

The 4-H Motto

"Learn to Do by Doing"



The 4-H Pledge

I pledge

*My **Head** to clearer thinking,*

*My **Heart** to greater loyalty,*

*My **Hands** to larger service,*

*My **Health** to better living,*

For my club, my community, and my country.

The 4-H Grace

(Tune of Auld Lang Syne)

*We thank thee, Lord, for blessings great
on this, our own fair land.*

*Teach us to serve thee joyfully,
with head, heart, health and hand.*

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TABLE OF CONTENTS

Alternate Livestock Module	1
Environment Module	19
Horse Module	57
Leadership Module	64
Life Skills Module.....	71
Livestock Module.....	136
Technology and Trade Module.....	217

ALTERNATE LIVESTOCK MODULE: ALBERTA 4-H LAW

We must plant the sea and herd its animals using the sea as farmers instead of hunters. That is what civilization is all about – farming, replacing, hunting.

Jacques Cousteau, French explorer, 1910-1997

WHAT WILL WE LEARN?

In this module members will come up with three questions a non-agricultural person may ask them. They will then choose one or more of these questions, research the issue, and present their findings to the whole club. This would be a wonderful module to do as part of your clubs' speech component.

WHO CAN HELP?

You will need to talk to people about some of the practices they use, when working with animals. Talk to teachers, farmers, your parents, etc. The more informed you are, and the greater the range of opinions you can gather, the better you will be able to make informed conclusions.

WHAT DO YOU NEED?

1. Common Sense
2. An Open Mind

LETS GET EDUCATED!

Animal handling practices such as castration, dehorning, beak trimming, tail docking

These procedures reduce animal aggressiveness, prevent physical dangers to other animals and producers, and reduce odors in meat. In sheep, docking tails (shortening an animal's tail) prevents fly and parasite infestations. Docking keeps pigs from chewing off one another's tails. If male swine are not castrated, (removing testicles and preventing the animal from reproducing), the meat is so stinky it is inedible. Trimming beaks in turkeys and laying hens reduces fighting, which can kill smaller and weaker animals.

Pain and discomfort felt by animals

Animals experience pain. The difference between animals and humans is that animals can't always let us know they are in pain. Pain is hard to detect in animals because they are prey creatures and are taught not to show pain as it will leave them vulnerable to predators.

Animals act out of instinct. The best way to understand their behavior and recognize when they are experiencing pain or discomfort is to work with them. Each animal demonstrates pain and discomfort differently.

The slaughter of animals

People in this country want a diverse diet, which includes meat. Meat adds variety and necessary protein to our diet. Animals are also used in the production of a wide range of products, like drugs, prescribed by your doctor, household products, and mechanical products.

Some of the products made with animal byproducts include: plastics, cosmetics, detergents, medicinal drugs, clothing, coverings, tires, oil, wallpaper, antifreeze, etc.

Do you know of any others?

Psychiatrist: What's your problem?

Patient: I think I'm a chicken.

Psychiatrist: How long has this been going on?

Patient: Ever since I was an egg!

LET'S HAVE SOME FUN!

1. Interview a livestock producer using some of the questions below:

- What kind of animal do you have?
- Do you dehorn, castrate, debeak, or dock tails? Why do you do these things? Do these procedures cause the animal pain?
- Do you train your animal, use a cane, whip or crop?
- Do you produce animal products for food?
- If 4-H members learn about caring for an animal, and befriend animals, before selling them for slaughter, does this teach conflicting values?

2. Stage a debate, or write an article on an animal health and welfare issue, stating the pros and cons of the issue. Suggestions:

- Animal castration
- Eating meat and animal products
- Removing horns from animals

Be prepared to explore both sides of each issue.

3. Make a display showing non-food items that are made from animal by-products.

Why did the farmer call his pig "Ink"?
Because it was always running out of the pen

ANIMAL PRACTICES

Using the list in the box at the right, write the practices beside the animal they would be associated with. This might be difficult to do on your own. Try talking to livestock producers about some of the practices listed. They should be able to help you.

ANIMAL	PRACTICE
	
	
	
	
	

PRACTICE

- a. Neutering, castrating
- b. Caging, tying, tethering
- c. Shipping, hauling
- d. Removal of horns, tails
- e. De-beaking
- f. Slaughtering
- g. Use of whips or cattle prods
- h. Shearing, clipping
- i. Inducing molting
- j. Training
- k. Rodeo, gymkhana
- l. Use of animal for recreation or work
- m. Disposal of young

When is a farmer like a magician?

When he turns his cow to pasture

ANIMALS ARE USED TO MAKE...

X F C E G M V E P L L C K S E
 B O J D G N D D N A I I L X F
 C O S M E T I C S T I A O N E
 A T Y Q I T B H S S N N L I Z
 V B R R H N E A T I K U T T E
 S A E D C L L R C O X J F A E
 G L A S S P F I G X L U S L R
 B L K S W G D X D E R C O E F
 T S F M J E L L K N N C A G I
 A N R X M D U G I K F T P Z T
 P T E M M I F T N X O E X L N
 J R Q S M E U C D P T Z Z W A
 V S L W Y R E P A P L L A W H
 B I Y D E D O F A V J C M I R
 B D E B L P C M U G P A K Z C

WORD LIST

ANTIFREEZE

CLOTHING

COSMETICS

DETERGENT

FOOTBALLS

FURNITURE

GELATIN

GLASS

GUM

MEDICINALS

OIL

PAINT

PLASTIC

SOAP

TIRE

WALLPAPER

What kind of doctor treats ducks?

A quack!

ANIMAL CARE AND WELFARE

C L Q S D D F O R G B L
 W R Q Z E L E F E Y U K
 S H O H S D C Z T M X J
 P H O P O I T E H K K P
 U R E R L O T U G A B O
 N M E A I A P D U N J Y
 L G Z L R V A S A N O G
 P E V T T I L Y L A R N
 C N S V F T N P S Y N I
 K A E B E D A G D S L G
 C P R O D R U C F J M A
 C L I P P I N G V P E C

WORD LIST

CAGING	CROP	PROD
CASTRATE	DEBEAK	RODEO
CATTLE	DEHORN	SHEARING
CLIPPING	GYMKANNA	SLAUGHTER

Why did the ram fall over the cliff?

He didn't see the ewe turn

SOLUTIONS

ANIMAL	PRACTICE
	a, b, c, f, g, h, j, k, l
	a, b, c, f, g, h, j, k, l
	b, c, e, f, i, m, n
	a, b, c, d, f, g, h, j, k, n
	b, c, e, f, i, m, n

ANIMALS ARE USED TO MAKE...

+ F + + G + + + P + L C + S +
 + O + D + N + + + A I I L + +
 C O S M E T I C S T I A O N E
 + T + + I T + H S + N N + I Z
 + B + R + + E A T I + + T T E
 + A E + + + L R C O + + F A E
 G L A S S P + I G + L U S L R
 + L + + + + D + + E R C O E F
 + S + + + E + + + N N + A G I
 + + + + M + + + I + + T P + T
 + + + + + + + T + + + + + N
 + + + + + + U + + + + + + A
 + + + + + R E P A P L L A W +
 + + + + E + + + + + + + + +
 + + + + + + + M U G + + + + +

OVER,DOWN,DIRECTION

ANTIFREEZE (15,12,N)
 CLOTHING (12,8,NW)
 COSMETICS (1,3,E)
 DETERGENT (4,2,SE)
 FOOTBALLS (2,1,S)
 FURNITURE (13,6,SW)
 GELATIN (14,9,N)
 GLASS (1,7,E)
 GUM (10,15,W)
 MEDICINALS (5,10,NE)
 OIL (13,3,NW)
 PAINT (9,1,SE)
 PLASTIC (6,7,NE)
 SOAP (13,7,S)
 TIRE (6,3,SW)
 WALLPAPER (14,13,W)

ANIMAL CARE AND WELFARE

C + + + + D + O R G + +
 + R + + E + E + E Y + +
 S + O H + D + + T M + +
 + H O P O + + E H K + +
 + R E R + + T + G A + +
 N + E A + A + + U N + +
 + + + L R + + + A N + G
 + + + T T I + + L A + N
 + + S + + T N + S + + I
 K A E B E D A G + + + G
 C P R O D + + C + + + A
 C L I P P I N G + + + C

OVER,DOWN,DIRECTION

CAGING (12,12,N)
 CASTRATE (1,11,NE)
 CATTLE (8,11,NW)
 CLIPPING (1,12,E)
 CROP (1,1,SE)
 DEBEAK (6,10,W)
 DEHORN (6,1,SW)
 GYMKANNA (10,1,S)
 PROD (2,11,E)
 RODEO (4,5,NE)
 SHEARING (1,3,SE)
 CLIPPING (1,12,E)

MORE! MORE! MORE!

1. Research Animal Rights and Environmental Issues on the internet.

RESOURCES USED TO CREATE THIS MODULE

1. Alberta 4-H Beef Project Leaders' Guide produced by the Alberta 4-H Branch, Edmonton, AB 2004.
2. www.seattlepi.nwsourc.com/newsforkids/raisedinwash/byproduct1.html
3. www.puzzlemaker.school.discovery.com

ALTERNATE LIVESTOCK MODULE: **BISON**

The bison project does not follow the traditional 4-H livestock rules!

WHAT WILL WE LEARN?

The bison project is a truly unique livestock project. There is a lot to learn about this magnificent animal and the role it played in our history. For this module we will focus on one very important aspect of raising bison, and that item is handling.

WHO CAN HELP?

In the last few years, the number of bison producers has increased dramatically. Check with your leader, he/she might know some of the producers or how you could get in touch with one.

WHAT DO YOU NEED?

Everything you need to complete this module is included.

LET'S GET EDUCATED!

BE SAFETY WISE

When we are startled or scared, our first reaction is to protect ourselves. It is the very same for bison. Charging, head bunting and stomping are the ways that bison have to defend themselves. This may cause serious injury to both the handler and the bison.

The bison is only considered to be a semi-domesticated farm animal. Meaning, we have put a fence around them, and in some cases, conditioned them to be used to our farm truck. But they have many, many generations of wild instincts and we will not change them in this lifetime. Therefore we must learn how to handle them with as much ease as possible for the safety of both them and us.

When we are working with bison we must be wise. Always follow these basic rules:

- Never attempt to work with bison alone, and always have an experienced adult giving directions.
- Stay alert.
- Move slowly when working with bison. Any sudden, jerky movements may be associated with a predator move.
- Don't make loud noises or sudden movements.
- Wear appropriate footwear.
- Keep your yard and working areas clean and dry, free from dangers to you or the bison.
- Keep dogs and small children well away. Each may be seen as a predator and it is better to be safe than sorry.

Don't cross this field unless you can do it in 9.9 Seconds. The bull can do it in 10!

UNDERSTANDING BISON BEHAVIOUR

Understanding bison behaviour will make it easier for you to work with your bison. The following two concepts will make handling these animals a lot easier.

- Understanding basic prey animal behaviour and motivations
- Understanding the bison flight zone

In the eyes of the bison, you, your dog, or any other person may be seen as a predator. Prey animals are more at ease when they know where and what their potential attacker is doing.

Bison are social animals. They like to live and move in groups. Therefore, it is always easier to move and work with bison when they can be with or near others.

Bison like to follow the leader. If you can get the first animal to move through a gate or chute, the others will follow. That is why most chutes are designed to hold at least three animals in a row. Animals will move much more easily when they can follow each other.

Like cattle, bison will stop if they seem to be approaching a dead end or a sharp turn. For this reason most chutes are curved rather than straight. Then the bison can always see part of the animal ahead of them. Don't frustrate them by forcing them into a chute before they can see where they are going. This may just cause the animal to become immobilized with fear.

The following chart explains possible causes for balking, and the solutions that should be used to alleviate the problems.

CAUSE	EXAMPLE	SOLUTION
Bison see something	Jacket on a post. Shadows. Reflections, shining metal, water. Dangling chains, rope. Vehicles nearby. People. Dogs. Flapping objects.	Remove it. Add light, solid sides, work at a different time of day. Cover it up. Dry it. Tape it up. Move them. Hide, don't move. Put them in the truck. Remove them.
Bison can't see	Entering a dark area. Can't find the exit.	Add light. Jiggle door, add light.
You	Behaving like a super predator.	Put your arms down. Get off the catwalk. Stop staring, Stand still. Take a break, Move away. Move sloooooowly!
Wrong Group Site	Single bison. Over crowded.	Add herd mates – three bison minimum. Open up the area. Work fewer animals.

THE FLIGHT ZONE

The flight zone is simply the distance a threat must be away from an animal before it will begin to move away from the threat. For instance, if you saw an angry mother bear coming up the trail from quite a distance, how close would you let her come before you moved out of her way?!!

This would be your flight zone. Now, obviously some of us would move more quickly than others; well this is the same as the bison will respond. Some will feel more comfortable than others. The flight zone will also vary from herd to herd, and in different situations. Therefore you need to be able to read the herd.

If you increase the pressure on them by coming into their flight zone, then you can get them to move. However, if you put on too much pressure you may cause them to panic. Similarly, if that mother bear began to run towards you it may cause panic. This means it is important to understand where the flight zone is, and stay at the edge of it. If you have too little pressure, you won't be going anywhere. If you have too much pressure, you might be left in the dust!

LET'S HAVE SOME FUN!

BISON HANDLING

S U I J H H C S L C M Q S S Q
 E G B T M E P A H I M S A S Q
 I F N O S U R A T I G E F E J
 T E Z I O E R D R W G H E R R
 I A M R N G T U M N A Y T T E
 L R G T I I O U I A E L Y S A
 I A A N Q I A K H J T A K M C
 C X G D V W L R B C C E I Z T
 A S O A E A C Z T W Q J S R I
 F G H N B D E A D E N D S E O
 S E R O T A D E R P P C Y L N
 B S H A R P T U R N A J N D W
 L A I C O S O S F R U A S N G
 B I S O N P X L E B O K H A Z
 T F S E Z E G D Q U O V C H A

WORD LIST

BALKING	CHARGING	FACILITIES	HERDMATES	SAFETY	STRESS
BEHAVIOUR	CHUTES	FEAR	LIGHT	SCARED	TRAINING
BISON	DEAD END	GROUPS	PREDATOR	SHARP TURN	
CAT WALK	DOGS	HANDLER	REACTION	SOCIAL	

BALKING BISON BONANZA

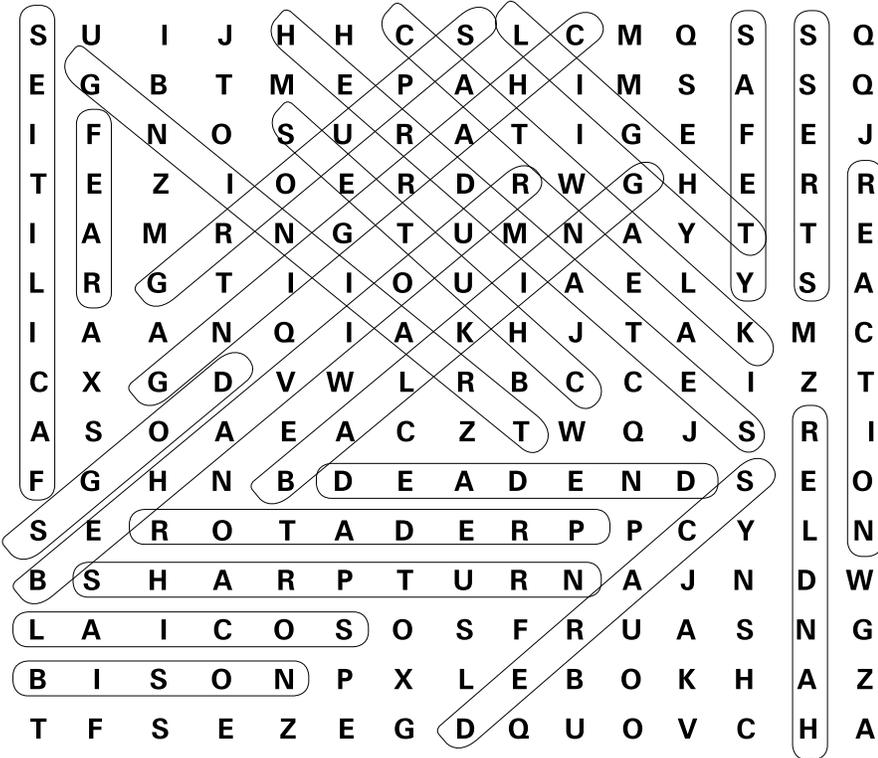
Now that you understand bison behaviour a little better let's do something for fun. Let's create a fun keepsake to keep with this module. Let's create a collage.

This module has focused on handling bison. There are some bison publications that most bison producers probably have – 'The Tracker' and 'Smoke Signals' would be a couple of these.

- See if you can get a few old publications from someone.
- Using these magazines or the internet try to get pictures of bison to create your collage.
- Focus on some of the things you've learned.
- Look for pictures of people working with bison, handling facilities, etc.
- The collage could include fun pictures or be more serious.
- Be sure you put a title on your collage.
- You may also want to write a caption with each picture.
- Be creative and use your imagination.
- You can use any size paper as a background. You can put the collage in your record book or make a large one to put on your wall.

SOLUTIONS!

BISON HANDLING



MORE! MORE! MORE!

If you have enjoyed what you learned in this module, ask your leader about looking at the Alberta 4-H Bison Project books.

RESOURCES USED TO CREATE THIS MODULE

Information used to create this module was obtained from The Alberta 4-H Bison Project Resources – Member Level One book published by the 4-H Branch, Alberta Agriculture, Food and Rural Development.

ALTERNATE LIVESTOCK MODULE: **LLAMA**

What animal can say “I am a terrific pet, a pack animal, a sheep guard, an entertainer, a race companion, a wool producer and a cart puller”? If you don’t know the answer to this question read on to find out what it is.

WHAT WILL WE LEARN?

In this module we will introduce you to the llama, a South American member of the Camelid family. You will learn some interesting facts about llamas, which will help you understand this creature a little better.

WHO CAN HELP?

If you don’t have a leader that can help you out with this module perhaps one of your leaders knows someone that raises llamas that would be able to assist you. It would be beneficial, and a lot of fun to spend some time on a farm where there are llamas. They are a unique animal and interesting to watch as they have unusual behaviors that make them fun to get to know.

WHAT DO YOU NEED?

The pages included in this module are all you need to complete it.

LET’S GET EDUCATED!

Llamas are South American members of the Camelid family. There are four species of South American Camelids. Llamas and alpacas are the domesticated Camelids. Guanacos and vicunas are wild. Over the centuries, llamas have been developed mainly as work animals, and alpacas as wool producers. Depending on its fineness, llama fiber can be used to make ropes, blankets, decorative wall hangings, or clothing.

Llamas have drawn much attention as pets, pack animals, sheep guards, entertainers, race companions, wool producers, and cart pullers.

Llamas are very intelligent and their calm disposition makes them a favorite with many people. They are easy to train. In just a few repetitions they will pick up and retain many behaviors such as accepting a halter, being fed, loading in and out of a vehicle, and pulling a cart or carrying a pack.

When training a llama, it is very important to remember that practicing with the llama often and repeating the actions will help the llama become familiar with what is expected. Be sure to give the llama verbal praise as it completes the required task. As the llama works with the trainer, the llama learns to trust the trainer and becomes more and more cooperative.

To help a llama become comfortable with being touched, move slowly and talk softly so the llama will relax. Stroke the llama while talking and move to different areas such as the

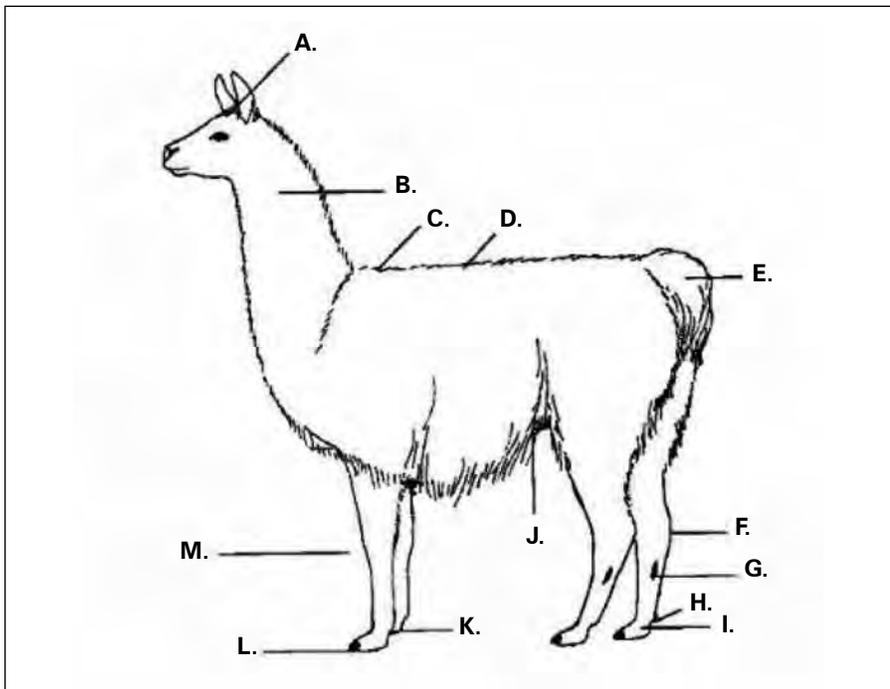
head, legs and belly. This is called desensitizing the llama. Eventually, the llama will become comfortable with being stroked all over its body.

Llamas are unique animals in appearance, habit, and disposition. They stand three to four feet tall at the shoulder and weigh from 250-400 pounds as adults. They have a long neck, erect curved ears, large doe-like eyes, and a unique cloven foot.

The llama's upper lip is cleft and prehensile, meaning able to grasp. Like all other ruminants, they have front teeth only on the lower jaw.

THE LLAMA

Included in the diagram are some of the most common llama body parts.



- A. ear
- B. neck
- C. withers
- D. back
- E. tail
- F. hock joint
- G. scent gland
- H. fetlock joint (ankle)
- I. pastern joint
- J. abdomen (belly)
- K. foot
- L. toenail
- M. knee (carpus)

The llama has two types of grease-free fiber in its coat: a long, coarse guard hair fiber which aids in air circulation, and a shorter, light-weight, finer fiber which helps keep the animal warm in cold weather. Llama fiber comes in a wide variety of colors: white, brown, black, rust, grey, and all shades thereof. The fiber length ranges from 3 to 12 inches or more.

Llamas may live as long as 25 years.

Like human beings and other animals, each llama has a different temperament. Some are shy and cautious, some like to be cuddled, while others hate to be touched. Most llamas, however, are curious about the world and interested in anything that is not familiar to them. They usually prefer to spend their time with other llamas, but are very willing to work with people when it means that they can enjoy doing new and different things, being with other

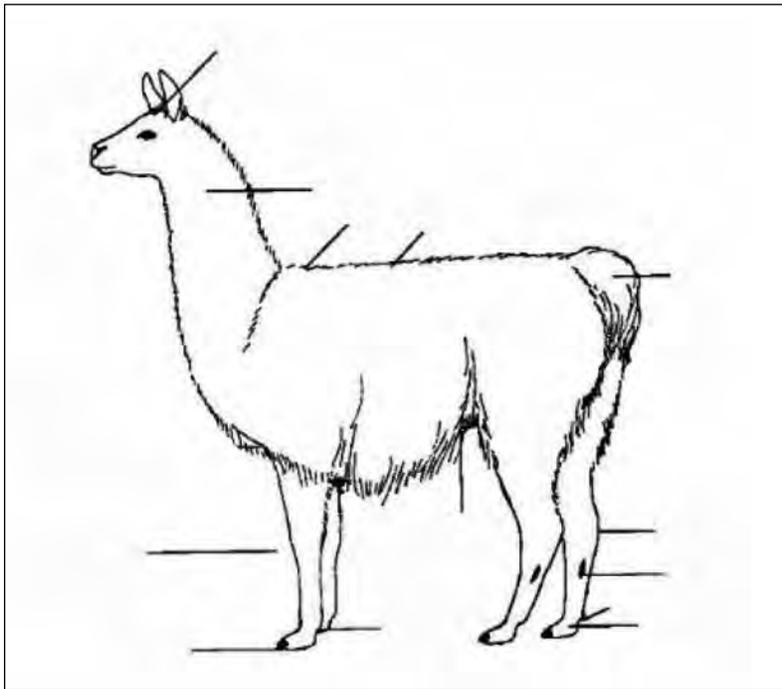
llamas and seeing new sights. By nature, llamas are social animals, which means that they need to be with other llamas.

Llamas may hold their ears back when they are bored, or to listen to something behind them, but if they lift their noses, and hold their ears close to their necks, this often means that they are about to spit. It is as if they are saying to the other llamas, "I don't like what you are doing, and if you don't watch out, I'll get you!"

There are no real "breeds" of llamas as there are of dogs and horses, but there are three general types of llamas recognized. These are "heavy-wooled," "medium-wooled," and "light-wooled" llamas. As mentioned previously, the llama's coat generally consists of two kinds of fiber. Guard hairs are long and shiny, while the fiber in the undercoat is soft and fine, more like sheep wool or a dog's undercoat. The fine undercoat is what is used for spinning and weaving.

LET'S HAVE SOME FUN!

To test your memory! See if you can remember these basic llama parts. **Check the diagram on the preceding page** to see how many you got correct.



- A. _____
- B. _____
- C. _____
- D. _____
- E. _____
- F. _____
- G. _____
- H. _____
- I. _____
- J. _____
- K. _____
- L. _____
- M. _____

CANDID LLAMAS

Llamas truly are a interesting creatures. They are entertaining to watch as they do have some unique behaviours. As suggested earlier in this module it would be beneficial to visit a farm that raises llamas. If this is possible, we suggest taking your camera along and create a CANDID LLAMA photo shoot. You can use a digital camera, a 35mm or even a disposable – whatever you have access to. Take snapshots of llamas eating, sleeping, interacting with other llamas or other animals, interacting with people, etc. etc. You can simply put your photos in a small album adding a title and date, or you can be more creative and use some scrapbook techniques, adding colored paper, stickers and using coloured markers for journaling. Have fun with this project and make it part of your Exploring 4-H Book.

If it is not possible to complete this photo shoot, you may want to find some pictures of llamas in magazines or on the internet that you could use to create a picture booklet.

MORE! MORE! MORE!

If this module sparked an interest in you, to learn more about llamas and perhaps take one as a 4-H project, talk to your leader about getting more information. If you don't own a llama and would like to purchase, or perhaps borrow one to use as a 4-H Project your leader may be able to help you get in touch with someone that could assist you.

RESOURCES USED TO CREATE THIS MODULE

4-H LLAMA PROJECT – Member Resource Manual, Member Mini Level Manual, Level One Manual published by Alberta Agriculture, Food and Rural Development, 4-H Branch

ENVIRONMENT MODULE:

ENVIRONMENTAL FARM PLAN

Everyone can help make the world a safer place to live. Especially you! This is because you know the area surrounding your home better than anyone. When you take responsibility for your own space, the environment becomes healthier for everyone. Farmers are no different. They care about their environment and making the place where they live and work as safe as possible.

WHAT WILL WE LEARN?

In this module we will do some exercises that will help you understand what farm planning is all about. We will let you map your own yard or a neighbor's yard to get you thinking about EFP's (Environmental Farm Plans). Most people, farmers included, try to take good care of their yard or farmyard. Farmers just have a lot more things to consider when they are planning their farmsites. Even if good habits are in place, writing down details about the land helps them keep track of how the environment changes. By doing the following exercises you will gain an appreciation for the farmer and the many things he/she needs to consider when taking care of his/her environment.

WHO CAN HELP?

Many of the farmers in your area have probably completed the Environmental Farm Plan workshop. Search out one of these people for their assistance.

WHAT DO YOU NEED?

1. pencil
2. pencil crayons or markers
3. computer with internet access (optional)

LET'S GET EDUCATED!

Before we start learning about Environmental Farm Planning, let's do a fun activity that will help us see what a farmer or acreage owner has to consider when planning his/her yard.

LET'S HAVE SOME FUN!

The first thing we are going to do is make a map of your yard. If you live in town and have a lot with a house on it, you may want to ask someone that has an acreage or a farm if you can map their yard instead. This will allow you to learn a little more about Environmental Farm Planning.

1. Using the pictures and lists below, identify which of the items you have in your yard.
2. Once you have identified the items you have in your yard, you have two choices.
 - a. You can freehand draw each of these items onto the map grid on the next page or
 - b. You can photo copy the page, cut out the items and glue them onto the map. You will have to freehand draw those items on the written list that you have in your yard.
3. A map is most beneficial if it is as close to the real thing as possible. When you place your items on the map try to put them where they belong in relation to other items in the yard.
4. You should also identify directions on your map. On each of the four sides of the map place the four compass points N (for north), S (for south), E (for east), and W (for west).

WHAT IS IN YOUR YARD?



__animal pen



__barn



__compost



__dugout



__fence



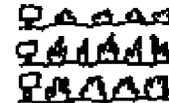
__fuel tank



__garage



__garbage cans



__garden



__grain bin



__greenhouse



__hay/straw bales



__house



__pond



__recycle bin



__road



__septic tank



__silo



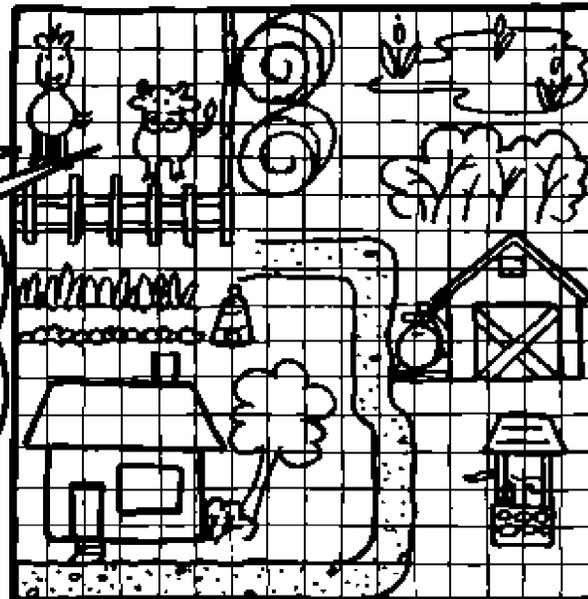
__trees/bushes



__water well

Hey! I see greenhouse on the list. What if your house isn't green?

Greenhouses are glass structures used to grow plants. They allow gardeners to grow plants that need a lot of heat or a long growing season.



- Extras**
- _ birdbath
 - _ birdhouse
 - _ bus shelter
 - _ chemical storage
 - _ clothesline
 - _ doghouse
 - _ driveway
 - _ fishpond
 - _ flowerbed
 - _ mailbox
 - _ parking spot
 - _ picnic table
 - _ planter
 - _ power line
 - _ propane tank
 - _ sidewalk
 - _ storage shed

Draw a Map of Your Yard

Make the map as detailed as you can.

Remember to include everything in your checklist.

3

Use a pencil to draw a map of your yard.

A large grid for drawing a map of a yard. The grid consists of 15 columns and 15 rows of squares, providing a space for students to draw their yard map.

ENVIRONMENTAL PROBLEMS

Now that you have taken a trip around your yard, let's learn a little more about farm planning. As you go through the following information look back at your map and see if there may be problems with the location of certain items in your yard. Some of these items may be able to be moved or relocated to have them in a more environmentally friendly location. There may also be reasons why the yard is arranged the way it is.

When doing an Environmental Farm Plan on a yard that already exists, a farmer must be able to identify where he/she may be able to make changes, or where potential problems may arise. He/she needs to be able to see what changes he/she can make to lessen or eliminate potential problems.

ENVIRONMENTALLY FRIENDLY PLANS

Now let's become environmental experts as we talk about some of the things that make the land around your home healthy.

A healthy ecosystem occurs when plants, animals, and humans exist together without hurting the environment. To create a yard that is environmentally friendly farmers need to think about a number of different things.

They need to consider water sources, soil and wastewater management, The Riparian Zone, pesticide safety, pest management, fertilizers, petroleum and energy efficiency.

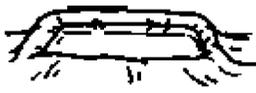
It's a lot to think about, but once you have read the following story (filling in words where the pictures appear) you will understand more about what makes a healthy ecosystem.

A HEALTHY ECOSYSTEM

Environment Friendly Farm Practices

Look at the pictures and guess the words needed to fill in the blanks.

Keep  away from , riparian areas,

and  • Put  around 

to  from reaching the  •  erosion!

 harvested plant stalks in the  •  directly

into  •  rows of  to stop soil from

 away •  add oxygen to the air •  and

 use  for  -ter • Store  in a 

place • Take  to a licensed 



What do you do to keep your ecosystem healthy?

SOLUTIONS!

A HEALTHY ECOSYSTEM!

Keep **livestock** away from **water sources**, riparian areas, and **wetlands**. Put **fences** around **dugouts** to **stop manure** from reaching the **water**. **Stop** erosion! **Leave** (leaf) harvested plant stalks in the **field**. **Seed** directly into **stubble**. Plant rows of **trees** to stop soil from **blowing** away. **Trees** add oxygen to the air. **Birds** and **wildlife** use **trees** for **shelter**. Store **pesticides** in a **locked** place. Take **garbage** to a licensed **landfill**.

MORE! MORE! MORE!

LOOKING FOR MORE FUN WITH THE ENVIRONMENT? (optional)

Try one or more of the following:

1. **Soil Conservation . . . It's In Our Hands Placemat** – this is available through Alberta Agriculture, Food and Rural Development, Conservation and Development Branch.
 - a. **Suggestions For Use:**
 - i. Order these placemats, give them to other members of your club to help them to start thinking about the environment and how it relates to them.
 - ii. Your club could use them for your Achievement Day/Awards Supper.
 - iii. To create more awareness in your community approach one of your local restaurants to see if they would use them on their tables.
2. **The game called Cows, Fish, Cattle dogs And Kids** is available from Cows and Fish Program Manager, Lethbridge. Contact this organization (further information listed below), to find out how you could use this game in your club.
3. **Cows, Fish, Cattle dogs & Kids Activity Sheet** also available from Cows and Fish Program Manager, Lethbridge. It might be fun to order enough of them for all the members in your club.

The contact information is listed below. Don't hesitate to contact anyone in the list to have some more fun, either on your own or in a group, learning about the environment.

Many environmental groups are working on developing games and activities for children to help them learn more about the environment. These activities will help you gain an appreciation for what needs to be done to make the environment a more friendly place.

1. **Cows and Fish:** Program Manager, 2nd Floor, YPM Place, 530-8 Street South, Phone 403 381-5538, www.cowsandfish.org/education.html
 - a. Cows, Fish, Cattle dogs and Kids! Activity Sheet: www.cowsandfish.org/pdfs/cfcdk_activity_sheet.pdf
 - b. Cows, Fish, Cattle dogs and Kids! Game: www.cowsandfish.org/pdfs/cfcdk.pdf

2. **Parkland Conservation Farm Association:** www.parklandconservationfarm.com
 - a. My Corner Of The Globe: in development, draft available.
3. **Alberta Agriculture, Food and Rural Development:** www.agric.gov.ab.ca
 - a. Soil Conservation... It's In Our Hands! Placemat (get an image of this placemat)

As more and more research is done on farming practices and the environment, there are more things that people need to be aware of. Most farmers nowadays have to complete an Environmental Farm Plan workshop. The 4-H Branch has produced an EFP for senior members. If you would like to pursue this topic further, talk to your leader about the EFP project.

RESOURCES USED TO CREATE THIS MODULE

1. 'EFPs For Kids' - being created by the Parkland Conservation Farm, Box 974, Vegreville, AB, T9C 1S1. Phone 780 764-3927, email – aEEP@parklandconservationfarm.com
2. Information provided by Therese Tompkins, Program Director, The Alberta Environmental Farm Plan Company, email – tompkins@albertaEFP.com

ENVIRONMENT MODULE: **FIELD CROPS**



Farming isn't done like this any more. Nowadays one combine can harvest enough wheat in 9 seconds to make 70 loaves of bread.

Did you know starch from wheat is used to make chewing gum and glue on stamps and envelopes.

WHAT WILL WE LEARN?

In this module you will learn to identify different field crops according to the seed they produce and/or the plant as it grows. In order to do this you will need to collect a variety of seed and plant samples. Seed samples should be easy to find no matter what time of year you complete this module. Plant samples may be a little more difficult. You should be able to go on line and find pictures of the various field crops or use agricultural magazines, seed catalogues etc. to find pictures.

WHO CAN HELP?

There are many grain farmers in the province. Ask one of them to assist you with this module. Many farmers have a large selection of magazine subscriptions related to crop production. You may be able to find some pictures that will help you identify different seeds and plants.

WHAT DO YOU NEED?

Follow the directions below and you will find out what you need as you go. By the time you have completed this module you will have a collection of items.

LET'S GET EDUCATED!

The ability of plants to produce sugars and starches is what makes them so important to the food chain of the world. A plant can store this food (sugars and starches) in its various parts - in roots (carrots, turnips, potatoes), in leaves and stems (alfalfa, grass, lettuce, cabbage), in fruit (apples, raspberries, cherries) and in seeds (wheat, peas, corn).

The food stored in the seed that would supply the germinating embryo with food for its initial growth, also supplies us with food and nutrients. Seed crops such as wheat, corn,

rice, barley and oats are important sources of food to people all over the world. Any seeds from these crops that are of poorer quality are important as animal feed. The main crops grown in Western Canada are classified into four general field crop types:

1. **Cereal Crops** – wheat, barley, oats, corn, winter wheat, triticale and rye. These are all bunch grasses. They all have many buds at the base of the stem and a bunch of stems all come from the same spot at soil level.
2. **Oilseeds** – sunflower, mustard, canola, flax, safflower. Oil is extracted from these seeds to provide edible and non-edible oil products.
3. **Pulses** – lentils, dry beans, field peas, soybeans and fababeans are examples. A pulse is a large seeded legume in which the seed is eaten. Legume seeds are second only to the cereals as a source of animal and human food.
4. **Forages** – alfalfa, brome grass, timothy, clover, pasture. All forages belong to one of two families – the legume family or the grass family.
 - a. **Grasses** – plants that have fibrous roots-these are the roots that look like they are made up of little strings. The stems have joints and the long leaves have parallel veins – that’s those little lines in them.
 - b. **Legumes** – plants that can add nitrogen to the soil if they are inoculated with nitrogen-fixing bacteria. Legumes grow from the top. The leaves have high amounts of nutrients and the flowers have five petals and the seeds are in a pod.

Let’s look at some of these field crops in a little more detail.

1. CEREAL CROPS

a. Wheat

- Is the largest crop produced in Canada.
- Is exported all over the world.
- Has an excellent reputation for delivering high quality grain to our customers, which include Japan, European Economic Community, United States, Chile, etc.
- There are two varieties of wheat: durum and non- durum.
- Depending on quality, durum wheat is used to make pasta and non-durum is used for milling or for livestock feed.
- Has many uses. It is used in the production of different bread varieties, buns, frozen dough products, crackers, noodles, cake mixes, cookies, pastry products, cereals, pasta and special flours.

b. Barley

- Is a high yielding cereal grain.
- It takes less time to grow and therefore can be planted further north than some other crops.
- Is mainly a feed for livestock.

- Is also used in the malting and brewing industry.
- Can also be found in soups, health foods and in specialty products.

c. Oats

- Are used in oatmeal, other cereals and traditional baked goods.
- Are now used to make a variety of health foods.
- Are now being used in cosmetics.
- Are an excellent crop for livestock because they have a high protein level and essential minerals.
- Are a horses favorite food.

d. Rye

- Used in specialty foods such as rye bread.
- Is also used as a livestock feed.
- Usually seeded in the fall for harvest early the next summer.

2. OILSEEDS

a. Canola

- Is a major source of income for prairie farmers.
- The name comes from two words-Canadian and oil.
- The oil that is extracted from the seed has many uses.
- Is used in margarine, salad oil and cooking oil.
- Is used in cosmetic soaps, printer's ink and lubricants in the plastics industry.
- The meal that is left after the oil has been removed from the seed is a high protein animal feed.
- Can be recognized by its' bright yellow blossoms in summer.

b. Flax

- Oil from flax is used for food and industrial practices, such as the manufacture of paint.
- Some industrial uses are concrete preservatives, paint and linoleum.
- Flax oil is also being used for cooking.
- Can be recognized by its' purplish blue flowers in summer.

3. PULSES

As mentioned above pulse crops include - lentils, dry beans, field peas, soybeans and fababeans

- Pulse is a Latin word meaning dried edible seed of a legume.
- Pulses help build the quality and productivity of the soil.
- 75% of peas grown are marketed as livestock feed (the majority of this is exported).
- 25% of peas grown are marketed as human food (largest export market is India).
- 1/2 of the pigs in Alberta are fed peas.
- All lentils and dry beans are exported as human food.
- Pulses have high fibre and are low in fat content. They are very healthy for you, as well as, for diabetics and people with heart conditions.
- Pulses also provide an alternative for people with wheat allergies.

4. FORAGES

- Forages are any plants consumed by livestock. They include pasture and browse plants, baled hay, silage, alfalfa pellets and cubes, immature cereals, and grain residues. As well as being the basis of Canada's large livestock industry, forages are very important in soil conservation-they are used in crop rotation to improve soil structure and add nitrogen to the soil.
- There are three ways in which forages are harvested - hay, haylage or silage.
- Hay is normally packaged as – pellets, cubes, small square bales, large round bales, or loose hay stacks.
- Haylage is chopped into shorter pieces by a forage harvester. The main difference between hay and haylage is that the haylage has a higher moisture content – around 40%.
- Silage is also normally chopped using a forage harvester. Silage is stored at about 60% moisture content.
- Recently, some new, innovative storing techniques are being developed using a combination of hay packaging and silage processing. Round bales are being wrapped up and bagged to ferment as silage.
- Alfalfa is considered the queen of forages and is the most widely grown forage legume in Canada. It is recognized around the world as premium forage for dairy cattle and horses.
- Canada is the world's largest exporter of alfalfa pellets and the second largest exporter of alfalfa cubes.

LET'S HAVE SOME FUN!

In this section of this module, you will create a scrapbook of field crop seeds and plants. This collection may simply be made up of pictures or hopefully, will include actual seed or plant samples.

- Materials
 - A large scrapbook
 - Plastic page protectors
 - Farm magazines, seed catalogues, newspapers etc.
 - Glue
 - Scissors
 - Markers
 - Pen or pencil
 - Specialty pages-pages with pockets may be helpful to display seed samples.
1. Start talking to farmers in your area to see if you can acquire samples of the different field crops – either seed or plant samples. If it is not the correct season to acquire plant samples you could talk to someone that sells or saves dried flowers. Some of these people may have a collection of dried flowers that may include some of the field crops you are looking for.
 2. Once you have exhausted your options for collecting samples start browsing the internet and going through magazines. Look for pictures of field crop plants and seeds.
 3. Once you have collected all your materials, you can start putting your scrapbook together. Include a title page. Be sure to identify each item you put in the book. You can add a date- this would indicate what year the crop was grown. You might want to include where the item came from. I.e. Uncle Jack's wheat field.
 4. This scrapbook will be a great keepsake. Maybe when someone wants to know what a certain type of field crop plant or seed looks like you will be able to pull out your scrapbook and show them.
 5. Be creative and have fun.

SOLUTIONS!

FIELD CROP FRENZY

- | | | |
|-----------|------------|----------|
| 1. wheat | 6. oilseed | 11. peas |
| 2. oats | 7. legume | |
| 3. pulses | 8. barley | |
| 4. pulses | 9. rye | |
| 5. animal | 10. canola | |

When you are done this module we hope you have learned something about this.

F	I	E	L	D	C	R	O	P	S
1	2	3	4	5	6	7	8	9	10

MORE! MORE! MORE!

If you are interested in learning more about field crops, talk to local farmers in your area or check out the Field Crops Project available through the Alberta 4-H Branch.

RESOURCES USED TO CREATE THIS MODULE

1. Canadian Western Agribitions' Teachers' Resource Package - AGRICULTURE AND YOU – AGRI-ED SHOWCASE
2. 4-H Field Crops Project Books – produced by the Alberta 4-H Branch

ENVIRONMENT MODULE: NEST BOXES

BIRD FEEDERS

WHAT WILL WE LEARN?

This module will provide ideas for making bird feeders that will attract a variety of species to observe.

WHO CAN HELP?

You would be surprised who might have a secret passion for birds - maybe your local grocer, or a retired engineer in your neighborhood. Ask a nature center, conservation officer, fish and wildlife officer, or forestry officer. Try your local Junior Forest Warden Group or Girl Guide or Scout group. They can help you identify the birds and give some personal stories on the experience of bird feeders and bird watching.

WHAT DO YOU NEED?

The following materials are sufficient for making one of each type of bird feeder described in this fact sheet. The letters in parenthesis refer to the feeder type.

1. 1 roll of nylon string or twine (A,B,C)
2. 1 cardboard toilet paper roll (A)
3. Plastic net bag like those used for produce (onions or oranges) (E)
4. Dull kitchen knife (A,B)
5. Hole punch (A)
6. Drill with 1" drill bit (C,F)
7. 1 eye bolt (F)
8. Wire hanger (D)
9. 2 - 9" wooden dowels, 5/16" diameter (C)
10. Clean 2-liter plastic soda bottle (C)
11. Softwood log 12" long, 4-6" diameter (F)
12. Smooth peanut butter (A,B,F)
13. Mature pine cone (B)
14. Sunflower head (D)
15. Seeds (A-F)
16. Millet
17. Corn
18. Black-oil sunflower seed
19. Niger thistle seed
20. Suet (B,E,F)

LET'S HAVE SOME FUN!

You might think that making a bird feeder is complicated, but it doesn't have to be. Think about it - you could just spill some seed on the ground and the birds would come.

Choose one or two of the feeders to construct and identify and compare birds that come to each feeder. Refer to the 'What Do You Need' section of this module for a list of supplies needed for each feeder.

A. Peanut Butter/Millet Roll

1. Take a cardboard toilet paper roll with a small hole punched 1/2" from the top on each side of one end.
2. Attach a string loop through these holes. This string should be long enough to hang the feeder from a branch.
3. Using a dull knife spread smooth peanut butter all over the outside of the cardboard roll.
4. Roll the peanut butter-covered cardboard in millet seed until it is well covered.
5. Hang the feeder from a tree branch.

BIRDS ATTRACTED - chickadees

B. Pine Cone Treat

1. Tie a string to a pine cone in such a way that the pointed end will remain upright when hung from a tree by the string.
2. Make a mixture of peanut butter and millet seed.
3. Using a knife or finger, apply the peanut butter/seed mixture to each pine cone scale.

BIRDS ATTRACTED - finches and chickadees

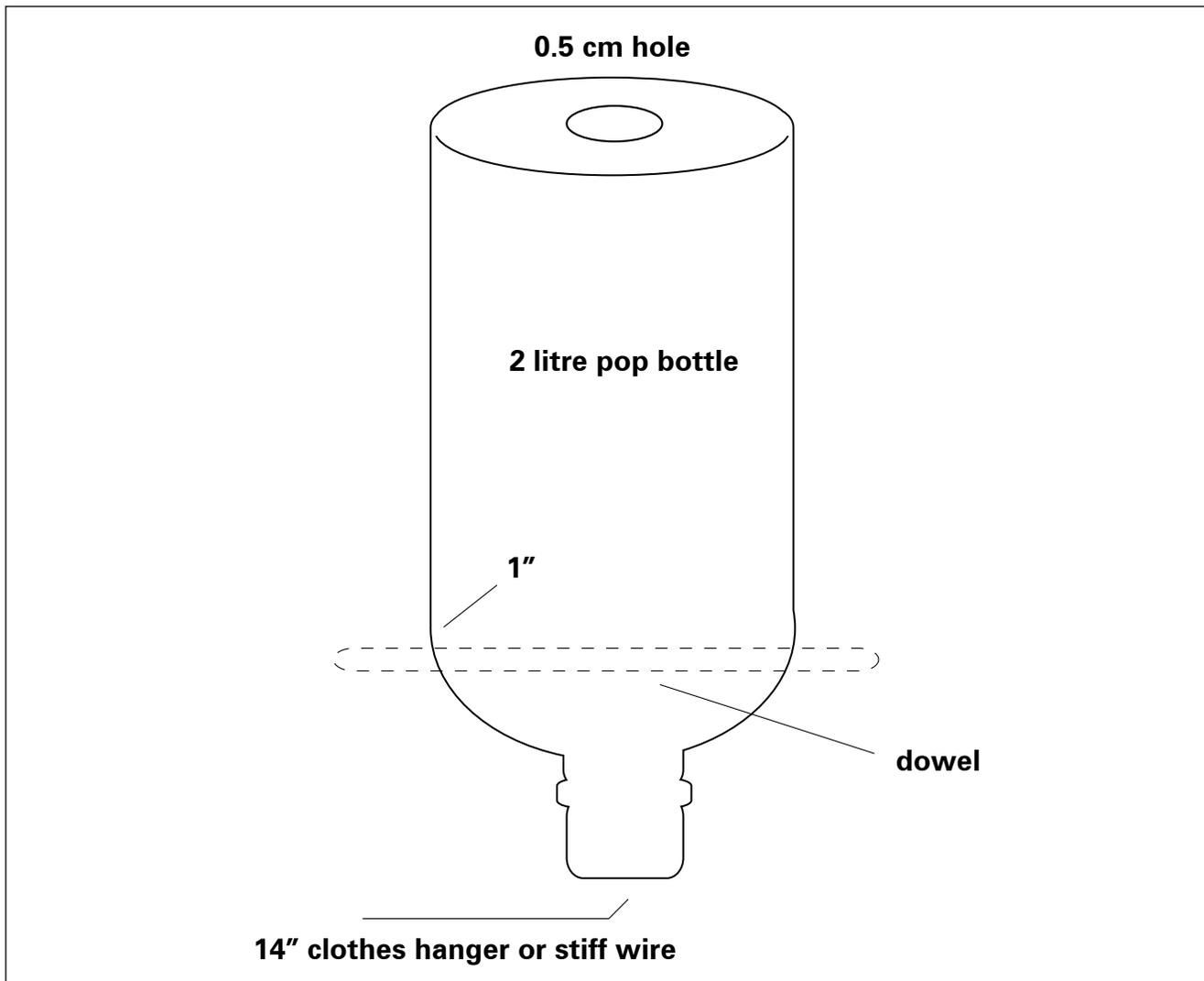
C. Hanging Plastic Bottle Feeder

1. Remove the label from a 2-liter plastic pop bottle.
2. Several holes must be made in the bottle either with a drill or a hot wire.
3. Make holes in the bottle as follows: a 1/8" (0.5 cm) hole in the bottom of the bottle; 4 holes 5/16" (0.75 cm) in diameter near the shoulder of the bottle so that dowels can be inserted for perches; and 4 feeding holes about 1" (2.5 cm) above the perch holes. The feeding holes should be 5/16" (0.75 cm) round if you intend to fill the feeder with black sunflower seeds and 1/4" x 1/8" (0.5x0.25 cm) if you will be using niger thistle seed.
4. Take a clothes hanger or other stiff wire and make 3 bends at one end. Insert the wire, straight end first, through the mouth of the bottle and into a 1/8" (0.5 cm) hole in the bottle's bottom. Pull the wire through the hole and fashion a loop from which to hang the feeder.

5. Cut off any extra wire.
6. Insert two dowels to serve as perches. Fill the feeder with the desired seed and suspend from a branch.

BIRDS ATTRACTED - finches and chickadees

HANGING PLASTIC BOTTLE FEEDER



D. Hanging Sunflower Head

This feeder uses sunflower heads from your garden - once they are mature. The heads are spiny and are attached to tough stalks so be sure to wear gloves and use clippers when making this bird feeder. To hang the sunflower head, push a piece of wire through the sunflower head. Bend the wire to make a hook that can be suspended from a branch. Hang the feeder in a location where you can watch the birds come to it.

BIRDS ATTRACTED - Chickadees, siskins, redpolls, nuthatches and goldfinches

E. Bag of Suet

1. Take a plastic net produce bag, such as those used for onions or oranges.
2. Fill the bag with suet. Suet is animal fat that can be obtained free of charge from the grocer. If you'd like, the fat can be mixed with seeds.
3. Knot the bag closed and hang it in a tree high enough so that dogs will not be able to jump up and get it.

BIRDS ATTRACTED - woodpeckers, nuthatches, and chickadees

F. Suet Log

1. Take a softwood log (pine or aspen would be good) 12 inches (30 cm) long and 4 to 6 inches (10 to 15 cm) in diameter.
2. Prepare the log by drilling numerous 1 inch holes (2.5 cm) 1 to 1.5 inches (2.5 to 5 cm) deep in various places along the log.
3. Fill these holes with suet or a mixture of suet and seeds.
4. Attach an eye bolt to the top, from which the log can be suspended in a tree or from a pole.

BIRDS ATTRACTED - This suet log should attract the same species as the suet bag – woodpeckers, nuthatches, chickadees

It might be fun to try filling the holes with a peanut butter/seed mixture to see what species it may attract.

It is a good idea to really think about feeding the birds... in the winter, it is not very easy for the birds to find food.

Please remember one thing. If you start feeding the birds... they will come to expect food to be there for them... so if you start... plan to feed them ALL winter long!

BIRDS AND BIRDERS

D K I S C W G E H J K G C Z A
 S N A X Y C O C Q D X H X B Q
 N E W E Z A N R N X I U C U P
 B O H V B I J V R C A X Y H S
 T L W C F S M Y K A J I T W G
 S D U D T M O A E R P Z W M X
 E I L E N A D R Z R M S O T G
 P O S C J E H L G P G R O P G
 G T O K E A G T F S S E D Y P
 P I N E I Z Y O U U M D P O R
 A A K V A N G S M N M P E J H
 D J K K M S S R Y D B O C W U
 R E D C A P P E D K E L K C V
 S E H C N I F K E D U L E R E
 B L U V F T P J J R G S R Q Z

WORD LIST

BLUEJAYS
 CHICKADEE
 FINCHES

GOLDFINCH
 GREYJAYS
 GROSBEAK

NUTHATCHES
 PINE
 REDCAPPED

REDPOLLS
 SISKINS
 SPARROW

WOODPECKER

SOLUTIONS

BIRDS AND BIRDERS

+ K + S + W + + H + + + C + +
 S + A + Y + O C + + + H + + +
 + E + E + A N R + + I + + + +
 B + H + B I J + R C + + + + +
 + L + C F S + Y K A + + + + +
 S + U D T + O A E + P + W + +
 + I L E + A D R + R + S O + +
 + O S + J E H + G + G R O + +
 G + + K E A + T + + + E D + +
 P I N E I + Y + U + + D P + +
 + + + + + N + S + N + P E + +
 + + + + + + S + + + + O C + +
 R E D C A P P E D + + L K + +
 S E H C N I F + + + + L E + +
 + + + + + + + + + + S R + +

OVER,DOWN,DIRECTION

BLUEJAYS (1,4,SE)

CHICKADEE (13,1,SW)

FINCHES (7,14,W)

GOLDFINCH (1,9,NE)

GREYJAYS (11,8,NW)

GROSBEAK (9,8,NW)

NUTHATCHES (10,11,NW)

PINE (1,10,E)

REDCAPPED (1,13,E)

REDPOLLS (12,8,S)

SISKINS (1,6,SE)

SPARROW (12,7,NW)

WOODPECKER (13,6,S)

MORE! MORE! MORE!

1. Compare the popularity of different feeders with different birds.
2. Nail a pie tin to the deck and fill with seeds. (not good if feeder is near cats or squirrels).
3. Identify the birds that visit your feeder.
4. Participate in your local Bird Count Survey. Contact your local Nature Conservatory to get details.

RESOURCES USED TO CREATE THIS MODULE

1. R. T. Peterson. A Field Guide to the Birds, Houghton Mifflin Co., Boston MA., 1980
2. Robbins, B. Bruun and H.S. Zim, Birds of North America
3. Golden Press, New York, NY, 1983.
4. Cornell Laboratory of Ornithology, Common Feeder Birds of North America, Ithaca, NY 1993
5. 1999 Loraine Wauer-Ferus www.BillyBear4Kids.com
6. www.puzzlemaker.school.discovery.com

ENVIRONMENT MODULE: **OUTDOORSMAN**

Outdoor Survival

“A man can live for forty days without food, three days without water, eight minutes without air, but only a second or two without hope.” Unknown

WHAT WILL WE LEARN?

In this module you will learn:

1. Tips to survive if you get lost in the woods
2. How to prevent and treat hypothermia
3. How to build a fire

WHO CAN HELP?

This project will need an instructor or experienced supervisor. Your mom or dad may enjoy backpacking, hunting, or some other outdoor activity, but if they do, make sure you ask whether they have experience or training in first aid or survival. Scout Leaders and Junior Forest Warden Leaders are good possibilities. Safety instructors, specifically survival first aid, people who work in the forestry or wildlife industries, may also have the background you need.

WHAT DO YOU NEED?

1. You will need to find a park or piece of private land with some forest.
2. If you know where to find an evergreen deadfall or some branches from a forestry company, or tree pruning business, you can use these to build a shelter.
3. Blanket, survival blanket, or sleeping bag
4. Wool toque and sweater
5. Waterproof matches or lighter
6. Tinder, kindling, and wood
7. Thermos of water
8. Tea bag
9. Small pot to boil water
10. Cups

LET'S GET EDUCATED!

Finding a good location for your outdoor survival project is the key to success. Parks in the city will have restrictions on building fires, using deadfall and wood, or building shelters. Check with the park officers or the town administrators if you can bring your own boughs and poles to build a shelter. Build a fire in the fire pits.

If you are on private land and can build shelters and fires, remember supervision will be even more important. Look for a location with a few species of trees and make sure there are open spaces that would be appropriate for building a fire.

Tree Hugging Can Save Your Life

Ever hear the phrase "tree hugger?" Well in this project you are going to be one. When people get lost in the bush, they often wander and get cold and tired and sometimes don't survive, because they don't sit still and wait for help to arrive. The principles for staying alive when you are lost are:

1. When you realize you are lost stop. Don't wander. Look for familiar landmarks. Make a tree your home base. If you think hugging a tree is too friendly for a first visit, lean against it, talk to it, name it, do whatever just don't leave. Trees get very offended if their new friends leave them. If you wander off you will only make it harder for searchers to find you.
 2. Now that you've made friends with your tree you might spend your time making shelter. If there are lots of evergreen trees around, you can break branches from the bottom of them and lay them upside down against a pole or branch leaning against your tree. Place the branches on the windward side of the pole and create a small windbreak that you can stay warm behind.
 3. Put some branches on the ground to make a pallet to keep you off the cold ground.
- *Remember to only gather branches from nearby trees, don't wander more than a few feet. The key to survival is staying as dry as you can and not wandering off. (Besides your tree could get lonely.)**

Keep A Warm Heart

The biggest threat to your survival is hypothermia. Hypothermia is a condition the body develops when its core temperature lowers two degrees. It can be fatal. Our normal body temperature is 39 degrees C and if your body temperature lowers to 37 degrees C you are considered hypothermic. This condition causes disorientation and can often cause the individual to make life-threatening decisions.

Hypothermia is caused by exposure to cool air or water and is accelerated by wet or damp clothing, wind or exhaustion. When your body starts to cool, you will shiver and as the shivering gets more severe, the possibility of hypothermia develops.

Signs And Symptoms Of Hypothermia

1. Uncontrollable bouts of shivering
2. Slurred, slow or incoherent speech
3. Memory lapses
4. Fumbling and stumbling
5. Drowsiness or inability to wake after a rest

An Ounce Of Prevention Is Worth A Pound Of Cure

1. Dress for the weather. Your mother has been nagging you for a reason. Remember most of your body heat escapes through your head and torso.
 - Do up your coat
 - Put on a toque
 - Bring rain gear. Even a plastic bag with holes cut in it can keep you dry in a pinch and save your life.
2. Check the weather before you leave.
3. Carry water, something to eat, and a set of matches.
4. Toss an emergency blanket in your bag if you plan on a trip into the bush. The shiny tinfoil like blanket preserves warmth and keeps you dry.

How To Treat Hypothermia

1. Cover up with your dry clothes, coats, toques, and blankets.
2. Move to shelter; even a rough evergreen branch windbreak can cut the cold and wind.
3. If possible remove wet clothes and replace with dry clothes or blankets.
4. Heat water and drink water or tea if possible.
5. If you are with someone, cuddle together and remember that you lose most of your heat through your head and torso.
6. Build a fire.

Building A Fire

One of the best ways to stay warm and keep up your spirits if you are lost is to build a fire. It also helps signal to searchers where you are, and provides a way to dry damp or wet clothes. If you plan to spend any time in the bush it is always a good idea to put a set of dry matches in a plastic container or a lighter in your pocket. Also pack some paper or tinder in a separate plastic bag in case you need to start a fire.

Three things that a fire needs to burn are:

1. Fuel (leaves, paper or wood)
2. Air (there is a reason people blow on a fire. The fire flares as it feeds on oxygen.)
3. Ignition (matches or lighter)

When making a fire one of the key challenges is making a good fire site. Find a spot in front of your shelter so that the radiant heat from the fire can warm your shelter, but far enough away that your shelter or nearby trees won't burn. Brush the leaves from the ground until you get to bare earth. If it is snowy, either find a few green stumps to build a fire platform or brush the snow away.

1. Find dry tinder branches and wood. Remember even a small fire can create a lot of heat and can be very helpful.
2. Place the tinder or paper on the fire site. Put dry kindling (small dry branches), on the tinder in a teepee shape or cabin shape alternating pieces of wood to give the burning fuel lots of room to draw oxygen.
3. Lay larger pieces of wood nearby to use when the tinder and kindling starts to burn.
4. Using your body as a wind-break, put the match or lighter to the kindling and start the tinder on fire.
5. When you have a flame add small amounts of tinder and kindling as the fire catches.
6. When you have the tinder and kindling burning well, add a piece of wood and let it catch and burn. Then add a piece or two more and let it burn.

***Remember to conserve your wood supply as you will want to stay warm as long as possible.**

LET'S HAVE SOME FUN!

SURVIVAL ACTIVITY

1. Plan for your day outside by dressing for the weather. Remember that you should prepare for weather changes.
2. Each of the members of your group should identify:
 - Ways to prevent hypothermia
 - Signs of hypothermia
3. As a group, find a spot you can pretend to be lost and hug a tree. When you have picked a tree, name it, get to know it, and if you are feeling particularly silly tell your group why it got its name, and what its likes and dislikes are.
4. Tell your group why you picked that tree.
 - Did it provide good shelter?
 - Was it large enough to find easily?
5. As a group construct a small one person shelter using whatever materials you have on hand. It does not have to be pretty; it just has to provide some shelter from the elements.
6. Adult supervision is necessary for this part of the module.
 - Prepare a fire site
 - Build a fire using materials you find or bring

ROLE PLAY

One member of your group has started to talk very strangely and is shivering very hard. Remembering what you have learned about hypothermia, role play how to treat this person using the materials on hand.

- What would you do if he/she was wet?
- What would you do if he/she started to drift off to sleep?
- How would not having a fire change how you would treat the individual?

HYPOTHERMIA HUNT

D R O W S Y I R H L L F S T R
 S J A N P R O C U W U U P M E
 G O P O Z S E Q B L G M V M T
 K F O R G E T F U L S B L R L
 Q Z N R P O K U T E A L A R E
 O K E S Q X S P M N B I T B H
 X G P U Q Z R O G B N N J E S
 T R E V O C K N T G L G R N C
 T E S G T C I R E O R I Y H U
 A K K L M R X A R L F Q N S D
 O T Z N E X R E H T A E W G D
 C K K V A E E L U J L K X J L
 L J I D L L P A O G M I X S E
 Y H N N L G B Y L L Q U R P Z
 S Q T X Y K R U N F T X A F P

WORD LIST

| | | | |
|-----------|-----------|-----------|---------|
| BLANKET | SPEECH | SHELTER | FIRE |
| FORGETFUL | COVER | TEA | SLEEPY |
| SLUR | RAINGEAR | DROWSY | WEATHER |
| COAT | STUMBLING | SHIVERING | |
| FUMBLING | CUDDLE | TOQUE | |

HYPOTHERMIA HUNT SOLUTION

+ T + + A + + + + + Y + + L +
 + + A E + + + + + S + + U + +
 + + T O + + W + W + + F + + +
 + T + + C E + O + + T + + + +
 + O + + A + R + + E + + + + R
 G Q + T + D + + G + + + + + A
 N U H R U L S R S L E E P Y I
 I E C + + + O F + + + + + N
 R R E + + F S T U M B L I N G
 E T E K N A L B C M + + + E E
 V + P T + + + O + U B + + R A
 I + S + L + V + + + D L + I R
 H + + + + E + + + + + D I F +
 S + + + R + H + + + + + L N +
 + + + + + + + S + + + + + E G

MORE! MORE! MORE!

1. Take a First Aid Course or hire an instructor to teach your whole 4-H club.
2. Go on a day trip with an experienced canoer, hiker or climber.
3. Make a survival kit

RESOURCES USED TO CREATE THIS MODULE

Alberta Conservation and Hunter Education, Alberta Sustainable Resources, Edmonton, 2004

ENVIRONMENT MODULE:

RANGE AND PASTURE MANAGEMENT

Most livestock operations have both range and pasture land. WAIT A MINUTE!! Are they not the same thing? Read on and find out the differences.

WHAT WILL WE LEARN?

In this module you will look at both range and pasture. You will discover the difference between them and find out why they are valuable to livestock producers.

WHO CAN HELP?

Most producers of cattle, bison, sheep, etc., use either range or pasture land, or both, and would be able to assist you with this module.

WHAT DO YOU NEED?

Everything you need to complete this module is included.

LET'S GET EDUCATED!

Range land and pasture land are two different types of land - both are used for growing feed for animals.

Pasture is land that grows plants put there by man. Pasture land is usually more productive than range land.

Range is land not suited for growing crops because it is too dry, rocky or rolling. Range land grows native plants - those that naturally grow in that area.

Looking After The Environment

Farmers and ranchers know that saving the land for future generations depends on how they care for it today. They must be very careful of the environment. Growing grasses and legumes for feed is an excellent way to protect land from erosion. The land that grows these grasses and legumes, covers a large area of Canada. Most of this land can only grow grasses or other leafy vegetation, as it is too rocky, dry or marshy to grow food for humans.

What Is Managing Your Range And Pasture?

To produce the highest yield and best quality feed, the farmer must properly manage the land and make careful use of the water available to him.

Managing your range and pasture land is 'the plan for the care and use of it'. This plan allows you to get the most product (meat, live animal, wool) per acre of land, while keeping the land in reusable condition. You want to make sure you do not harm the plants, soil and water.

Without a plan, your range and pasture would not stay in good condition and you would be unable to get the same return from it in the future.

Range and pasture management is much more than turning your cattle out to graze.

- By caring for the land, you make the best plants grow at the fastest rate. These plants are harvested by the animal, turning the plant into products, which provide an income for the farm.
- With good management, you will always have a reserve of feed. If cattle grazing is not controlled, they will overgraze the land, eventually killing many of the popular plants. Those plants that are not liked by the animals and are usually the least valuable, will grow and take over the pasture, reducing its quality.
- With proper management, you can keep a good plant cover. The grasses and plants will have strong root systems. This plant cover will help to protect the soil from erosion.

Rules For Proper Management

1. Use the right season for grazing.

Some plants (native western wheatgrass and Russian rye grass) are cool season grasses. They begin to grow early in the spring. Warm season plants (blue gamma grass) do not begin to grow until the weather becomes warmer.

In the spring, allow the plants to grow to a height of 15cm before you put your cattle out to graze. If there are lots of legumes, such as alfalfa and clover, allow them to grow to a height of 25cm.

2. Graze the right number of animals.

Do not let too many animals graze any area. Change the number of animals grazing your land so that half of the annual grass is left at the end of the grazing season. Remember that the green leaves make the food for the roots to grow. "It takes grass to make grass."

3. Use the right amount of time for grazing.

Good grazing must include a rest period for the plants. Once the plants and grasses are down to 8cm in height, move the cattle to another area for about four weeks.

4. Know the range and pasture plants

It is important to be able to recognize plants which are poisonous and can harm your livestock. You will need to get rid of them or fence them out. Three plants which can poison your cattle are:

Larkspur**Water Hemlock****Arrowgrass****Range And Pasture Plants**

- 1. Grasses** are the most important range plant group. They have hollow, jointed stems and the leaves are in two rows on the stem. Examples are rough fescue, quackgrass, smooth brome grass, orchard grass, and cheatgrass brome.
- 2. Grasslike** plants look like grass but they do not have a hollow stem and the stem is not jointed. Veins in the leaves are usually net like. They include SEDGES (triangular stems) and RUSHES (round stems).
- 3. Forbs** are non grassy plants with annual stems or tops. They include range weeds and flowered. Examples are gumweed, skelton, tapertip hawksbeard, bull thistle and tumbling mustard.
- 4. Shrubs** are woody plants with stems and buds which winter above the ground and stems which branch near the base of the plant. Examples are sagebrush, wolf willow, rabbitbrush and bitterbrush.

LET'S HAVE SOME FUN!

R & P WORD SCRAMBLE

Below are some important words you have learned in this unit. Unscramble the letters and write the unscrambled words in the blanks.

1. OSNOPISUO _____
2. ZGIRANG _____
3. SGARS _____
4. GEMNAMTANE _____
5. TPALN _____
6. SOERNOI _____
7. TWEAR _____
8. LISO _____
9. RETPASU _____
10. GENAR _____
11. DEFE _____
12. VETANI _____
13. ONRENMTENVI _____
14. MESGULE _____
15. ROTPTCE _____

SOLUTIONS!

| | |
|-----------------|--------------------|
| 1. OSNOPISUO | POISONOUS |
| 2. ZGIRANG | GRAZING |
| 3. SGARS | GRASS |
| 4. GEMNAMTANE | MANAGEMENT |
| 5. TPALN | PLANT |
| 6. SOERNOI | EROSION |
| 7. TWEAR | WATER |
| 8. LISO | SOIL |
| 9. RETPASU | PASTURE |
| 10. GENAR | RANGE |
| 11. DEFE | FEED |
| 12. VETANI | NATIVE |
| 13. ONRENMTENVI | ENVIRONMENT |
| 14. MESGULE | LEGUMES |
| 15. ROTPTCE | PROTECT |

MORE! MORE! MORE!

1. Visit a local livestock producer during the grazing months and talk with him/her about some of the things you have learned in this module.
 - Take a look at their pastures and/or rangelands. Have them help you identify the different types of grasses and legumes that are growing.
 - Discuss the grazing system the farmer/rancher uses.
 - Talk to them about the different types of plants that grow on the land – are they native or did he/she plant them? Identify the plants according to the four categories described in the 'Let's Get Educated' section of this module. Ask the farmer/rancher about poisonous plants, perhaps he/she can point some out to you.
 - Map out a rancher's pastures and rangelands. Show the fences and water bodies and identify whether the land is range land or pasture land. Add anything you feel would be of interest to your map. You could even show how the rancher intends to graze each of the fields, considering the number of cattle he/she will put in each one, and how long they will graze each field.
2. To learn more about range and pasture management check with your leader to see if you can have a look at some of the resources put out by the 4-H Branch for the Range Management Project.

RESOURCES USED IN THIS MODULE

1. Alberta 4-H Beef Project Book – Level 1
2. Alberta 4-H Bison Project Book – Level 1

ENVIRONMENT MODULE: **WILDLIFE HABITAT**

Building A Terrarium

WHAT WILL WE LEARN?

In this module you will learn about the interaction of plants in their environment by building a terrarium.

WHO CAN HELP?

You do not need an adult to lead this session but if you know a science teacher, parent, 4H leader who can help it may make it easier. Your local plant nursery or greenhouse has lots of people who could give you some advice on choosing plants for your terrarium.

WHAT DO YOU NEED?

- A clear container with a lid, jar, bottle, cookie jar, fish bowl
- Pebbles to cover the bottom of the container to ½ inch
- Sterilized potting soil
- Three or four plants with similar watering needs
- Charcoal
- Piece of nylon stockings to cover pebbles and charcoal
- Two to four plants with similar watering needs

LET'S HAVE SOME FUN!

Designing and Building a Terrarium

A terrarium is a collection of small plants growing in a transparent, enclosed container.

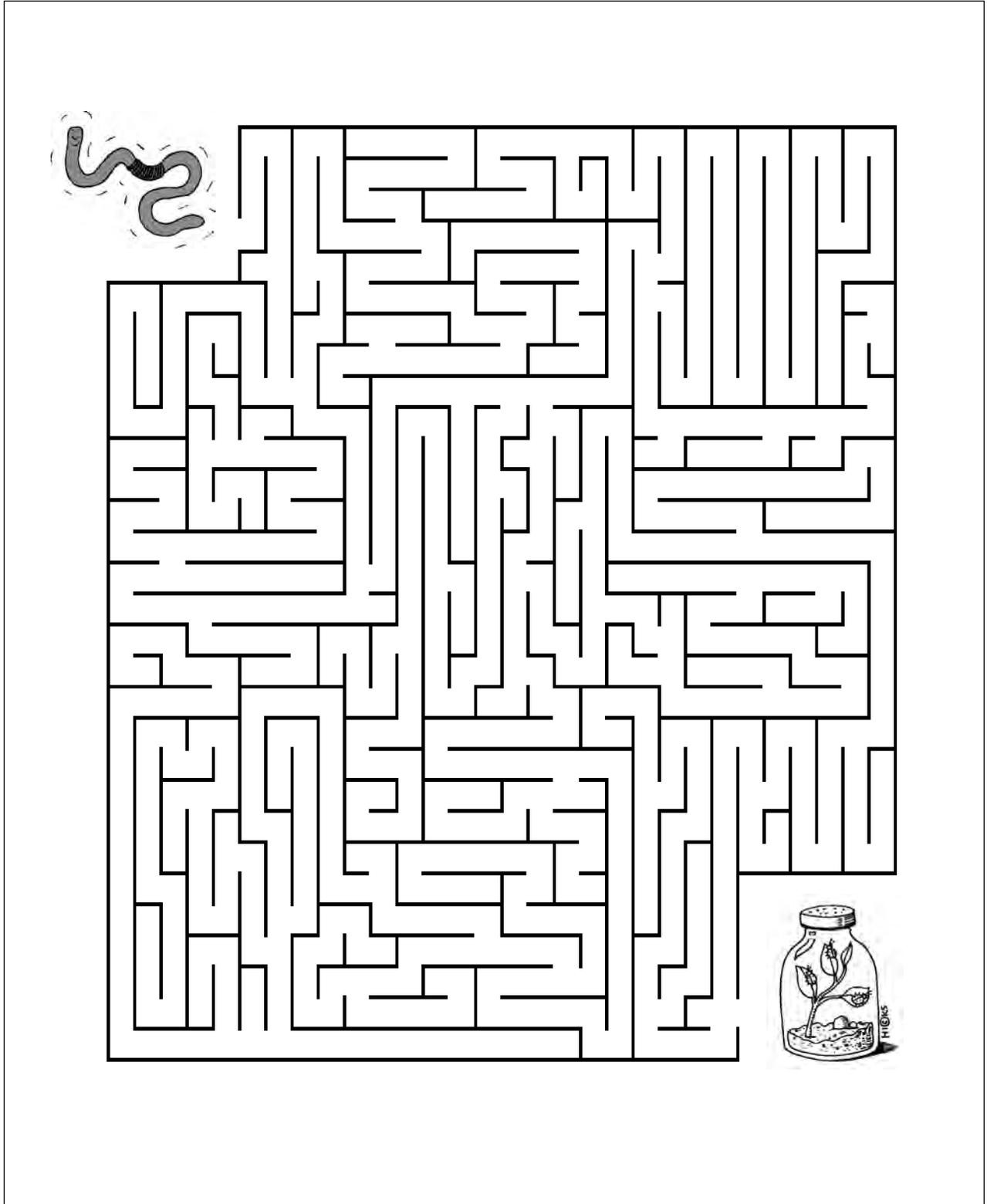
1. Select a container big enough to hold 2 or more plants such as a fish bowl, candy jar, aquarium, canning jar or a large bottle
2. Line the bottom of the container with pea-size gravel to provide drainage for excess water.
3. Add a thin layer of charcoal over the drainage materials to absorb unpleasant odors which can occur when terrariums are over watered
4. Place a piece of synthetic fabric over the drainage layer to prevent soil from settling into it and destroying its ability to drain.
5. Next, add enough premixed, sterilized soil mix to fill approximately 1/5 of the container, being careful to keep the soil off the walls of the container
6. If the terrarium is to be viewed from all sides, the largest plant should be planted near the center.
7. Place accessories such as stones, figurines, sand and driftwood at the desired location in the terrarium.
8. Water plants sparingly since excess water will saturate the soil and may cause disease.
9. Cover and place the terrarium where it is exposed to bright indirect light usually in a northeast or north window. Avoid direct sunlight, as this will increase the air temperature inside the terrarium and may burn the plants.
10. If the sides of the container become foggy due to the condensation of water, remove the lid until all condensation evaporates; then replace the lid. Terrariums should only be watered when the soil is dry to the touch.
11. If fertilizer is added at planting, there is no need to add more unless the plants begin to develop a slight yellow coloration. If this happens, apply a water soluble house plant fertilizer at 1/4 the recommended rate.

Plants for Terrariums

| | | | |
|---------------------|---------------------|---------------------|----------------|
| Irish Moss | Liverworts | Maidenhair Fern | Mosses |
| Partridgeberry | Violet | Wild Strawberry | Foliage Plants |
| Baby's tears | Cast Iron Plant | Dracaena | Fern Asparagus |
| Fernleaf-inch plant | Jade Plant | Norfolk-Island pine | Prayer Plant |
| Wax plant | Strawberry Geranium | Swedish Ivy | |

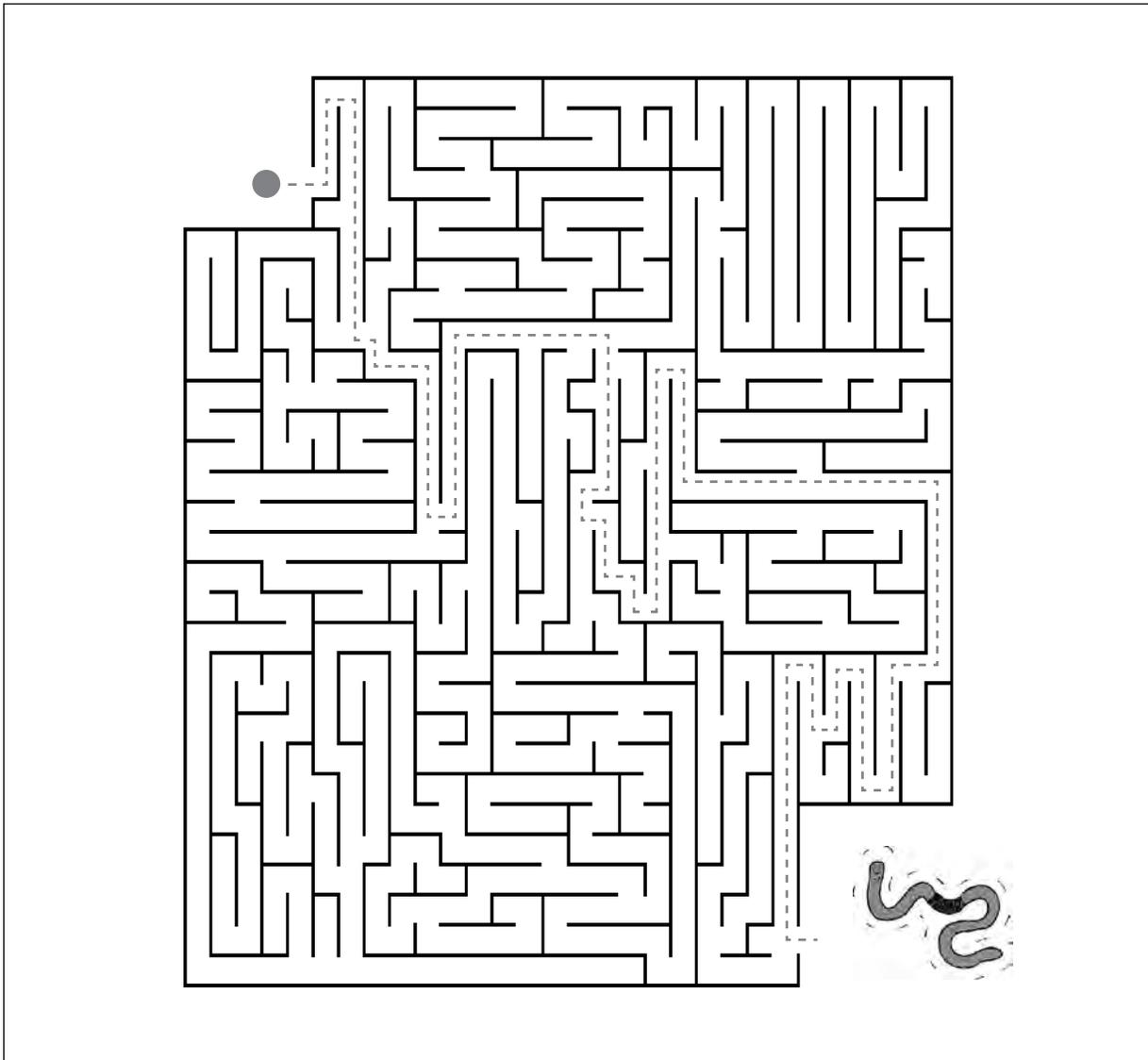
MOLLY'S MAZE!

Help Molly the earthworm find her way through the maze of tunnels back to her terrarium home.



SOLUTIONS!

MOLLY'S MAZE



MORE! MORE! MORE!

1. Add ants or earth worms to your terrarium

RESOURCES USED TO CREATE THIS MODULE

1. Kathleen C. Ruppert and Robert J. Black, Environmental Horticulture Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida June 1996. Reviewed October 2003
2. <http://edis.ifas.ufl.edu>.
3. www.puzzlemaker.school.discovery.com

HORSE MODULE: **HORSE**

Grooming

WHAT WILL WE LEARN?

In this module you will learn how to groom a horse and to employ some basic safety rules when working a horse from the ground.

WHO CAN HELP?

Horses are popular and you can find those familiar with the creatures quite easily. Find someone who has experience with horses, local stables, 4-H clubs.

WHAT DO YOU NEED?

A horse to practice on! Make sure the animal is calm and used to kids.

LET'S GET EDUCATED!

Grooming Horses

Grooming is important in maintaining the health and happiness of your horse. Domesticated horses must rely on humans to provide the opportunity for skin care. Grooming, no matter who does it (horses or humans) increases the circulation to the skin which then releases the oils that provide luster to the horse's coat and can help identify any abnormalities or wounds.

Safety First

Following are a few common horse sense practices that will reduce the chances of an accident:

- Do not jump around, move suddenly, or behave nervously around horses. All of these actions result in a nervous horse that is unsafe to work around.
- Hard-toed shoes or boots should be worn when working around horses. One of the most common horse-related injuries is having ones feet stepped on.
- Always let the horse know what you intend to do. Avoid quick, sudden movements.
- Keep all equipment away from the immediate work area. That way neither the horse nor you can trip on it.

LET'S HAVE SOME FUN!

The Grooming Process

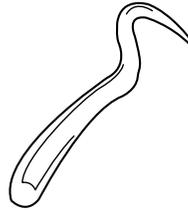
1. Start grooming on the near or left side of the neck and work towards the rear of the horse.
 - Areas that have few muscles and bones near the surface, such as the face, legs and hips, should be groomed carefully and gently.
 - Stand near the horse as you groom it. Make fluid, not quick jerky movements that are likely to startle the horse.
 - When changing sides, either walk far enough away to avoid getting kicked or stay close to the horse's rear quarter with a hand on the rump, to break the momentum of the kick.
 - Never step over the lead rope or crossties (which should not be low enough to step over anyway).
 - Never crawl under the horse's belly. Even the most docile horse can spook and step on you.
2. The grooming process begins with currying.
 - The purpose of currying is to loosen caked-on dirt and to bring dust and dandruff to the surface for easy removal.
 - Start currying at the neck and firmly brush the hair in circular movements while working towards the rear.
 - Pay particular attention to areas you cannot see such as the belly and underline, between the legs and behind the ears, because they are often forgotten.
 - Vigorous circular movements when currying increases circulation to the skin.
 - Be careful not to curry too vigorously on bony areas, and do not use a curry comb on the face. A rubber curry mitt or soft rubber curry should be used on the bony areas and the face.
3. Brushing with a stiff body brush should follow currying.
 - Brushing returns the hair to its normal position and removes the dirt brought to the surface by currying.
 - Brush with short, firm strokes not long fluid strokes.
 - While brushing with one hand, hold the curry in the other to clean out the brush every few strokes.
 - Do not use the stiff brush on the face.
 - Remember to brush the belly and underline. Be aware that some horses are ticklish there and may become fidgety.
 - During fly season, particularly, a horse often thrusts its hind leg forward to chase flies from the abdomen; therefore, it is wise to keep your head and body out of striking range when working in that area.

4. Follow the stiff brushing by brushing with a soft brush.
 - This second brushing removes the dust left by the coarser, stiff brush and brings oils to the surface, giving a lustrous shine to the horses coat.
 - The face can also be brushed with the finer, soft brush. Before grooming the head, untie the horse and hold it by the halter.
 - With a soft brush start at the forehead and move down the face, brushing with the grain of the hair. Avoid the eyes. Be gentle around the nose and mouth. Some horses are sensitive or ticklish in these areas and may try to move their heads to avoid the brush.
 - When grooming the legs, bend at the hips or remain in a squat position. Do not sit on the ground or rest one or both knees on the ground. These are committed positions, which means once in them, it takes longer than a split second to get out of them. In committed positions, if the horse should become frightened, the time it would take you to move away from scrambling feet and the chance of becoming seriously injured is increased. It always helps to have your free hand resting on the horses body while working on the legs. This way you can feel the muscles tense up and be warned that the horse is about to panic.
5. Grooming the mane and tail differs according to the breed and use of the horse.
 - For most hunters and stock horses, the mane and tail are brushed with either a Sarvis curry or a mane and tail comb.
 - A horse with fine, thin hair that falls out easily should have its mane and tail groomed frequently with nothing more severe than a soft brush, and the knots separated with ones fingers to limit hair loss.
 - Burrs and knots should not be combed out. Rather pull hairs away from the burr or knot until it is free. This method prevents excessive hair loss.
 - When brushing the tail, always stand to the side of the horse.
 - During fly season it is good to apply a liquid fly repellent. Be cautious when using repellents as they may be harmful to touch or breath in. Follow the manufacturers directions.

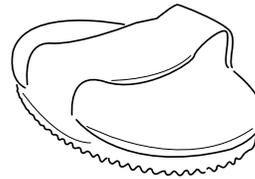
GROOMING TOOLS

Below are pictures of tools that may be used to groom horses. Draw a line to the right tool. Color the tools.

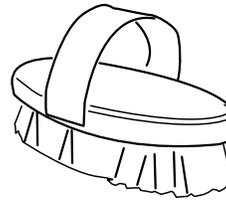
BODY BRUSH



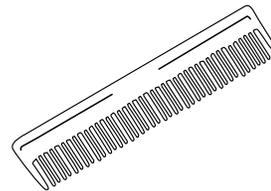
HOOF PICK



MANE COMB



CURRY COMB



What do you give a pony with a cold?

COUGH STIRRUP

MANE AND TAIL!

E Y R R U C E P
 N J E F L Z K U
 I V P N Y Q N I
 H D E T H D J F
 S A L X M T O V
 U L L S S O S B
 R L A T H E R K
 B I N S E C T R
 T M T B D R S X
 T A O C K D R O
 Y N S C H B P Y
 E E I N F J T C
 S P E R J N L U
 E X N G T X N Q
 N M C N P T Y C

WORD LIST

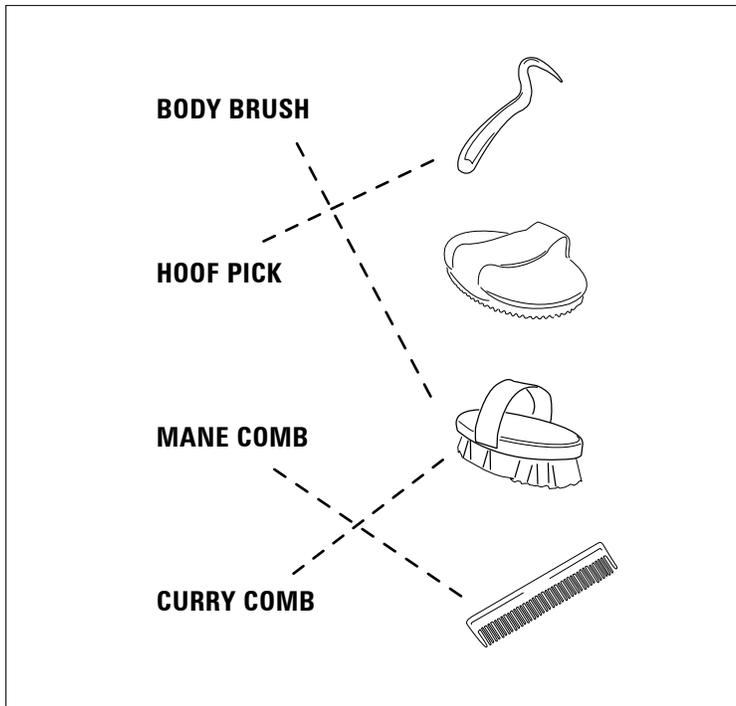
| | | | |
|--------|-----------|--------|-------|
| BODY | HOOF | SHED | CURRY |
| HALTER | REPELLANT | COMB | MANE |
| PICK | COAT | LATHER | |
| BRUSH | INSECT | SHINE | |

What animal goes to bed with his shoes on?

A HORSE!

SOLUTIONS!

GROOMING TOOLS



MANE AND TAIL!

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| E | Y | R | R | U | C | + | + |
| N | + | E | + | + | + | + | + |
| I | + | P | + | Y | + | + | + |
| H | + | E | + | + | D | + | F |
| S | A | L | + | + | + | O | + |
| U | + | L | + | S | O | + | B |
| R | L | A | T | H | E | R | + |
| B | I | N | S | E | C | T | + |
| + | M | T | + | D | R | + | + |
| T | A | O | C | K | + | + | + |
| + | N | + | C | + | + | + | + |
| + | E | I | + | + | + | + | + |
| + | P | + | + | + | + | + | + |
| + | + | + | + | + | + | + | + |

OVER, DOWN, DIRECTION

BODY (8,6,NW)
 HALTER (1,4,SE)
 PICK (2,13,NE)
 BRUSH (1,8,N)
 HOOF (5,7,NE)
 REPELLANT (3,1,S)
 COAT (4,10,W)
 INSECT (2,8,E)
 SHED (5,6,S)
 COMB (4,11,NW)
 LATHER (2,7,E)
 SHINE (1,5,N)
 CURRY (6,1,W)
 MANE (2,9,S)

MORE! MORE! MORE!

1. Take a class in basic horsemanship.

RESOURCES USED TO CREATE THIS MODULE

1. Dawn M. Richard and Karyn Malinowski, Ph.D., Rutgers Cooperative Extension State University of New Jersey. Publication date: November 1988.
2. www.puzzlemaker.school.discovery.com
3. www.ahajokes.com

LEADERSHIP MODULE: **BRAINSTORMING**

WHAT WILL WE LEARN?

In this module individuals will learn how to brainstorm, identify creative solutions to a problem and thereby gain participation of the whole group.

WHO CAN HELP?

Here you don't need any adult to help. Choose a member of your group who is a good listener and is confident enough to refocus the group if the discussion goes off track. Maybe this would be a good time for your Vice President to take a lead role.

WHAT DO YOU NEED?

- Flip chart
- Pens
- Creativity
- An issue or challenge to solve:
 - What special events or group activities does your group want to do this year
 - How can the group attract more members
 - How will the group raise money for their ski trip

LETS GET EDUCATED!

How to Brainstorm

Brainstorming is an excellent way of developing many creative solutions to a problem. It works by focusing on a problem, and then coming up with as many radical solutions to it as possible. Ideas should deliberately be as broad and odd as possible, and should be developed as fast as possible.

During brainstorming sessions there should be no criticism of ideas. You are trying to open possibilities and break down wrong assumptions about the limits of the problem. Judgments and analysis at this stage will stunt idea generation.

Brainstorming Rules

Brainstorming is a process of spontaneously thinking and sharing as many ideas as possible about a topic without being judgmental. Brainstorming is an important part of the problem solving process. We suggest following these GUIDELINES during the brainstorming process:

1. Everyone is welcome!

2. Write all spoken ideas down.

All ideas are valuable!

3. No criticism of ideas!

This includes your ideas and other people's ideas!

4. Focus on sharing many ideas!

The more ideas the better!

5. Hitchhiking or piggybacking is welcome!

That occurs when one idea sparks another similar idea, or enhances an idea given by another.

6. Freewheeling is encouraged!

The sky is the limit; outrageous and humorous ideas are acceptable.

Ideas should only be evaluated once the brainstorming session has finished - you can then explore solutions further using conventional approaches.

LETS HAVE SOME FUN!

To run a group brainstorming session effectively, do the following:

1. Clearly define the problem you want solved, and lay out any criteria to be met.
2. Keep the session focused on the problem.
3. Ensure that no one criticizes or evaluates ideas during the session.
4. Encourage an enthusiastic, uncritical attitude among members of the group. Try to get everyone to contribute and develop ideas, including the quietest members of the group.
5. Let people have fun brainstorming. Encourage them to come up with as many ideas as possible, from solidly practical ones to wildly impractical ones. **Welcome creativity!**
6. Ensure that no train of thought is followed for too long.
7. Encourage people to develop other people's ideas, or to use other ideas to create new ones.
8. Appoint one person to jot down ideas that come out of the session. A good way to do this is to use a flip chart. This should be studied and evaluated after the session.

9. Once you have completed the brainstorming session have the members of the group select the top three ideas.
 - This can be done by voting on the ideas that you have collected on the flipchart.
 - Each member can have three votes – you can use all three votes for one idea (if you feel strongly about it), or you can use each vote for one idea.
 - Once all the votes have been tallied you will know the three most popular ideas.
 - If your brainstorming session was about a problem that was relevant to your club you would have the three most popular solutions/ideas.

MORE! MORE! MORE!

1. Investigate mind mapping.
2. Present your ideas to the rest of your club.

RESOURCES USED TO CREATE THIS MODULE

1. <http://www.mindtools.com/brainstm.html>
2. <http://perspectives-la.com/images/img.brainstorm.gif> Page curators Shannon Ricles, Kevin Sparks
3. http://whyfiles.larc.nasa.gov/text/kids/Research_Rack

LEADERSHIP MODULE: **MEETINGS**

Who says meetings can't be fun?



WHAT WILL WE LEARN?

Meetings are a part of life no matter what organization you belong to, but do these meetings have to be boring and monotonous?

In this module you will prepare and facilitate two activities that can be used at a regular club meeting. This module allows you to explore leadership, and at the same time bring some fun back into the club's meetings.

WHO CAN HELP?

It may be helpful for you to enlist the assistance of a senior member, leader or parent.

WHAT DO YOU NEED?

There are materials required that are specific to each activity.

LET'S GET EDUCATED!

You will need to become familiar with the activities included in the Let's Have Some Fun section below before arriving at a meeting to facilitate them. These two activities can be done at the same meeting or be done at two separate meetings.

LET'S HAVE SOME FUN!

ACTIVITY 1 - COMIC STRIP FRAMEUP

This is an activity that is used to put members into groups or teams.

Skills Used/Developed:

Communication, creating a positive environment, group dynamics, leadership, problem solving and team building.

Materials:

Comic strips cut apart so that each participant has a piece of a strip.

Benefits:

- Presents a problem that needs to be solved.
- Encourages communication between members.
- Helps members get to know one another.
- Creates bonds between members.
- Creates an opportunity for interaction.

Preparation:

- 1) Depending on the number and size of groups needed, cut out several different comic strips.
- 2) Cut up the individual frames and place them in a hat.

Instructions:

- 1) Players draw a comic frame from the hat.
- 2) They hold up their frames, mingle, and match up with everyone with the same comic strip. For example, frames from the "Peanuts" strip make a group; "Garfield," another; and so on.
- 3) Groups must put their comic strip together so that the frames are in the correct order. As facilitator, you can have each group stand facing everyone, and one at a time, read or show their comic strip.

Conclusion:

As a young 4-H member you have not yet been involved in a lot of leadership activities. This module is designed to give you a brief glimpse into leadership roles in a 4-H club. All activities and games require skills on the part of the participants. Each activity has benefits that are helpful in developing these skills. Talk to your leader about the benefits of the activity and the skills used/developed while playing the game.

LET'S HAVE SOME FUN!

ACTIVITY 2 - ARE YOU GOING TO KEEP YOUR NEIGHBOUR?

In this game members take turns being the leader.

Skills Used/Developed

Creating a positive environment, group dynamics and leadership.

Materials:

Chairs for all participants except one.

Benefits:

- Members have fun while becoming more comfortable leading.
- Members interact with one another.

Set-Up:

- 1) Arrange chairs in a circle.
- 2) There should be one chair for each participant except one – this will be the leader.

Instructions:

- 1) Have the participants sit in chairs.
- 2) Ask for a volunteer to act as the leader.
- 3) The leader should stand in the center of the circle.
- 4) Each group member, including the leader, is given a number.
- 5) The leader then walks around the circle, stops and asks a member the question, "Are you going to keep your neighbor?"

There are two possible responses:

- If the response is "yes", everyone in the group, including the leader, must run for another chair. Whoever is left standing becomes the leader.
- The person may also say, "No, I will not keep my neighbors" (or whatever two numbers). The two people whose numbers have been called get up and move to take the seats on either side of the caller. The two people who have been sitting next to the caller, as well as the leader, must scramble for the two seats vacated by those whose numbers were called. The person who ends up without a chair becomes the leader for the next round.

Conclusion:

You can continue playing this game as long as you like. Once everyone seems like they've played enough, talk to your leader about the **benefits** and **skills** used/developed while playing the game.

MORE! MORE! MORE!

If you would like to do some further work on meetings check out the following 4-H resources.

1. Conquering The Scene Stealers – Running Effective Meetings (DVD)
2. The Meeting Pack
3. The Fun Pack

If you would like to do further work on leadership check out the 4-H resource:

1. Leadership Project Material - new in 2005.

RESOURCES USED TO CREATE THIS MODULE

1. The Fun Pack written by Kelly Schram and Sherry Dechant - produced by the Alberta 4-H Branch

LIFE SKILLS MODULE: CLOTHING

Did you ever want to create your own wardrobe - wearing items that you made with your own hands? Well, here's your opportunity!!

WHAT WILL WE LEARN?

In this module you will learn some sewing machine terminology so that you can create your own pair of pyjama shorts or pants.

WHO CAN HELP?

There are many people that have a lot of experience sewing. Talk to neighbours, parents or friends and try to find someone that can assist you with this module.

WHAT DO YOU NEED?

You will need to purchase a pattern for pyjama pants/shorts. I suggest the Kwik Sew pattern #3074. This pattern gives directions for both pyjama shorts and pants and is a unisex pattern that gives different size options in one package.

LET'S GET EDUCATED!

- A. Straight Pins** – Pins should be fine, sharp and rustproof. Dressmaker pins with sharp points are suitable for woven fabrics and ball-point pins are suitable for knits or delicate fabrics.
- B. Hand Sewing Needles** – Needles are available in many types and sizes. Sharps are suitable for most hand sewing. They have round eyes that prevent the thread from slipping out. Choose a needle that is suitable in size for your fabric and thread. The larger the number, the smaller the needle. Chenille/candlewicking size 18/22 are great for beginner sewers as they have large eyes and sharp points.
- C. Machine Sewing Needles** – Machine sewing needles are available in assorted types and sizes. The smaller the size, the finer the needle.
- D. Thread** – Thread is available in many types and sizes. A polyester or a polyester/cotton blend thread can be used on most fabrics.
- E. Thimble** – A thimble fits the middle finger of your sewing hand. It is used to push a needle through fabric.
- F. Dressmaker Shears** – Dressmaker shears are more than 15cm long. They have bent handles with one handle larger than the other to fit two or more fingers and the smaller one the thumb. They are used to cut fabric.

Scissors – Not Shown In The Puzzle – Scissors are talked about here so you know the difference between scissors and shears. Scissors are less than 15cm long. They have identical finger and thumb handles. They are used for trimming, snipping and crafting.

- G. Pinking Shears** – Pinking shears cut out notches in the fabric. They are used for edging seams that will not ravel easily and trimming seam allowances. They work great for grading curved seams because they evenly reduce the bulk. They are also useful for decorative trimming.
- H. Embroidery Scissors** – Embroidery scissors are small scissors approximately 5 cm long with sharp points. They are ideal for cutting threads and removing stitches.
- I. Thread Clippers** – Thread clippers have small blades and sharp points. They are used to trim seams and clip threads.
- J. Seam Ripper** – A seam ripper has a curved blade with a sharp point. It is used to remove stitches.
- K. Sewing Gauge** – A sewing gauge is a 15 cm ruler with an adjustable marker. It is used to measure short lengths and turn up hems.
- L. Tape Measure** – A tape measure is numbered on both sides and has metal ends. The best tape measure starts with 1 on either side for ease when using. It should be flexible, but it should not stretch. A tape measure is useful for taking body measurements.
- M. Ruler** – A ruler and meter stick are used for taking long, straight measurements.
- N. Dressmaker Tracing Paper** – Dressmaker carbon is used to trace pattern marks to the wrong side of fabric. Choose a color close to the color of the fabric.
- O. Tracing Wheel** – A tracing wheel is used with dressmaker carbon to transfer pattern markings to fabric. Tracing wheels are available with a smooth or serrated wheel.
- P. Fabric Marking Pen** – Fabric marking pens are used to transfer pattern markings to a fabric. Several kinds are available including water soluble, evaporating and tailor's chalk.
- Q. Pincushions** – There are two basic pin cushions. The Tomato Pincushion is ideal for storing pins. It has attached an emery-filled strawberry that is perfect for cleaning pins and needles. The Magnetic Pincushion grabs pins, needles and bobbins. It is great for picking up pins that have spilled. They should not come near a computerized sewing machine as they will harm the memory.

LET'S HAVE SOME FUN!

SEWING TOOL SCRAMBLE

The items below need to be put away in the sewing box, however, before this is possible you must identify them. Use the words in the Let's Get Educated section above and write the proper tool name in each of the blanks.

























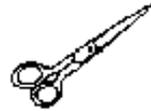
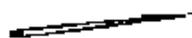










SOLUTIONS!**SEWING TOOL SCRAMBLE****FABRIC MARKING PEN****SEAM RIPPER****STRAIGHT PINS****SEWING MACHINE NEEDLE****PINKING SHEARS****EMBROIDERY SCISSORS****SEWING GAUGE****THREAD CLIPPERS****TAPE MEASURE****PIN CUSHIONS****RULER****TRACING WHEEL****DRESSMAKER
TRACING PAPER****THREAD****HAND SEWING NEEDLES****THIMBLE****DRESSMAKER SHEARS**

SEWING FUN

Now that you have learned about some of the sewing machine tools you might use for your sewing project you can begin to sew.

- With your leader, look through the pattern you selected to determine the type and quantity of fabric to purchase.
- Set a couple of dates to get together to cut out and sew your pyjama pants or shorts.
- If you don't have the necessary sewing supplies you may need to borrow some items from your helper.
- Follow the sewing directions that are included with the pattern. You may need some help with this.

GOOD LUCK AND HAVE FUN!!

MORE! MORE! MORE!

If you enjoyed this module and would like to pursue the clothing project further talk to your leader and see if you can look at the Clothing Project books. You may want to experiment and try sewing some other items. Have someone help you choose simple patterns. It's better to keep things simple at first so you don't get discouraged.

RESOURCES USED TO CREATE THIS MODULE

Information for this module was taken from the Clothing Level One 4-H Project books created by the 4-H Branch.

LIFE SKILLS MODULE: **EXCHANGE**

Keystrokes and Keypals

WHAT WILL WE LEARN?

You will learn about another culture and community by exchanging emails with a child of your age. You will also learn basic safety procedures when exchanging email with a keypal.

WHO CAN HELP?

You will need some supervision for your email exchange. A parent, librarian, or group leader needs to monitor the email exchange and ensure that no inappropriate information is exchanged.

WHAT DO YOU NEED?

Access to the internet in a supervised environment:

- School, library, or your home with your parents permission
- Computer

LET'S GET EDUCATED!

It would be a good idea to visit a library and talk to a librarian in a Computer Access Point. They could talk to you and your supervisor about good web use monitoring equipment. Yahoooligans, for example, is a well monitored site.

Here is a list of safety rules for children exchanging messages.

1. Only tell your first name.
2. Do not give out personal information such as your last name, home address, parent's work address, or telephone number.
3. Never share a password for an internet game or chat room with an online pen pal.
4. Never agree to meet in person with someone you meet online.
5. Notify your parent if you receive an obscene message.
6. Never send identifying pictures to your pen pal. Class pictures are fine to send as long as individuals are not named (for example, John is the third person in the second row).
7. Never attach pictures or other files to an e-mail message unless the people receiving the message have given you permission.

LET'S HAVE SOME FUN!

Email exchange is an interesting and quick way of exchanging information about your community. Remember to only exchange general information about your community, your interests etc. Any identifying information should be avoided.

Remember, interesting information about yourself, and your community, can include what you do in the winter, what kind of food you eat, what kinds of wildlife there is in your area. It's not necessary to ever exchange your name or the name of your community.

Now you're ready to begin exchanging emails. Follow the list of steps below:

1. Log into one of the websites recommended for keypal exchanges.
2. Choose an ID
3. Write an introduction.
 - Make it interesting. Maybe you would like to exchange information on stamp collecting. Perhaps you are a basketball fanatic and would like to exchange stats. Write this information into your introduction and maybe you will meet someone with the same interests.
 - Make it honest. Remember exaggerating or fibbing about your accomplishments will only set yourself for disappointment later on.
4. Be careful when first introducing yourself. Let a parent or supervisor read the first few exchanges so that everything seems on the up and up.
5. If something seems strange or uncomfortable ask your supervisor or parent before answering.
6. Don't feel bad about discontinuing contact if you feel uncomfortable.

Most importantly have fun!

KEYSTROKES AND KEYPALS

K Z Z P B E A A C T R H S S F I K G
 Z Y U P R Z C Q I O C H L T N H D P
 C L A S S R O O M S M A F T R O N J
 J S I J K X M Y A E P M E T L O R A
 B E W Q Z L P C S Y W R U H S R P W
 I D O F R C U N E M N E Q N Z O F S
 A O L R Z S T K R E M D A Q I A F D
 S E G A P B E W T E T G N T U T Z N
 L Y M N M F R R X A I Q J A H A Y E
 I M Z C D K S I H L P E T S L E H I
 A Y J E K I C C O T H Y G U U G R R
 M A T U S O O O I S C E N G L P N F
 E I L Z Z M H P E N P A L S E M M E
 G O T W Z A Z U Z Y I H A F V G L H
 P F G D Y G W R C D I B L O T B A N
 E E S N B Y O W S C W W H D T M S B
 T M B K V F E L P Y T E F A S F L X
 S W X L O E P W I A Z I C J B W J E

WORD LIST

| | | | |
|------------|-----------|------------|---------|
| CHAT | FRANCE | PETS | EMAIL |
| ENGLAND | PENPALS | YAHOOIGANS | KEYPALS |
| MEXICO | WEBPAGES | COMPUTERS | SPORTS |
| WEATHER | COMMUNITY | INTERNET | |
| CLASSROOMS | FRIENDS | SAFETY | |

SOLUTIONS

KEYSTROKES AND PENPALS

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| + | + | + | + | + | + | + | + | C | + | + | + | S | S | + | I | + | + | |
| + | + | + | + | + | + | C | + | + | O | + | + | L | T | N | + | + | + | |
| C | L | A | S | S | R | O | O | M | S | M | A | + | T | R | + | + | + | |
| + | + | + | + | + | + | M | + | + | + | P | M | E | + | + | O | + | + | |
| + | + | + | + | + | + | P | + | + | Y | W | R | U | + | S | + | P | + | |
| + | + | + | F | + | + | U | + | E | + | N | E | + | N | + | + | + | S | |
| + | + | + | R | + | + | T | K | + | E | M | D | A | + | I | + | + | D | |
| S | E | G | A | P | B | E | W | T | E | T | G | N | T | + | T | + | N | |
| L | + | + | N | + | + | R | + | X | A | I | + | + | A | H | + | Y | E | |
| I | + | + | C | + | + | S | I | H | L | P | E | T | S | L | E | + | I | |
| A | + | + | E | + | + | C | C | O | + | + | + | + | + | + | G | R | R | |
| M | + | + | + | + | O | + | O | + | + | + | + | + | + | + | + | + | N | F |
| E | + | + | + | + | + | H | P | E | N | P | A | L | S | + | + | + | E | |
| + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + |
| + | + | + | + | Y | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| + | + | + | + | + | + | + | + | + | + | Y | T | E | F | A | S | + | + | + |
| + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

OVER, DOWN, DIRECTION

CHAT (8,11,NE)

CLASSROOMS (1,3,E)

COMMUNITY (9,1,SE)

COMPUTERS (7,2,S)

EMAIL (1,13,N)

ENGLAND (18,13,NW)

FRANCE (4,6,S)

FRIENDS (18,12,N)

INTERNET (16,1,SW)

KEYPALS (8,7,NE)

MEXICO (11,7,SW)

PENPALS (8,13,E)

PETS (11,10,E)

SAFETY (15,17,W)

SPORTS (18,6,NW)

WEATHER (11,5,SE)

WEBPAGES (8,8,W)

YAHOO LIGANS (5,15,NE)

MORE! MORE! MORE!

1. Make your own webpage.
2. If you are going to “chat”, make sure you use a kid friendly space, an ID name, and your parents are monitoring. Never give your name, community, or other personal information.

RESOURCES USED IN THIS MODULE

Email Sites

1. www.siec.k12.in.us/west/online/coll1b.htm
2. www.safebrowser.epals.com/en/techSpecs
3. www.zen.org/~brendan/kids-pen.html
4. www.ks-connection.org/home.cfm
5. www.ks-connection.org/connect/kc_result.cfm
6. www.yahooligans.yahoo.com/
7. www.kiddonet.com/

Monitored Chat Rooms

1. Yabber.net (Canadian site) www.yabber.net
2. Headbone Zone www.headbone.com
3. Zeeks www.zeeks.com

Kid Friendly Search Engines (Some have chat capacities)

1. Yahooligans! www.yahooligans.com
2. KidsClick! www.sunsite.berkeley.edu/KidsClick!/
3. Ask Jeeves for Kids www.ajkids.com
4. AOL Kids Only Search www.aol.com/netfind/kids/
5. <http://searchenginewatch.com/links/kids.html>

Kid Friendly Directories

1. KidsClick! sunsite.berkeley.edu/KidsClick!/
2. 700+ Great Sites, American Library Association www.ala.org/parentspage/greatsites/
3. Yahooligans! www.yahooligans.com
4. The Canadian Kids Page www.canadiankids.net/ck/default.jsp

LIFE SKILLS MODULE: **FOODS**

When it's time to use a knife here is something you should always do.

When you're going to chop, or slice, or dice, be sure to face the blade away from you!

*Cooking on a stove can be lots of fun,
but it must be handled with care.*

*If you remember that pots
can get really HOT,
then you'll be halfway there!*

WHAT WILL WE LEARN?

In this module we will prepare two separate afternoon/afterschool snacks. We will include information on nutrition, making choices, preparation, cooking and eating.

WHO CAN HELP?

A senior member, leader or parent can assist you with this module. You may want to complete this module at your home or your helpers' home or perhaps it would work better to take all the supplies needed to a hall or school equipped with a kitchen.

WHAT DO YOU NEED?

Refer to the recipes below for a list of supplies and ingredients.

LET'S GET EDUCATED!

SOME GENERAL TIPS FOR COOKING

Wash your hands - that means using soap too – before you start and when you're done.

Make sure you get permission from your mom or dad before you start cooking using any equipment.

Wear an apron so that your clothes don't get splashed or stained.

Make sure that the dishes, utensils and countertops are clean before you begin. Keep your work surface as neat as possible so that you can see what you are doing.

Read the recipe from start to finish; get all the ingredients and utensils that you will need so that you don't have to stop in the middle of a recipe to find something.

Do any of the food preparation that is listed in the ingredients (i.e. toast bread, washing and preparing fruit)

Be careful not to cut yourself. Don't be afraid to ask for help when using these sharp utensils.

Be careful whenever you use the stove. Always use potholders or oven mitts when handling hot pots and pans. Be sure to turn oven or burner dials to "off" when you have finished cooking. Make sure pot handles are turned in toward center of stove.

AFTER YOU FINISH

1. Put away any unused ingredients.
2. Wash, dry, and put away all of your dishes and utensils. If you are loading your dishes into a dishwasher, remember that the dishes also have to be unloaded and put away once they have been washed.
3. Clean the countertops, stovetop and any spills made on the floor.

COOKING TERMS

You may not need all these terms for the recipes we have included, but they are terms you may need if you enjoy this module and decide to do some more cooking.

1. **Mix:** Stir, distributing all ingredients evenly.
2. **Beat:** Mix with hand or electric beater until all ingredients are blended together.
3. **Chop:** Carefully cut food into small pieces using a small knife on a cutting board.
4. **Shred:** Carefully cut into tiny strips using up and down motions on a grater.
5. **Blend:** Combine two or more ingredients together until smooth and uniform in texture and color.
6. **Sizzle a drop of water:** Heat the pan at "medium heat". To determine if pan is hot, sprinkle a drop of water into the pan. If the drop "sizzles" and then evaporates, the pan is ready.
7. **Dash:** A very small amount, less than 1/8 teaspoon.
8. **Garnish:** To decorate a finished dish, making it more attractive.
9. **Some recipes use abbreviations.**
 - **Tsp** – teaspoon
 - **Tbls** – tablespoon

We have provided instructions for you to create two afternoon/afterschool snacks. Each recipe provides its own list of directions, suggestions, ingredients, supplies and nutritional information.

LET'S HAVE SOME FUN!

FUN FRUIT KABOBS

Prep time: 15 minutes

Serves: 4

Serving Size: 1 kabob

Ingredients:

- 1 apple
- 1 banana
- 2/3 cup pineapple chunks
- 1/3 cup red seedless grapes
- 1/3 cup green seedless grapes
- 1/4 cup dried coconut, shredded
- 1 cup non-fat yogurt

Equipment kit:

1. knife (you may need help from an adult)
2. 2 wooden skewer sticks
3. large plate

Directions:

1. Prepare the fruit by washing the grapes, washing the apples and cutting them into small squares, peeling the bananas and cutting them into chunks, and cutting the pineapple into chunks, if it's fresh. Put the fruit onto a large plate.
2. Spread coconut onto another large plate.
3. Slide pieces of fruit onto the skewer and design your own kabob by putting as much or as little of whatever fruit you want! Do this until the stick is almost covered from end to end.
4. Hold your kabob at the ends and roll it in the yogurt, so the fruit gets covered. Then roll it in the coconut.
5. Repeat these steps with another skewer.

Variation: Roll your kabobs in something besides coconut. Try granola, nuts, or raisins, or use your imagination.

Nutritional Analysis (per serving):

141 calories, 3 g fat, 28 g carbohydrate, 1 mg cholesterol, 2 g saturated fat, 52 mg sodium, 103 mg calcium, 0.5 mg iron, 3 g fiber

Note: Nutritional analysis may vary depending on ingredient brands used.

LET'S HAVE SOME FUN!

TASTY EGG MUFFINS

Mmmmmmm good! It's been said that these are just as good – if not better – than the McD ones (you know the ones I mean)!

Prep time: 15 minutes

Serves: 1

Serving Size: 1 egg muffin

Ingredients:

- 1 teaspoon butter or margarine
- 1 egg
- 1 whole wheat English muffin, split and toasted
- 1 slice cheddar or processed cheese
- 1 slice cooked ham or turkey

Equipment kit:

- Toaster
- Measuring spoons
- Frying pan
- Spatula

Directions:

With adult supervision...

1. Melt butter in a frying pan over medium heat. Break egg into frying pan.
2. With a spatula, break yolk and mix a bit with the white.
3. When egg is cooked, using the spatula, turn it over and briefly cook the other side.
4. Place cooked egg on a toasted muffin half.
5. Top with a slice of cheese and ham or turkey.
6. Cover with the other toasted muffin half.

Variation: Use other toppings of your choice, such as tomato, lettuce, pickles, ketchup, mayonnaise or onions and bun top.

Nutritional Analysis (per serving):

361 calories, 18.5 g fat, 28.5 g carbohydrate, 20.7 g protein

Note: Nutritional analysis may vary depending on ingredient brands used.

MORE! MORE! MORE!

To find more information on Foods in 4-H, check out the foods resources created by the 4-H Branch. If you are looking for more recipes for kids you can go on line to any search engine, type in kids + recipes and you will find numerous great tasting, nutritious, fun to create snacks and meals.

RESOURCES USED TO CREATE THIS MODULE

1. www.kidshealth.org
2. www.eggs.ab.ca
3. www.cookingwithkids.com
4. In Pursuit Of Eggcellence produced by the Canadian Egg Marketing Agency

LIFE SKILLS MODULE: **COMMUNICATION**

You might not believe this, but 4-H leaders agree unanimously that the 4-H communication program is one of the best ways to develop self-confidence in members. Leaders frequently attest to seeing remarkable personal growth in members during three to five years of club membership.

WHAT WILL WE LEARN?

In this module, we will use some public speaking activities to begin this journey of personal growth and self-confidence in 4-H members.

WHO CAN HELP?

There may be an assistant leader or senior member in your club that looks after communication activities. Perhaps they could assist you as you prepare and complete the activity suggestions we have provided you with in this module.

WHAT DO YOU NEED?

Follow the directions for each activity – each one will have its own supply list.

LET'S GET EDUCATED!

Speaking is one of four basic communications skills. Listening, writing and reading are the others. Employers rate the ability to communicate as the second most important job related skill. By increasing their communication abilities, members are contributing to the development and advancement of their future careers.

Completing speaking activities is the best way to become more educated in the skill of communication.

Let's have some fun with a few of these activities.

LET'S HAVE SOME FUN!

We have included directions for a number of different communication activities. You will be able to do some of them in a small group, while others will need to be done with your whole club. Work with one of your leaders to find time during club meetings to complete the activities.

PRESS CONFERENCE

Purpose

Learn to think on your feet and gain confidence in your speaking abilities.

Materials

None

Group Size

4 to 6 people

Background

What makes a singer a great singer? They practice. What singers do to practice varies greatly. A great singer may practice singing scales, may sing with others, may spend time memorizing the words of songs, may try to write her/his own songs, may practice by watching others, or may hire a coach to help her/him develop her/his vocal abilities.

To help you become better at speaking, here is one practice idea. It works at helping you to think on your feet. Every speaker needs this ability. You never know what may happen during your speech. You might forget a part, drop your notes, or get asked questions. Being prepared can in part be done through exercises like the one you are about to engage in.

Activity

1. Imagine that you are a well-known soccer player, farmer, writer, singer, actor, teacher, artist, or computer inventor.
2. Announce to your group who you will be. Give the group about two or three minutes to come up with some questions for this famous person.
3. Now hold a press conference. You are at the head of the group - sitting in an interview chair. The others are around you, members from the press and ready to ask you some questions about yourself.
4. Give each member of the group the opportunity to ask you at least one question.
5. Respond to each question as briefly as you can. This is a pretend press conference, so you can make up your responses as you go. The point here is to get your answers out quickly and briefly.
6. You always have the right to not answer a question. You may want to reply with "no comment". Try to avoid using this too much.
7. After your press conference, another member may want to hold their press conference.

Debrief

- What was the easiest question you were asked? What made it so easy?
- What was the hardest question you were given? Why?
- What do you need to work on to become better at this?

PROP TALK

Purpose

- To develop your ability to convince others.
- Learn how to use a prop in your talk.

Materials

Prop

Group Size

4 to 6 people

Background

Have you ever tried to sell something to someone? If you really think about it, we're selling all the time. We may not be selling products like computers or cars, but we do attempt to sell our idea to others. For example:

- When you want a particular gift for your birthday, you sell your suggestion to your parents.
- When you want to go to a pop, western or rock concert, you try to convince your friends to join you.
- When you need more time on your assignment, you try to convince your teacher to give you the time you need.

We're selling our ideas all the time! What is most important in selling your ideas? You guessed it, effective communication. Your idea may be a great one, but convincing the buyer to buy your idea depends on how well you present yourself.

- Do you prepare your thoughts before you open your mouth?
- Do you think of the buyer and not just about yourself?
- Do you use a variety of voice skills like different pitch and power levels?
- Do you look at your buyers with a friendly face?
- When you are selling ideas, it's always more effective if the buyer can see the idea.

In this exercise we will use props.

Activity

1. Choose a common object you might find around your home, school or club. It might be a pencil, lamp, compass, watch, hat, purse, box, milk carton, or whatever.
2. Now think of two or three creative uses this object might have for which it is presently not being used.

E.g. milk carton:

- Cutting one side off - this side can be used as a memo pad.
- Cutting the top off of the carton to make into a pencil storage container.

3. With your creative ideas, think how you might present them.
4. Plan your talk to include:
 - A brief introduction
 - Your key ideas
 - And a conclusion

For example, you might want to start with a question to pique their curiosity. Then follow with the three creative uses of your object and conclude with a challenge for the audience to use your object.

5. Include a prop in your talk. (E.g. the milk carton, pencil, etc.). You may want to demonstrate how your prop can be used creatively. Remember, to use your prop appropriately. Don't let yourself or the audience be distracted by the prop and make sure everyone can see it.
6. Give your prop talk. Your objective is to sell the audience on the creative uses of your prop.

Debrief

- Did you sell your prop ideas? What gave you the feeling that you did or didn't?
- How did you feel about using a prop? Would you change how you used your prop?

THE WINGER

Purpose

Build up your flexibility and creativity in speaking and learn how to think on your feet.

Materials

None

Group Size

4 to 6 people

Background

When you get a call from your friend who says, "Hi, how are you doing?" you have a wide range of responses available to you.

Some of your responses may include:

- "Just great, I aced my math test yesterday. That's the first time I've ever done that."
- "Okay, I guess. So what's up with you?"
- "Oh, not bad. But it's Saturday and I'm in for some fun. What do you want to do?"
- "Super! My dad just gave me permission to go to the country and western concert in Edmonton - you know the one next week. I'm getting tickets tomorrow."
- "Well I'm feeling a little down today. It's all over the argument I had with Joe. What do you think I should do"?

What you're thinking, feeling and doing - all give you choices on how you might respond to the other person. You are thinking on your feet when you respond.

Let's develop our ability to think on our feet and develop some flexibility in the way we respond.

Activity

1. Look around the room you are in. Pick an object. Let this be your topic.
2. One person says something about that object - in one sentence.
3. The person to their right takes one word out of that sentence and makes it the new topic.
4. He or she then makes up a sentence on that new topic.
5. The next person does the same - picks a new topic based on one word in the last sentence and makes up a sentence on that new topic.
6. Continue going around the group for as long as you can.

EXAMPLE:

First person: I like digital clocks, because they're easy to read.

Second person: The last book I read was awesome.

Third person: Mario LeMeiux is an awesome hockey player.

Fourth person: Hockey has become a big paying sport.

Fifth person: Money is easy to get but hard to keep.

Debrief

- The more you do this the better you get at it - try it again! Maybe this time you might want to say two or three sentences before you pass to another person.

MORE! MORE! MORE!

If you enjoy the activities included in this module and would like to try some more, go to the website listed below to see what other communication activities are included in the Speak Pack.

RESOURCES USED TO CREATE THIS MODULE

The Speak Pack - Communicating Effectively...the 4-H Way! – available through the 4-H Branch or online at www.4h.ab.ca. Talk to your leader about the User Name and Password to access the resources section of the website.

LIFE SKILLS MODULE: **CRAFTS**

Would you like to create something that is a permanent record of your 4-H participation and accomplishments? Do you enjoy painting, drawing, building, creating? If so this is a project you will probably enjoy. 'Crafting' has few boundaries - you can let your imagination run wild.

WHAT WILL WE LEARN?

We have provided directions to create a plaque/display board that you can use to record and display your accomplishments in 4-H.

WHO CAN HELP?

Anyone who has a sense of creativity and enjoys crafting would be helpful with this project. Present this module to a leader or friend. They may already have the supplies necessary to complete this project. This would save you from spending a lot of money. You could offer to pay them a sum of money to cover the cost of the supplies you may use. These expenses, of course, you will include in the Exploring 4-H Record Book. Your helper may also be familiar with painting and woodworking and may be able to provide further suggestions.

WHAT DO YOU NEED?

Some supplies will only be necessary for certain decorating techniques.

1. 12" x 16" piece of wood – any type of wood works. Check out prices at a local building supply store. It may be possible to purchase pre-cut widths of wood. Some stores may cut you the exact width you want.
2. Craft paint or stain suitable for wood
3. Clear spray or brush on acrylic for finishing
4. Paintbrushes
5. Fine sand paper
6. Old clothes
7. Rags

LET'S GET EDUCATED!

As you create your plaque/display board you will learn to work with wood and use different painting and finishing techniques.

LET'S HAVE SOME FUN!

PLACQUE/DISPLAY BOARD

Now, let's start using our creativity. There are many different designs and techniques you can use to create your board. Some of these are outlined below.

1. There are two basic ways to use the piece of wood. The first is to use it as is. The second is to router the edges so as to create a more decorative look.
2. Once you have decided how to use your board, you need to prepare it. As only one side will be displayed, you can focus on that side. You will need to sand the edges as well. Using a fine sand paper gently sand your board to remove any imperfections.
3. We will now go through a number of different finishing techniques and design ideas.

a. Stained Board – choose a stain color you like and follow the directions for application. Be sure you cover the sides and front of the board.

i. Using this technique if you are artistic you can paint a picture or scene on the board.

ii. You could also use stencils to create designs or pictures.

b. Painted Board - If you decide to paint your board there are a number of different techniques you can use. Make sure you put lots of newspaper down (or you can use an old cardboard box), as this can get quite messy!

i. Toothbrush Splatter

- Choose a base color and paint your board. Let dry.
- Choose a few of your favourite color paints.
- Find an old toothbrush. You may want to have a couple of different ones so you can see which one splatters the best.
- Pour your splatter color/colors into separate containers (such as paper cups). Paint may need to be thinned. Experiment to find the right consistency.
- Dip your toothbrush into the paint color desired and using your finger, flick the paint onto the board.
- Before splattering on your board you may want to practice on paper. Experiment with different amounts of paint, different colors, and the end result you would like to achieve.

ii. Marbled

- Choose a base color and paint your board. Let dry.
- Choose two paint colors. It is most effective if you use white and a shade of your base color. So if your base is dark green you can use white and light green as your second two colors.
- Craft paints that come in squeeze bottles work well here. Using first one color, then the other squeeze paint from the bottle in long, narrow strips/streaks across your board.
- Now you will need a long (12") candle. Starting at one edge of your board and applying **firm** pressure, roll the candle to the other side of the board. You only need to roll the paint once. The paint will spill over the edges, but that's okay just use old rags or paper towels to dab up the excess paint.

IMPORTANT: When you roll the paint with the candle, be sure you roll in the opposite direction you put the strips/streaks of paint. So if the strip/streaks go from top to bottom, roll from side to side and vice versa.

- Again you may want to practice on paper and experiment with colors and technique.

iii. Sponging

- Choose a base color and paint your board. Let dry.
- Choose one or more other paint colors. Put a small amount of paint in a flat container such as a pie plate. This paint may need to be thinned. Experiment to get the right consistency.
- You will need pre-cut sponge shapes or you will need to purchase larger sponges and cut the shapes you want.
- Dip the sponge in the paint. Dab off the excess on a cloth or newspaper.
- Sponge on your board. Use as many different colors and sponge prints as you like.
- Again you may want to practice on paper and experiment with colors, quantity of prints and patterns.

4. Finishing – To finish your board and set your paint you need to coat it with a spray on, or brush on clear acrylic. For boards that are done with more than one paint color and don't have a smooth finish a spray works better.

5. Decorative Finishes

- a. Decorative metal corners can be added.
- b. You can purchase 4-H emblems and metal plates with your name engraved on them from companies that make trophies. These can be placed at the top of your board.
- c. You can purchase more plates later and display your accomplishments with your club. This may include plates for 1st in Public Speaking, 2nd in Showmanship or could list the projects you have completed.
- d. This is your own creation and you can personalize it however you want.

Check out the design suggestions below. You can use one of these or a creation of your own.



The first two are done on boards that are just stained.

The 4-H Cloverleaves can be drawn and painted on, or a stencil could be made to apply them.

The third design uses a painted board that could be sponged, splattered or marbled.

The 4-H Emblem and name plate are items that you could purchase from a trophy store.

If you didn't want the expense of purchasing the emblem and plates you could use a stencil to do the printing.

Decorative corners could be added to any one of these designs. Keep in mind that if your board is routed you won't be able to use decorative corners.

MORE! MORE! MORE!

If you would like more craft ideas the 4-H Craft Project Leaders' Guide provides the following suggestions.

Magazines – there are a number of these on your local newsstand or check with your public library.

4-H Members and their Parents – typically if the parent of a 4-H member is crafty, they will have all sorts of neat ideas for the club. Members will also have some great ideas that the rest of the club will want to create.

Community members – are a fabulous resource to your 4-H club. Most will be willing to help the club with a project or two. Don't overlook the older generations who have many heirloom type crafts that they would like to share with the younger generation. What a wonderful way to get member's grandparents involved. Who knows, maybe there could be some community service work that results in exchange for the crafting ideas!!

Craft Fairs and Farmer's Markets – everywhere you look there is a craft fair popping up. These shows have numerous ideas for everyone to take away and use with their clubs. Farmer's markets are also a good place to look for new ideas. Again, maybe you could approach the person to help with a specific project.

Internet – there are a number of interesting sites to explore. Here are some sites to get you started.

www.canadianliving.com

www.yahoo.com/recreation/hobbies-and-crafts

www.offray.com

www.countrystitches.com

www.quilts.com

www.deltacrafts.com

www.pack-o-fun.com/projects/index.htm

www.familyfun.com

www.tandyleather.com

RESOURCES USED TO CREATE THIS MODULE

1. Marianne Ferriss – Three Rivers 4-H Beef Club
2. www.bbc.co.uk

LIFE SKILLS MODULE: **GARDENING**

Pot Of Pansies

This project is best to do in the spring, from mid April to June.

WHAT WILL WE LEARN?

In this session you will learn what a garden needs to survive. You will demonstrate that knowledge by planting and caring for a pot of pansies.

WHO CAN HELP?

Finding someone who has a green thumb (that is someone who likes to grow plants) isn't tough. Many people find gardening therapeutic. Maybe your neighbour likes to grow their own food in a community garden. Maybe your teacher loves to grow flowers to relieve stress. Maybe the lady who works with your mom has a pond and specializes in water plants. Or maybe your granddad has a greenhouse. Planting and harvesting is arguably the most popular hobby there is. Find one of those people and recruit him/her to lead this session or book a tour with your local greenhouse operator. Tell him/her you are planting a planter and let them have some fun.

WHAT DO YOU NEED?

1. A Planter With Drainage.

- Two gallons is a good size.
- A bucket with holes drilled in the bottom will do, so will a wooden box, a two gallon terra cotta pot, an antique milk jug or even an old coal scuttle with a few inches of rocks on the bottom.

Here is where your expert will help. There are any number of creative choices that are possible, but before you decide on your planter you may want to check if there will be sufficient drainage. Also check with your mom, because you may think her antique milk jug needs a few petunias, but she may not agree.

2. Potting Soil or Garden Soil

- Remember to check with the garden owner that the soil you are taking is healthy and weed free.
- Remember that your garden soil should be dark and loamy.

3. Seedlings for transplanting (four healthy plants should do it).

- Pansies or petunias are good for the first time gardener.

4. Acrylic Paints and brushes

LET'S GET EDUCATED

Preparation

It would be a good idea to visit a greenhouse as a part of your project or before your 4-H meeting. If you speak to the greenhouse ahead of time and explain that you are trying to learn some basic gardening concepts as part of a 4-H project, the greenhouse will know to have someone on hand who has a little more experience. Once you arrive hopefully you can take a tour of not only the commercial part of the greenhouse but maybe tour the non-public areas and learn about humidity, fertilizers, and temperature controls.

During your tour may be a good time to purchase your seedlings. You can talk to the operator about where you plan to put your planter. He/she should be able give you advice on what kind of plants to buy according to: the amount of sun they will need, whether they are suited to a basket or pot, and how much water they require. You can also see some different varieties of familiar plants and maybe you can fill your pot with a pansy that will make a statement.

If you don't have an expert opinion to rely on, try to pick a pansy or a petunia. There are lots of different colors and varieties to choose from. They produce an abundance of flowers that are generally tough and drought resistant.

What Does A Plant Need To Survive?

Its needs are simple: soil, sun, and water.

Soil

Plants use minerals in the soil for food; the roots stretch out in the soil to stabilize the plants. Some plants spread their roots into water, others cling to rocks but for the most part plants spread their roots in soil.

Sun

Plants need sun. Plants use the sun's energy to photosynthesize, which means they turn the energy from the sun and the food from the soil into starches which make up the plants body. The byproduct of this process is oxygen, plants produce oxygen, which means as a species, we need plants to produce the air we breathe. Animals and humans use plants for food. (Think of the foods we eat that are plants. Now think of the other kinds of food that come from animals that need plants to survive.)

Some plants like lots of sun. Marigolds and pansies love lots of sun. Some like shade. Hostas and ferns like to live in the moist shadows under trees or in the shade of the house but even they can not survive in total darkness.

Water

A plant can not survive without water. Some plants can survive on very little water. Cactuses can live without water for months at a time. Other plants need to live in water. Lilies and some kinds of bamboo, can root in water and live out their entire lifecycle, taking minerals they need to survive from the water they are rooting themselves in. Some vegetable producers grow vegetables in huge ponds. Lettuce can be grown that way!

LET'S HAVE SOME FUN!

1. Prepare your planter.
 - You will first need to wash it with a mild bleach solution and let it air dry. This will get rid of any fungi that might harm your plant.
2. Make sure your planter has enough drainage.
 - Depending on the type of material your planter is made of you may be able to drill holes in the bottom of your bucket (oops planter) to let the water drain.
 - Another solution is to put a layer of rocks on the bottom of your planter to allow the water to drain. If you have an unusual type of planter this will likely be a good solution.
 - Remember planters can be adapted from everything from cream separators to wheel barrows.
3. Decorate your planter with the acrylic paints.
 - Be as creative as you want. Remember even plants love a beautiful place to live.
4. Put soil in your planter.
 - Don't pack it. Just put enough soil that it is within an inch or two of the lip of your planter.
5. Dig a hole large enough to drop the seedling root ball in, so the top of the ball is slightly below the surface of the soil in your planter.
6. Pick three or four of the healthiest seedlings in the bunch.
 - Pinch off any dead leaves. It is sometimes a good idea to even pinch off the flowers so that your seedling will concentrate its efforts on growing roots after transplanting.
 - Water your seedling and squeeze the bottom of the container to loosen the roots. (Don't pull your seedling from the top. You'll end up breaking the plant off.)
 - Gently take the root ball from the plant pot and set it into the hole in the planter.
 - Cover the root ball with soil and gently pack the soil around the stem of the plant.

7. Plant two more seedlings into your eight-inch planter.
8. Water your plants immediately and then again at least once every week until the soil is damp, or maybe as much as every day, depending on how hot and dry the weather is.

Remember to talk to your plants regularly. It is unlikely this actually helps them grow but it will make your parents wonder!

PETUNIAS AND PANSIES

S Y Q N A C M P L D E I J S
 E I C E I D A T S Q S Z D E
 C H S J E N V I M F U L Y E
 U W P E S G N I T T O P E D
 T N T I H L W G I G H V V L
 T J E C E T F A I J N A N I
 E S R V R O N R T O E S V N
 L L O E O O A Y L E E O G G
 Z H E D T M O U S B R I O Z
 S B G Y X N H T R O G L L H
 P E T U N I A S B M T E A U
 O X Y G E N X L U A B O H P
 N U S Z T Q L D P N L Y H Z
 I Q S X L E U N E K Z L R P

WORD LIST

| | | | |
|------------|----------------|-----------|----------|
| FOOD | PHOTOSYNTHESIS | SOIL | OXYGEN |
| PETUNIAS | SHOVEL | MARIGOLDS | ROOTBALL |
| SEEDLING | LETTUCE | PLANTER | WATER |
| GREENHOUSE | POTTING | SUN | PANSIES |

SOLUTIONS

PETUNIAS AND PANSIES

S + + + + + P + + E + + S
 E I + + + + A + + + S + D E
 C + S + + N + + + + U L + E
 U + + E S G N I T T O P + D
 T + + I H L W + + G H + + L
 T + E + E T F A I + N + + I
 E S R V R O N R T + E S + N
 L + O E O O A Y + E E O + G
 + H + D T M O + S + R I + +
 S + + + + N + T + O G L + +
 P E T U N I A S B + T + + +
 O X Y G E N + L + A + O + +
 N U S + + + + + P + L + H +
 + + + + + + + + + + + L + P

OVER,DOWN, DIRECTION

FOOD (7,6,SW)
 PETUNIAS (1,11,E)
 SEEDLING (14,1,S)
 GREENHOUSE (11,10,N)
 PHOTOSYNTHESIS (14,14,NW)
 SHOVEL (1,10,NE)
 LETTUCE (1,8,N)
 MARIGOLDS (6,9,NE)
 PLANTER (9,13,NW)
 SOIL (12,7,S)
 OXYGEN (1,12,E)
 POTTING (12,4,W)
 SUN (3,13,W)
 PANSIES (8,1,SW)
 ROOTBALL (5,7,SE)
 WATER (7,5,SE)

MORE! MORE! MORE!

1. Dry your flowers and make a flower arrangement.
2. Use dried pansy leaves to decorate a cake. They are edible!
3. Draw a flower garden plan.
4. Visit a Farmer's Market, or a market garden.
5. Find a recipe using vegetables from your garden and bring it for your friends at 4-H to try.
6. Research and make a composter.

RESOURCES USED TO CREATE THIS MODULE

1. 4-H Gardening Project, Alberta Agriculture, Food, and Rural Development, 4-H Branch, Edmonton 2001.
2. Gardening Life
3. www.canadianliving.com - Canadian Living Magazine
4. www.holesonline.com - Holes Greenhouses

LIFE SKILLS MODULE: **INTERIOR DESIGN**

Memory Board

WHAT WILL WE LEARN?

In this module you will be learning basic concepts on choosing colors and patterns in fabric. You will also be creating a memory board.

WHO CAN HELP?

Lots of your friends and family may be experienced crafters or quilters. Recruit one to help you decide which colors would work well in a room.

WHAT DO YOU NEED?

- 19" x 24" piece of plywood
- fabric pieces 25" x 30" and 20" x 25"
- sand paper
- 7 meters ribbon to match fabric
- 12 buttons to match ribbon
- cardboard cut 18" x 30"
- batting approx. 25" x 30"
- picture hanger
- glue gun, glue sticks, scissors, tape measure, pliers
- staple gun and staples

LET'S GET EDUCATED!

Choosing Your Fabric

When choosing fabrics for projects there are some points you should consider.

1. For your memory board, consider the style/theme of the room you are going to put it in. If you have sports items in the room, a frilly pink fabric probably won't work.
2. With the style and theme in mind, decide on an 'anchor' fabric for your board that has three or more colors.
3. Select a co-ordinating color for your ribbon. You may want to choose one of the brightest colors in your anchor fabric.
4. Later you may want to make upholstery covers for furniture or throw rugs for the floor. You could use your anchor fabric or using your anchor fabric as a guide, you could select a mid-toned color. This could be a solid or patterned design.

For example, to use an 'anchor' fabric with an American flag design: use white (the background color) for walls, navy (a mid-toned color) on floor, blue and white ticking on the sofa, and red (the brightest color) for accessories and accents.

LET'S HAVE SOME FUN!

Memory Board

1. Choose your fabric.
2. Sand the piece of plywood so the edges are not rough.
3. Center the quilt batting atop the plywood. Wrap it around to the back of the plywood and staple the batting securely in place.
4. Iron your fabric.
5. Center your plywood over wrong side of fabric. Pull fabric tight and staple to board. Be careful not to make puckers at corners.
6. Starting at one corner, measure 4 ½" in and place ribbon diagonally across board.
7. About 2 " from the backside edge, staple one end of the ribbon.
8. Pull tight and staple the other end of ribbon. Cut ribbon.
9. Measure 6" from the ribbon and attach in the same manner as step six. Measure another 6" and place and attach ribbon in the same way. Measure 4 ½" and place and attach ribbon again in the same way.
10. Starting in the opposite corner measure and attach ribbon in the same way as in steps 6 and 7, crisscrossing over existing ribbon. If the measurements aren't working right, you can just eye it.
11. At ribbon intersections staple the ribbon to the board to secure it.
12. Measure cardboard 18" x 23" and cut out. Glue your other piece of fabric to the cardboard.
13. Staple cardboard to back of memory board.
14. Attach picture hanger to back of memory board, either direction.
15. Glue buttons at ribbon intersections.

Knock Knock!
Who's there?
Alfred!
Alfred who?
Alfred the needle! If you sew!

SOLUTIONS

MEMORY BOARD USES

A picture is worth a thousand words

MORE! MORE! MORE!

1. Glue fabric to an old lampshade to coordinate with your room colors.
2. Paint a frame with colors to match your room and put it on a cork board to keep notes and your calendar.
3. Find some boxes and paint them in a coordinating color to use as storage and reduce clutter in your room.

RESOURCES USED TO CREATE THIS MODULE

www.interiordec.about.com

LIFE SKILLS MODULE: JUDGING

DARE TO COMPARE!!

WHAT WILL WE LEARN?

In this module you will learn how to judge. We will provide you with the steps needed to compare items or animals. Through the information we provide you with you will complete a 4-H judging card where you will place four items and give reasons for your placings.

WHO CAN HELP?

Anyone who is involved in the 4-H program – past or present who has judging knowledge would be able to assist you with this module.

WHAT DO YOU NEED?

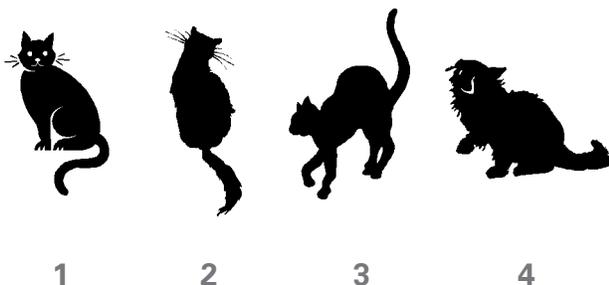
You will need two groups of four items of the same type. For the first group we suggest four jogging shoes, as we will refer to this group throughout this module while teaching you about judging and how to fill out a judging card. The second four items will be used to complete a second judging card. You can use any items you wish, just remember they must be of the same type. Four winter gloves/mittens, four snacks (one candy bar, one granola bar, one bag of potato chips, one apple), four cats, four binders, etc. Be creative – as long as items can be compared using the same criteria they will work.

LET'S GET EDUCATED!

As mentioned above, we will refer to the four jogging shoes throughout this section. There are a few things that you need to know before we begin the nine steps to successful judging.

4-H JUDGING

- Four items are always used.
- Items are always numbered from left to right.



NINE STEPS TO SUCCESSFUL JUDGING

- 1. Picture The Ideal** – Before you look at the four jogging shoes, picture what a perfect or ideal one would look like. If you are judging loaves of bread, get a picture of an ‘ideal’ loaf of bread in your mind. Take the time to sketch the ideal, or write down the points that you feel make up the ideal. Number the items according to their importance.
- 2. Prepare To Compare** – Judging means comparing. You will compare the four jogging shoes to each other and to your idea of the ‘ideal’ jogging shoe. See if you can pick out the advantages one shoe has over the next. Examples of questions you might ask are: Are they new? Are they old? Do they have holes? Do they have good support? How are the laces? Compare quality – good quality shoes that are broken in might be more useful than new shoes that have poor ankle support or are poorly made.
- 3. View From A Distance** – Now stand back and compare the shoes. If you are judging livestock, stand about 6 or 7 meters away from the animals. The smaller the items you are judging the closer you will have to be to get a good overall view of them. Compare the way they are made and their overall appearance.
- 4. View From The Front And The Rear** – Move around the items, still looking from a distance. View the items in the class from all angles.
- 5. Move In For A Closer Examination** – Now you are ready to take a closer look at the items you are judging. Look at each shoe individually and make a thorough assessment of each one. At the same time continue to compare it to the others in the class. Because you are judging small items you should be able to pick them up and look at them from all angles. If you are judging larger items such as sheep or beef cattle you won’t be able to pick them up, but you should be able to touch them in order to get a feel for what is under the hide.
- 6. View Again From A Distance** – By now, you should be getting close to making your decision on the placings of the class. Once you have finished your close examination, move back and take one last look from a distance.
- 7. Build A Picture** – Now close your eyes, and build a picture in your mind of the class as it stands in front of you. This step will be important as you begin to write your reasons. This step will also become important, as at some point in the future it may be necessary for you to give oral reasons.
- 8. Make Your Decision** – If you haven’t already done so, now is the time to make your final decision on the placings of the class. You will put the jogging shoe that you think best fits your picture of the ideal in first place, down to the jogging shoe you think least fits your picture of the ideal in fourth.
- 9. Mark Your Cards** – Now you need to write your placings on the card in the placings section. Do not forget this step as many markers won’t give you credit for your placings if they are not written in the appropriate section. Also be sure they match the numbers you use when writing your reasons. We will do more on writing reasons later in this module.

Above are nine steps you can use when judging.

We will now look at the 4-H judging card and give you some tips on how to effectively fill them out.

Remember:

- Good reasons have a specific format.
 - This format is used for both written and oral reasons.
 - For this module we will focus on written reasons.

On the following page is a sample of how a judging card could be filled out. It shows the format and terminology 4-H members use.

Study the card and then refer to the points that follow it to identify what points you need to concentrate on.



4-H Judging Card

| | |
|---------------------|---------------------------|
| Club name _____ | |
| Name Mary Jane | Age 11 |
| Class Jogging Shoes | Contestant's number _____ |

Placing:

First _ 2 _____

Second _ 1 _____

Third _ 4 _____

Fourth _ 3 _____

For official use only

Placing _____

Reasons _____

Total Score _____

Reasons: Be comparative and brief.

I placed this class of jogging shoes in the order 2143.

I placed 2 over 1 because #2 is a more sturdy shoe, shows quality workmanship and is made from a more breathable material.

I place 1 over 4, in a close placing (Statement 2) because although #4 has more overall eye appeal than #1, #1 provides more support than #4 and also has stronger laces for tying securely.

I place 4 over 3 because (Statement 1) #4 is a more well put together shoe than #3 and the stitching in the seams is straighter and more even.

These are my reasons for placing this class of jogging shoes in the order 2143.

INTRODUCTION

THE BODY

CONCLUSION

As you can see on the card, reasons follow a specific format and have three parts – **the introduction, the body and the conclusion.**

The Introduction – This is a simple statement that tells the listener/marker:

- The class you judged
- Your placing of the class

Example – “I placed this class of market steers 2134.” Or

“In this class of canine agility I placed the dogs 3214.”

As I have shown, the statement doesn’t always have to be exactly the same, as long as it states the class name completely and correctly, and identifies the placings.

The Body – This is the most detailed part of your card. This is where you will spend the most time.

- There are three pairs that you will compare: the top pair, the middle pair and the bottom pair. In the following example - “I placed this class of pyjama pants in the order 1 3 2 4” you will compare 1 and 3, 3 and 2, 2 and 4.
- Be descriptive and comparative in your reasons. You are not only describing the items, but you are comparing them as well. You need to use words ending in “er” and phrases beginning with “more”. Refer to the card above. These words are formatted in italics and underlined so you can easily pick them out.
- Be sure the information you provide is true. Don’t make things up just so that you can write something down.
- State your most important points first, then go on to your less important points.
- Be thorough – mention all of the points you consider to be important.
- Be sure your words are descriptive and specific. Words that aren’t descriptive or specific and that you should never use on your card are “good”, “better”, “best” and “nice”. The words you use will describe specifically why one item is good, better, best or nice. If you were to say item # 1 is better than item #3, this wouldn’t really describe why it is better, so don’t use these non-descriptive words.
 - **A hint** – if your statement doesn’t say **why** one item is better than another you know it’s not something you want to write on your card.
- Use correct terminology. Often a judging official will tell you what the ideal is to him. Write down the points he uses and when you fill in your card you will have some of this terminology and understand its meaning.
- Be positive. State the advantages of one item over another, rather than pointing out the weak points of the lower placed item. See statement 1 above. Notice it doesn’t say #3 is more poorly put together than # 4, but rather that #4 is more well put together than #3. Avoid being negative.
- Try to keep your reasons organized.
- If a placing is close it’s okay to say so, as exhibited by statement 2 on the card.
- Be concise. If possible, get your point across in a few words rather than many words.
- Avoid using “he”, “she” or “it”. Refer to the items in the class with their number.

The Conclusion – This should be a simple statement summarizing the information from your introductory statement. Again, give a complete and correct identification of the class and your placings of the class.

For the purpose of this module the teachings have been kept at the introductory level. If you enjoy this module and decide you would like to pursue this project further, you will be able to learn how to be more creative with your judging card.

For many years 4-H has put a great deal of time and effort into written reasons. In the past few years leaders have tried to spend more time teaching oral reasons. In most competitions, officials explain their placings and reasons verbally, rather than in a written format. So, although 4-Hers need to know the basics and know how to complete their reasons in a written form eventually if they intend on continuing with judging, most of their judging experiences will require giving reasons verbally in front of a group of spectators.

LET'S HAVE SOME FUN!

Now it's time to complete your own judging card. Enlist the assistance of your project leader or someone who is familiar with 4-H judging cards. Work with this person to find four items that you can compare in a regular judging class to fill out your judging card. You can photocopy the card we have included with this module or if you want more experience, or would like an official judging card, these can be obtained through the 4-H branch. Allow your leader to go over the card with you pointing out the strengths and areas where you need improvement.

MORE! MORE! MORE!

A 4-H Judging Project is now available through the 4-H Program. There are also many workshops and competitions that 4-H members can participate in. Check one of your leaders if you are interested. They may be able to help you with this. In the resources section of the Alberta 4-H website – www.4h.ab.ca you can access the Let's Judge pamphlet as well as see other judging pamphlets on livestock species that are available through the 4-H Branch. The publication called, '4-H Judging Manual', is available from the 4-H Branch.

As a senior member more judging opportunities are available, beginning at the provincial level, with the Provincial Judging Competition held each year in Olds. From here you can qualify to go to other competitions across Canada and the U.S.

RESOURCES USED TO CREATE THIS MODULE

Much of the information supplied in this module comes from the 'Let's Judge' publication.

LIFE SKILLS MODULE: **PERFORMING ARTS**

Drama

The theatre is so endlessly fascinating because it is so accidental. It's so much like life.

Arthur Miller

WHAT WILL WE LEARN?

This module is designed to explore basic concepts of movement and interaction between actors. You will complete activities that will enable you to learn to improvise in response to fellow actors.

WHO CAN HELP?

It would be a good idea to have someone with acting experience work with you for this module. However, remember that much of drama is designed around the basic spontaneity and creativity in each of us. Don't be afraid to explore this without expert help. Just be prepared to be spontaneous and have fun.

WHAT DO YOU NEED?

A group of five or more

Your sense of fun and creativity!

LET'S GET EDUCATED!

We could but why not have fun and see what develops.

LET'S HAVE SOME FUN!

Using the 4-H Fun Pack that is available through the 4-H Branch, start with the following activity that is taken from the section entitled "Creating A Positive Environment."

LINE 'EM UP

Divide your members into groups of eight to ten people.

Have each group form a line, with plenty of room between each participant.

Each group's task is to rearrange themselves in the order you call out. For example, if you say, "alphabetical order by last name," groups hurry to rearrange themselves so members are all standing in alphabetical order.

Here are some formations to call out:

- By birthday months
- By age
- By alphabetical order of first or middle names
- By number of brothers and sisters
- By number of people in your family
- By how long they've lived in the community
- By length of hair
- By time they get up in the morning
- By bedtime
- By distance from school

The following activities will help you continue your performing arts module.

FREEZE

When everyone is relaxed and laughing, start a game called "Freeze." Have your members start by moving, walking, adding movement, and then call out "freeze!" suddenly, when you want them to stop. They will soon get the idea that the more they explore movement the funnier the pose when they freeze in. Try this a few times and see where it goes.

Tell your members to explore different scenarios:

- You are climbing a mountain
- Trying to see over a lady at a football game and your team scores a touchdown
- Fight an imaginary partner
- You are a burglar and you are trying to escape with the crown jewels when the guards see you

Use your imagination.**PARTNER FREEZE**

Now explore a more advanced form of the game. Split the group into groups of three. (You might use a Teaming Up game from the 4-H Fun Pack.) Have each group start their own private game of "Freeze." One person thinks of a scenario and starts to act it out. The partners watch until they figure out a scenario that matches the first person's actions. It doesn't matter whether this is the intended scenario. The purpose is to draw a second person in. The first person may pretend to be a prisoner being escorted to prison and his/her partner may decide they look like a ballroom dancer. The partner moves in and the first must adapt to this new reality using their dialogue and movement to convey the scenario; the more movement the participants use, the better.

Then the third person watches the new tableau until a movement reminds them of another scenario and then they call, "Freeze." He/she taps a person on the shoulder they wish to replace and move into the partner's spot. Suddenly the cat burglar/ballroom dancer is being measured for a wedding dress and getting stuck with pins.

On and on it goes until the partners are learning to adapt to one another's cues. If you find one group does a great job and others are floundering, try asking one member of each group to move to another group.

MOVEMENT EXERCISE

Drama is about more than dialogue and emotion; a story can be conveyed in movement. Members must practice moving in a very self-aware way. A basic concept is that a movement—any movement—can be changed in a number of specific ways. Among them:

Change the size of the movement. A movement can be made wider or narrower, higher or lower, deeper or shallower. (Demonstrate these three concepts by walking—and having the members walk. One can make the walk wider or narrower by widening or narrowing the stance and swinging the arms further away or closer to the body. One can make the walk higher or lower by walking on tiptoe or slouching. One can make the walk deeper by taking larger steps or swinging the arms further forward and back.)

Change the weight of the movement. A movement can be light or heavy. (An angry schoolteacher may walk heavily; a ballet dancer may move lightly.)

Change the direction of the movement. A movement can be direct—moving to a specific point without veering off the path—or indirect—wandering aimlessly.

Change the tension of the movement. The muscles can be loose and relaxed or tense and constricted.

Now have your members practice changing movements. Start by creating a scenario for them. "You are waiting for a bus, now it's late and you're angry. Your foot tapping gets more impatient, heavier. You decide to walk." Now have your members change their style of walking. Change the size and weight of the walking by making it bigger or smaller, lighter or heavier.

Another activity that asks members to explore movement might be the following:

MIRROR IMAGES

Members need to find partners. Stand opposite one another and have one person choose to be the leader and the other their mirror image. Now have the leader move slowly and have the mirror image copy the motions as accurately as they can. Soon you will be responding to very simple cues to copy one another's movements. To make this easier, have a leader or senior member walk around the groups and if one is not catching on,

suggest a scenario that will allow more cooperation between the partners. For example - you are getting ready for a date, shaving, or putting on makeup.

HAMSTER BUBBLES

Now that you are learning to respond to one another, try incorporating more movement. Curl up into a small ball. Picture yourself as being curled up into a small bubble. Now you must expand the bubble by pushing on the walls, which are heavy and elastic, like a rubberized hamster ball. Push on the walls of the bubble until it slowly expands to accommodate you standing inside the spherical bubble.

Now, picture that you are a hamster in the bubble, rolling the bubble around and bumping into other bubbles. Remember that at this point you cannot collide because each of the members is trapped in their own spherical bubble.

Now change the scenario and suggest that you can reach through a small hole in the bubble and catch the hand of someone else in his or her bubble. Shake that person's hand. Now you can expand the hole to allow the other person into a larger bubble that formed out of the two bubbles. Now you two people must learn to roll your bubble around the room by working together.

When you get the hang of rolling your bubbles around the room in partnership, run your bubbles into another pair, shake their hands, and then expand the bubble again. When the four get the hang of moving around together collide again until everyone is in a very big bubble. Now expand the bubble to encompass the room.

You did it.

CLOSING ACTIVITY

A good closing activity for this module is “Rain” from the 4-H Fun Pack. Another might be a relaxation meditation involving deep breathing and visualizing. Discuss with other members completing this module, what they liked about it.

DRAMA FUN!

H G U A L G K M M V W F
 F A C E N R O P U C A U
 Z P A O U V A M S H A N
 H Z S N E M L V I A W I
 S S E M U T S O C R R S
 W N E V F M P Q E A O V
 E N I I O U Y K C C T O
 T G G A E I Y Z N T C H
 N H A K T M C V A E E K
 T Y A T V R A E D R R E
 T M G A S J U S E S I A
 W R I T E R W C K S D P

WORD LIST

| | | | |
|------------|----------|----------|----------|
| CHARACTERS | RUN | MAKEUP | FACE |
| FIGHT | CURTAINS | STAGE | MOVEMENT |
| MUSIC | LAUGH | DIRECTOR | WRITER |
| COSTUMES | SONG | MASK | |
| FUN | DANCE | VOICE | |

SOLUTIONS!

DRAMA FUN!

H G U A L G + M M + + F
 F A C E N R O + U C + U
 + + + O U V + + S H + N
 + + S N E + + + I A + +
 S S E M U T S O C R R +
 + N E V F + P + E A O +
 E N I I O U + + C C T +
 T G G A E I + + N T C +
 + H A K T M C + A E E +
 T + A T + R A E D R R +
 + M + + S + U S + S I +
 W R I T E R + C K + D +

OVER, DOWN, DIRECTION

CHARACTERS (10,2,S)

FIGHT (5,6,SW)

MUSIC (9,1,S)

COSTUMES (9,5,W)

FUN (12,1,S)

RUN (6,2,SW)

CURTAINS (8,12,NW)

LAUGH (5,1,W)

SONG (3,4,NE)

DANCE (9,10,N)

MAKEUP (2,11,NE)

STAGE (5,11,NW)

DIRECTOR (11,12,N)

MASK (6,9,SE)

VOICE (4,6,SE)

FACE (1,2,E)

MOVEMENT (8,1,SW)

WRITER (1,12,E)

MORE! MORE! MORE!

- As a group you could go to see a theatre production, a drama festival or improvisational theatre.
 - Most communities have drama clubs that put on productions and with their experience they may have an added appreciation for the production.
- Make a paper mache mask conveying an emotion.

RESOURCES USED TO CREATE THIS MODULE

The 4-H Fun Pack produced by the Alberta 4-H Branch

LIFE SKILLS MODULE: **SCRAPBOOKING**

Creative keepsakes – scrapbooks for all occasions!!

WHAT WILL WE LEARN?

We will give you some basic tips that will help you create your own scrapbook page. We hope to give you a glimpse of this creative pastime that has people creating precious heirlooms to pass on from generation to generation. You will use photos and memorabilia that you collect throughout your 4-H year to create a title page for your Exploring 4-H Project.

SUGGESTION: Because you will be acquiring photos and memorabilia throughout the year, from each module, to use to create your cover page, you may want to complete this module last.

WHO CAN HELP?

You can enlist the help of any senior member, parent, leader or community member that has experience scrapbooking. One of your leaders may be a scrapbook 'specialist' or may be able to point you in the direction of someone who is.

WHAT DO YOU NEED?

You will be creating a title page for your Exploring 4-H Project. You will need the following items:

1. Approximately 3-8 photos and/or memorabilia items from your Exploring 4-H Project
2. One 8 ½" x 11" photo album page with plastic cover
3. Stickers that follow the theme of your Exploring 4-H Projects
4. Colored paper
5. Acid free pen or pencil for tracing
6. Markers for journaling - giving your photos dates and captions
7. Scissors-regular and/or scissors with a special edging blade called paper edgers
8. Photo splits, photo corners, photo glue or something that will adhere your photos and colored paper to your title page

The items you use to create this page should be archival quality, acid-free and lignin free to ensure your page will not deteriorate over time. If you use items on your page that don't follow these guidelines your photos will deteriorate. A scrapbook enthusiast may be able to help you acquire the necessary materials. They can also be purchased at drugstores, craft stores, department stores or through home party scrapbook consultants.

LET'S GET EDUCATED!

There is a wonderful new craft called scrapbooking (creating memory albums). It provides a creative, fun way to get your precious photographs out of shoe boxes and into photo albums where they can be seen and shared.

"Everything we do depends on memory. Without it, we would have no history, no reading or writing, no ability to learn by experience. Being able to recall the past-either a recent moment or a distant decade-makes us who we are.

We rely on certain objects to help us reconstruct the past - a past that would certainly blur, if not disappear entirely from our grasp, without them. Photographs help us remember the all-too-quick stages of a child's growth, a treasured landscape, or our own life's milestones. And by compiling these photographs and mementos into scrapbooks (or, more literally, memory books), we are preserving not only the physical remains of the event but the invaluable story that they trigger in our memory."

The art of scrapbooking combines photographs, memorabilia and decorative design elements to capture and illustrate events or particular moments in time.

Scrapbooking is a one-of-a-kind expression of creativity. It is yours and yours alone - no one else will ever be able to re-create what you have created.

It is your own personality and imagination that will be displayed in your creation. What you choose to include in your memory album, or in this case on your Exploring 4-H Cover Page is up to you.

Your own combination of photos, colors, stickers, embellishments and overall arrangement will reflect your own creativity and personality.

Before starting your page, take the time to look at the creations of someone who has completed memory albums.

You can use the internet to find ideas for scrapbook pages. Simply use a search engine; type in scrapbooking and you will be amazed at the ideas that pop up.

Other peoples' albums and the internet will provide you with inspiration and give you ideas on how to complete your Exploring 4-H Cover Page.

You may also be inspired to go further with this module and take scrapbooking as a project of its own.

LET'S HAVE SOME FUN!

Now that you are full of ideas and enthusiasm it is time to put your creativity and imagination to work. Included below is a list of steps to get you organized and help you create your Exploring 4-H Cover Page.

- 1. Sorting:** Sort your photos and memorabilia according to module. Set your photos and memorabilia on the page and decide which work best together.
- 2. Cropping:** Cropping is the cutting away of all the unnecessary parts of a photograph. The photo is most exciting if you crop it just around the focal subject. Images in the background should be eliminated unless they pertain specifically to the focal point. When cropping, turn the photo, not the scissors. After cropping, you may want to re-cut some photos with paper edgers. You may want to cut out photos close to the focal subject or you may want to cut them in a circle, square, oval or other unique shape.
- 3. Cutting Shapes:** For perfect shapes, use a plastic stencil or household items such as plates, lids, containers etc. Place stencil (or household item) over the photo, framing the image, then mark around stencil using an acid-free pen or pencil and cut inside the line. For cutting shapes from your colored paper, trace on the back of the paper and then cut out.
- 4. Matting:** Select your papers. You can use paper to border your photos and/or memorabilia. You can co-ordinate your colors with your photos or use a color theme on the entire page. Cut your matts or photo borders approximately $\frac{1}{4}$ " to $\frac{1}{2}$ " outside the edge of the photo. You can put triple or double matts on some photos or leave some with no matts. Matts can be trimmed in a different shape from the photo and you can use different combinations of paper edgers and straight scissors to create different effects.
- 5. Mounting Photos/Memorabilia To Matts:** Once you have decided what paper color combinations, shapes and paper edgers you are going to use you can mount your photos. There are two ways you can do this:
 - a. Glue/stick the photo to the selected sheet then cut around it.
 - b. Cut all your matts first and then glue/stick the photos to them.
- 6. Borders & Shapes/Die Cuts:** You can use colored paper to create borders and shapes (often called die cuts) that will add to the overall design you are creating. You can co-ordinate these colors with the colors you use with your photos.
- 7. Putting Your Page Together:** Arrange your photos on the background sheet until you

are satisfied with your arrangement. Consider where you will place your borders and die cuts as well as where you will place stickers to enhance the overall design. Once you are satisfied with the placement of items, glue or stick pieces in place using photo splits or an acid-free adhesive. Don't forget to leave some space for journaling.

8. Journaling: This may be the most important step in scrapbooking. While you may not like your printing or handwriting this adds a valuable personal touch. Some details you may want to add are names, dates and places. To make your page more personal it's nice to add a little more information. "Our leader, June 2005, Judging Day" is adequate but it's better to add a little more creativity with something like "Leader's name, entertaining us with a presentation on Scrapbooking, Judging Day, June 2005."

When journaling you can write on a colored sheet, cut it out and stick it on the background sheet or you can write directly on the background sheet. Colored markers will also add to your design, but be sure they are acid free.

9. Enjoy: Now sit back and take a look at your creation – you have created your first scrapbook page.

MORE! MORE! MORE!

There are a huge variety of decorative design items as well as scrapbook idea books. These are available at pharmacies/drugstores, department stores, craft stores and through home party sales consultants. Many of these also offer classes and workshops that can be helpful when creating memory albums. As mentioned earlier in this module, entering scrapbooking into any search engine on the internet will turn up numerous sites that will be helpful.

RESOURCES USED TO CREATE THIS MODULE

1. Fiskars – A Snip Down Memory Lane
2. Cynthia Hart's Scrapbook Workshop

Quote 1 - Cynthia Hart's Scrapbook Workshop

LIFE SKILLS MODULE: **SMALL BUSINESS**

Turning Lemons Into Lemonade

This project is easiest to do in the summer from June to August.

WHAT WILL WE LEARN?

In this module you will learn some basics on how to plan a successful business venture.

WHO CAN HELP?

There a lot of people with basic business skills. Most people have to write a business plan to get a business loan; bank employees would be especially good to help develop your business plan. If you can find someone who loves to help people with good business ideas you will be well on your way.

WHAT DO YOU NEED?

A Business Plan

A good idea for a business: Some ideas might be: Rent A Kid, Babysitting, Dog Walking, Lemonade Stand, A Garage Sale.

LET'S GET EDUCATED!

On the following pages is a sample business plan for you to follow as you prepare your business venture.

BUSINESS PLAN OUTLINE – Garage Sale

| WHAT YOU NEED TO PLAN | YOUR IDEAS |
|---|------------|
| <p>Executive Summary
 (Quit your gabbing. What do you want to do in one or two sentences?)</p> <p>I want to hold a garage sale to raise money for our class field trip.</p> | |
| <p>The Industry
 (Who is your competition and how are they doing?)</p> <p>Garage sales are very popular on Saturday mornings. They do really well on sunny days during the summer. There are at least five garage sales held every Saturday morning in the summer.</p> | |
| <p>The Market
 (Describe your potential customers, what they are looking for, and where they are coming from.)</p> <p>They are relaxing on a Saturday morning. They probably won't spend more than fifty dollars.</p> | |
| <p>Competitive Analysis
 (How am I going to beat the competition? And if I can't beat 'em how can I join 'em.)</p> <p>My customers are looking for inexpensive household items, baby furniture, and recreational items. I'll need a couple of larger items to draw the customers in but have lots of smaller stuff to fill things up.</p> | |
| <p>Marketing Plan
 (How am I going to reel in the customers?)</p> <p>There is cheap ad space for garage sales in the local paper. I'm also going to have free coffee and ice water for customers.</p> | |

Management Plan**(Who's in charge, and what is their job?)**

Me! Mom and Mrs. Kelley will help. My job is to coordinate, Mom will give me ideas and help me arrange things, and Mrs. Kelley is arranging the transportation of the sale items to my garage.

Operating Plan**(How are we going to arrange the business idea?)**

My dad is helping me unload items. My mom said she would help me write the ad and price the items. The kids in my class will bring their items to our garage. I will make posters for the corners and to put up at the gas station at the corner. I have three friends coming to man the table and collect money.

Financial Plan**(We need seed money!)**

| | |
|------------------------------|--------------|
| Expenses | |
| Gas to bring items to garage | donated |
| Poster Paper | \$3 |
| Labels | \$3 |
| Tape | \$2 |
| Coffee | \$6 |
| Disposable cups | \$3 |
| Total | \$17 |
| | |
| Estimated Sales | \$125 |
| Less Expenses | -17 |
| PROFIT | \$118 |

LET'S HAVE SOME FUN!

LEMONADE STANDS AND GARAGE SALES

J W Q R G R Q A G V B H G Y C
 G M A N W U T H H O K K A E T
 B N Q L E Q D L W L J Z R N Q
 Y O I S K W M O V I V K A O C
 G N I T T I S Y B A B N G M P
 H T N A E A N E N M S O E O K
 Z Q X C J K D G I I J I S E G
 X B G W Y A R S F I S T D C E
 X H T B N P M A M A E A D T K
 Z E L O B C Z Z M R M R D O U
 S Y M S U C C E S S S E I W G
 R E D N A T S Z E S O P H L X
 L G L V E D Z Y O M S O T W T
 T J E A X M V B W O R K B J Q
 S R G D S C C P U J U D L V M

WORD LIST

BABYSITTING
 MARKETING
 STAND
 BOSS

MONEY
 SUCCESS
 DOG
 OPERATION

WALKING
 GARAGE
 POSTER
 WORK

LEMONADE
 SALES

SOLUTIONS!

LEMONADE STANDS AND GARAGE SALES

+ W + + + + + + + + + + G Y +
 G + A + + + + + + + + + + A E +
 + N + L + + + + + + + + + + R N +
 + + I + K + + + + + + + + + + A O +
 G N I T T I S Y B A B N G M P
 + + + + E + N E + + + O E O +
 + + + + + K D G + + + I S + +
 + + + + + A R + + + + T + + +
 + + + + N + + A + + E A D + +
 + + + O + + + + M R + R + O +
 S + M S U C C E S S S E + + G
 + E D N A T S + + S + P + + +
 L + L + + + + + O + + O + + +
 + + + A + + + B W O R K + + +
 + + + + S + + + + + + + + +

OVER, DOWN, DIRECTION

BABYSITTING (11,5,W)

MARKETING (9,10,NW)

STAND (7,12,W)

BOSS (8,14,NE)

MONEY (14,5,N)

SUCCESS (4,11,E)

DOG (13,9,SE)

OPERATION (12,13,N)

WALKING (2,1,SE)

GARAGE (13,1,S)

POSTER (15,5,SW)

WORK (9,14,E)

LEMONAD (1,13,NE)

SALES (5,15,NW)

MORE MORE MORE!

1. Try out your business plan.
2. Take pictures and present your business idea to your club.
3. Create a scrapbook of how you built your business.
4. Create posters to advertise your business.

RESOURCES USED TO CREATE THIS MODULE

1. From Susan Ward, Your Guide to Small Business: Canada.

LIFE SKILLS MODULE: **SNOWMOBILE**

Snowmobile Safety

WHAT WILL WE LEARN?

In this module you will learn some basic rules for snowmobile safety. Specifically, you will learn to prepare properly for a snowmobile outing.

WHO CAN HELP?

Try to find a member of a local snowmobile club who would be willing to come to your club and help explain the uses for the items in your safety kit.

WHAT DO YOU NEED?

Supply list is included in the Let's Get Educated section below.

Where do snowmen go to dance?

SNOWBALLS!

LET'S GET EDUCATED!

Planning A Snowmobile Trip

Planning for your ride is always an important factor in making your trip a success. Whether you're going for the afternoon, the day, or camping overnight, make sure you have everything you need.

What do snowmen wear on their heads?

ICE CAPS!

Basic Snowmobiling Equipment and Survival Gear

- flashlight
- candles
- tool kit
- pocket knife
- first aid kit
- strobe
- radio/cell phone
- high energy food/drinks
- nylon tow rope
- waterproof matches
- extra batteries
- extra key
- axe, saw & shovel
- mirror/reflective material
- thermal blanket
- spark drive belt
- spark plugs
- a map and compass
- extra mitts & socks
- extra boot liners
- flares
- metal cup or pot
- extra fuel
- space blanket
- transceiver/probe

Pack smart and check your snowmobile gear and tools each time before you head out.

Basic Equipment Checklist:

- Clothing (numerous layers) to stay warm and dry in all weather and temperature conditions.
- Certified snowmobile helmet.

Additional Tips

- Always file your travel plans with family and friends to let them know where you are planning to go and when you will return.
- Get to know your riding area.
- Talk to local people in the area and discuss safe routes with other snowmobilers.
- Obtain a local map and ride with others.
- Have someone experienced do a Snowmobile Maintenance Checklist.

Preparation

1. Have your group assemble all the needed items.
2. Pack them in a canvas tote that can be packed easily.
3. Do a presentation to your group about the items and their uses.

LET'S HAVE SOME FUN!

SLED SAFETY

F M A Q C Z Y T F M N D N I Y
 I L V C V E E E B P F Q X C N
 O B A J K L T K W F W X V Q E
 M S B S E S Q N M Q R Y C D H
 E O N V H D S A U S C K D P B
 Y T O I E L Y L S S M W M U P
 E H J T Y P I B Q J W A S A V
 S Q W M K H V G A S T T M Q N
 U E S M P A W D H C E I L N C
 I C U E S E O E H T M R D M E
 U E Z T P O A E F H H Y A L L
 J H U W F O S N T I X G L L L
 V X N Z S N R J L H N W I A F
 P A W R A W D S Z G M K K V E
 S C Y L D G G M S S A P M O C

WORD LIST

BLANKET

CELL

COMPASS

FLARE

FLASHLIGHT

FOOD

KEY

KNIFE

MAP

MATCHES

ROPE

SHOVEL

SOLUTIONS!

SLED SAFETY

F + + + + + Y T + + + + + + + +
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 + + + + + + + + S S A P M O C

OVER,DOWN,DIRECTION

| | | | |
|---------------------|-------------------|-------------------|------------------|
| BLANKET (8,7,N) | CELL (15,9,S) | COMPASS (15,15,W) | FLARE (15,13,NW) |
| FLASHLIGHT (1,1,SE) | FOOD (5,12,NE) | KEY (5,3,NE) | KNIFE(12,14,NW) |
| MAP (13,8,NE) | MATCHES (13,6,SW) | ROPE (7,13,NW) | SHOVEL (1,8,NE) |

MORE! MORE! MORE!

- Take a First Aid Course or hire an instructor to teach your whole 4-H club
- Go on a day trip with an experienced snowmobiler
- Look on Alberta Snowmobile Website for hand signals and practice them
- Make a tool kit
- Plan a snowmobile trip with an adult
- Make a first aid kit

RESOURCES USED TO CREATE THIS MODULE

1. Alberta Snowmobile Association website
2. www.ahajokes.com
3. www.puzzlemaker.school.discovery.com

LIFE SKILLS MODULE: **VISUAL ARTS**

You use a glass mirror to see your face; you use works of art to see your soul.

George Bernard Shaw

Irish literary critic, playwright and essayist.

1925 Nobel Prize for Literature, 1856-1950

WHAT WILL WE LEARN?

You will learn basic visual art method and techniques and create a map of your community.

WHO CAN HELP?

It is sometimes difficult to find an artist able to teach basic drawing technique. However, if you talk to a local art gallery or art supply store, you may be able to find someone who can work with you. There may be art teachers or visual artists in your community and you don't even know it. Many schools don't have an art program but do have teachers on staff that are familiar with fine arts and would be willing to help out.

WHAT DO YOU NEED?

1. Sketchbook
2. Graphic pencils
3. Magazines
4. 12x18 inch black construction paper (any large drawing paper will do)
5. Light-colored pencil, and an assortment of crayons or markers

Optional:

- Instrumental music
- CD player

LET'S GET EDUCATED!

Map Of Your World

Maps are made for different reasons. Different maps show different information. For example, some maps are made to show property lines and other maps show us how to get where we want to go (like road maps). Pirates used maps to find buried treasure. There are also weather maps which show precipitation (rain, sleet, snow) and cold fronts in a particular region.

The most important function of a map is to show location—where certain things are. Maps also show the characteristics and features of a place which make it unique and different from other places. Another feature a lot of maps have in common is that they show distances between things.

LET'S HAVE SOME FUN!

1. Put your favorite CD in the player and turn it down low. Music without words can stimulate your right brain and can help you be more creative. Avoid talking during this exercise.
2. Make a list of the places and things in your community that you want to include on your map? Think about places you go to regularly in your community (like your school), places where relatives or friends live, and your favorite places. How do you get to these places? By bus? car? bicycle? What roads or paths do you take? What kinds of things do you see along the way?
3. On a large sheet of black construction paper, draw (with a light-colored pencil) pictures of the places or the things you decided to include on your map. Include places and things on your map that you feel make your community a special place to live. Show the roads or pathways you use to get to these places. Your map doesn't have to be exactly how it is in real life. You can add more things to see to make your map fun to look at.
4. Lightly draw in roads or pathways that show how you get to these places. Make sure that you label all the features of your map so that others can tell what they are.
5. Next, fill in the shapes of the places and roads with light-colored colored pencils or wax crayons. Try using two or more colors on each feature of your map. You can blend these colors to make you map more interesting to look at.
6. Using darker colors fill in the areas between the features and roads on your map. You can also blend these colors to make you map more interesting to look at. Every area of your map should be filled in with color. When your map is finished, sign, date and title it in the bottom right-hand corner. Show it to your friends or family members to see what they think of it.

MORE! MORE! MORE!

If you would like to pursue Visual Arts further try one of the ideas below.

- 1. Quick Draw.** Copy a masterpiece in less than 30 seconds. It will teach you to estimate proportion quickly.
- 2. Two Face.** Take a full page picture from a magazine looking at a face, human or animal, straight on. Cut it in half, glue it on a sheet of paper and draw the other half of the face.
- 3. Checkerboard Drawing.** Take a picture you find interesting and draw a checkerboard on top of the picture. Have a group of people take a square each and reproduce what is in that square onto an 8X8 inch piece of sketch paper. Paste the completed sketches back onto a large canvas.

RESOURCES USED TO CREATE THIS MODULE

1. "My Map Book" by Sara Fanelli (1995).
2. Check out the maps in The Harvard Map Collection and the Panoramic Maps Collection.
3. Visit the Community Maps Project web site.

LIVESTOCK MODULE: BEEF

There's a lot more to getting beef 'from the pasture to your plate' than you might imagine. There's no quick way to a steak or roast of beef!

WHAT WILL WE LEARN?

It takes 2 - 2 ½ years to get beef to reach your table. In this module we will look at what happens along this road.

WHO CAN HELP?

There are a lot of people in this province that have expertise in beef production. Cow/calf and feedlot operators are your obvious choices. Other knowledgeable people include veterinarians, some Alberta Agriculture employees, ranchers, etc.

WHAT DO YOU NEED?

Everything that you need to complete this module is included. You may find it beneficial to visit a cattle ranch or feedlot to help you understand more about cattle production and what it takes to get that beef from the 'pasture to your plate'.

LET'S GET EDUCATED!

It takes a cow nine months to have a calf. If the calves go directly to a feedlot the cattle are marketed at 12-14 months of age. If the calves are pastured and then go to the feedlot the cattle are marketed at 22 months of age. Add it up and you will see why it takes 2-2 ½ years for beef to reach your table.

The cattle industry has three major producers:

- 1. Cow-calf producers** own the basic cow herd. They produce calves and earn their income on the sale of these calves. Together, the cow and calf spend six to seven months on pasture, until the calf is weaned from its mother's milk.
- 2. Backgrounders** feed and care for cattle before they go to the feedlot. Backgrounders feed forage feeds such as alfalfa, hay and straw to smaller calves to increase their weight at a steady pace. Six to eight months feeding of hay and grass by a backgrounder results in a 350kg yearling, ready for the feedlot. Yearlings are cattle over one year of age which have not yet reached the age of two years.
- 3. Cattle feeders** finish cattle in their feedlots. During a feedlot stay of three to five months, cattle eat a balanced diet of grain, essential protein and mineral supplements, hay and silage (a finely chopped hay). The grain finishing makes the beef more tender. A 500kg feedlot finished steer is ready to be processed into beef. Feedlots range in size from those handling a few hundred head to feedlots that handle up to 40,000 animals at one time.

Pasture To Plate

Getting beef from the field to your table is not as simple as it might seem. Cattle producers rely on elements they are unable to control, such as the weather, especially rain, and the value of cattle in the markets.

Cattle are bought by a processing plant to be converted from beef on the hoof to beef for the table. At the processing plant there is inspection of live animals and meat before chilling and grading. Refrigerated trucks take beef to stores and restaurants where it sells as steaks, roasts, stew and hamburgers.

A 500kg steer doesn't yield the same volume of processed beef. Once the hide, bones and other by-products are removed, there is about 41% of the steer or 205kg of retail beef available for the consumer. Parts of the animal not suitable for meat are used to make by-products. These parts are used in a variety of foods, toiletries, clothing, manufactured items and medicines.

Cattle today have more lean meat and less fat finish than cattle produced 30 years ago. This leanness is due to improvements in genetics and feeding. That means today's beef has fewer calories, 50% less fat, and 21% less cholesterol. This makes beef an excellent food choice because it is a nutrient-dense food providing an abundance of nutrients for a small amount of calories. Beef is particularly important for providing people with protein, zinc and iron. They are all necessary for growth, development and energy.

LET'S HAVE SOME FUN!

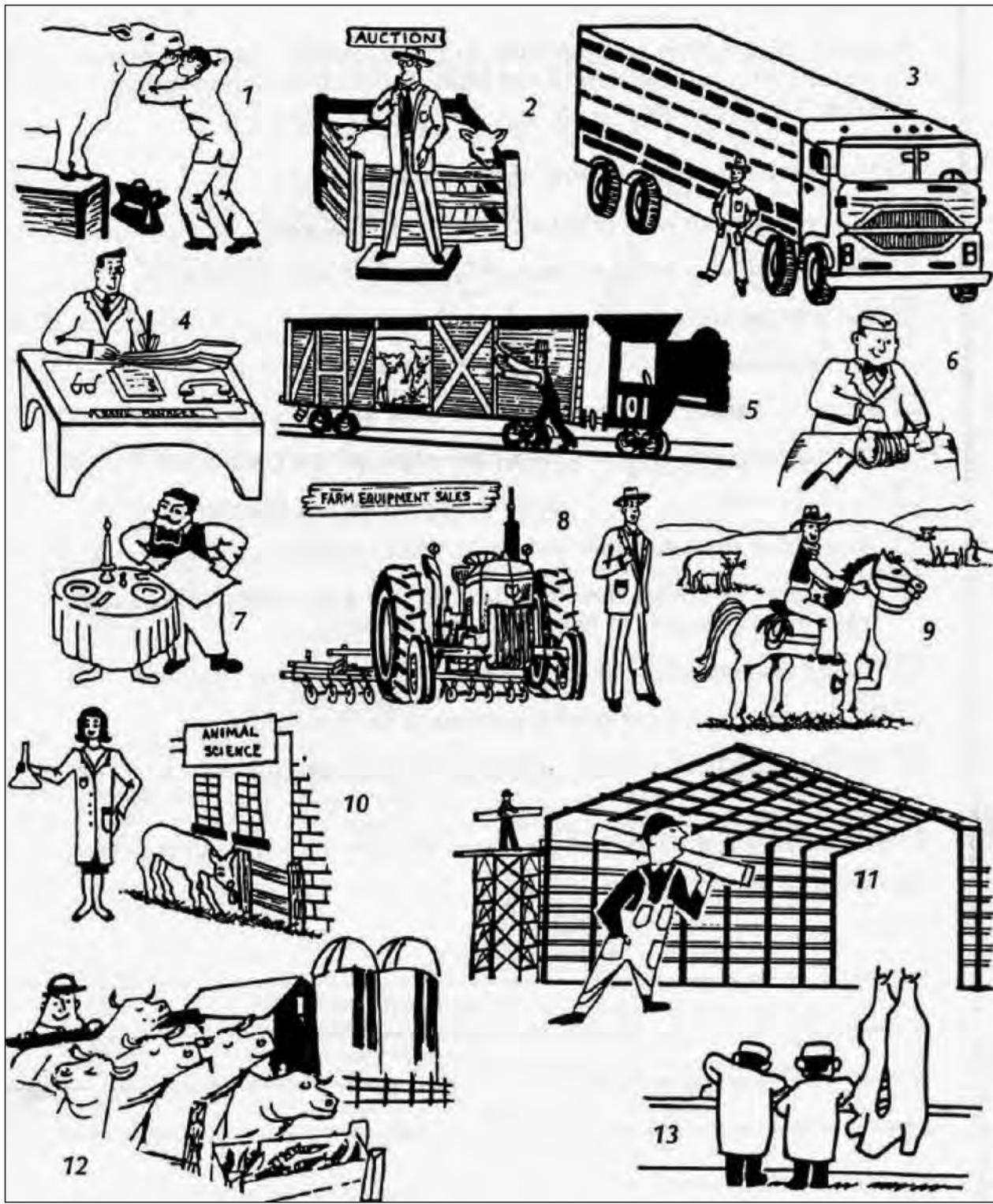
BEEF – FROM PASTURE TO PLATE

The pictures on the following page represent some of the many people that work in the Canadian Beef Industry.

- Photocopy the sheet and cut out the pictures.
- Put the pictures in a bowl or bag.
- With some of the other members of your club take turns picking pictures out of the bag.
- Using the clues on the following page, try matching up the picture you choose, with the right description.
- Put the number in the box beside the description.

Once you have matched up all the pictures with the descriptions of the beef industry workers, you will have a better idea who is involved in getting the beef from 'the pasture to your plate'.

CANADIAN BEEF INDUSTRY WORKERS



CANADIAN BEEF INDUSTRY WORKER DESCRIPTIONS

- ___ The rancher who looks after the cows and calves.
- ___ The veterinarian who looks after the health of cattle.
- ___ The banker who helps to finance land, cattle and equipment.
- ___ The grocery store butcher who forms the final link between all of.
- ___ The restaurant owner who serves these people and you.
- ___ The meat packer who processes the meat and sells it to grocery stores.
- ___ The truck drivers who haul cattle across Canada, to market.
- ___ The railroader who transports meat to the store.
- ___ The feedlot operator who finishes cattle to market weight.
- ___ The scientist who has developed cattle that grow quickly, producing maximum amounts of lean, high quality beef.
- ___ The auctioneer who acts as a sales agent for the beef producer.
- ___ The construction worker who constructs farm buildings.
- ___ The farm machinery dealer who sells farming equipment.

These are just a few of the people involved in the Canadian beef business. You may want to add a few to the list.

SOLUTIONS!

BEEF – FROM PASTURE TO PLATE

- 9 The rancher who looks after the cows and calves.
- 1 The veterinarian who looks after the health of cattle.
- 4 The banker who helps to finance land, cattle and equipment.
- 6 The grocery store butchers who form the final link between all of them.
- 7 The restaurant owner who serves these people and you.
- 13 The meat packer who processes the meat and sells it to grocery stores.
- 3 The truck drivers who haul cattle across Canada, to market.
- 5 The railroaders who transport meat to the store.
- 12 The feedlot operator who finishes cattle to market weight.
- 10 The scientist who has developed cattle that grow quickly, producing maximum amounts of lean, high quality beef.
- 2 The auctioneer who acts as a sales agent for the beef producer.
- 11 The construction worker who constructs farm buildings.
- 8 The farm machinery dealer who sells farming equipment.

MORE! MORE! MORE!

If you would like to learn more about the beef industry and raising cattle take a look at the Beef Project books. They are available on line at www.4h.ab.ca. You may need to ask your leader or 4-H Specialist for the user name and password to look at these resources. Perhaps you would like to take a Beef Project when you start 4-H next year.

RESOURCES USED TO CREATE THIS MODULE

1. Canadian Western Agribitions' Teachers' Resource Package - AGRICULTURE AND YOU – AGRI-ED SHOWCASE – The Beef Story – From Pasture to Plate

LIVESTOCK MODULE: **DAIRY**

Milk and the “Amoozing Milk Machine” – The Dairy Cow

Milk is cool – a most excellent drink for kids and adults. Where does milk come from? How is it made? What else can you make with it? To discover these awesome facts about the coolest drink on the planet, come along on a journey with “Milk...From Moo to You”!

WHAT WILL WE LEARN?

In this module we will learn about the ‘Amoozing Milk Machine’ – the dairy cow.

WHO CAN HELP?

The best resource person for this module would be someone that operates a dairy. Although this module is all-inclusive, as all the information you need to complete it is included, one of the best ways to learn about a dairy cow is to visit her at home. You will be amazed by where she lives, what she eats and how much milk she can produce. Most dairy farms today are highly technical using automated feed, manure and milking equipment. A field trip to a dairy farm is something you won't soon forget.

LET'S GET EDUCATED!

Did you ever wonder how the dairy cow happened to arrive in our great country? Well, just like Canadian people whose ancestors came from other countries, the dairy cows that are commonly found in Canada originally came from overseas. As people moved here, they brought dairy cattle with them.

When you think about a dairy cow do you think black and white? Well these cows are called Holsteins and they came from North Holland. 95% of all dairy cows used in Canadian milk production are Holsteins. The other 5% of dairy cows include Jersey, Guernsey, Ayrshire, and Brown Swiss.

You might be amazed by milk's journey from the cow to you. When does it start? When the dairy cow eats, the journey begins.

You're probably wondering what she eats. An average dairy cow weighs the same as about 20 4-H members that are the same age as you, all put together – that's about 650 kilograms! To keep this cow's large body functioning and to allow her to produce milk, she eats 4kg of hay (about the size of a small microwave oven), 16kg of silage (four small microwave ovens full), 10kg of mixed grains, salt, vitamins and minerals (2 ½ ice cream pails full), and she drinks 60L of water (2/3 of a standard bathtub full) – this is all in one day.

It takes a cow 50-70 hours to turn grass or silage into milk!

Cows are interesting creatures. They are called ruminants. This is because they don't have one stomach like you and I, they actually have four – and they don't just chew and swallow. They gulp down their food fast and later chew it again – yes the same food! The four parts to their stomach are: the rumen, the reticulum, the omasum and the abomasum.

First the food stops in the rumen, then it travels to the reticulum – it can actually travel back and forth from one of these stomachs to the other. The food is held there until the cow finishes eating.

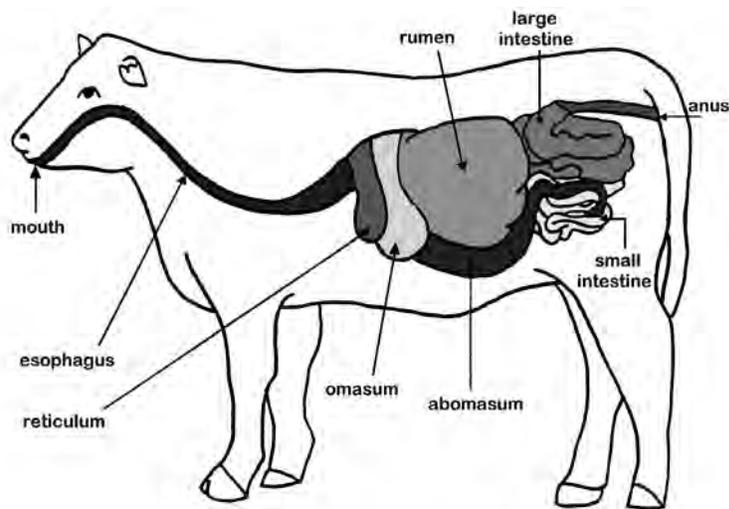
The rumen has bacteria in it that partially digests the food.

In the reticulum the food is formed into lumps the size of tennis balls, each called a cud. The cow uses her stomach muscles to bring the cuds up to her mouth one at a time so she can chew them again – this time more thoroughly.

If you see a cow laying down chewing, with no food in sight you'll know she is "chewing her cud". She then swallows the re-chewed, but this time, it goes into the third section of the stomach called the omasum. This is where softening and grinding of the food continues.

Finally, the food reaches the fourth compartment, the abomasum. Here it is digested much like the food in our stomach.

The small intestine finishes the digestion. Nutrients are carried by the blood to the rest of the cow's body.



THE RUMINANT DIGESTIVE SYSTEM

Before a cow can make milk, she has to have a baby. You might not believe this, but a cow has her first baby when she is only two years old herself. After a cow has a calf she will be milked for ten months. Each time she has a calf she will produce more milk. Dairy cows make about 7 300 L of milk each year (enough to fill 85 bathtubs!). Since their young calves need only about 255L (3 bathtubs full) of this milk for the first few months of life, all that extra milk is available for us to enjoy!

You're probably wondering where these cows live? Well a farmer's dairy cows are very special to him/her so he/she keeps them in large clean barns that protect them from cold and wet weather. When the weather is nice, they may roam the pastures and feed on fresh grass.

There are two types of dairy barns where cows can live. On smaller dairy farms cows live in a Tie Stall Barn. Each cow has its own stall where she can eat and move around. At milking time the cows stay in their stall and the farmer brings the milking equipment to them.

A second type of home for cows is the Loose Housing Barn. This is a sheltered area where cows can move about freely.

Larger dairy farms have Free Stall Barns. The barn has different areas – one is the eating and sleeping area. Tractors drive down the middle of this area to put the cow's food in the areas, which are called feed alleys. At milking time, cows are moved through gates to another part of the barn called the milking parlor. This is a very clean room, where the cow walks up a ramp, to stand in a stall on a raised platform. There are two rows of stalls and between them is an area where the farmer stands to attach the milking equipment to the cows udder-this of course is where the cows keep the milk until it is time for her to be milked.

Most cows are milked twice per day. If you have the opportunity to visit a dairy farm you will find out just how early dairy farmers have to get up. It is important that cows are milked at regular intervals everyday, so if you milk a cow at 5:00pm then she also has to be milked at 5:00am. That means the dairy farmers' day starts very early.

All the equipment the farmer uses in the milking parlor to milk the cow is thoroughly cleaned before and after each milking. Did you ever wonder how the farmer gets the milk out of the cows' udder? Well a special device called a milking machine is attached to her udder. This special machine has four cups (called a cluster), one cup for each teat. Before the cups are fitted on the cow, the farmer cleans the cows udder and teats. The cups gently suck the milk out of the teats. With these special milking machines the milk never touches a human hand. Milking each cow takes about five minutes and doesn't hurt them at all.

Where does this milk go? Well, it travels in pipes directly from the milking machines to a big tank in the barn. When it arrives there, it is quickly cooled to 4°C. This ensures that the milk stays fresher longer. That's the same temperature as your refrigerator at home.

Every second day, the milk is picked up from the barn by a big stainless steel, insulated milk truck and driven to the dairy. On very large farms, milk is picked up daily.

At the dairy the milk is pumped out of the truck into another cold storage tank, called a silo.

The milk is then pasteurized – this is a special process that kills harmful bacteria. Extra cream is taken out at the same time. The milk is also homogenized – this is to keep the milk fat from separating and floating to the top.

You're probably wondering when this milk is ever going to get to you so you can drink it – we're almost there.

Now the milk can be put into containers. Machines put the cold milk into cartons, glass bottles, plastic jugs or plastic bags. These containers are taken by refrigerated truck to your local grocery store.

Don't forget this isn't the only way you'll see milk in the grocery store. Milk is used to produce many other products. Ice cream, yogurt, sour cream, butter, cottage cheese and all other types of cheeses are dairy products made from milk.

Now when you take your next drink of milk, you will have a better understanding of where the milk came from before it arrived in the grocery store and what it took to get it there.

LET'S HAVE SOME FUN!

Now that you have learned about the 'Amoozing Milk Machine' let's have some fun with what you have learned.

WACKY WORD SCRAMBLE

Remember these words? Do they look a little mixed up? Use the Let's Get Educated section of this module to unscramble these milk related words.

RDIAY _____

NIEHLOST _____

GHCEINW ETH DCU _____

MREUN _____

EITCMUURL _____

LMKI _____

OTYGRU _____

YIRDA WCO _____

TDZAPUISRE _____

OMHGNEZEIDO _____

SNRACTO _____

GINKLIM HCMANEI _____

TEINEISTN _____

CSOAMTH _____

What would you use to count cows?

A Cow-culator

FROM MOO TO YOU

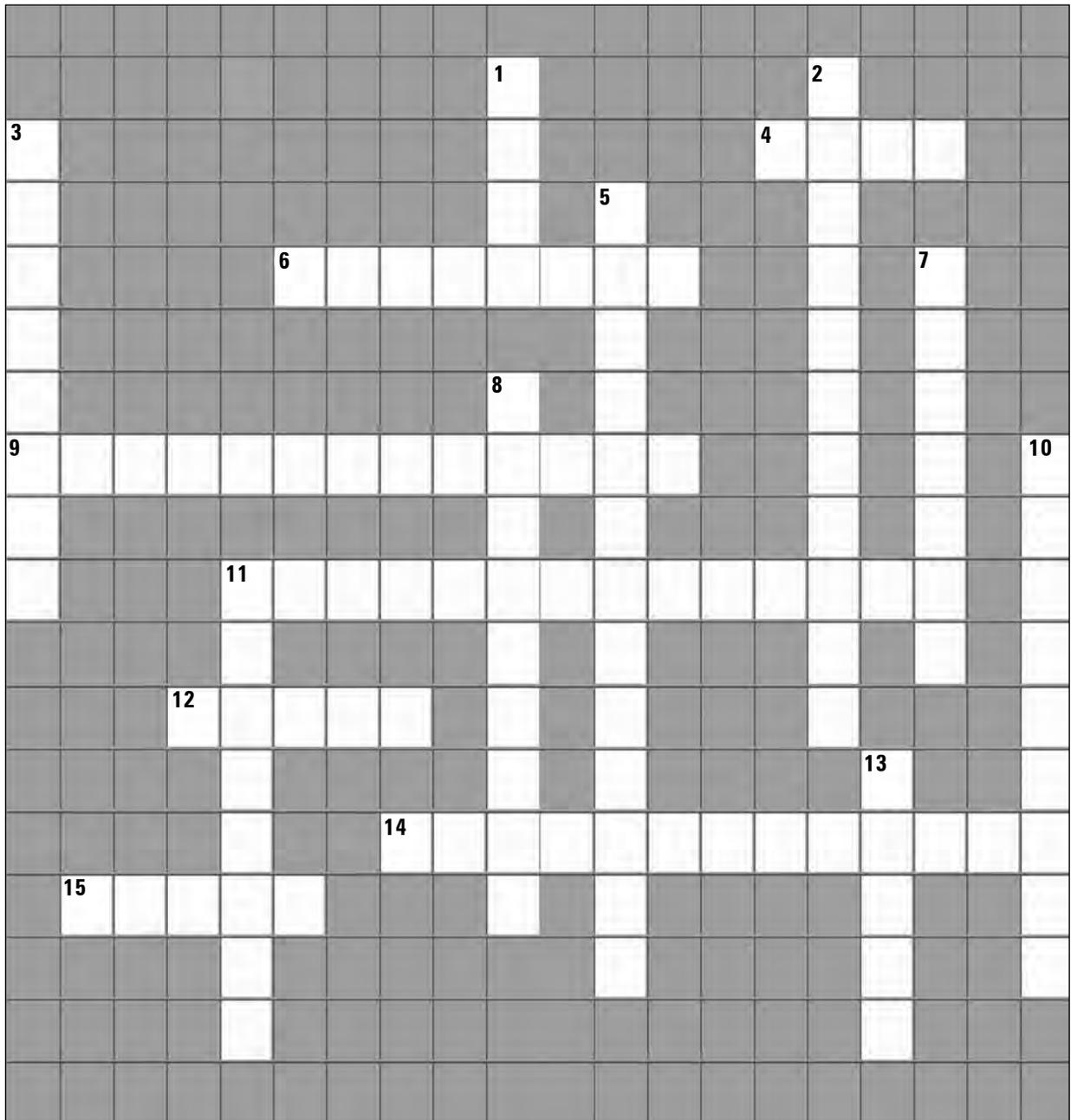
Solve the following clues and enter the answers into the crossword puzzle.

DOWN

1. A cow has this many stomachs.
2. The dairy cow produces the equivalent of _____ bathtubs of milk per year.
3. She produces milk. (2 words)
5. This is a special process that kills harmful bacteria in the milk.
7. Milk can be packaged in these containers.
8. Some dairy cows live in this type of barn. (2 words)
10. A dairy cow drinks _____ of a bathtub of water each day. (2 words)
11. Black and white dairy cow.
13. Milk is picked up from the dairy farm with a stainless steel, insulated _____.

ACROSS

4. It takes about _____ minutes to milk a cow with a milking machine.
6. This is made from milk and is one of a kids favorite treats. (2 words)
9. This is what you call it when a cow brings her food back up to chew it again. (3 words)
11. This keeps the milk fat in milk from separating and floating to the top.
12. Nutrients are carried by the _____ to the rest of the cow's body.
14. This is where the cows are milked. (2 words)
15. This is a cow's first stomach.



TRY THIS DELICIOUS CREATION:**YUMMY YOGURT POPS****Ingredients:**

1 cup (250ml) - plain yogurt

$\frac{3}{4}$ cup (175ml) - frozen orange juice concentrate

$\frac{3}{4}$ cup (175ml) - cold milk

Directions:

In blender container combine plain yogurt, juice concentrate and milk. Cover and blend at high speed until smooth. Pour mixture into 12 popsicle molds or 6 (3oz./100ml) paper cups. Freeze until partially firm, then insert wooden stick into each pop. Freeze until firm.

Preparation time: 5 minutes

Freezing Time: 8 hours

Makes: 6-12 pops

WACKY WORD SCRAMBLE

- | | |
|---------------------|-----------------|
| 1. RDIAY | Dairy |
| 2. NIEHLOST | Holstein |
| 3. GHCEINW ETH DCU | Chewing the cud |
| 4. MREUN | Rumen |
| 5. EITCMUURL | Reticulum |
| 6. LMKI | Milk |
| 7. OTYGRU | Yogurt |
| 8. YIRDA WCO | Dairy cow |
| 9. TDZAPUISRE | Pasteurized |
| 10. OMHGNEZEIDO | Homogenized |
| 11. SNRACTO | Cartons |
| 12. GINKLIM HCMANEI | Milking machine |
| 13. TEINEISTN | Intestine |
| 14. CSOAMTH | Stomach |

MORE! MORE! MORE!

To learn more on dairy production:

1. Check out the 4-H resource material on this topic.
2. Contact the Alberta Milk Producers at www.albertamilk.com to find out about educational materials for children.
3. Check out the website www.moo2you.ca.

RESOURCES USED TO CREATE THIS MODULE

1. **“The Milky Way”** produced by Alberta Milk Producers
2. **“Milk From Moo to You”** produced by Alberta Milk Producers
3. **“Agriculture and You”** produced by Western Canadian Agribition
4. **Website: www.edhelper.com**

LIVESTOCK MODULE: **GOAT**

There are over 100 goat breeds in the world, ranging in size from the 20-40 pound tropical breeds to breeds of European and African decent weighing 100 pounds and more.

Let's learn about these intriguing animals.

WHAT WILL WE LEARN?

In this module you will learn that all goats are not the same, and can have different purposes. Goats can be categorized according to what they are used for - dairy, fleece, meat, pack or dual purpose. Now let's find out the differences.

WHO CAN HELP?

Perhaps a leader in your club or a neighbor might be familiar with the raising of goats. It would be helpful to have someone that knows about goats so they can assist you with any questions you might have. Also if you don't own any goats yourself it would be great if you could visit the farm of someone who does.

WHAT DO YOU NEED?

Everything you need to complete this module is included.

LET'S GET EDUCATED!

MEAT BREEDS

Boer

(also known as South African common goat)

These goats were developed in South Africa for their meat, hardiness and brush control abilities.

Boers are specifically meat goats. A Boer goat should have a deep broad chest, good back, strong shoulders and heavy muscling in the rump. They are large framed animals resembling, in many ways, the Nubian goat. The most obvious difference is the size. Mature weights between 200 and 350 pounds for females are considered normal.



Boers are generally white with a reddish brown head and usually a white blaze down the middle of their face. They have long ears that should hang down the sides of their faces.

Pygmy

The Pygmy Goat was originally called the Cameroon Dwarf Goat. The goat is mostly restricted to the West African countries. The Cameroon goats were exported from Africa to zoos in Sweden and Germany where they were on display as exotic animals. From there they made their way to England, Canada, and the United States.



Pygmy goats are smaller than any other recognized breed of goat. On average a full-grown buck stands at about 20 inches wide while the full-grown female goat is somewhat less. They are usually not over 60 pounds and are blue in color. A goat in milk may give about one pint of milk at both morning and evening milking. Since they are small and easy to handle, Pygmy goats make excellent animals for medical, psychological, chemotherapeutic and physiological scientific research.

Nigerian Dwarf

The Nigerian Dwarf is a miniature goat of West African Origin.

They make wonderful pets and are great projects for young children in 4-H.

The coat is soft with short to medium hair. Any color or combination of colors is acceptable, though silver agouti (roan) is considered a moderate fault. Shown below is the rainbow of colors these gentle and loveable animals can come in.

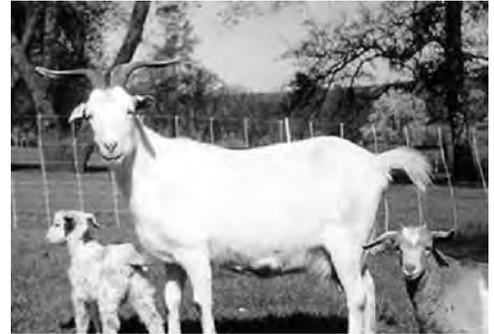
As you can see color is one of the BIG factors that makes breeding Dwarves so popular. You never can be sure what color the babies will be until they are born; even then you can't be sure because many times their color will change.



Kiko

The appropriately named Kiko goat was purpose-bred in New Zealand for meat production – the Maori word “kiko” meaning flesh or meat.

The Kiko breed was established by crossbreeding selected feral does with Anglo-Nubian, Toggenburg and Saanen bucks, with further cross-breeding in the second and third generations. After four generations of selective breeding – selection being on the grounds of survivability and growth rate in a hill country environment – a dramatic improvement in liveweight and animal performance was achieved. By 1986 the Kiko breed was established and the herd was closed to further cross-breeding.



DAIRY BREEDS

Alpine

The Alpine Dairy Goat is also referred to as the French-Alpine and is a breed of goat that originated in the Alps. The goats of Alpine type that were brought to the United States from France were selected for much greater uniformity, size, and production.

The Alpine dairy goat is a medium to large size animal, alertly graceful, and the only breed with upright ears that offers all combinations of colors giving them distinction and individuality. They are hardy, adaptable animals that thrive in any climate while maintaining good health and excellent production.

The hair is medium to short.

Toggenburg color and markings, or all-white is discriminated against. Alpine colors are described by using the following:

- Cou Blanc - (coo blanc) white neck and dark hind quarters
- Cou Clair - (coo clair) tan neck and dark hindquarters
- Cou Noir - (coo nwah) black neck and hind quarters
- Sandgau - (sundgow) black with white underbelly
- Pied - spotted or mottled
- Chamoisee - (shamwahzay) grayish yellow

The face is straight; a Roman nose is discriminated against.



© Oklahoma State University
Provided by Crystal D'Eon

La Mancha

The LaMancha goat originated in the U.S.A.

It has excellent dairy temperament and is an all-around sturdy animal that can withstand a great deal of hardship and still produce. Through official testing this breed has established itself in milk production with high butterfat.

Any color or combination of colors is acceptable with no preferences. The hair is short, fine and glossy.

The LaMancha face is straight with the ears being the distinctive breed characteristic. There are two types of LaMancha ears - the "gopher ear" and the "elf ear". One type of ear has no advantage over the other.



© Oklahoma State University
Provided by Karen Lee

Nubian

The Nubian is of mixed Asian, African, and European origin.

It is a relatively large, proud, and graceful dairy goat known for high quality, high butterfat and milk production. The hair is short, fine and glossy. Any color - solid or patterned, is acceptable.

The head is the distinctive breed characteristic, with the facial profile between the eyes and muzzle being strongly convex. The ears are long, wide and pendulous. They lie close to the head at the temple and flare slightly out and well forward at the rounded tip, forming a "bell" shape.

Toggenburg

The Toggenburg is a Swiss dairy goat from Toggenburg Valley of Switzerland. They are also credited as being the oldest known dairy goat breed.

This breed is medium size, sturdy, vigorous, and alert in appearance. The hair is short or medium in length, soft, fine, and lying flat. Its color is solid, varying from light fawn to dark chocolate with no preference for any shade. Distinct white markings are as follows: white ears with dark spot in middle; two white stripes down the face from above each eye to the muzzle; hind legs white from hocks to hooves; forelegs white from knees downward with a dark lien (band) below knee acceptable; a white triangle on either side of the tail; white spot may be present at root of wattles or in that area if no wattles are present. Varying degrees of cream markings instead of pure white acceptable, but not desirable.



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The ears are erect and carried forward. Facial lines may be dished or straight, never Roman.

Oberhasli

The Oberhasli is a Swiss dairy goat.

This breed is of medium size, vigorous and alert in appearance.

Its color is chamois. Does may be black but chamois is preferred. Chamois is described as: Bay - ranging from light to a deep red bay with the later most desirable. A few white hairs through the coat and about the ears are permitted. Markings include: two black stripes down the face from above each eye to a black muzzle; forehead nearly all black, black stripes from the base of each ear coming to a point just back of the poll and continuing along the neck and back as a dorsal stripe to the tail; a black belly and udder; black legs below the knees and hocks; ears black inside and bay outside; bucks often have more black on the head than does, black whiskers, and black hair along the shoulders and lower chest with a mantle of black along the back; bucks frequently have more white hairs through the coat than does.



provided by Dave Battjes

The face is straight. A Roman nose is discriminated against.

Saanen

The Saanen Dairy Goat originated in Switzerland.

It is medium to large in size with rugged bone and plenty of vigor. Does should be feminine, and not coarse.

Saanens are white or light cream in color, with white preferred. Spots on the skin are not discriminated against. Small spots of color on the hair are allowable, but not desirable. The hair should be short and fine, although a fringe over the spine and thighs is often present.



Ears should be erect and alertly carried, preferably pointing forward. The face should be straight or dished. A tendency toward a roman nose is discriminated against.

FIBER BREEDS

Angora

The Angora goat originated in the Himalayas of Asia.

The fiber they produce is known as mohair and is from an Arabic word meaning “select” or “choice”. This select fiber is long, strong, warm, and lustrous. This mohair is the most valuable characteristic of the Angora as compared to other goats. The average goat in the U.S. shears approximately 5.3 pounds of mohair per shearing and is usually sheared twice a year. They produce a fiber with a staple length of between 12 and 15cm.



Modern Angoras are often classified according to the type of ringlet or lock hair in which the hair grows. Ringlet type goats are often referred to as the C Type, while B Type is used to designate those with a flat mohair lock. In the case of the ringlet type goat, the mohair is carried in tight ringlets throughout almost its entire length and represents the finest mohair produced. The flat lock, in contrast, is usually wavy and more bulky in appearance.

The Angora goat is a small animal as compared to sheep, common goats, or milk goats.

The Angora is a very picturesque animal in which both sexes are horned. The bucks usually have a pronounced spiral to the horn, which comes back and away from the head; the horns of mature bucks sometimes reach two or more feet in length. In contrast, the horn of the female is comparatively short, much smaller, and has only a very slight tendency to spiral. The horn of the female seldom exceeds nine or ten inches. The ears are heavy and drooping.

Cashmere

This is not a breed but a description of all goats that produce cashmere, a very fine fiber. Sixty percent of the world's supply of cashmere is produced in China. The first Cashmere goats were imported from Australia and New Zealand in the late 1980's.

They are sheared once a year and a full grown adult buck will yield as much as 2.5 pounds of fleece. The fleece consists of two kinds of fiber, cashmere and guard hair. On average, 20% of the fleece is cashmere and 80% is guard hair.



LET'S HAVE SOME FUN!

Now let's have some fun with some of the knowledge you've gained about goats.

WHAT'S MY ORIGIN

As you have discovered, virtually all goats originated somewhere other than Canada. Using the map of the world, let's identify the wide range of areas where the different types of goats originated.

1. On the the bottom of this page, are names of the different breeds and types of goats that we have talked about in this module.
2. Photocopy the names, cut them out and glue them on the map of the world to indicate where each breed originated.
3. You may want to use a larger wall size map for this activity, if you have one.
4. To check your answers go back to the Let's Get Educated section on the previous pages.

BOER

PYGMY

LA MANCHA

NUBIAN

ANGORA

CASHMERE

NIGERIAN DWARF

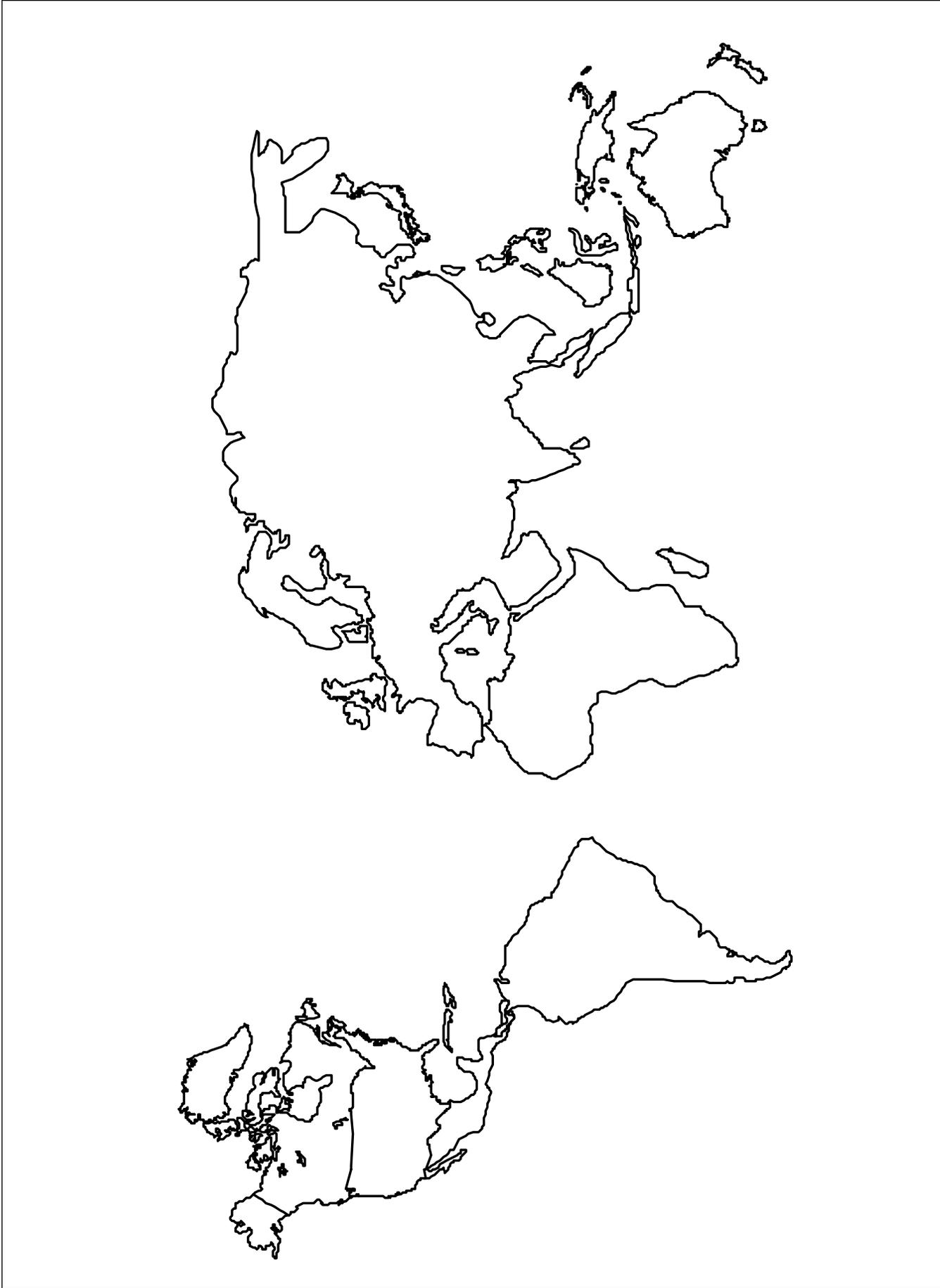
TOGGENBURG

OBERHASLI

KIKO

ALPINE

SAANEN



MORE! MORE! MORE!

The 4-H Branch has a number of publications available for the Goat Project. If you are interested in these cute, loveable animals talk to your leader about getting a look at some of these books.

RESOURCES USED TO CREATE THIS MODULE

1. www.ansi.okstate.edu/breeds/goats/
2. 4-H Skills For Life – Animal Science Series – Getting Your Goat produced by the National 4-H Cooperative Curriculum System, Inc.

LIVESTOCK MODULE: SHEEP

There's nothing cuter than a newborn lamb, but these little creatures need lots of TLC (tender loving care) to keep them happy and healthy.

WHAT WILL WE LEARN?

We will learn about THE NEWBORN LAMB.

WHO CAN HELP?

This module will be the most rewarding for you if you can visit a sheep farm. If you know someone that raises sheep, talk to them about this module. See if you could visit their farm during lambing season. This season can be a lot of work, but is also very rewarding and fun.

WHAT DO YOU NEED?

No special supplies needed for this module.

LET'S GET EDUCATED!

In this module we will focus on the lamb after it is born. The lambing process is another topic in itself.

FEEDING THE NEWBORN LAMB

Feeding the newborn lamb properly is very important to the future growth of the lamb. You need to be sure that the newborn lamb receives enough of the right nutrients. That is why it is very important to make sure that the lamb suckles as soon as possible after birth. By suckling early, the lamb will receive Colostrum from the mother's milk.

What is Colostrum?

Colostrum is the first milk the mother sheep (or ewe) produces. It is thick, rich milk that the ewe produces for her newborn lamb.

Why Does The Newborn Lamb Need Colostrum? And Need It Fast?

The lamb's stomach can only absorb the nutrients from the colostrum for the first three or four hours after birth. That is why the lamb must get the colostrum quickly.

There are many things in the colostrum that are necessary for the lamb. Let's look at these:

PROTEIN

VITAMINS

MINERALS

And most important, ANTIBODIES

What Are Antibodies?

Antibodies are disease fighters. They are the tiny creatures in the blood that get together and attack diseases. The ewe gives these antibodies to the lamb through the colostrum in the milk, so that the lamb will be able to fight disease until it is old enough to make its own disease fighters.

If the lamb is not able to get fresh colostrum from its mother, you can always give it colostrum in a bottle. If a ewe has a lot of milk when she lambs you can milk some of it from her and freeze it. This way if you need colostrum for a young lamb you can warm it up when required. Lambs aren't always able to be nursed by the ewe.

The lamb may not be able to stay with its mother if:

- The lamb is orphaned when the ewe dies or won't mother her lamb.
- The ewe does not have enough milk for her lamb.
- The lamb is a twin or triplet and the ewe doesn't have enough milk for all her babies.

These lambs are called orphans and they have to be raised artificially. This means that someone other than the ewe is supplying the lamb with its nutrients. These nutrients will come from a product called milk replacer. For one reason or another, most sheep farmers end up with one or more of these lambs that they need to care for.

Perhaps you could offer to help with this job. It's a lot of fun, as the little lambs become very dependant on whoever feeds them and end up adopting them as their mother.

WHAT DOES IT TAKE TO CARE FOR YOUR ORPHAN LAMBS?

Milk replacer is a special powder that you mix with water. It makes a liquid that has all the characteristics and nutrients of milk. When mixing the milk replacer the sheep farmer always reads the instructions on the label. It gives the most accurate directions according to the age of the lamb that is being fed.

Keep orphaned lambs in a warm, dry enclosed area. Don't mix any large lambs in with smaller ones.

Show the lambs the nipples on the bottles you have selected to use for feeding the milk replacer, and watch to make sure that they are drinking.

Clean the feeding equipment regularly. Make sure the pens are kept clean and dry.

At 7-10 days provide creep feed and fresh water.

- Creep feed is a special ration that is high in protein and energy.
- Always be sure to provide a good supply of fresh, clean water.

At about four weeks, provide the lamb with some good quality alfalfa hay.

The main causes of newborn lamb deaths are:

- Chills
- Unsanitary conditions
- Starvation

Your goal is to raise healthy lambs so that you can have strong rams and ewes, or market lambs.

SO WHAT DO WE NEED TO DO TO RAISE HEALTHY LAMBS?

Here are a few hints to help you raise your lambs successfully:

- During very cold weather, keep your ewes indoors to lamb. When it is extremely cold, newborn lambs chill very quickly.
- Make sure your lambing pens are clean, warm and dry. Keep the area well bedded.
- Avoid any drafts in your lambing pens. Make sure they are well ventilated.
- Most important – watch your ewe to make sure she is a good mother.
- Check your newborns for sharp teeth! You may find that your lamb is not nursing – is the ewe letting it nurse? It may be that your lamb has razor sharp teeth that are painfully cutting the ewe's teat. You can solve this problem by filing the lamb's teeth with an emery board!

LET'S HAVE SOME FUN!

FEEDING THE NEWBORN LAMB

In the cryptogram you see below, each letter has a number that represents it. By placing the correct letters on the blanks you will solve this cryptogram.

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|----|----|----|----|----|---|----|----|----|----|---|----|----|----|---|---|----|----|----|---|---|----|----|
| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
| 9 | 6 | 1 | 20 | 12 | 26 | 25 | 24 | 8 | 11 | 19 | 17 | 16 | 7 | 13 | 14 | 21 | 2 | 5 | 18 | 15 | 22 | 4 | 3 | 10 | 23 |

 9 7 18 8 6 13 20 8 12 5 9 2 12 20 8 5 12 9 5 12

 26 8 25 24 18 12 2 5 18 24 12 10 9 2 12 18 24 12 18 8 7 10

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 25 12 18 18 13 25 12 18 24 12 2 9 7 20 9 18 18 9 1 19

 20 8 5 12 9 5 12 5 18 24 12 12 4 12 25 8 22 12 5

 18 24 12 5 12 9 7 18 8 6 13 20 8 12 5 18 13 18 24 12 17 9 16 6

 18 24 2 13 15 25 24 18 24 12 1 13 17 13 5 18 2 15 16 8 7 18 24 12

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 6 12 9 6 17 12 18 13 26 8 25 24 18 20 8 5 12 9 5 12 15 7 18 8 17

 8 18 8 5 13 17 20 12 7 13 15 25 24 18 13 16 9 19 12 8 18 5

 13 4 7 20 8 5 12 9 5 12 26 8 25 24 18 12 2 5

SOLUTIONS!

FEEDING THE NEWBORN LAMB

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|----|----|----|----|----|---|----|----|----|----|---|----|----|----|---|---|----|----|----|---|---|----|----|
| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
| 9 | 6 | 1 | 20 | 12 | 26 | 25 | 24 | 8 | 11 | 19 | 17 | 16 | 7 | 13 | 14 | 21 | 2 | 5 | 18 | 15 | 22 | 4 | 3 | 10 | 23 |

A N T I B O D I E S A R E D I S E A S E
 9 7 18 8 6 13 20 8 12 5 9 2 12 20 8 5 12 9 5 12

F I G H T E R S . T H E Y A R E T H E T I N Y
 26 8 25 24 18 12 2 5 18 24 12 10 9 2 12 18 24 12 18 8 7 10

C R E A T U R E S I N T H E B L O O D T H A T
 1 2 12 9 18 15 2 12 5 8 7 18 24 12 6 17 13 13 20 18 24 9 18

G E T T O G E T H E R A N D A T T A C K
 25 12 18 18 13 25 12 18 24 12 2 9 7 20 9 18 18 9 1 19

D I S E A S E S . T H E E W E G I V E S
 20 8 5 12 9 5 12 5 18 24 12 12 4 12 25 8 22 12 5

T H E S E A N T I B O D I E S T O T H E L A M B
 18 24 12 5 12 9 7 18 8 6 13 20 8 12 5 18 13 18 24 12 17 9 16 6

T H R O U G H T H E C O L O S T R U M I N T H E
 18 24 2 13 15 25 24 18 24 12 1 13 17 13 5 18 2 15 16 8 7 18 24 12

M I L K , S O T H A T T H E L A M B W I L L
 16 8 17 19 5 13 18 24 9 18 18 24 12 17 9 16 6 4 8 17 17

B E A B L E T O F I G H T D I S E A S E U N T I L
 6 12 9 6 17 12 18 13 26 8 25 24 18 20 8 5 12 9 5 12 15 7 18 8 17

I T I S O L D E N O U G H T O M A K E I T S
 8 18 8 5 13 17 20 12 7 13 15 25 24 18 13 16 9 19 12 8 18 5

O W N D I S E A S E F I G H T E R S .
 13 4 7 20 8 5 12 9 5 12 26 8 25 24 18 12 2 5

MORE! MORE! MORE!

If you enjoy this Newborn Lamb module check out the Sheep Project books to see if you would like to continue learning about sheep production.

RESOURCES USED TO CREATE THIS MODULE

1. The Sheep Project resources produced by the Alberta 4-H Branch.
2. www.puzzlemaker.school.discovery.com

LIVESTOCK MODULE: **SWINE**

How big can a pig be? Well the largest pig on record was a Poland-China hog named "Big Bill". He weighed an amazing 2552lbs. and was so large that he dragged his belly on the ground. He had a shoulder height of 5 feet and a length of 9 feet.

NOW THAT'S A LOT OF BACON!!

WHAT WILL WE LEARN?

In this module, you will learn a little about the very intelligent and remarkable pig. You will learn a little about where and how pigs live, and some interesting facts about sows, boars and piglets.

WHO CAN HELP?

The best person to help you with this module would be the operator or employee of a swine operation.

WHAT DO YOU NEED?

This module contains everything you need to complete it.

LET'S GET EDUCATED!

Hog, swine and pig are names for a very intelligent and remarkable animal.

Modern day pigs probably descended from two wild swine species - one from Europe and the other from Southeast Asia. Archaeologists think that the Chinese were the first people to domesticate wild pigs. This happened about 9 000 years ago. Christopher Columbus and Spanish explorers brought pigs to the Americas. Today, farmers raise pigs in almost every part of the world.

Adult pigs have heavy, rounded bodies. They are famous for their long, flexible snouts, short legs with cloven hooves and short tails. Pigs have thick but sensitive skin which is covered by coarse bristles.

Female pigs are called sows. Male pigs are called boars. Young pigs are called piglets. Piglets that have been weaned from their mother are called weanlings.

Pigs or hogs come in a variety of colors and have different characteristics. The characteristics are the litter size, how fast and how well the pigs grow, the carcass structure and composition.

TYPES OF HOG FARMS

Multiple Units are farms that raise pigs to provide breeding stock to other producers.

Farrow to Finish farms raise pigs from when they are born to when they are finished. Finished is the word that means the pigs are ready for slaughter. Farrow is the word that is used for when pigs are born.

Farrow to Weanling farms raise pigs from when they are born to when they stop nursing from the sow. The weanling pigs are sold to finishing operations.

Finishing Operations buy weanling pigs and raise them until they are finished as slaughter hogs.

Most pigs are raised in large, modern barns. Raising pigs indoors protects the animals from weather that is either too hot or too cold for the pigs. Pigs are very sensitive to hot temperatures because they do not have sweat glands. They also have small lungs for their body size. The pigs are kept in barns with ventilation systems that keep the pigs cool in warm weather and warm in cold weather. Raising pigs indoors also keeps the pigs safe from diseases and predators.

Pigs require special feed, good health care and safe buildings. For example, to prevent the spread of diseases, farmers may limit the number of visitors in pig barns. Some farmers ask visitors to shower or put on special clothing before they go into the barns. Producers also use the help of people such as veterinarians and feed specialists. All of these things keep pigs healthy and productive.

A mother sow carries her piglets for 3 months, 3 weeks and 3 days before giving birth. Piglets are born in litters. There are usually eight to twelve piglets in a litter. Piglets are very small when they are born. A mother pig can be very large. The piglets could be crushed accidentally by the sow; so special pens called farrowing crates are used. These crates let the piglets nurse from the sow but keep the piglets safe from harm.

When pigs are born they have very little hair and body fat. This means the newborn piglets can become very cold. Heat lamps are used to keep the piglets warm. Sometimes special areas and the concrete floors are heated as well.

At the end of the three-week nursing period, the piglets are weaned. This means they are old enough to be taken from the sow and begin eating on their own. They are now called weanlings or weaners.

As the pigs grow they are fed special diets depending on their age and size. This means that farmers change the pigs' feed rations as they grow.

The feed ration contains large amounts of highly digestible ingredients, vitamins, minerals, proteins and energy. The sources of protein include soybean, canola and pea meal. The sources of energy are grains such as corn, wheat, barley, oats, triticale and rye.

LET'S HAVE SOME FUN!

WHERE DO PIGS LIVE?

Types of Hog Farms

Test your knowledge without looking back at what you have learned. Draw a line connecting the type of hog farm as listed on the left with the correct description on the right. Once you are done, go back to the Let's Get Educated section of the module to see if your ideas were correct.

Farrow to finish

Farms that raise pigs to provide breeding stock to other producers.

Multiple units

Farms that raise pigs from when they are born to when they stop nursing from the sow.

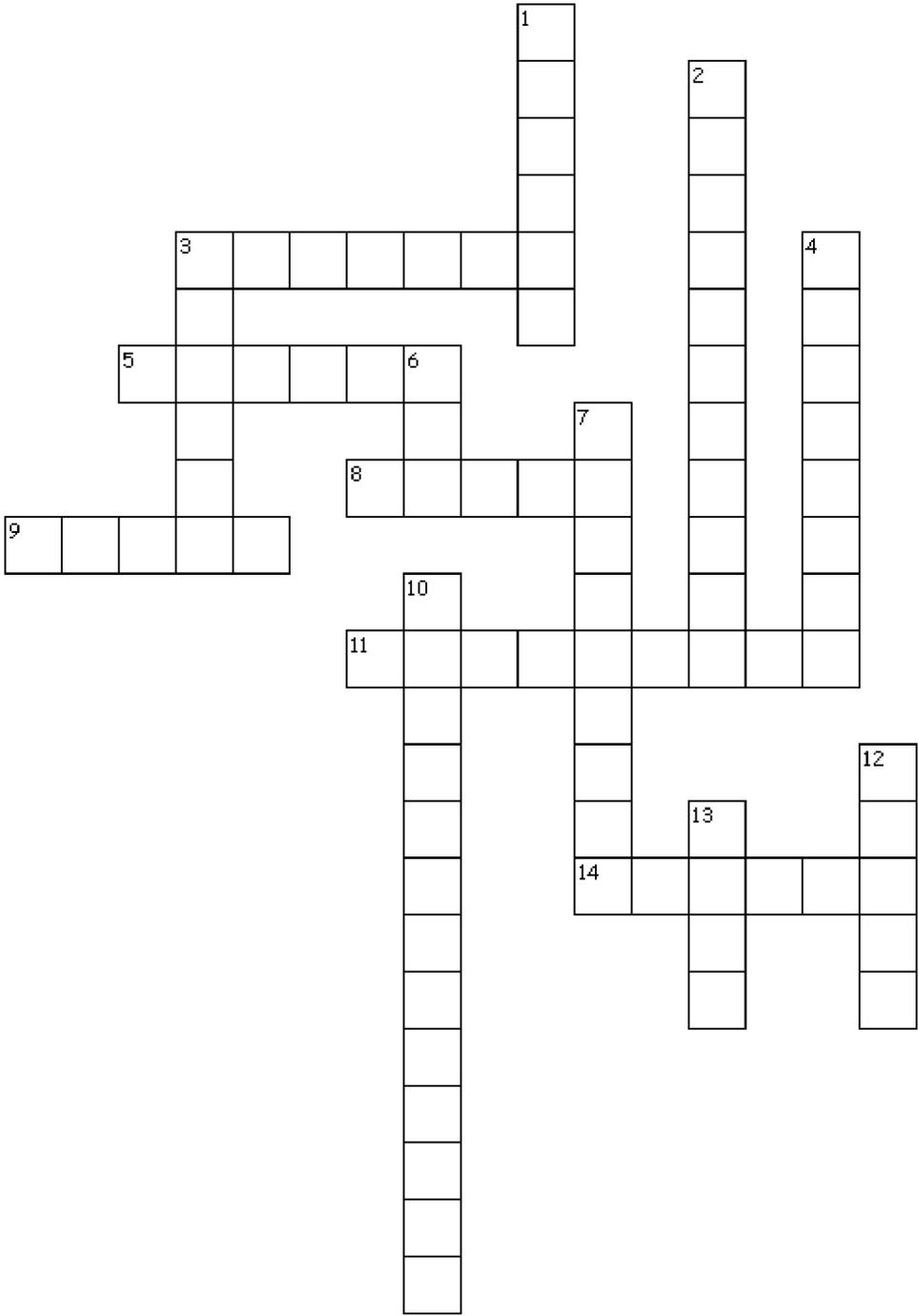
Finishing operations

Farms that buy weanling pigs and raise them until they are finished as slaughter hogs.

Farrow to weanling

Farms that raise pigs from when they are born to when they are finished.

SWINE, HOGS & PIGS



Across

3. It is thought that the _____ were the first to domesticate pigs.
5. Pigs have long, flexible _____.
8. _____ is another name for a pig.
9. Pigs do not have _____ glands.
11. Piglets that have been weaned from their mother are called _____.
14. Some farmers ask visitors to _____ before entering the pig barn.

Down

1. A young pig is called a _____.
2. Pigs are kept in barns with _____ systems.
3. This is one source of protein for feeding pigs.
4. Raising hogs indoors keeps them safe from _____ and predators.
6. A female pig is called a _____.
7. Because baby piglets have little hair or body fat these are used to keep newborns warm.
10. Hog producers use the help of _____ to manage the health of their pigs.
12. Pigs are raised in large modern _____.
13. A male pig is called a _____.

SOLUTIONS!

WHERE DO PIGS LIVE?

Types of Hog Farms

Farrow To Finish - Farms that raise pigs from when they are born to when they are finished.

Multiple Units - Farms that raise pigs to provide breeding stock to other producers.

Finishing Operations - Farms that buy weanling pigs and raise them until they are finished as slaughter hogs.

Farrow To Weanling - Farms that raise pigs from when they are born to when they stop nursing from the sow.

SWINE, HOG and PIGS

Across

3. It is thought that the **Chinese** were the first to domesticate pigs.
5. Pigs have long, flexible **snouts**.
8. **Swine** is another name for a pig.
9. Pigs do not have **sweat** glands.
11. Piglets that have been weaned from their mother are called **weanlings**.
14. Some farmers ask visitors to **shower** before entering the pig barn.

Down

1. A young pig is called a **piglet**.
2. Pigs are kept in barns with **ventilation** systems.
3. This is one source of protein for feeding pigs. **Canola**
4. Raising hogs indoors keeps them safe from **diseases** and predators.
6. A female pig is called a **sow**.
7. Because baby piglets have little hair or body fat these are used to keep newborns warm.
Heat lamps
10. Hog producers use the help of **veterinarians** to manage the health of their pigs.
12. Pigs are raised in large modern **barns**.
13. A male pig is called a **boar**.

MORE! MORE! MORE!

The 4-H Branch has produced resource books for the Swine Project. If you enjoyed what you learned about pigs in this module and would like to pursue this project further, talk to your leader about having a look at these books.

RESOURCES USED TO CREATE THIS MODULE

Information for this module was obtained from:

- 1) The Canadian Western Agribition – Agriculture and You Publication
- 2) The Farmfair International AgAwareness Program Teachers Guide.

SMALL ANIMAL MODULE: **CAT**

Cat and Kitten Care

“Dogs have owners. Cats have servants.”

Unknown

WHAT WILL WE LEARN?

In this session you will learn:

1. How to care for your pregnant cat.
2. How to care for newborn kittens.

WHO CAN HELP?

You will need someone with some experience with cats. Some ideas may be the coordinator of your local SPCA, a cat breeder, or a veterinarian.

WHAT DO YOU NEED?

A pregnant cat, or a cat with newborn kittens. A SPCA or vet may have some for you to spend some time with.

LET'S GET EDUCATED!

Take a tour of your local SPCA. Some questions you might ask are:

- Do pregnant cats have any special nutritional needs?
- How often can a cat get pregnant?
- What can you do to prevent your cat from getting pregnant?
- What immunizations do cats need?

What is more clever than a talking cat?

A SPELLING BEE!

Pregnancy And Birth

Unless your female outdoor cat is spayed (surgical removal of its reproductive organs to prevent pregnancy), inevitably she will become pregnant. Even if you try to keep her indoors while she is in heat, an escape of only a few hours is more than enough time for her to find a male or for males to find her. Signs of pregnancy begin about three weeks after conception, when your cat's nipples change from pale to deep pink and begin to swell and stiffen as the teats prepare for lactation. A cat will not change noticeably in size until the four or five-week mark, when her belly will begin to swell.

Prenatal Care

Pregnancy normally lasts between 9 and 10 weeks. Like any pregnant mom, your cat will need more protein and energy. Ask your vet for specially formulated food. As the kittens grow, her internal organs will become cramped, so serve her smaller but more frequent meals. Watch her weight: An increase in weight of 20 to 25 percent is normal, but excessive weight gain can interfere with labor. Cats can, and should, remain active throughout pregnancy in order to keep fit and prevent obesity. But toward the end, you can expect your lady-in-waiting to decrease her activity level.

Some cats, especially first-time mothers, may be a bit confused by the physical changes and discomfort they experience. If your cat seems very nervous and excitable or becomes aggressive or more vocal, consult your veterinarian.

To prevent birthing in an inconvenient or unsafe place, prepare a disposable birthing box. Accustom your cat to the box early so that she will choose to give birth in it, lining it with her usual bedding and encouraging her to sleep in it for a week before the babies are due. Keep closet doors shut and block access to as many other places as possible. As delivery approaches, confine her to the house, even better to one room.

As her time approaches she may become grumpy, so keep other animals away.

What do you get when you feed a cat vinegar?

A SOURPUSS

Kitten Time

Just before she enters labor, the expectant mother will probably be anxious and restless and might appear to be searching for something. She will probably lose her appetite; in any case, feed her sparingly or give her only water. When she settles into her birthing area, she will shred the nesting materials and lick at her abdomen and genital areas. As she enters the first stage of labor she will fuss over the nest, kneading it into shape. As contractions begin to move the kittens down the birth canal, her breathing and pulse will elevate, and her body temperature will drop.

In the second stage, forceful, straining contractions begin. The cat may lie on her side or chest, or she may squat. The first kitten should emerge within 30 minutes and subsequent kittens should be born at intervals of 15 to 30 minutes. There may be fluid if the amniotic sac ruptures on the way out. The amniotic sac is what the kitten is wrapped in while inside the mother's womb. If the sac is intact, the mother will tear it herself, sever the umbilical cord, clean and groom the kitten and perhaps nurse it while waiting to give birth to the next one. While the mother cat is pregnant it is the umbilical cord that provides the kittens with nourishment.

The kittens are born blind, nearly deaf and helpless: Their mother's care is essential. If she is doing a good job by herself, has groomed and is nursing the kittens, don't interfere. Anxious mothers, especially first-timers, have been known to abandon their kittens in favor of attention from their owners, so keep her calm and reassured. What the mother and her newborns need most right now is a warm, dark, quiet and secluded nest — no external stress.

Visually examine the kittens for defects and to make sure they are healthy, but do this without being intrusive; a worried mother will want to move her nest to a safer location. Then, leave the family alone for a few days, keeping other animals away as well.

What is a cat's favourite dessert?
CHOCOLATE MOUSE!

Since Mother Nature does not work on a schedule it is unlikely you will be in attendance when a cat has her kittens. However, it is possible to visit a vet and see if they have any newborn kittens. Farmers with barn cats also always have kittens around. The SPCA likely has some as well. When you take a look at a mother cat it is a chance to ask lots of questions:

- Has this cat had kittens before?
- Did all the kittens survive?
- Did she need any help?
- Are the kittens nursing well?

If you are having a tour of the vets' facilities ask about the process of spaying an animal.

- What does the surgery entail?
- How long does it take the cat to recover?
- How old are the kittens?
- When will they be old enough for adoption?

LET'S HAVE SOME FUN!

STAGES OF LABOUR

Using the words in the list below, put the stage of pregnancy or labour next to the description.

1. A cat has part of its reproductive organs removed surgically to prevent pregnancy.

2. You will see swelling in its nipples and it begins to gain weight. _____
3. A cat's pregnancy lasts this long. _____
4. When the cats' time of delivery approaches, make this to give the cat a place where she can deliver. _____
5. The cat will look anxious and start shredding nesting material in her bed. _____
6. Kittens are born this way. _____
7. The cat will lay on her side or squat and her breathing will get faster.

8. It will take this long for a kitten to be born. _____
9. Nourishment travels from the cat to the kitten along this pathway.

10. This wraps the kitten in the womb. _____

Word Choices

- | | |
|-----------------------------------|------------------------------------|
| a. First signs of pregnancy | f. Amniotic Sac |
| b. Ten weeks | g. Fifteen to thirty minutes |
| c. Prior to first stage of labour | h. Umbilical cord |
| d. Birthing box | i. Blind, nearly deaf and helpless |
| e. Spayed | j. Second stages of labour |

CATS AND KITTENS

B B K S Z G R H F L I T T E R
 J E R F P U N N T C E S R U N
 V T D E O A I I O R E M V H S
 U L X B A P Y L H N I K X D T
 F U A Y P T O E K T J B U X R
 Y L Q L P S H D D C R B E N A
 K B E I T D J I Q B U I R E I
 Y T Q R J X K E N W M R B T N
 I X U R N C L W H G B C I T W
 P M C I T O I N M A I Q O I O
 W O M B N B M X Z C L D M K C
 K L C U Y J G Y C H I G T G E
 V P N J P Q I K I E C C W O V
 Z Y F O W B P K S U A A W L L
 I P R E G N A N C Y L T H G P

WORD LIST

AMNIOTIC

BED

BIRTH

BIRTHING

BREATHING

CAT

COLOSTRUM

KITTEN

LABOUR

LITTER

MILK

NEST

NIPPLE

NURSE

PREGNANCY

SPAYED

STRAIN

UMBILICAL

WOMB

SOLUTIONS!

STAGES OF LABOUR

1-e, 2-a, 3-b, 4-d, 5-c, 6-i, 7-j, 8-g, 9-h, 10-f

CATS AND KITTENS

B B + S + G R H + L I T T E R
 + E R + P U N N T C E S R U N
 + + D E O A I I O R E + + + S
 + + + B A P Y L H N I + + + T
 + + A + P T O E + T + B + + R
 + L + L + S H + D + R + + N A
 + + E + T + + I + + U I + E I
 + + + R + + K + N + M + B T N
 + + U + + + L + + G B + + T +
 + M C I T O I N M A I + + I +
 W O M B + + M + + + L + + K +
 + + + + + + + + + + I + + + +
 + + + + + + + + + + C C + + +
 + + + + + + + + + + A A + + +
 + P R E G N A N C Y L T + + +

OVER, DOWN, DIRECTION

AMNIOTIC (10,10,W)

BED (1,1,SE)

BIRTH (12,5,NW)

BIRTHING (13,8,NW)

BREATHING (2,1,SE)

CAT (12,13,S)

COLOSTRUM
(10,2,SW)

KITTEN (14,11,N)

LABOUR (2,6,NE)

LITTER (10,1,E)

MILK (7,11,N)

NEST (10,4,NE)

NIPPLE (8,2,SW)

NURSE (15,2,W)

PREGNANCY (2,15,E)

SPAYED (4,1,SE)

STRAIN (15,3,S)

UMBILICAL (11,7,S)

WOMB (1,11,E)

MORE! MORE!

- Build a scratching post
- Make a cat toy

RESOURCES USED TO CREATE THIS MODULE

www.discoveryschool.com

SMALL ANIMAL MODULE: **PET**

How To Choose A Pet

WHAT WILL WE LEARN?

In this module you will explore the benefits and drawbacks of certain pets. You will also explore how to choose an appropriate pet.

WHO CAN HELP?

A parent, leader, veterinarian or staff member of the local SPCA would be ideal to help you out with this module, but ultimately this is an exploratory module using your own experience and research.

WHAT DO YOU NEED?

An actual pet, photo of a pet, or picture of a pet you would like to own.

LET'S GET EDUCATED!

There are a lot of things to consider before choosing a family pet. Never decide to get a pet on an impulse. Pet ownership comes with a significant amount of responsibility. Invest in a pet and you can typically expect to care for your new friend for up to ten years, sometimes longer.

Here are a few questions to ask yourself before you bring home that little bundle of fur or feathers.

1. Do I have the time to take care of a pet?

Some pets, like goldfish, are certainly less demanding than parrots, which live for as much as sixty years and need socialization, but they still need care and attention. Miniature horses need regular exercise, veterinary care, and company.

2. Do I have room for a pet?

Cats can adapt to any size living quarters. The same can be said for birds, fish and small mammals that live in a contained environment. A small snake can live in a fifteen-gallon aquarium. A boa constrictor will need a large aquarium; a lizard may like to explore your houseplants.

3. What kind of pet do I want?

Learn about the temperament and the behavior patterns, how much activity the pet needs and the animal's dietary and housing needs. Can you handle feeding a snake live fish or mice? A chameleon is cute but eats live insects. If your mother can't handle animals in the house a budgie will not work for you. Fighting fish are really fascinating to look at but will kill other fish in your aquarium.

4. Can I afford to acquire a pet?

While you may indeed acquire an animal from someone with an unexpected litter of rabbits, you need to consider the costs of food, veterinary care, grooming, toys, pet license and more. The cost for a pet varies with the type of animal, their requirements, your resources and your location. All pets require the basic food and shelter. For exotic pets you can expect to have unusual dietary requirements that can cost money and a lot of time to find. They should also have regular visits to a veterinarian for health checkups and vaccinations. Other costs could include boarding and obedience training. In some cases, pet health insurance is now available and may be something you wish to consider. If you acquire your animal from a local shelter or human society, you will most often be asked to pay a fee. Often this will include or at least provide a discount to a cooperating veterinarian for the purposes of having your animal spayed or neutered.

5. What type of extra housing or equipment will I need for a pet?

Will you need to build a shelter? Fence in your backyard? Buy a pet bed? Buy an aquarium? Animals often need to keep their minds busy, their aquariums need space to run toys to occupy their minds, equipment to exercise them. Want a gerbil or guinea pig you will have to have a cage large enough to hold them, and make sure you have separate ones for the males and females or you may have unwanted babies to contend with.

6. Will my other pets tolerate a new pet?

It's said that cats and dogs don't get along. Well try a cat and a cockateil. Or how about putting two rabbits in the same cage. They may make babies you have no ability to take care of. Your dog may eat your gecko. Introducing pets to a household takes thought and preparation. Maybe your dog can be taught not to harass your guinea pig or perhaps you will need a very sturdy cage to protect your chameleon from the cat.

7. Does anyone in my family have allergies?

If anyone in your family has allergies to animals this will definitely be something you have to consider. Birds can bring dust and mites into the house that can be very toxic. Sometimes people have slight allergies but if they sleep on the bed they get a rash. Remember to keep their cages clean and bathe your animals if appropriate, or better yet keep the animal outside if you can.

LET'S HAVE SOME FUN!

We have provided you with suggestions on some fun activities that can be completed at a project or general meeting.

1. Warm-up Activity

This activity could be facilitated by a leader or a member completing the Small Animal – Pet Module. The facilitator hands out index cards with common animals named on them. You can use as many different animals as you like and as many cards with the same animal as you like. This will allow the facilitator to make different numbers of groups of members with a different amount of members in each group. Ask participants to find their mates. They will do this by making the animal sound of the animal named on their card. All members will make their sounds simultaneously until all members have found their mates. This is a very loud game and guaranteed to bring fun into your program.

2. Roll Call

Have each member identify a type of pet they own or would like to own as their name is called.

3. Member Presentations

The leader or volunteer assisting with this module should facilitate this activity. Members are asked ahead of time to bring their pet, a picture of their pet or a picture of their dream pet to a meeting. Members will need to prepare and deliver a short presentation on the benefits and drawbacks of their pet. The leader/volunteer can provide members with suggestions on things that the member may want to talk about. If the member brought a pet or a picture of their pet they can introduce the pet to the group. They could also provide information on how to care for their pet.

Remember to make sure pets are leashed or caged in some way. Cats and dogs don't always get along, and a budgie may be cute, but if it gets out, it may be difficult to return it to its cage. Some animals may make meals of other member's pets, so be cautious.

Following the presentations each member will answer some basic questions on their pets. Encourage other members to ask the questions.

Some questions that could be asked are:

1. What are the benefits?
2. What are the drawbacks of owning your pet?
3. What does it eat?
4. What are the challenges to owning your pet?
5. What do you like most about your pet?

Some leaders may want to assign judges to evaluate these informal presentations for their content and delivery.

MORE! MORE! MORE!

Take a tour of your local small animal veterinarian's office or local SPCA. Workers at any one of these places may be able to provide information on the types of pets available to own.

RESOURCES USED TO CREATE THIS MODULE

- http://exoticpets.about.com/cs/resourcesgeneral/a/findpet_sitter.htm
- www.animalnetwork.com/critters/library

SMALL ANIMAL MODULE: **APICULTURE**

**Who is the bees favorite singer?
STING!**

WHAT WILL WE LEARN?

In this module you will learn what types of bees make up a hive and explore different ways of presenting research material.

WHO CAN HELP?

Bee Keepers not only have an interesting job, but are often willing to share their knowledge.

WHAT DO YOU NEED?

If possible, find out if your local beekeeper has a model of a hive so you can see the activity in the local bee colony. Some even have small models of hives. If not, you can usually find one at a nature centre. If you can't find a model you can find photos of beehives on the internet.

Some items you will need depending on the type of presentation you choose to do:

- Photos of bees
- Paper and pens to write
- A display board: cardboard, felt or wood
- Items for the display of your choice using your research, i.e. jars of honey, honeycombs, pictures of different bees, short articles and posters

Or

- Computer
- Photos

LET'S GET EDUCATED!

Research Is Fun!

Depending on the kind of presentation you wish to do you can focus in different places to do your research.

- Local beekeepers can give you a tour of a bee yard and give you first hand information.
- Your local library.
- The internet has many wonderful sites.
- Alberta Agriculture.
- Nature Centers and Museums often have displays on bees.

Background Information

WHY DO BEES MAKE HONEY?

We know that bees have been producing honey as they do today for at least 100 million years (since the Cretaceous period). Bees produce honey as food stores for the hive during the long months of winter when flowers aren't blooming and therefore little or no nectar is available to them. European honeybees, genus *Apis Mellifera*, produce such an abundance of honey, far more than the hive can eat, that humans can harvest the excess. For this reason, European honeybees can be found in beekeeper's hives around the world!

THE COLONY

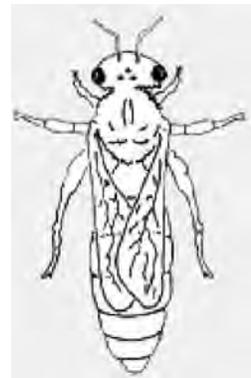
Honeybees are social insects, with a marked division of labor between the various types of bees in the colony. A colony of honeybees includes a queen, drones and workers.

THE QUEEN

The queen is the only sexually developed female in the hive. She is the largest bee in the colony.

A two-day-old larva is selected by the workers to be reared as the queen. She will emerge from her cell 11 days later to mate in flight with approximately 18 drone (male) bees. During this mating, she receives several million sperm cells, which last her entire life span of nearly two years.

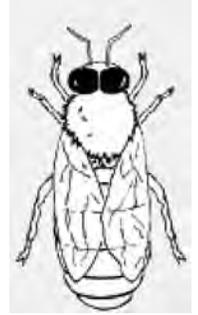
The queen starts to lay eggs about 10 days after mating. A productive queen can lay 3,000 eggs in a single day.



**What does a queen bee do when she burps?
ISSUES A ROYAL PARDON!**

THE DRONES

Drones are stout male bees that have no stingers. Drones do not collect food or pollen from flowers. Their sole purpose is to mate with the queen. If the colony is short on food, drones are often kicked out of the hive.

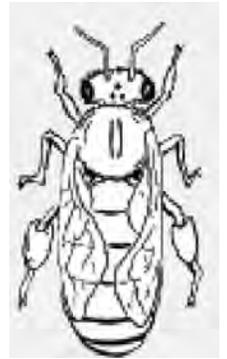


THE WORKERS

Workers, the smallest bees in the colony, are sexually undeveloped females. A colony can have 50,000 to 60,000 workers.

The life span of a worker bee varies according to the time of year. Her life expectancy is approximately 28 to 35 days. Workers that are reared in September and October, however, can live through the winter.

Workers feed the queen and larvae, guard the hive entrance and help to keep the hive cool by fanning their wings. Worker bees also collect nectar to make honey. In addition, honeybees produce wax comb. The comb is composed of hexagonal cells that have walls that are only 2/1000 inch thick, but support 25 times their own weight.



HONEY BEES' WINGS STROKE 11,400 TIMES PER MINUTE, THUS MAKING THEIR DISTINCTIVE BUZZ.

LET'S HAVE SOME FUN!

APICULTURE ACTIVITY

You will need to gather information and/or materials for this activity. Use one or more of the suggestions listed.

1. Take a tour of a bee yard.
 - Interview the beekeeper.

Ask the following questions, or think of some of your own:

 - i. What is the role of each of the bees in the hive?
 - ii. How do you harvest the honey?
 - iii. What is the purpose of the honey in the hive?
 - iv. What needs to be done before we eat it?
 - Take photos while visiting the bee yard and save them for your presentation.
2. Visit internet sites, museums, nature centers, or your local library for information, photos and other materials that may be helpful.
3. Once you have collected information and materials, you need to decide on a format for your activity. You may want to write an article to put in your local newspaper, make a presentation of your findings to your club, or create a display.
 - Article

Write an article describing your visit, or your findings. Local papers will often print short articles - less than 200 words. Submit your article and labeled photos to your club reporter. They can then contact the local paper or help you to approach them.
 - Presentation

As a 4-H member, you have the option to do a presentation instead of a speech, as a communication activity. The items and information you have collected could be used to make this presentation.
 - Display

Concentrate on visually appealing display. Include photos and pictures. Arrange your photos artistically. Don't be afraid to leave blank spots on your display. Interactive activities are wonderful for displays. Activities or puzzles slow people down and make them stop and take the time to see your display.

Why do bees hum?

BECAUSE THEY'VE FORGOTTEN THE WORDS!

HIVES AND HONEY BEES

Y K B C J S N W A T E N S R E G N I T S
 E I F O N E R F Y F K E J L E M P T O J
 N U S J E H G E Z U T C E U T H Z D D B
 O C M U A W O T W T N T M S E Z Y K C A
 H E Q S N I N T Q O H A T L V N N A O U
 B D E D N M T K K V L R W J Y I O G M A
 Y O A B M M A I R U U F E K E J L R B H
 J M B P R Y N T A L B O C T T P O T D O
 Z D O E J T V J I B E I R A V B C W N F
 J T U B G C X H Y N B D N T N I O D Z M
 B O Y X O Z U E E D G O J R A W T F T B
 O U W A V X U V P H Z K Y E W N I A G R
 H H Z W O R T L A R V A E W X H G W P V
 X J Y Z O C J R E K R O W F U P P O Z M
 D A P P E D Z G M P W I N G S H L K U B
 Y M E S P P G E V I H R P S L L A E L Z
 C A N X R S N N Z M Z O U T E L L N O J
 N I D M V H C G O A N L X N O Q I U Q L
 A Q N O U M W G Q A X C F J B I R R K Y
 G D U R Q J Z N Z W E I W S O Q P Q M Y

WORD LIST

| | | | | |
|--------|----------|---------|--------|--------|
| BEE | BUZZ | COLONY | COMB | DRONE |
| EGGS | EUROPEAN | FLOWERS | HIVE | HONEY |
| INSECT | LARVAE | MATING | NECTAR | POLLEN |
| QUEEN | STINGERS | WAX | WINGS | WORKER |

SOLUTIONS!

HIVES AND HONEY BEES

Y + + + + S N + + + + N S R E G N I T S
 E + + + + E R + + + + E + + + + + + + + +
 N + + + E + + E + + + C + + + + + + + + +
 O + + U + + + + W + + T + + E + Y + C +
 H E Q + + + + + O + A + + + N N + O +
 + + E + + M + + + + L R + + + + O + M +
 + + + B + + A + + + + F + + + + L R B +
 + + + + + + + T + + + + + + + + O + D +
 + + + + + + + I + + + + + + + + C + + +
 + + + + + + + N + + + + + + + + + + +
 B + + X + + + E + + G + + + + + + + + + +
 + U + A + + U + + + + + + + + + + + + +
 + + Z W + R T L A R V A E + + + + + P +
 + + + Z O C + R E K R O W + + + + O + +
 + + + P E + + G + + W I N G S + L + + +
 + + E S + + G E I H + + + + L + + + +
 + A N + + S + + + + + + + + + E + + + + +
 N I + + + + + + + + + + + N + + + + + + +
 +
 + + + + + + + + + + + + + + + + + + +

OVER, DOWN, DIRECTION

BEE(4,7,NW)
 BUZZ(1,11,SE)
 COLONY(17,9,N)
 COMB(19,4,S)
 DRONE(19,8,NW)
 EGGS(9,14,SW)
 EUROPEAN(8,11,SW)
 FLOWERS(12,7,NW)
 HIVE(11,16,W)
 HONEY(1,5,N)
 INSECT(2,18,NE)
 LARVAE(8,13,E)
 MATING(6,6,NE)
 NECTAR(12,1,S)
 POLLEN(19,13,SW)
 QUEEN(3,5,NE)
 STINGERS(20,1,W)
 WAX(4,13,N)
 WINGS(11,15,E)
 WORKER(13,14,W)

MORE! MORE! MORE!

1. Build a bee colony model with your local beekeeper.
2. Using the photos and information you collect, create a powerpoint presentation to show to the rest of your club.

RESOURCES USED TO CREATE THIS MODULE

1. The World History of Beekeeping and Honey Hunting, by Eva Crane, Routledge, 1999, p. 7.
2. National Honey Board, www.Honey.com
3. www.puzzlemaker.school.discovery.com
4. www.ahajokes.com
5. www.pbs.org/wgbh/nova/bees/hive.html
6. Almost Live Bee cams!
 - www.gears.tucson.ars.ag.gov/beecam/beecam.html
 - www.draperbee.com/webcam/beecam.html

SMALL ANIMAL MODULE: **CANINE**

Basic Dog Training Tips and Techniques

WHAT WILL WE LEARN?

In this section you will learn basic dog training techniques - how to teach your dog basic commands and how to work as a team.

WHO CAN HELP?

Many community members have expertise in training dogs. Talk to other members in your club to find out if their parents may have experience in this area. Your local Adult Learning Council or SPCA may also have instructors who may be willing to donate their time.

WHAT DO YOU NEED?

In order to complete this module, you will need a dog or at least have one dog for each three members. If you don't have your own dog try and borrow one. There are some things you need to ask if you are borrowing a dog. Talk to the owner and ask if the dog likes people and other dogs and if he/she is small enough to be managed by young people. If at all possible find a dog that is spayed or neutered to avoid competition between dogs.

Find a dog-friendly place to complete this session. Some halls or riding arenas will allow dogs indoors. Otherwise use an outdoor space but remember, wherever you choose to work on this module a pooper-scooper and a bag may be necessary so as not to leave any treasures behind. If you are indoors remember a mop and industrial detergent will be needed. Allow time at the end of the session for a clean up. Each dog should come with a leash and a well-fitted collar.

You will also need:

- A 15 ft nylon rope or lunge line
- Dog treats
- Lots of love and patience.

LET'S GET EDUCATED!

We need to review some basic handling issues before you begin training.

1. You must be in control of your dog at all times. Keep the leash in your hand.
2. You need to keep your attention on the leader/teacher because the noise of the dogs will make it difficult to hear.
3. If you are borrowing a dog talk to the owner of the dog you are using, so you know its preferences and behavior.

As with all training you must be patient, persistent, consistent and firm when working with your dog. While you are a partnership, you must always remember that you are the handler and therefore the one in control of the situation. If you allow leadership to switch from you to your dog, training will no longer be taking place.

Here are a few other things that you should keep in mind when beginning a training session with your dog:

1. Keep training sessions short in the beginning to avoid your dog from becoming bored or frustrated.
2. Try to train when you are alone or away from distraction so that you can keep the focus on you and what you are saying.
3. If your dog misbehaves use a simple "NO!" in a firm voice.
4. Keep commands short, simple and concise. Always use the same command for the same meaning. For example if your dog jumps up on you be sure to not use the command "down" as you will want to teach your dog a different action for "down". Instead use the command "stay off" so that he or she will not jump up on you.
5. Determine what commands you are teaching your dog and inform everyone in the family of these commands so that it is established before any training takes place.
6. Use a steady and controlled voice. Dogs' ears are sensitive and loud noises can be confusing.
7. Always have your dog come to you. Chasing after your dog will make your dog think that you are either playing a game, or it will frighten the dog.
8. Do not allow your dog to chew on your finger, hand or leash as this is not acceptable at any age.
9. During a training session, only teach one command at a time. Wait to teach a new one until the dog has learned the current command completely.
10. Remember patience, persistence, consistency, firmness and reward is what is needed to train your dog.

BASIC COMMANDS

The obedience commands are introductory commands and by mastering these skills with your dog, you will be ready to move on and attempt to accomplish the more difficult skills outlined on your obedience commands.

'Come' When Called (Recall)

Repeating the dog's name often will help the dog to learn what its name is. Having a dog that will come to you is very important, as it will enable you to control your dog in any situation.

To teach a dog to "come", place him on the 15 ft. nylon rope or lunge line. When the dog dashes away or leaves your side, simply say, "come" and the dog's name. If the dog doesn't respond give the line a pull until the dog comes to you. Keeping a handful of dog treats ready and giving one to your dog each time he/she responds will help with the learning process. Give the dog praise and patting when he/she responds to you. You will have to wean the dog off the treats so that eventually the dog is responding to the command and the praise without needing the treats.

Repeat the lesson until your dog will come to you no matter what he is doing. As a test, keep the lead on and expose your dog to situations where you think he will disobey you. When your dog is becoming reliable and obeys every command of "come" you make, get a cord that is a lighter weight than the lead. Work him/her on this line for a little while. Work on lighter and lighter lines, then cord, then string, until the dog comes to you. Eventually the dog will come to you without a string.

'Sit'

There are several ways to teach your dog to sit. Three methods are listed here for you to try and see what works most successfully for you.

While saying sit:

1. Using the left index finger and thumb, place them on the loin of the dog and exert gentle pressure inward and down. (The loin is just in front of the hip bones on his/her back.) He or she should fold into a sit to avoid the pressure. When he or she does sit, reward immediately even if the sit was only for a brief second.
2. Slide your hand over his or her rump and apply pressure to the back of his/her legs right at the bend just above the hock. (The hock is the area of the leg below the "elbow" of the hind leg.)
3. Tuck the legs and tail comfortably beneath him/her.

Allow at least an hour to work with the 'come' and 'sit' commands. If a dog is already trained you can add 'down' and have the dog learn to lay down. 'Stay' is another command that can be taught using the long lunge line.

LET'S HAVE SOME FUN!

As well as the hands on teaching suggested in the Let's Get Educated section above, consider some of the suggestions below that could be completed at a general or project meeting before beginning the command training.

1. For roll call or as a communication activity have each member repeat their dog's name or something about his/her likes or dislikes.
2. Have a dog handler or parent discuss how to care for a dog – considering the differences between an outdoor or indoor dog, have the speaker talk about feed, water, grooming and exercising the dog.

MORE! MORE! MORE!

Alberta 4-H has more on training your dog on their website, www.4h.ab.ca. Find out more about your dog, his/her health and further commands.

SMALL ANIMAL MODULE: **POULTRY**

Which came first, the chicken or the egg? This age old question has been debated by many scholars. While we may never all agree on which came first, we do know that getting those pristine packages—Alberta eggs—from the farm to your fridge involves hundreds of farmers and thousands of hens, working together every day. What you end up with at home is nature’s own fast food – perfectly packaged protein that’s easy to cook, convenient to carry, and simple to eat.

WHAT WILL WE LEARN?

There is a lot more to a chicken than meets the eye. In this module we will focus on egg production and getting eggs from the “Hen To Your Home.” We have included some fun games and activities to test your knowledge and help you become an “eggsper” on egg production.

WHO CAN HELP?

A senior member, parent or leader could help you complete this module. If your club is fortunate enough to know someone that is knowledgeable on the production of eggs, this would be a bonus. However, because there are only a small number of egg producers in Alberta, we suggest going straight to the ‘eggsper’s by logging on to the Alberta and Canadian Egg Producer websites. Much of the material that is used in this module is taken from these sites. They are user-friendly and interactive, and suggest ‘eggsplanations’, ‘eggtivities’, ‘eggimals’, ‘eggheads’ and ‘eggciting’ recipes that will help you become an ‘eggsper’ on the egg industry. Sound like fun, well ‘Get Cracking’ and log on to www.eggs.ab.ca or www.canadaegg.ca. This module can be completed without the internet, however these websites will enhance what we have included in the module.

WHAT DO YOU NEED?

The items you need will be specified in the 4-H Fun section. Each game or activity will have it’s own list of supplies that you will require.

Why did the chicken go cluck, cluck, cluck?

Because it’s a chicken DUHHHH!

LET'S GET EDUCATED!

Or as Yolkey Dokeywould says, Let's 'Get Cracking'

1. As science has evolved so has our knowledge of food safety, food quality and a hens' needs. Gone is grandmother's hen house. Today the egg farm is highly organized and automated. Hens in Alberta are now housed in large, clean, well-ventilated buildings where temperature, humidity and lighting are controlled. These buildings/barns also protect the hens from predators such as coyotes. Fresh food and water are constantly available.
2. Most laying hens are kept in pens with 6-8 other hens to support their natural instinct to cluster together for security. These groups are small enough that the hens don't fight or hurt one another. They are fed a diet of grain, protein, vitamins and minerals. The stringent feed regulations set and controlled by the Canadian Food Inspection Agency ensure that only approved levels of ingredients and no antibiotics or hormones are in feed.

How do monsters like their eggs?

Terri-fried

3. Egg producers in Alberta give their laying hens the best possible care, for two reasons - #1 because humane treatment is morally right and #2 because healthy, well cared for hens produce safer and more eggs. It just makes sense for egg farmers to treat their hens well!
4. In 1945, the average laying hen produced 151 eggs a year. Now, due to selective breeding and better nutrition the average hen lays approximately 280 eggs a year. That's about one egg every 1½ days. In Alberta those large barns house an average of 9500 hens. Gathering eggs by hand is impossible.
5. Why are some eggs brown and some white? It is a matter of genes. Some breeds of hen such as the Rhode Island Red (brown feathered) lay brown eggs, while others, like the White Leghorn (white feathered), lay white eggs. Brown or white, there is no difference in nutritional value or cooking performance.

What do you call a mischievous egg?

A practical yolker

6. Egg collecting used to be like a game of hide and seek. Many eggs were lost or damaged in the process. Now, egg collection is done automatically as eggs, as soon as they are laid, gently roll down onto a moving belt. Eggs are collected twice per day, stored on flats (special trays) and immediately put in a cooler room chilled to 11° to 12° celsius. At this temperature, eggs retain their freshness and quality while awaiting shipment (in a refrigerated truck) to a registered egg grading station - usually within four days.
7. Once the eggs reach the egg grading station, the second part of their journey begins. High-speed, electronically controlled equipment provides a continuous automated process to carry out the tasks of cleaning, candling, grading, sorting and packaging eggs for shipping to stores, restaurants, etc.
8. The grading process begins with flats of eggs being lifted onto an assembly line. Metal arms with suction cups gently lift the eggs from the flats onto a moving track. The eggs are then washed and sanitized in a high speed washer that gently scrubs the eggs. After washing, a thin film of odourless mineral oil may be applied to help seal the porous shell. From here, the interior as well as exterior of the eggs are examined using a process called candling.
9. Candling is when the eggs are passed over a very strong light. This allows the grader to better inspect not only the shell of the egg, but the inside as well.
10. Eggs are then weighed (sized) and packaged in cartons. Less than five days after arriving at the grading station, eggs are off to grocery stores, restaurants, hospitals and so on. Eggs you buy at the store often arrive there within 7-10 days of being laid. THAT'S FRESH!
11. The best quality eggs are marked Canada Grade "A". These are put into cartons and sent to stores.
12. The other eggs are not wasted. They become processed eggs and are used in products such as pasta, salad dressing, cake mixes, mayonnaise and shampoo.
13. There are actually three possible grades for eggs in Canada.
 - **GRADE A:** sold at retail stores
 - **GRADE B:** a small percentage sold at retail stores; most go to further processing market
 - **GRADE C:** not sold at retail stores; go to further processing market

14. Eggs are shipped in refrigerated trucks from the grading station to the store. Care is taken to maintain safe storage of eggs.
15. At the store, eggs are kept refrigerated until purchased by the consumer. Look for eggs in a refrigerated egg case in your grocery store. Also check the “Best Before” date on the carton. This date indicates the length of time the eggs will maintain their top quality.
16. Put them in your fridge as soon as you get home. Store them in the main body of the fridge, not on your fridge door. This keeps the eggs at a cooler, more consistent temperature. Regularly check to ensure your fridge is 4°C (39°F). Also, keep eggs in their original carton to prevent them from absorbing flavours and odours from strong-flavoured foods like onions, cheese, cabbage and some meats or fish.
17. The eggs are brought home to be a part of your healthy diet. Eggs are good any time of day – for breakfast, lunch, dinner or snacks.

ENJOY THE GOODNESS OF ONE OF NATURE’S MOST PERFECT FOODS!

LET'S HAVE SOME FUN!

Now let's play some just for fun games and some games that will use the knowledge you have gained from going through the Let's Get Educated section above.

YOLKEY'S EGG JOURNEY

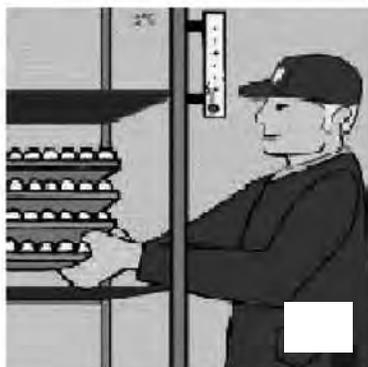
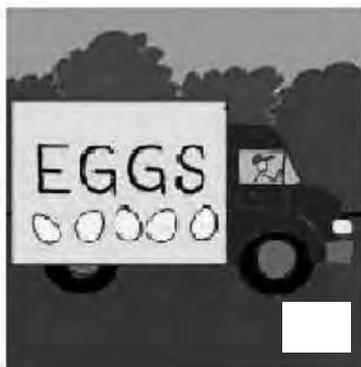
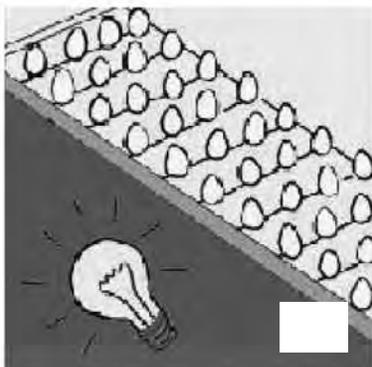
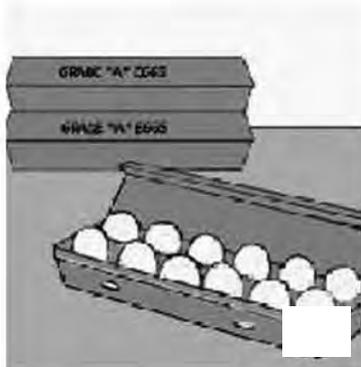
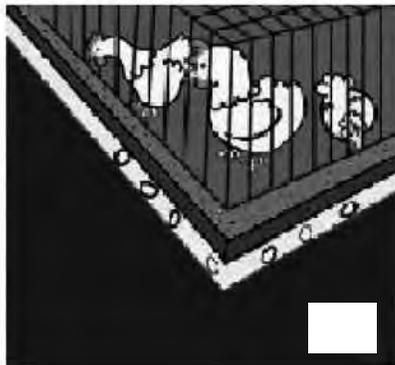
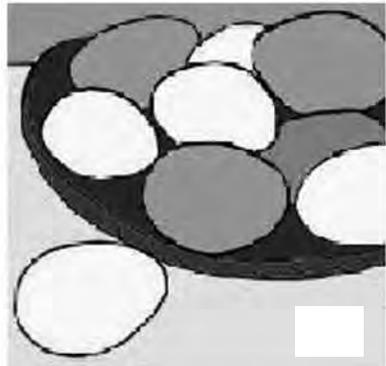
Yolkey Dokey is lost. He knows that if you can help him follow the egg from the hen to his house he will be able to get back home. He remembers that the egg had something to do with his getting lost in the first place. He is going to explain some of the things he can remember seeing before he got lost. However, all the pictures are mixed up in his head – he can't remember what order they go in. If you can help him put the statements below together with the picture they describe, then he will be able to find his home. Write the statement number that matches the picture in the box in the bottom right corner of the picture. Once you are done Yolkey Dokey will have a good idea how he got lost and where he lives.

1. Yolkey knows that eggs are produced on egg farms and that farmers give their chickens the best possible care. He can remember seeing Farmer Eggman with one of his chickens.
2. Yolkey was in one of those big barns that chickens are kept in and knows that they are clean, warm and safe.
3. He saw the chickens in their cages with other birds, and thought it was nice of the farmer to keep them together so they didn't get lonely, but also so that they were in small enough groups that they didn't fight or hurt each other.
4. Yolkey knows that chickens have a special diet and eat grain and get all the vitamins and minerals they need to be healthy. They also have lots of fresh, clean water available to drink.
5. On his travels, Yolkey saw eggs that were brown and eggs that were white. Farmer Eggman told him this is because some breeds of chickens lay white eggs and some lay brown. White eggs usually come from chickens that have white feathers and brown eggs usually come from chickens with brown feathers.
6. Yolkey remembers watching the eggs being collected and saw where they went after that - to a special room in the barn that was cool. By keeping the eggs in these rooms they stay fresh and great tasting longer.
7. After that the eggs went to a grading station where they were washed, candled, graded, sorted and packaged. Candling of course, is a special process where the eggs pass over a strong light so you can see the whole egg, inside and out.

8. Yolkey also remembers seeing the eggs being put into cartons that held twelve eggs, or one dozen. The best eggs had a special stamp on the carton that said Grade "A".
9. It was cold in the special trucks that took the eggs to the grocery store, but this of course is so that they will stay fresh, safe and great tasting longer.
10. Yolkey is starting to think he is getting closer to home. He remembers seeing the eggs at the grocery store, in the refrigerated cases, where they are kept cold as they wait for people to buy them.
11. He remembers seeing the eggs in his fridge last night. He knew they were eggs because they were still in the special carton they were packaged in. People use eggs for meals at breakfast, lunch and supper. He enjoyed one of those egg dishes with my family last night.

Yolkey is very excited, because now that you have been able to put numbers on almost all the pictures he had in his head, he can figure out where he lives and will be able to find his way home. Yolkey says "Thanks a bunch for helping him get back home!"

12. Eggs taste great and are very good for you. You should eat eggs along with other healthy foods such as bread, milk, fruits and vegetables. All of these foods help you grow, keep you healthy and give you energy so you can be active. Remember, eggs are one of nature's most perfect foods.



"EGG"CEPTIONAL EGGS

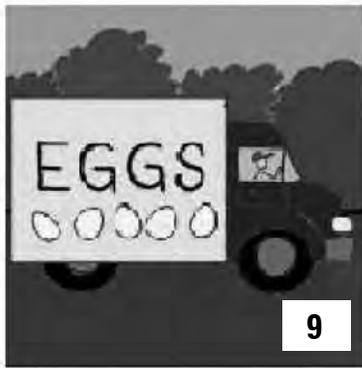
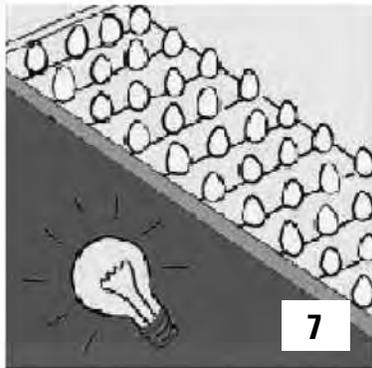
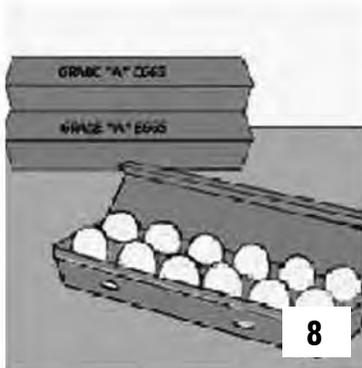
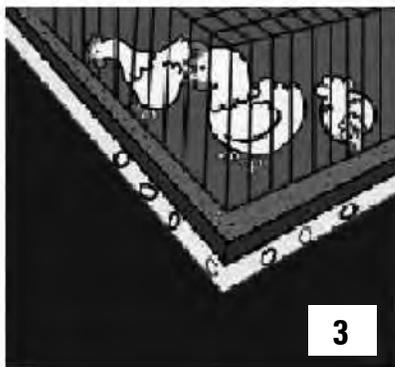
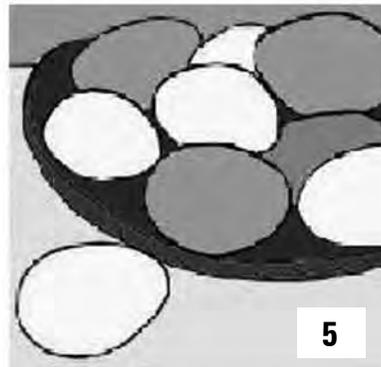
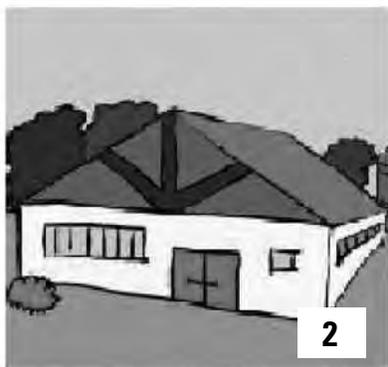
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 X O Y Y S S Q H N S O E X P S
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WORD LIST

| | | | |
|----------|-------------|--------------|-------------|
| BARNS | FEEDING | NUTRITION | SUPERMARKET |
| CANDLING | FOODQUALITY | PACKAGING | TEMPERATURE |
| CARTONS | FOODSAFETY | POULTRY | TRUCKS |
| CHICKEN | FRESH | PRODUCTION | VITAMINS |
| CLEANING | GRADING | QUALITY | WEIGHED |
| EGGS | HENS | REFRIGERATED | |
| FARMERS | LAYING | SANITIZE | |

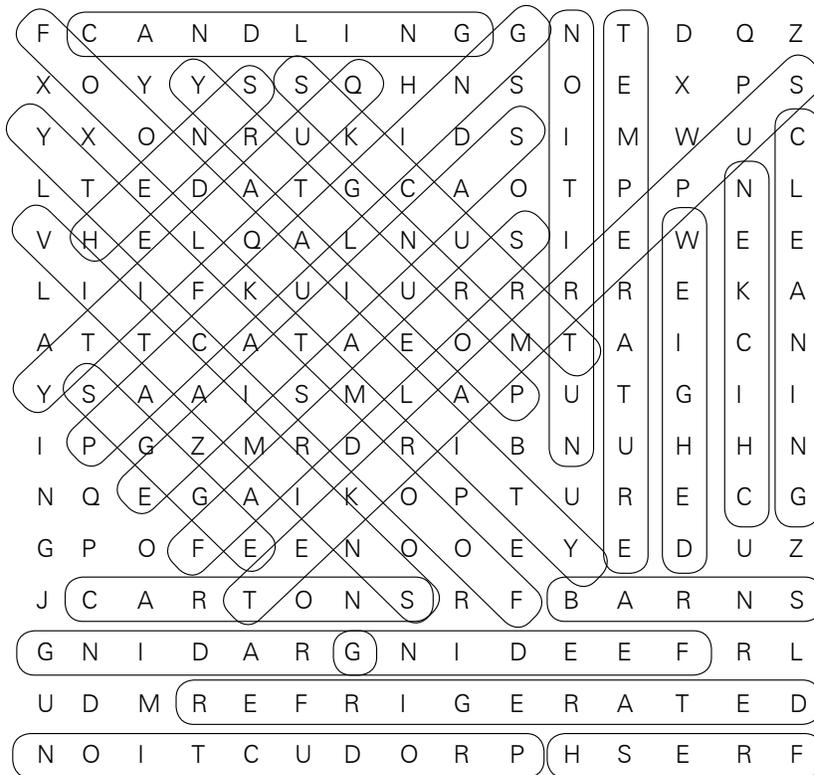
SOLUTIONS!

YOLKEY'S EGG JOURNEY



SOLUTIONS!

"EGG"CEPTIONAL EGGS



MORE! MORE! MORE!

If you would like more information, interactive games or activity suggestions on egg production check out the websites included under resources section below. If you would like to look at the 4-H resources available on poultry contact the 4-H Branch to see what is available.

RESOURCES USED TO CREATE THIS MODULE

1. Alberta Egg Producers

Calgary, Alberta

Phone: (403) 250-1197 or Toll Free: 1-877-302-2344

Fax: (403) 291-9216

Email: info@eggs.ab.ca

Website: www.eggs.ab.ca

2. Canadian Egg Marketing Agency

112 Kent Street, Suite 1501

Ottawa, Ontario

K1P 5P2

Website: www.canadaegg.ca and www.eggs.ca

3. Website: www.puzzlemaker.discovery.com

SMALL ANIMAL MODULE: **RABBITS**

Bugs Bunny might be one of the most mischievous rabbits you'll meet, but honestly most rabbits don't get into anywhere near as much trouble as Bugs. Rabbits actually make ideal 4-H project animals. They are interesting to watch, and easy to handle!!

WHAT WILL WE LEARN?

In this module we will learn a little about the care of rabbits. We will also look at some of the different breeds of rabbits, so that if you decide to pursue this project further you will have enough information to help you select the right type of rabbit for you.

WHO CAN HELP?

Someone that raises rabbits could assist you with this project. Perhaps you have a leader or parent in your club that has some expertise in this area.

WHAT DO YOU NEED?

If you don't have a rabbit you may want to talk to someone that does, so you can acquaint yourself with these furry creatures.

LET'S GET EDUCATED!

Rabbits don't make noise and because of their size, they require only a small living area. They come in many sizes, shapes and colors.

BREED TYPES

The larger breeds are usually kept for meat production. The medium weight breeds are usually kept for meat, fur or for pet or show stock. The smallest breeds are usually kept for pet or show stock. The smallest breeds weigh about one kilogram and the very large breeds weigh over six kilograms.

Here are some of the breeds associated with each size category.

Small Breeds

Dutch
Himalayan
Holland Lop
Mini Lop
Netherland Dwarf
Petite
Polish
Tan

Medium Breeds

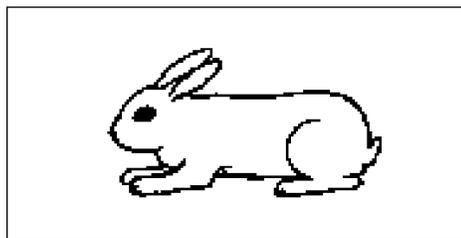
English Angora
French Angora
Belgian Hare
Californian
Standard Chinchilla
English Spot
Havana
Rex
Silver
Silver Marten

Large Breeds

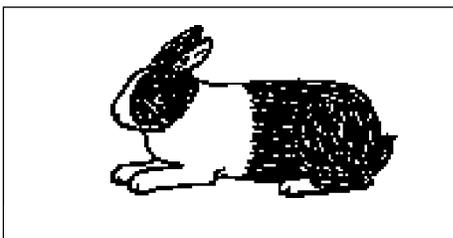
Argente Champagne
Bevern
Checkered Giant
Giant Chinchilla
Chinchilla Heavyweight
Flemish Giant
English Lop
French Lop
New Zealand
Satin

If you are choosing a rabbit as a pet, you might choose a small breed. These rabbits require less area for housing, eat less food and are small and easy to pick up. Here are four of the more common of the small breeds.

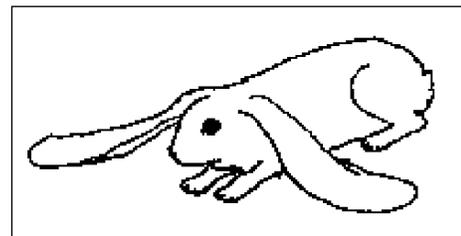
POLISH



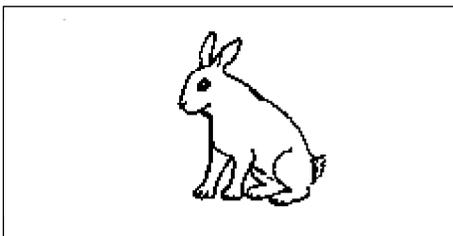
DUTCH



MINI LOP

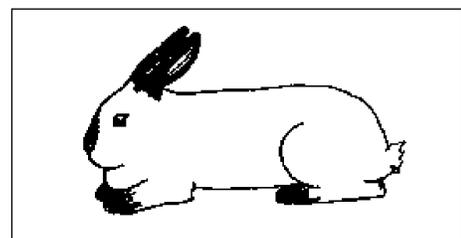


NETHERLAND DWARF

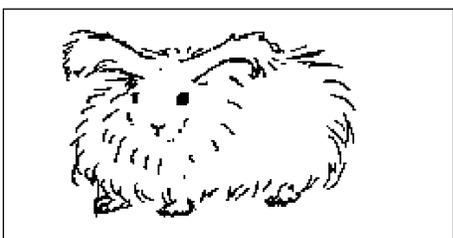


The rabbits on the medium breed list are also suitable as pets, but most of these are also large enough to be used for meat production. Here are a couple of these.

CALIFORNIAN

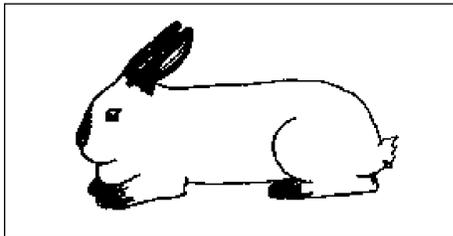


ENGLISH ANGORA

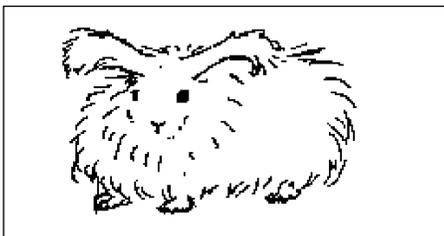


The rabbits on the large breed list may also be kept as pets, but as they mature, these rabbits will become quite large. They will require extra living space and food. As you can see by the pictures they get quite large therefore they may be quite difficult to handle.

CALIFORNIAN



ENGLISH ANGORA



Breeds such as the English Angora and French Angora rabbits have very long, soft, woolly coats. They require special grooming and must be regularly plucked or clipped to remove the wool, which they shed on a continuous basis. If they are not groomed adequately, their coats will become extremely matted. They will also try to groom themselves by licking their coats and will swallow large quantities of hair. This can result in a deadly digestive system blockage known as “wool block”.

SELECTING YOUR RABBIT

You should try to purchase your first rabbit from an experienced rabbit breeder. Most serious rabbit breeders will be able to help you start out right with your new rabbits. Most will be able to make suggestions about ways to feed and care for your new rabbits. (You might like to take a notebook along when you go to purchase your new rabbits. Ask for instructions on feeding and care and make notes on these for future reference).

The health of your new rabbit is very important. Here are some pointers and a **TEN POINT INSPECTION** to help you choose a healthy rabbit!

LOOK around when you enter the seller’s rabbitry. The rabbitry should be clean. All of the cages, waterers and feeders should be clean. The air should be fresh and not heavy with dampness and odor from urine. All of the rabbits should be clean and healthy-looking.

LISTEN for any signs of coughing or sneezing in the rabbitry. These are signs of serious health problems.

Do the “TEN POINT INSPECTION” that follows when you find a rabbit you wish to buy. Take your time and watch carefully for health problems as well as defects that would affect the health of the rabbit and its usefulness for breeding or show.

- 1. Look inside the ears.** You should not see any dried, yellowish or brownish crusty discharge. This could mean an ear mite problem. Ear mites are very tiny bugs that can cause damage to rabbit's ears. The rabbit should not mind having its ears handled close to where they join the head unless the ears are sore from ear mite damage.



Yellowish or brownish crusty discharge

- 2. Check the eyes** to be sure that they are clean, shiny and bright. They should not be covered with a milky-looking coating. This would mean an eye infection. There should not be discharge from the eyes. The fur on the face below the eyes should be dry, never wet.

Discharge in corner of eye



Wet fur below eyes

- 3. Check the nose.** There should not be any yellow or white discharge. The fur around the nose should be dry, never wet! A runny nose and noisy breathing could mean that the rabbit has snuffles. Snuffles is a serious disease that cannot be cured.



Discharge in nostrils and wet fur below nose

- 4. Check the teeth** to be sure that there are none missing. The teeth should be straight and a normal length. Watch out for upper and lower teeth that do not meet properly. Malocclusion (mal-o-clue-shun) is the proper word to describe teeth that do not grow properly.



Teeth are overgrown and deformed



Correct bite

- 5. Check the front paws** of the rabbit to make sure that they are clean and dry. A rabbit with runny eyes or nose will rub its front feet on its face. Its front paws will then become wet. This is a common symptom of snuffles.

A rabbit with 'snuffles' may have wet front feet from rubbing at its eyes and nose

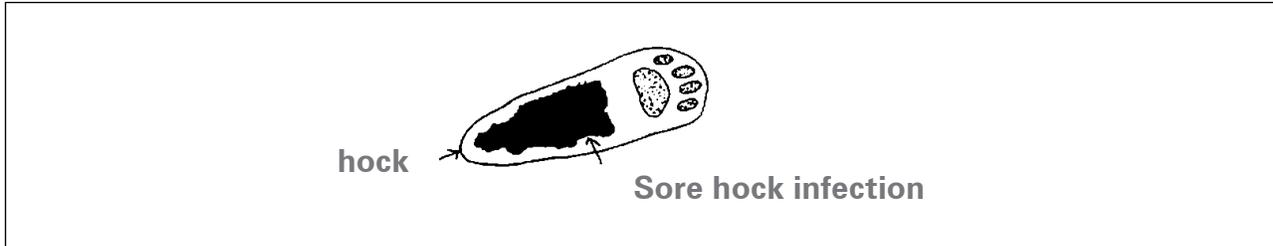


- 6. Check the rabbit's front and rear feet for broken or missing toenails.** Missing toenails are a disqualification at a show. Be sure that the nails are the correct color for your breed of rabbit.

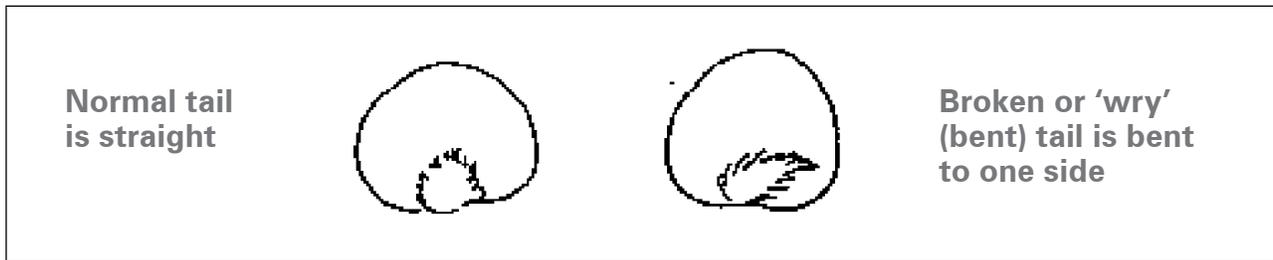


Watch out for missing or broken off toenails or toenails of wrong color for breed (if you wish to show your rabbit).

7. **Check the bottoms of the feet for sores.** Sores on the bottoms of the back feet and legs are called sore hocks. This is caused by poor hair covering and from being kept in an unclean cage.



8. **Check to see that the tail is normal** and not bent, broken or missing.

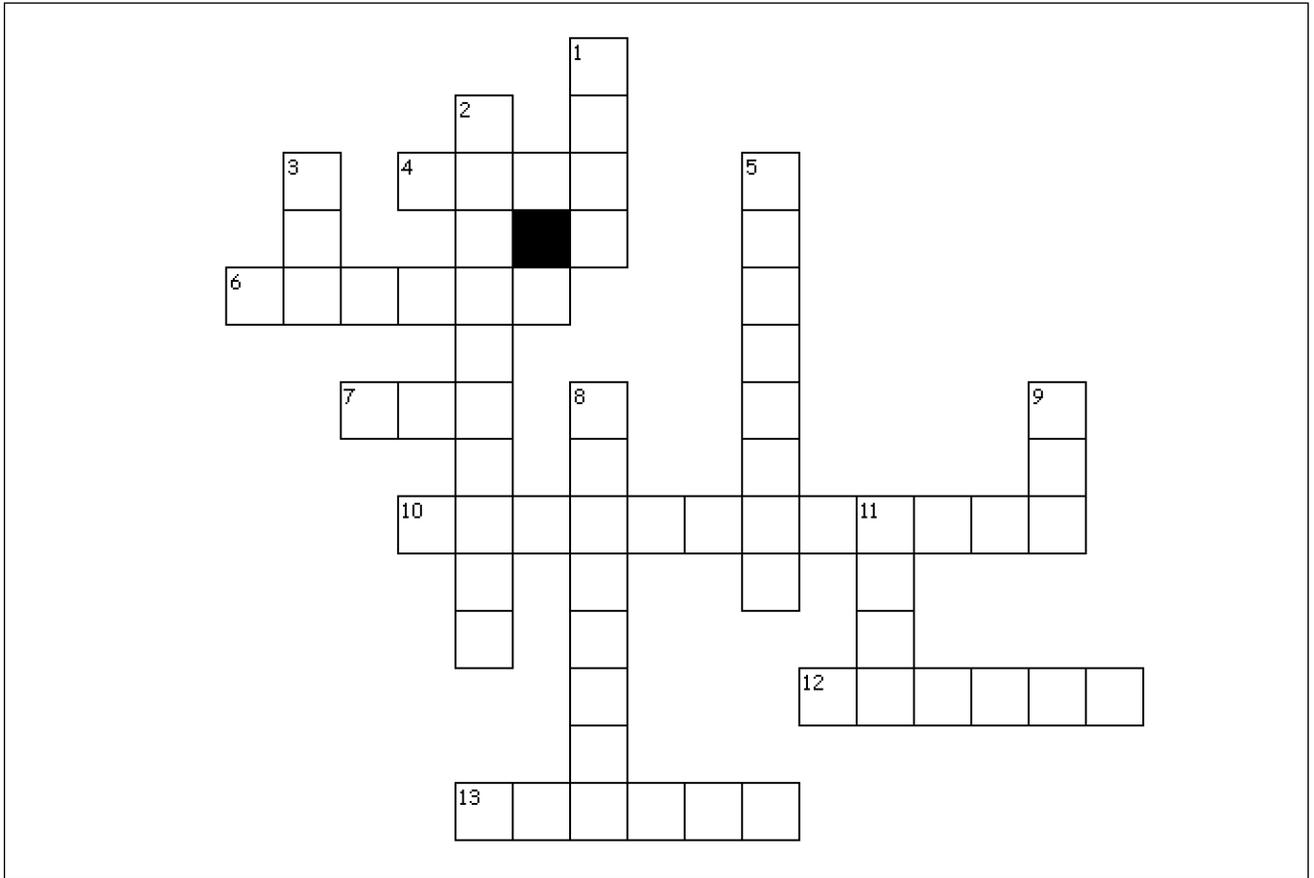


9. Turn the rabbit onto its back and **check to see if it is the sex you want.** Check that there are no sores or other skin irritations around the reproductive organs.
10. **Check that the rabbit's coloring, coat type, nails, eyes, etc. conform to the breed standard** (if you want a particular breed of rabbit for show).

LET'S HAVE SOME FUN!

Just for fun, do a search on the internet and see what kinds of pictures and information you can find on these breeds. It might be fun to start a scrapbook of pictures and facts about rabbits to help you learn about the different types and how to care for them.

ROWDY RABBITS

**ACROSS**

4. The larger breeds are kept for _____.
6. The eyes should be clean, shiny and _____.
7. The ears of your rabbit can get very tiny bugs in them called ____ mites.
10. _____ is the proper word to describe teeth that do not grow properly.
12. The Standard Chinchilla is an example of a _____ breed.
13. English and French _____ rabbits have very long, soft woolly coats.

DOWN

1. Small breed rabbits make the best _____.
2. The _____ Dwarf is an example of a small breed rabbit.
3. The medium breeds are often kept for their _____.
5. When looking at a rabbit you would like to buy you should make sure it has no _____ missing or broken off.
8. Long haired rabbits require special _____.
9. When you find a rabbit you wish to buy you should do the "____ Point Inspection."
11. When rabbits are kept in a dirty cage they will get _____ hocks or sores on the bottoms of the back feet or legs.

SOLUTIONS!

ROWDY RABBITS

ACROSS

4. The larger breeds are kept for **meat**.
6. The eyes should be clean, shiny and **bright** .
7. The ears of your rabbit can get very tiny bugs in them called **ear** mites.
10. **Malocclusion** is the proper word to describe teeth that do not grow properly.
12. The Standard Chinchilla is an example of a **medium** breed.
13. English and French **Angora** rabbits have very long, soft woolly coats.

DOWN

1. Small breed rabbits make the best **pets**.
2. The **Netherland** Dwarf is an example of a small breed rabbit.
3. The medium breeds are often kept for their **fur**.
5. When looking at a rabbit you would like to buy you should make sure it has no **toenails** missing or broken off.
8. Long haired rabbits require special **grooming**.
9. When you find a rabbit you wish to buy you should do the "**Ten** Point Inspection".
11. When rabbits are kept in a dirty cage they will get **sore** hocks or sores on the bottoms of the back feet or legs.

MORE! MORE! MORE!

There are many resources available through the Alberta 4-H Branch related to the 4-H Rabbit Project. Talk to your leader or Regional 4-H Specialist to have a look at some of them.

RESOURCES USED TO CREATE THIS MODULE

Information to create this module was obtained from:

1. Alberta Agriculture 4-H Publication – 4-H-2000-91 SE
2. www.puzzlemaker.com

TECHNOLOGY & TRADE MODULE: **WOODWORKING**

Tool Caddy

WHAT WILL WE LEARN?

In this module you will learn to construct a tool caddy with the help of an adult.

WHO CAN HELP?

This involves some skill. Maybe a member has a dad who is a carpenter, or perhaps you know someone who has retired that may be able to help. Talk to your Group Leader to see if he/she can suggest someone to help with this module.

WHAT DO YOU NEED?

- Precut pieces of 1/4 inch plywood
- Dowling
- Glue
- Hammer
- 10-1/2 inch finishing nails
- Glue
- Sandpaper
- Safety goggles

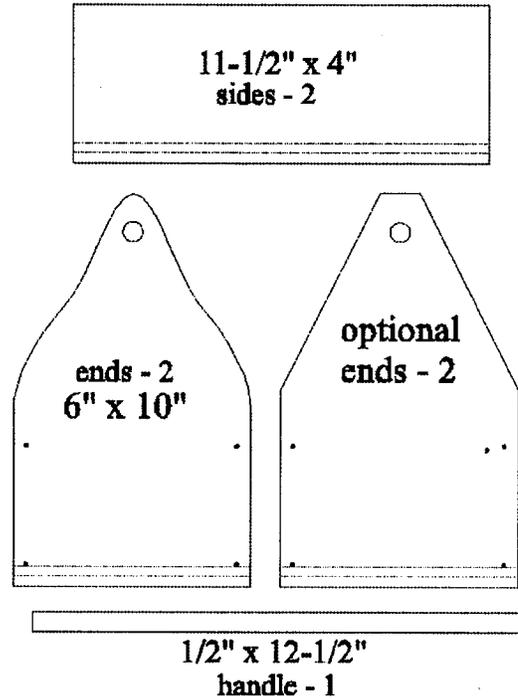
We will use this section to describe what you need to do in preparation for constructing your tool caddy. This is a very simple project when pre-cut pieces are used. The handle is made from a 1/2" dowel, the bottom from 1/4" masonite board, and the rest from 3/4" pine planking scraps.

For your adult supervisor

Use the diagrams to cut out all pieces to the specified sizes. Using a router, radial arm saw, or table saw; cut a 1/4" wide - 1/4" deep groove into the inner sides of both sides and both ends 1/4" from the bottom edges. Drill the 1/2" deep 1/2" diameter holes into the inner side of both ends near the top as shown in the drawings.

Full-size Drawings

1" = 1"



LET'S HAVE SOME FUN!

Assembly

1. Drive four finishing nails into each end piece where the black dots on the drawings indicate.
2. Drive the nails to the point they are about to go completely through or 'ever so slightly through' the wood.
3. Apply glue to the end of one side piece and position it against one end being sure the grooves in both face inside and align with each other.
4. Hammer the two nails all the way in.
5. Apply glue to the opposite end of the other side piece and position it against the same end piece, again being sure the grooves face inside and align with each other.
6. Hammer these two nails all the way in.
7. Slide the bottom into the groove in the sides and the end.
8. Apply glue to the exposed ends of the two side pieces and position the last end piece against the sides with the bottom piece fitting into the groove.
9. Slip the handle into the holes but do not glue it. You will need to open the top a little to insert it.
10. Hammer the last four nails all the way in.
11. Sand off all sharp corners.
12. Allow the glue to dry well before use.

HAMMER AND NAILS!

M Q C B T G N S A M L Y
 B E Z P R E L Z N X E T
 G W A O O I D W G S W Y
 C W O S A W K H L T O M
 Q V K N U L E P E A D P
 E U L G C R L R S I C W
 R E M M A H E I P N A X
 J Y L S K D R Z C S B R
 E U C E G F T D W N T X
 Y R I E P P Q O S R E I
 P A I N T A E O A J Y P
 S L X T B H T W B T A P

WORD LIST

ANGLES
 HAMMER
 POWER

DOWEL
 MEASURE
 SAW

EDGE
 NAILS
 STAIN

GLUE
 PAINT
 TAPE

GROOVE
 PENCIL
 WOOD

SOLUTIONS!

HAMMER AND NAILS!

G + + W + S S L I A N R
 + L O + E + N E T + + E
 + O U L T I + R A + + W
 D + G E A N + U P + + O
 + N + T + + I S E P + P
 A + S + + + + A + E + +
 + + + + D H + E P N + +
 G R O O V E A M + C + +
 + + W + + + + M + I + +
 + E E D G E + + M L + +
 L W A S + + + + + E + +
 + + + + + + + + + R +

OVER, DOWN, DIRECTION

ANGLES(1,6,NE)

MEASURE(8,8,N)

STAIN(3,6,NE)

GROOVE(1,8,E)

HAMMER(6,7,SE)

SAW(4,11,W)

GLUE(1,1,SE)

PENCIL(10,5,S)

POWER(12,5,N)

EDGE(3,10,E)

PAINT(9,7,NW)

WOOD(4,1,SW)

DOWEL(5,7,SW)

NAILS(11,1,W)

TAPE(9,2,S)

MORE MORE MORE!

1. Build a planter
2. Build a bird feeder
3. Make a shelf for your room

RESOURCES USED TO CREATE THIS MODULE

1. Big Learning, Karen Cole 2003
2. www.puzzlemaker.school.discovery.com
3. www.thewoodcrafter.net/jr.html

LIFE SKILLS MODULE: **PHOTOGRAPHY**

Photography-Composition

WHAT WILL WE LEARN?

In this module you will learn to:

1. Plan a picture considering the subject and background.
2. Simplify the picture to focus the subject.

WHO CAN HELP?

It is pretty easy to find someone who has skill in photography. You may ask parents and find someone who has expertise. Grandparents are another useful source. They may even have some good photos of you when you were a baby that you can bring and show to your friends!

WHAT DO YOU NEED?

1. A camera (The simpler the better if you are a beginner. Digital or disposable cameras are perfect).
2. Photos you like or pictures cut from magazines.

LET'S GET EDUCATED!

Purpose

Before you take a picture think about what you want the picture to do for you.

1. Do you want it to record an event? (The awards given to your speech competition winners)
2. Do you want it to tell a story? (Your friend dancing at her birthday party)
3. Do you want it to create a mood? (The feeling that comes from petting your dog)
4. Do you want it to inspire action? (A truckload of garbage dumped in a creek near your home)
5. What emotion do you want it to trigger?

Composition is a matter of taste. What some people like, others will think is boring or weird. Keep your camera ready and think about taking shots before you take them.

Some Tips To Get Better Pictures

1. Put your subject slightly off centre in the picture, either up from the middle or to the side of the middle.
2. Move close to your subject and avoid background clutter.
3. Make sure there isn't distracting background items. (A flower on the shelf behind your subject looks like it's sprouting from his/her head!)

Groups Of People

1. Arrive early where you intend to take the photo and set it up before your subjects arrive.
2. Lay string or a cord on the floor to show people where they should line up.
3. Arrange people so that their faces are at different levels for an interesting picture.
4. Have your subjects look to the side of you to prevent "red eye."
5. It isn't necessary to have everyone smile at the camera. Photos are often taken when people aren't looking at the camera at all. An example would be taking a comfortable shot of a parent doing something they love.
6. Ask everyone to close their eyes and open them just before a shot to prevent having a number of your subjects blink as you are taking the shot.

LET'S HAVE SOME FUN!

Collect pictures you like - favorite photos or magazine pictures.

1. Identify what you like about the photo.
2. Discuss what the photographer was trying to accomplish.
3. Discuss the background, the subject, the mood, the placement of the main subject.

Take photos of your club, where you meet, your home and your favorite places. Think about your photo composition, your purpose, and your likes and dislikes. Take a roll or two of film to get processed and bring the photos back to a meeting to show other 4-H members.

ENJOY!

MORE! MORE! MORE!

To learn more about photography check out the Alberta 4-H Photography Leaders Manual, Agriculture Food and Rural Development 4-H Branch.

TECHNOLOGY AND TRADE MODULE: VETERINARY SCIENCE

Do you like animals and do you care about the welfare of these animals? If you answered “yes” to these two questions then Veterinary Sciences may be something you want to learn about. Join me, as we go through this module and learn about different animals.

WHAT WILL WE LEARN?

Rather than providing you with a bunch of medical terms that you have to decipher, you will complete an activity that will teach you a little bit about Veterinary Sciences. Hopefully you find this module exciting. It is designed to help you identify and learn the differences between species and breeds of animals.

WHO CAN HELP?

The very best resource person for this module is a veterinarian, however, if there is no way to visit or contact one, a person that cares for animals could also help you - farmer/rancher, SPCA worker, dog kennel operator, etc. Someone that cares about the welfare of animals and understands and is sensitive to their needs is who you want to help you.

WHAT DO YOU NEED?

1. A scrapbook – any type of book that you can write in and glue or stick photos, magazine pictures, small posters, etc. will work just fine - a photo scrapbook would work quite well.
2. Pictures from magazines, breed associations, internet, computer clipart, newspapers etc.
3. Glue
4. Markers
5. Pen or pencil

LET'S GET EDUCATED!

1. While you are completing this activity you may find you are learning important skills that you can use your whole life. Some of these skills may include communicating with others, learning to learn, developing character and acquiring and evaluating information.
2. Veterinarians are considered to be experts on animals. This doesn't only mean knowing how their digestive systems work or what kinds of diseases they need to be vaccinated for. It also means knowing the proper way to care for them and understanding their behaviour.
3. Veterinarians even have to become experts on different species of animals and different breeds within a species. They are often asked questions about different breeds. If you find a stray dog and you take it to the veterinarian for a check up one of your first questions might be "what breed do you think it is?" If someone wants to purchase a horse for their children to ride they might want to know if one breed has a quieter disposition than another breed. Some breeds of animals are also more susceptible to certain diseases. These are all bits of information that a veterinarian may need to know.
4. We are going to complete an activity that will help you learn to recognize some of the many different breeds of animals. Once you have completed the activity you will have something to refer back to at any time to refresh your memory on the things that you will learn.

LET'S HAVE SOME FUN!

SPECIES SCRAPBOOK

Discovering Differences

What Will I Do?

For this activity you will collect pictures of different animals and arrange them in a scrapbook. By using the steps below as a guide you will create a book that is fun to look at and make, but that also provides you with information. This information you will be able to use for years to come. Have fun and be creative while putting together your scrapbook!!

Goal

You are going to collect items that show or tell about different breeds of animals. These items may include photographs, magazine pictures, articles, small posters or anything you can find that shows or tells something about a specific breed of dog, cat, sheep, etc. You will display these items in a scrapbook.

Getting Organized

1. Before you start it may be helpful to create a chart like the one below. This will help you get started and keep your scrapbook organized.
2. If there are certain breeds or certain species of animals that you are familiar with start with these. Write them into the chart.
3. Use your own photos, ask friends or relatives for photos, look through magazines, books, papers, search the internet, etc. and cut out pictures and articles (if you like) of different types and breeds of animals. Write the breed of the animal in the chart. Keep track of what you have collected.

NOTE: Most breeds of animals have Breed Associations that represent them. You can probably access most of these on line, simply by typing in the breed name to a search engine. These association sites may have pictures you can use. There may also be contact information on the site. Many associations are more than happy to promote their breed and would probably send you pamphlets, brochures etc. that would have pictures in them that you could use for your scrapbook.

4. As you collect your pictures, be sure to make a note on the back of them, so you don't forget the details of the picture.

5. You may want to wait until you have collected all your materials for your scrapbook before putting them in. That way you will be able to arrange them all at once. Maybe you prefer sticking them in as you go. Either way is fine, just be sure to make a note on the back of your pictures so you don't forget details about them.
6. To keep items organized you could use a file folder, envelope, box or something similar to put the pictures, photos, articles etc. in as you collect them.

Create, Create, Create!

1. Your scrapbook will definitely need a title page. Use a combination of your computer, your own creative drawing ability, pictures, photographs etc. to create a cover page for your book.
2. Once you start putting your scrapbook together you will want to include certain information under your pictures. This could include the type of animal it is, the animal's name – if it is someone's pet, the breed, the date the magazine article was created and where you found the picture. You can discuss this with your helper/leader and determine what information you should include.
3. You may want to mount your items on a sheet of coloured paper before putting them in your scrapbook.
4. How you organize your scrapbook isn't important as long as it has some sort of order. You should probably keep your species together, but otherwise you can use your own creativity. Each page or section could have a title. You could add captions to your pictures to create some humor. Don't forget to talk with your leader/helper to decide what information to include with each picture. Remember a leader or helper will have to look at it when you're done so you want them to be able to follow what you did.

MORE! MORE! MORE!

1. To learn more about Veterinary Science ask your local vet. clinic or SPCA about doing some volunteer work.
2. Check out the 4-H Resources available for Veterinary Science.

RESOURCES USED TO CREATE THIS MODULE

1. 4-H Animal Series - Skills for Life – From Airedales to Zebras produced by National 4-H Cooperative Curriculum System, Inc.

TECHNOLOGY & TRADE MODULE: **COMPUTERS**

Drawing and Painting with a twist!! You don't need markers, pastels, paints, easels etc. for this project - just sit down in front of your computer and let your fingers do the work.

WHAT WILL WE LEARN?

This module uses some of the information provided by the Computer 1-2-3 Member Manual. You will learn how to use graphic applications to create a project in MS Paint – on a Windows computer, or ClarisWorks or AppleWorks drawing and painting on the Macintosh computer. Using one of these programs you will create a document. This document could be a title page for this module, your Exploring 4-H Binder or just something that you would like to create.

WHO CAN HELP?

You could get a leader, parent or senior member to help you out with this module, or you may want to enlist the help of your computer teacher at school, or someone that runs a computer or graphic design shop that would have a lot of experience in this area. There are many people very skilled in the use of computers. Some of them might be happy to assist you with such a project. It may be helpful to show this module to one of these people. They should be able to guide you through the module, as well as give you pointers on how to complete it more successfully.

WHAT DO YOU NEED?

1. A computer.
2. Computer paper – heavier paper will make your design have more defined lines, be more clear, and have more vibrant colors. Use at least 24lb. paper for the best effect.

LET'S GET EDUCATED!

MS Paint comes with most Windows computers; ClarisWorks or AppleWorks drawing and painting will usually come with the Macintosh computer. These programs are fairly easy to use and they give you some practice using different tools to make or change pictures. When you are first learning these programs, it is best to start experimenting with some of the basic tools like the paintbrush, pencil and fill tool or paint bucket. Once you have some practice with those tools you can begin using the other tools on your formatting palette like the line tool and curve tool. Practicing each of the tools using an online tutorial or the HELP menu from the application will let you create original images for your project.

MS Paint, AppleWorks and ClarisWorks are basic graphic design programs. They will allow you to use the computer in a creative way, while still using basic computer concepts.

There are many innovative and creative exercises you can complete if you choose to take computers as your main project in 4-H. This is just one activity that will allow you to see what types of things you could do.

It is difficult to complete this module if you are not familiar with the computer or have someone helping you with the project. So please read through the directions before starting and make sure you are familiar with the terms and steps involved. If not, be sure there is someone close by that can lend a hand. If there are a number of members in your club completing this module perhaps it could be done as a group in a computer lab if you have access to one, or at the home of someone that has more than one computer.

LET'S HAVE SOME FUN!

Now let's get down to the fun part of this module – creating!!

You are going to create a document that could be used as a title page for this module or for your Exploring 4-H Project book.

1. Find the program on your computer-MS Paint, AppleWorks or ClarisWorks.
2. Create, Open and Save a document - create the document, save it to your hard drive (desktop or into a folder that you have made). You might want to set up a folder for this project and any future 4-H projects you may want to create.
3. Quit the Drawing or Painting program.
4. Start the program again and open the document that you saved. See how easy this is!
5. If you follow directions, ask for help and stay organized, you'll do great!
6. Experiment using the pens, brushes, eraser tools and the undo command.
7. If you need help, ask someone, or use the Help menu or an on-line tutorial.
8. Use the Copy and Paste commands in a single image and between two different images.
9. You can use an image or picture that you have made or you can use a picture on the computer.
10. Each computer has different pictures that come with it, so check around and see what you may be able to use.
11. The reason you might want to copy and paste, on a picture, is to create an image that has some part of another picture in it, or has two of the same thing in one picture. For example, you could use a picture of yourself, copy your head and put it in a picture of a sports car or copy and paste your whole body into the scene of a different place. For fun, you could put yourself at the North Pole in your swimsuit.
12. Practice and experiment as much as you like. Once you start feeling comfortable with the program and like what you are creating, think about saving some of your creations. Keep creating and saving until you have a page you are happy with. Once you are pleased with your creation, print preview it and then print it.
13. What do you think? Are you happy with your creation? If so, you might want to insert it into a protective plastic sleeve to protect it.

MORE! MORE! MORE!

1. If you enjoyed using these programs – MS Paint, AppleWorks or ClarisWorks, you may eventually want to use the more powerful graphics programs that graphic designers, moviemakers and artists use. These professional programs can be quite expensive, but the websites will sometimes give free downloads of tryout versions.
2. You can access 4-H Computer Resources on-line on the Alberta 4-H website - www.4h.ab.ca - for a glimpse of the Computer Project as it is now available. This will give you an idea what this project would involve.

RESOURCES USED TO CREATE THIS MODULE

1. Computer 1-2-3 Member Manual produced by the Alberta 4-H Branch.

TECHNOLOGY & TRADE MODULE: SMALL ENGINES

How Small Engines Work

Ever notice that it is always the carpenter's house that needs work and the mechanic's car that isn't running?

WHAT WILL WE LEARN?

You will learn to identify the basic parts of a small engine. This may be done by dismantling the engine or simply by observation.

WHO CAN HELP?

Perhaps a knowledgeable parent, local handyman or mechanic would be willing to assist you with this module and answer basic questions on the workings of a small engine.

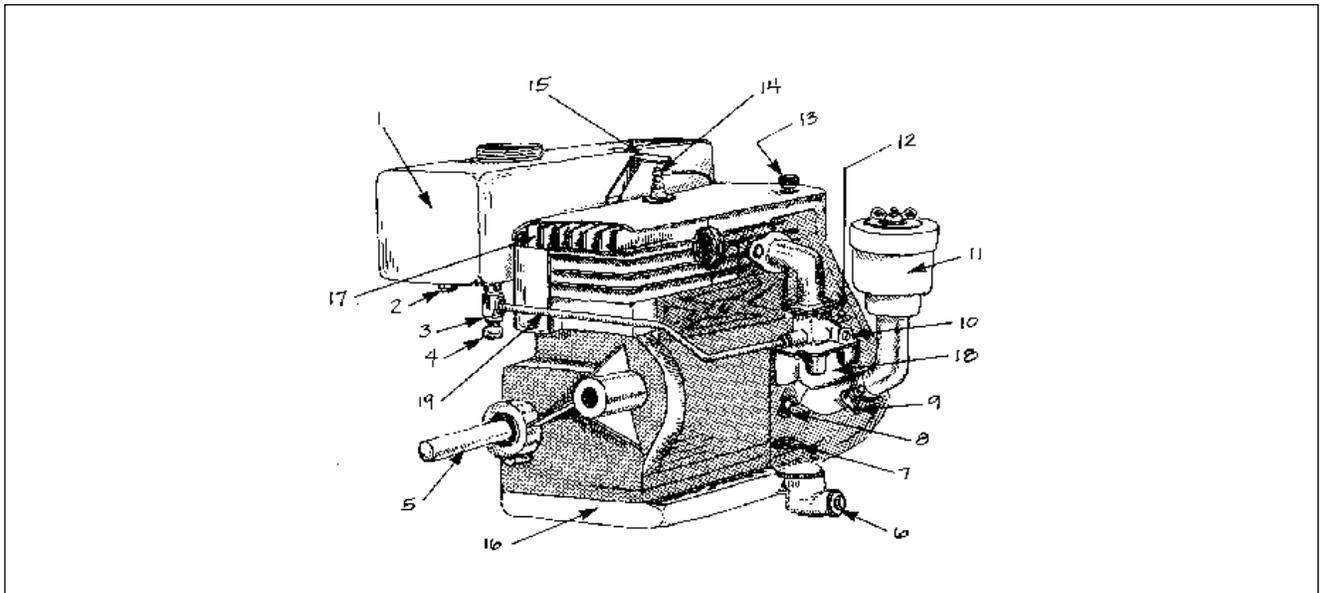
WHAT DO YOU NEED?

To complete this module you will need:

1. A lawn mower, motorcycle or some other machine, that has a small engine. Perhaps who ever you get as a resource person/leader could help you find one.
2. A pair of coveralls or some old clothes that can get dirty would also be helpful.
3. A wrench and socket set, screwdrivers, and pliers if you will be dismantling the engine.

LET'S GET EDUCATED!

MAJOR PARTS OF A SMALL ENGINE



- | | | |
|--------------------|--------------------|-------------------|
| 1. Fuel Tank | 8. Needle Valve | 15. Stop Switch |
| 2. Drain Plug | 9. Choke Lever | 16. Oil Sump |
| 3. Fuel Filter | 10. Idle Valve | 17. Cylinder Head |
| 4. Fuel Valve | 11. Air Cleaner | 18. Carburetor |
| 5. Power Shaft | 12. Idle Screw | 19. Fuel Line |
| 6. Oil Drain Plug | 13. Governor Screw | |
| 7. Oil Filter Plug | 14. Spark Plug | |

Demonstration

Ask your guest or parent leader to point out the parts of a small engine. Explain in general how an engine works and the function of each part.

Do the member activity to solidify the key parts of an engine and their general purpose.

LET'S HAVE SOME FUN!

ENGINE EXPERT?

This activity has been modified from **"Proverbs"** an activity found in the 4-H Fun Pack.

1. The questions or phrases and their corresponding answers (from the SOLUTIONS section of the module) are written on index cards.
2. Each member is handed an index card with either an engine part or it's corresponding question or phrase.
3. Members are asked to find their partners by walking around and trying to find the corresponding answer or question.
4. Leaders can walk around encouraging discussion and problem solving with members until each member has the correct partner.
5. Members must then introduce their part and point it out on the engine or the picture.
6. If it is not practical to have the entire club participate in this activity, members could write the answers to the questions on cards, and try to figure out which question they answer.
7. If you like, you can simply go through the questions below and write in the answers from what you have learned.

1. What turns the engine off? _____
2. What do you need to use in order to start a cold engine? _____
3. What protects the engine from dust in the air? _____
4. Where do you put the gasoline that runs the engine? _____
5. What ignites the fuel mixture? _____
6. Where would you need to remove the dirty oil from? _____
7. Where is the gas and the air mixed? _____
8. If the engine is running too slow what do you turn? _____
9. The engine turns this mechanism. _____
10. The gas moves from the tank to the engine through this. _____

SMALL ENGINE SEARCH

B E T O P T J G L R N S D Z J
 F N I R H Q P P O V T R O P J
 J I S B M T T T V O A A Z P V
 P L Q N B L E C P I S H A F T
 L S N R C R U H N P Q S J Q J
 U S R D U T A O W K A I X Q R
 G I W B F P Z K Y V R V D E L
 A E R I D U B E B Y E A W K W
 B A L F T R E V E L V O P G E
 C C K D J C Q L P M P T Y S R
 M Q D I I Q H G I C K N A T C
 O I L P C L E A N E R V L I S

WORD LIST

| | | | |
|------------|-------|-------|--------|
| AIR | LEVER | OIL | SWITCH |
| IDLE | SHAFT | STOP | FUEL |
| SCREW | CHOKE | DRAIN | POWER |
| CARBURETOR | LINE | PLUG | TANK |

SOLUTIONS!

1. Stop switch
2. Choke lever
3. Air cleaner
4. Fuel tank
5. Spark plug
6. Oil plug
7. Carburetor
8. Idle screw
9. Power shaft
10. Fuel line

SMALL ENGINE SEARCH

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| + | E | + | + | + | + | + | + | R | + | S | D | + | + | |
| + | N | + | + | + | + | + | O | + | T | R | + | + | + | |
| + | I | + | + | + | + | T | + | O | A | + | + | + | + | |
| P | L | + | + | + | + | E | C | P | I | S | H | A | F | T |
| L | + | + | + | + | R | + | H | N | + | + | + | + | + | + |
| U | S | R | + | U | + | + | O | + | K | + | + | + | + | R |
| G | I | W | B | F | + | + | K | + | + | R | + | + | E | + |
| A | E | R | I | + | U | + | E | + | + | + | A | W | + | W |
| + | A | L | + | T | R | E | V | E | L | + | O | P | + | E |
| C | + | + | D | + | C | + | L | + | + | P | + | + | S | R |
| + | + | + | + | I | + | H | + | + | + | K | N | A | T | C |
| O | I | L | + | C | L | E | A | N | E | R | + | + | + | S |

OVER, DOWN, DIRECTION

AIR(1,8,NE)

IDLE(5,11,NW)

SCREW(15,12,N)

CARBURETOR(1,10,NE)

LEVER(10,9,W)

SHAFT(11,4,E)

CHOKE(8,4,S)

LINE(2,4,N)

SPARK(14,10,NW)

CLEANER(5,12,E)

OIL(1,12,E)

STOP(12,1,SW)

DRAIN(13,1,SW)

PLUG(1,4,S)

SWITCH(2,6,SE)

FUEL(5,7,SE)

POWER(11,10,NE)

TANK(14,11,W)

MORE! MORE! MORE!

1. More resources can be found in the “Small Engines” Leader’s Guide available from the 4-H Branch in Edmonton.
2. Another activity may be to create your own crossword puzzle after the demonstration and dismantling of the engine.

RESOURCES USED TO CREATE THIS MODULE

1. www.small-engine.com

TECHNOLOGY AND TRADE MODULE: **WELDING**

Arcs, electrodes, clamps, welding shields, spatter, slag – what do all these words have in common? Once you have completed this module you will be able to answer this question.

WHAT WILL WE LEARN?

As welding is more of a project for intermediate or senior members we are going to use this module to introduce a few concepts and suggest taking a look at some welding projects. Welding is something that should be done by older members under the supervision of an adult.

WHO CAN HELP?

It would be beneficial if you could talk to a welder and visit a welding shop. Because welding is largely hands on, it would be good for you to look at some welding jobs to understand the teachings in this module.

WHAT DO YOU NEED?

Everything you need is included in this module.

LET'S GET EDUCATED!

BASIC PRINCIPLES OF WELDING

If you were to take two ice cubes from the refrigerator, the outer surfaces under the heat of the day will begin to melt to ice water. Place the two wet cubes one on top of the other back in the refrigerator and within a short time the two cubes are welded together to form one block of ice. The addition of heat has melted a portion of the two parts to be joined. As they cool down they become one structure - the melted section becoming an intimate part of the bond. This is the basis of welding.

THINGS TO KNOW

Let's look at some equipment that may be used by a welder. By learning correct terminology you will be able to identify some of the items in the welder's shop when you visit one. For this module, we will focus on arc welding.

WHAT IS ARC WELDING?

Arc welding is a method of joining two pieces of metal into one solid piece. To do this, the heat of an electric arc is concentrated on the edges of two pieces of metal to be joined. The metal melts, while the edges are still molten and additional melted metal is added. This molten mass then cools and becomes one solid piece.

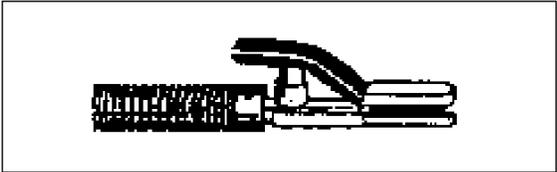
WELDING TERMS AND TOOLS

Arc – The bright spark that happens when electricity jumps from the electrode to the metal being welded.

Electrode – the long grey metal rod which is used to weld metals together; the electrode melts while in use.

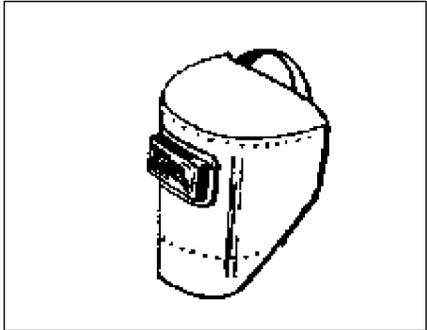
Welding Equipment

- **Electrode Holders** - The electrode holder is the hand clamp which must hold the electrode to be used for the weld. Some professional welders call the electrode holder the “stinger”. A good electrode holder is rugged but light.


- **Ground Clamp** - The ground clamp is the clamp that must be clamped either to the part to be welded or to the table on which the welding will be done.

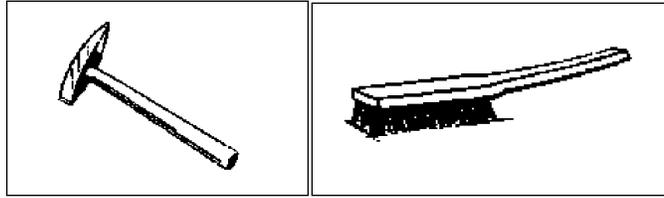

- **Cables** - One three-wire heavy cable called a “pig tail” connects the welder to the power. This “pigtail” is much the same as the cable used on the electric stove in the kitchen. Two single conductor cables are used to carry the current to the welding table. One of these is hooked to the ground clamp and the other to the “stringer” electrode holder. These cables must be large enough to carry a lot of current without getting hot.


- **Head Shield** - Never look at the arc or try to weld without a shield. There is a lot of spatter of hot metal and slag flying around which will be painful and damaging if you get some of it in your eyes. The arc itself gives off some rays known as ultraviolet and infrared which will burn your eyes much like the sun will give you a sunburn. Looking at the arc may not bother you much at the time, but four or five hours later you will be in real pain. Your eyes will feel like someone threw a handful of salt in them.

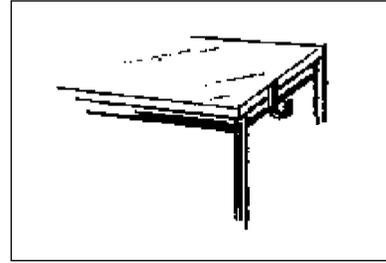


- **Chipping Hammer and Wire Brush -**

When you are doing a welding job, you need a chipping hammer to chip off the slag. You should always remove the slag from the weld before running another pass. A wire brush is handy to clean off rust and burnt paint, etc. If you do not have a chipping hammer, it is easy to make one by welding a short rod to an old cold chisel.



- **Welding Table** - You need a table to work on when you are welding small parts. A piece of sheet metal 45 x 60 cm and about 6mm thick works out very well for a table top. Pipe or angle iron can be used for legs. Weld spatter doesn't stick to copper or cast iron. If you can find either a fairly large piece of flat cast iron or copper sheet, use it on the top of your table to place your weld jobs on.



Slag – the waste material left on a weld that must be chipped off so that a weld can be seen.

Spatter – red hot bits of metal and slag that fly away from the bead while welding.

WELDING SAFETY

Because there are a lot of precautions that welders need to be aware of it is important that we point out what they are.

1. Never look at welding arc with the naked eye.
2. Always use a helmet or face shield that is in good condition. Wear safety glasses.
3. Replace any cracked or poor-fitting lenses in the helmet or shield.
4. Wear suitable clothing to protect all parts of your body from spatter and arc burns.
5. Any part of your body left exposed to the arc can be burned by the ultraviolet radiation (just like a sunburn!). Cover up!
6. Do not strike an arc or weld until you are sure those in the vicinity have protective equipment or will look in the other direction.
7. Do not weld around combustible materials.
8. Do not pick up hot metal. Even if it's black, it can still be quite hot. Use pliers.
9. Do not weld in confined spaces without adequate ventilation.
10. Do not leave the electrode holder on the welding table or in contact with a grounded metal surface.
11. Do not use worn or frayed cables.
12. Keep your welding area clean.

LET'S HAVE SOME FUN!

Now that you have a few of the basics of welding, this may be the time to visit a welding shop.

1. Take a look at some welding projects and see if you can identify the equipment we talked about in the Let's Get Educated section above. If you have a farm machinery dealership near you, take a look at the equipment. Any piece of machinery that is made with metal will have some welding on it. Check out where the machinery is welded and the quality of the welds. You will probably notice that not all welding jobs connect two pieces of iron that are parallel to one another. Sometimes joints will be done at an angle, or in a difficult location.
2. **Welding Cryptograms** - To find the solutions to the two cryptograms below, transfer the letters identified by each number, into the blanks under the code.

WELDER'S WORK

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|----|---|----|---|----|----|---|----|----|----|---|----|----|----|----|---|----|----|----|----|----|---|----|---|---|
| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
| 2 | 16 | 5 | 22 | 1 | 18 | 21 | 7 | 14 | 10 | 15 | 8 | 13 | 20 | 24 | 17 | 9 | 26 | 23 | 19 | 11 | 12 | 3 | 25 | 4 | 6 |

2 26 5 9 1 8 22 14 20 21 14 23 2 13 1 19 7 24 22 24 18

10 24 14 20 14 20 21 19 3 24 17 14 1 5 1 23 24 18 13 1 19 2 8

14 20 19 24 24 20 1 23 24 8 14 22 17 14 1 5 1

WELDER'S AWARENESS

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|----|----|----|----|---|----|----|---|---|----|----|----|---|----|----|----|----|---|---|----|----|----|----|
| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
| 7 | 9 | 6 | 18 | 13 | 26 | 12 | 5 | 15 | 24 | 2 | 4 | 10 | 16 | 25 | 1 | 19 | 23 | 20 | 22 | 8 | 3 | 11 | 14 | 21 | 17 |

16 13 3 13 23 4 25 25 2 7 22 11 13 4 18 15 16 12 7 23 6

11 15 22 5 22 5 13 16 7 2 13 18 13 21 13 7 4 11 7 21 20

8 20 13 7 5 13 4 10 13 22 25 23 26 7 6 13 20 5 15 13 4 18

22 5 7 22 15 20 15 16 12 25 25 18 6 25 16 18 15 22 15 25 16

11 13 7 23 20 7 26 13 22 21 12 4 7 20 20 13 20

SOLUTIONS!**WELDER'S WORK**

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|----|---|----|---|----|----|---|----|----|----|---|----|----|----|----|---|----|----|----|----|----|---|----|---|---|
| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
| 2 | 16 | 5 | 22 | 1 | 18 | 21 | 7 | 14 | 10 | 15 | 8 | 13 | 20 | 24 | 17 | 9 | 26 | 23 | 19 | 11 | 12 | 3 | 25 | 4 | 6 |

A R C W E L D I N G I S A M E T H O D O F
 2 26 5 3 1 8 22 14 20 21 14 23 2 13 1 19 7 24 22 24 18
J O I N I N G T W O P I E C E S O F M E T A L
 10 24 14 20 14 20 21 19 3 24 17 14 1 5 1 23 24 18 13 1 19 2 8
I N T O O N E S O L I D P I E C E .
 14 20 19 24 24 20 1 23 24 8 14 22 17 14 1 5 1

WELDER'S AWARENESS

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|----|----|----|----|---|----|----|---|---|----|----|----|---|----|----|----|----|---|---|----|----|----|----|
| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
| 7 | 9 | 6 | 18 | 13 | 26 | 12 | 5 | 15 | 24 | 2 | 4 | 10 | 16 | 25 | 1 | 19 | 23 | 20 | 22 | 8 | 3 | 11 | 14 | 21 | 17 |

N E V E R L O O K A T W E L D I N G A R C
 16 13 3 13 23 4 25 25 2 7 22 11 13 4 18 15 16 12 7 23 6
W I T H T H E N A K E D E Y E . A L W A Y S
 11 15 22 5 22 5 13 16 7 2 13 18 13 21 13 7 4 11 7 21 20
U S E A H E L M E T O R F A C E S H I E L D
 8 20 13 7 5 13 4 10 13 22 25 23 26 7 6 13 20 5 15 13 4 18
T H A T I S I N G O O D C O N D I T I O N .
 22 5 7 22 15 20 15 16 12 25 25 18 6 25 16 18 15 22 15 25 16
W E A R S A F E T Y G L A S S E S .
 11 13 7 23 20 7 26 13 22 21 12 4 7 20 20 13 20

MORE! MORE! MORE!

1. To help you remember what you have learned in this module create a journal/scrapbook. Take photos of the welding shop you visit and of machinery that has been welded. Journal what the photos are of and add a fact, or a piece of information about each one. You should also write a date and location beside each photo. You can probably get pictures from the internet or magazines as well. Make a cover page for your journal/scrapbook and keep the book with your Exploring 4-H Project material.
2. If you enjoyed what you learned in this module and would like to learn more talk to your leader about the Welding Project. You may not yet be quite old enough to pursue this topic further, but check it out and see what the possibilities are.

RESOURCES USED TO CREATE THIS MODULE

1. 4-H Welding Project Book produced by The 4-H Branch, Agriculture, Food and Rural Development
2. www.puzzlemaker.com
3. www.aussieweld.com.au

