Major Projects

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Now it is time to prepare your major project for the year. This is the project that will be judged at Achievement Day and will be on display.

If you are involved in other projects with your 4-H group like photography, automotives, crafts, horses, beef or dairy cattle, small engines, clothing, Mind your Own Business or any of the other projects this is a great time to do some overlapping and make use of the technology in a really useful way.

On Achievement Day...

Judging may be:

1. Individual Accomplishment

You test yourself against a standard (the rubric)- and strive to do your personal best. The individual project could be any project identified below or agreed on by you and your project leader. This individual learning emphasizes independence and control over your own work.

2. Cooperative Projects

You can work together in groups to accomplish a common goal identified in team scoring. Examples of this may be; to create a group of robots that function in an environment your group has made, build a computer together, create a home business and produce all of the promotional materials using computers, or make a short movie that includes, sound, special effects and image manipulation.

This type of cooperative learning encourages social interaction, communication skill development and individual accountability, which will also be part of your individual score.

Project Guides

Each major project plan must include these basic stages of

INPUT-PROCESSING-OUTPUT:

1. INPUT

INPUT – the research and gathering of information for your project

Choose 3 or more sources:

Internet, video, CD ROMs, interviews, maps, newspapers, exploration, brainstorms, experiments, library books, phone calls, observations, charts/diagrams, e-mail, television, etc.

INPUT – electronically
Enter your data

2. PROCESSING

PROCESSING - organizing your information

Identify what it is you are going to accomplish:

compare/contrast, solve problems, classify, summarize, draw conclusions, predict, invent, analyze perspectives, elaborate, evaluate, make decisions, generalize, justify, order, investigate, etc.

PROCESSING – electronically
Use at least 3 applications:

Organize your information using at least 3 applications (i.e. word processor, spreadsheet, presentation, database, etc.)

3. OUTPUT

OUTPUT – putting your information into a design you have created inc. layout, color, fonts, format, construction, etc.

OUTPUT – the electronic product
Use a minimum of 2 display items:

Memo, letter, report, poster, digital image, magazine, flyer, advertisement, news article, newspaper, journal, story, diagram, multimedia, chart, graph, e-mail, brochure, video, animation, speech, web page, robot, silk screen, or transfer paper, etc.

Peripherals/Software

Because technology is changing so quickly you may already have peripherals or software that has advanced beyond this manual.

In the 1990's estimates suggested that a piece of technology was out of date after 18 months. That time frame is now considered an over estimate! Processors speeds double every 18 months and information on the Internet is doubling every 100 days. Understanding the uses of technology, the possibilities for future use and making sure you are always learning provides you opportunities to have the necessary skills to develop a career plan and participate fully as technology becomes more and more part of our lives.

If you have access to any of the following peripherals please make use of them in any of your major projects. Scanners, digital cameras, etc. come with instruction guides and you can usually find tutorials online to help you with the skills and knowledge you need to use them:

Scanner	Printer
Digital camera or video	CD or DVD burner
Video card or Video adapter	Digital projector
Sound card	Voice recognition
Scanner	Microphones
Touch screens	Wireless connections
Etc.	

Level 1-Transitions Major Projects

1. Plan an imaginary or real vacation for your family

Content
Location, map from your home to the destination, photos or drawings of the place, cost of the trip, mileage, activities.

2. Produce and print a t-shirt design

Content
The design should include an original picture or image and text.

3. Design a series of greeting cards

Content
The cards must include an original image or picture, a message on the outside and inside as well as the production information on the back. Check out your last birthday card for the type of information to put on the back of your card.

4. Design and produce a poster and a newspaper ad for an actual event or an event that you are interested in.

Content
The poster and ad must include an original image or picture and all the information about the event.

5. Design and produce a map of your community, farm, ranch, district or neighbourhood.

Content
The map should include main buildings, roads and green areas (fields, pastures, parks, wooded areas, etc.). You must also include a complete legend.

6. Design and produce an electronic presentation about a topic of interest

Content
Minimum 10 slides including the introduction, information, and conclusion. You should also include original images or photographs you have taken.

7. Design and print a series of 5 word puzzles.

Content
Each of the word puzzles should be done with a different plan, a different topic and contain at least 20 words to find or solve.

8. Create a series of 3 original art works using a draw/paint or another graphics program

Content
These images should be on the same topic to create a "series".

9. Create a slide show or electronic presentation that promotes a real or an imaginary business

Content
You must include what it is you are promoting and/or selling. The business should have a logo, a slogan, a color palette and information that would help promote your product or service.

10. Produce a set of instructions that would help your family or club members learn how to use one of the computer applications you learned in Computers Level 1.

Content
This project can be done using word processing and a presentation program.

11. Complete a Personal Project of your choice and approved by your project leader

Content
This is a free choice project where you can work on an area of your own interest. You must still follow the project guides!

Level 2-Interface Major Projects

1. Plan a cross Canada holiday for your family

Content
Must include hotels, travel time, mileage, food, sites of interest, costs, etc.

2. Create a database to manage a collection

Content
This must be a different data base than you did in your mini projects. The data base must include at least 20 records with 3 or more fields.

3. Produce a Newsletter for your 4-H club

Content
This newsletter must be a minimum of 4 (8 1/2 X 11 stapled) or 1 (11 X 17 folded in half) pages. It must include original images, text and have at least 1 to 3 (1/2 page articles) written by different members of your club.

4. Write, illustrate and publish an original short story

Content
Minimum 10 pages with at least 5 original images.

5. Create a database of a collection of your choice.

Content
Minimum 40 records with at least 5 fields each.

6. Create a souvenir book

Content
The book must include text and images you have created (either with a camera or drawings) of an event that your club has participated in or a holiday that your family has been on. Minimum 10 pages and 5 images.

7. Use the computer to design a hands on team project

Content
The design must include a landscape, at least 3 characters and a story line. As a team of at least 3 you will then build and present the project. This can be done as an individual with permission from your 4-H leader.

8. Arrange to volunteer for a minimum of 2 hours at a local business that uses technology.

Content
While at the business learn a new skill and share your new skill with your club by using a presentation program to teach the skill.

9. Create a promotional package for a real or imaginary product that you would like to sell in your area.

Content

The package should include at least a business card, brochure and a spec sheet (all the technical information about your product).

10. Produce a handbook or set of instructions for your family or club that would help them learn how to use a computer application that you learned in Computers Level 1 and 2.

Content
This project can be done using word processing, database and a presentation program.

11. Complete a Personal Project of your choice approved by your project leader

Content
This is a free choice project where you can work on an area of your own interest. You must still follow the project guides!

Level 3-eGAD Major Projects

1. Research a foreign city or town and make a travel brochure

Content

Minimum 4 pages including hotel(s), costs, sites of interest, how to get there, local transportation, etc. Try to use some original images.

2. Produce an animated presentation

Content
Use at last 20 slides which tell a story. Include original images and an original background.

3. Produce a magazine

Content
Minimum 8 pages which include a common layout, original images, a theme (i.e. a sport, a game, a collection, an animal, computers, etc.) Include at least 3 articles written by other people and original images with a common layout. You should make at least 5 copies of your magazine to share with other members, your family and friends.

4. Produce a newspaper

Content
Minimum of 8 (8 1/2 X 11 stapled) or 2 (11 X 17 folded in half) pages. It must include original images, text and have at least 3-4 (1/2 page) articles by different people. You should make at least 5 copies of your newspaper to share with other members, your family and friends.

5. Create a logo, brochure, business card and presentation for a real or imaginary business

Content
You must include an image of what you are promoting and/or selling, a logo, a slogan, a color palette, a common layout for the brochure, business card and presentation.

6. Build your own computer
Required Tools
Cross head screwdriver, a small pair of pliers, a clean place to work and an anti-static wrist strap (recommended).

Content
For this project be sure to have a tech buddy or an expert assistant who has built a computer before. You must be very careful when connecting cables and installing the different components, damage to cables or the parts can result in the computer not working properly.

The minimum parts for your new computer are:

Motherboard - the bus speed of your board is critical and is the first part of the computer you should buy and then be sure everything else is compatible, including the case
Computer case - desktop or a tower case which includes a power supply and fan or space for a fan
Processor - this is where you look at speed and price. Be sure the processor you buy is compatible with the rest of the system, etc.
RAM - this is the memory that allows everything in your computer to operate. The amount you need to buy depends on how much you will need to access when using your computer. The most common type of RAM chips are SIMM's and DIMM's. You'll need to do some research on what will work for you.
Graphics Card (if not built into motherboard) - this is what allows you to see images on the monitor
Floppy drive – 3.5 inch 1.44mb
Hard Drive - IDE (Integrated Drive Electronics)
CD or DVD ROM - compatible IDE with motherboard
Keyboard – compatible with motherboard
Mouse - compatible with keyboard
Monitor - 15 inch is a minimum
Modem - minimum 56k internal or external version that allows you to hook up to the Internet

As you begin to plan this project, remember that each of the components must be compatible with the others. Use a spread-sheet program to keep track of the components, prices, type, specifications, compatibility information and where it can be purchased.

If there are add on components or peripherals that you want to build into this project, like Zip drives, video capture card, sound card, speakers, joysticks, etc. include them in your spreadsheet.

7. Create a graphics database of a collection of your choice

Content
Minimum 30 entries with fields for name, graphics (image), description, and inventory numbers.

8. Build your own functional robot
Have your project leader approve your theme. This includes the robot, the robot's environment and a series of challenges your robot will complete.

Software
Lego Robotics Mindstorm or a similar system.

Content
Use the Lego Robotics Mindstorm or a similar system, which have a graphic programming language where you can produce your own set of robotic instructions and download to a portable computer robot. Design and build a robot, which has light and touch sensors, video cameras, rotation sensors and pattern recognition capabilities. Once the robot is complete you will need to build some sort of landscape or environment so that you can demonstrate what the robot can do.

9. Produce a short video or movie

Content
Use a video camera and a computer with a video capture board to produce a short video or movie. Try stop motion video animation, create a short film featuring graphic and video overlays using blue screen techniques or produce a short advertisement clip. In the process you need to use video capture, image manipulation of both moving and still images, sound editing, and word processing to script your project beforehand.

10. Produce a handbook and presentation

Content
Produce a handbook and presentation for your family or club that would help them learn how to use at least one computer application you learned during Computers Level 1, 2 and 3 plus a command or trick you learned on your own.