

TECHNOLOGY SOLS INTEGRATED WITH THE SCIENCE CURRICULUM

Computer Technology standards of Learning – Grade 6-8

C/T8.1 – The student will communicate through application software.

C/T8.2 – The student will communicate through networks and telecommunication.

C/T8.3 – The student will have a basic understanding of computer processing, storing, retrieval, and transmission technologies and a practical appreciation of the relevant advantages and disadvantages of various processing, storage, retrieval, and transmission technologies.

C/T8.4 – The student will process, store, retrieve, and transmit electronic information.

GENERAL SCIENCE SKILLS FOR 6TH, 7TH, AND 8TH GRADE SCIENCE.

Spreadsheets – A spreadsheet is an arrangement of information in columns, and rows. Students may enter text, numbers, or formulas. Students may use "What if" strategies by changing the input information and looking at the results. The results may be displayed in graphic forms such as bar, line or pie charts. The spreadsheet may be used for summing up data, charting data, or scientific model simulation.

Fast cars

Students collect data on toy cars to determine which of four measurements (mass, wheel alignment, wheel span, momentum_) is the most important in determining their speed. Use spreadsheet to record data. Make charts of recorded data.

Dissolving Rate

Students collect data on the dissolving rate of sugar cubes (cold water, water at room temperature, warm water, warm water and stirred, warm water, stirred, and crushed.) Record the data on a spreadsheet and make a graph to show the results.

Length of Leaves

Students collect data on the length of leaves on a tree in the schoolyard. They only measure them; they do not collect them. Record the measurements and make a scatter graph.

Lunchroom Litter

Students' collects litter in the luncheon area and enter the data on a spreadsheet. They can produce graphs to illustrate the data.

Magic Bubbles

Students conduct a scientific investigation in which they experiment with various combinations of ingredients to make a bubble solution. They use a spreadsheet to record the results. They then determine which ingredient combination is best. They can also develop an advertising campaign to sell their magic bubble recipe. Using the e draw pro paint tools, they can design an advertising flyer or poster.

Acid Rain

Students plant three beans in each of four pots (the bean should be pole beans, which will climb). They develop a scientific investigation to determine how different pH levels affect the

growth of the plants. They record the data on a spreadsheet to show their results.

Word Processing – Word processing allows students to enter their writing, revise, and print it using a variety of options. A graphic object maybe e used within the text. Spelling and thesaurus features are available to the writer.

Passport

Students create a passport to another planet.

Journey into a Cell

Students work in-groups of four and create a story about a journey into a cell. Each student writes 25% of the group's story. After it has been saved as one completed story, each student should edit and revise his section.

Sequential Order

After conducting an experiment, the steps of the procedure are scrambled. The students use the editing tools to put them in the proper order.

Letters

Students can write letters to various agencies about environmental issues.

Ten Fabulous Facts

Students choose a topic that interests them and research it on the Internet. They then choose the ten most interesting facts that they have learned and create a word processing document.

Presentations – allows student to create professional-looking presentations.

Endangered Animals

Students create a presentation on an endangered animal using word processing, database, spreadsheet, paint, and draw documents as slides, and the computer monitor as a screen.

Database – A database helps students work with numbers. They can design and create numbered records. They can then arrange and sort the data retrieve information and print reports. A database allows the students to access and manipulate information in their own way.

Animals A to Z – Database

Students collect data on any type of animals (can use Internet). Decide what information the student will be looking for and give the categories titles, such as Kind of animals, Habitat, Enemies, etc. Research the topic and fill out a data sheet. Make a database. Each student may print a data record of each animal, illustrate it, and include it in a class resource book.

Element Scavenger Hunt

Students make a database of information about the elements on periodic chart. Categories may include symbol, atomic number, atomic mass, density, uses, discoverer, date of discovery, etc.

Inventions

Students create a database of inventions that they have researched. They should decide what information they would like to include. If used in connection with a unit on simple machines, they could include the simple machines use in the invention.

Resident Expert Encyclopedia

Students create a database file containing information about a subject that they have researched. They start with an interest and expand it to include what they learn during their research. They record the subject are and facts and identify themselves as the expert. Students can E-mail questions to the 'expert'.

Other ideas for databases:

Wildflowers in Virginia

Endangered species

Biomes

Plants

Animals

If there is only one computer in the classroom, each student can choose one entry and put the data in a class database.

Draw and Paint – The paint and draw environments allow students to create their own illustrations or choose items from a selection of clip art graphic packages. This environment can be used to create banners, illustrations, logos, and page layouts.

Mini-books

Students create a small book about a concept in science. They write the text and organize it so that when the book is folded, a small eight-page book is created.

Volcano

Students can use the draw environment to create and label a diagram of a volcano.

Cell

Students use the draw environment to draw and label parts of a plant or animal cell.