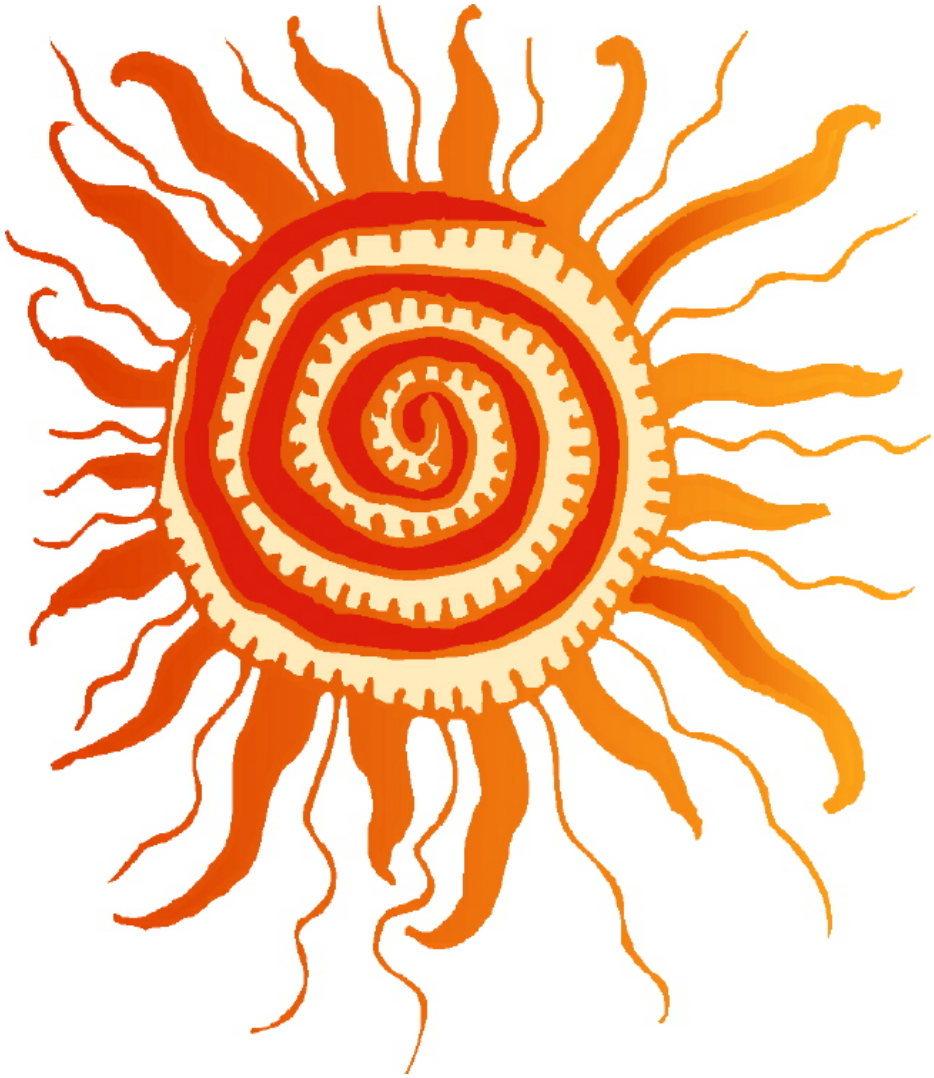
Day 2



" Can't died when Could was born."

Discovering Lakes and Rivers

Teaching Strategies Modeled	Technology Strategies Modeled	Instruction:
		Essential Questions for Teachers: How can I use cooperative grouping with technology? How can I use The Graph Club software? How can I use specific Web sites to deliver information to my students? How do I use Microsoft Word to create a poster?

		Essential Question: What is the difference between a lake and a river? How are the animals in those habitats different? What are the largest lakes/rivers? How has the environment been effected in both of those habitats? **Learning Standards** **Social Studies** Organize social science information to make maps, graphs and tables. Gather and analyze information using appropriate information technologies to answer the question posed. Construct an answer to the question posed and support their answer with evidence. Report the result of their investigation including the procedures followed. **English/Language Arts** Integrate listening, speaking, viewing, reading, and writing skills for multiple purposes and in varied contexts. An example is using all the language arts to prepare and present a unit project on a selected state or country. **Mathematics** Organize data using concrete objects, pictures, tallies, tables, charts, diagrams and graphs. **Materials:** Inspiration, Graph Club, Microsoft Word, Scan Converter, student reproducibles, Internet connection **Technology Connections:** Students will research information on the Internet. Following this activity, they will create a graph in

Teaching Strategies Modeled	Technology Strategies Modeled	
		The Graph Club, make a group big book, and write a summary in Microsoft Word.
Whole Group Instruction		**3-5 Procedures:** 1. Write the words geographer, environmentalist, and zoologist on the board. Have students explain the jobs of each scientist, adding more information when necessary. Explain that the class will be divided into groups. Some will research lakes, and some rivers. Each group member will have a different assignment. 2. Divide students into groups by using the following activity. Prior to the lesson, print the animal puzzles and cut them apart. Make sure that you have exactly the number of pieces needed for your students. If you have a number that is not divisible by 3, you may have to take a role. Give each student a piece of one of the puzzles. When you give the signal, students will try to find the other two students that they need to complete their animal. The groups will be referred to by the animal name on their puzzle.
Expert Groups For more ways to use Cooperative Learning in your classroom see: Cooperative Learning Elementary Activities http://204.184.214.251/coop/ecoopmain.html		3. Assign a geographer, environmentalist, and zoologist in each group. Each student is to become an "expert" in his or her field. Tell students that the geographer for the group is the student who has the animal's head, the environmentalist is the student who has the animal's middle section, and the zoologist is the student who has the animal's tail. Give half of the groups the handouts for Ponds and Lakes, the other half handouts for Rivers and Streams. Make sure the each geographer gets the appropriate map. 4. Allow individual students to visit the Evergreen Project site on the Internet (http://mbgnet.mobot.org/fresh/index.htm). They will follow the directions to find information for their specific area and record their answers on the fact-gathering sheet.

Teaching Strategies Modeled	Technology Strategies Modeled	
Individual Work	Internet- http://mbgnet.mobot.org/fresh/index.htm	5. After students complete their "scientist" information sheet they are to meet with other students who hold the same job for the habitat they are studying. This is when they become "experts" in their field. 6. Students in each habitat, lakes and rivers, will now jigsaw and meet back with the scientists in their animal group (zoologist, environmentalist, geographer). Using the fact-gathering sheet, students will become knowledgeable on all areas of the habitat.
Expert Groups		7. Students are to then organize their information and storyboard a report with an introductory paragraph and three paragraphs containing information from each scientist. 8. Finally, have students return to the Evergreen Project site on the Internet (http://mbgnet.mobot.org/fresh/index.htm) and research their fish from their puzzle piece. Student will use the Fish Fact Sheet to gather specific facts. Students will capture a picture of their fish.
Individual Work	Graph Club Teacher Tips for using Graph Club- http://www.tomsnyder.com/classroom/tips/tips_graphclub.asp	9. Next, gather fish size data as a whole group and use this data to create a graph in Graph Club. Demonstrate how to create a graph using the scan converter before allowing students to get started with their own graphs. Ask students to show their graph in two forms, as a table and in another form of their choice. Have students print their completed graphs. Students are to write an explanation of the data with the graphs before printing. Print poster size in order to create a big book. 10. Each student is to then make a poster in Microsoft Word or Claris Work. 11. Give students the opportunity to share their completed graphs and paragraphs with the class. Before students

Teaching Strategies Modeled	Technology Strategies Modeled	
		share their presentation, go over the criteria on which they will be graded. Evaluate each student's presentation with the rubric.
Individual Work	Internet- http://mbgnet.mobot.org/fresh/index.htm	**Assessment:** Assess students' presentations according to the rubrics.
Sharing		**Extension:** Have students choose one of the Lakes or Rivers mentioned on the site to research on the Internet. Have students create a slide show using graphics collected from Internet sites. Online Graphing Resource- http://nces.ed.gov/nceskids/graphing/index.asp

Rivers and Streams Habitat
Job Assignment: Geographer

Directions:

Go to the Evergreen Project site.
http://mbgnet.mobot.org/fresh/index.htm

Click on Rivers and Streams. Use the information included on the site to answer the following questions.

1. What is a watershed?

2. How are watersheds, rivers, and streams related?

3. Locate the Amazon, Nile, and Mississippi and write a fact about each river.

   Amazon River

   Nile River

   Mississippi River

Rivers and Streams Habitat
Job Assignment: Geographer

Longest Rivers in the World

River	Country	Miles
Nile		
Amazon		
Yangtze		
Mississippi-Missouri		
Yenisei-Angara		

Rivers and Streams Habitat
Job Assignment: Environmentalist

Directions:

Go to the Evergreen Project site.
http://mbgnet.mobot.org/fresh/index.htm

Click on Rivers and Streams. Use the information included on the site to answer the following questions.

1. What are some sources of water pollution?

2. How can dams harm the environment?

3. What happens to polluted water in a watershed?

4. What is a dam? How does it make power?

Rivers and Streams Habitat
Job Assignment: Environmentalist

Fill in the following information.

Highest Dams in the U.S. and the World

Name of Dam	Location	Height in Feet
Oroville Dam		
Hoover Dam		
Nurek Dam		

Rivers and Streams Habitat
Job Assignment: Zoologist

Directions:

Go to the Evergreen Project site.
http://mbgnet.mobot.org/fresh/index.htm

Click on Rivers and Streams. Use the information included on the site to answer the following questions.

1. Research 2 creatures and write three interesting facts about each one. Draw a picture of each animal and plot the place on each map where that animal can be found.

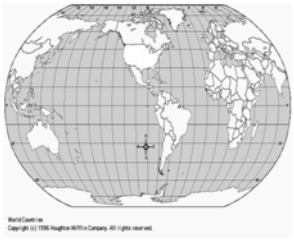
2. Fill in the missing information below

Length of Fresh-Water Fish

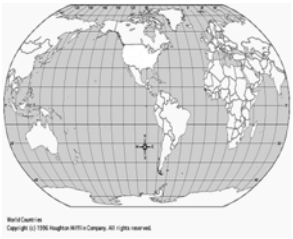
Name of Fish	Maximum Length in Inches
Pufferfish	
Barbell	
Red Pirhana	
Stoneroller	
Boutu	
Mekong	

Rivers & Streams Habitat
Job Assignment: Zoologist

Name of Animal:
Facts:



Name of Animal:
Facts:



Ponds and Lakes Habitat
Job Assignment: Zoologist

Directions:

Go to the Evergreen Project site.
http://mbgnet.mobot.org/fresh/index.htm
Click on Ponds and Lakes. Use the information included on the site to answer the following questions.

1. Research 2 creatures and write three interesting facts about each one. Draw a picture of each animal and plot the place on each map where that animal can be found.

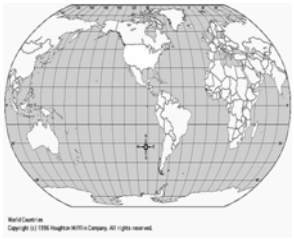
2. Fill in the missing information

Length of Fresh-Water Fish

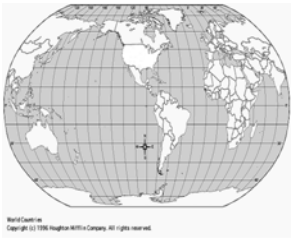
Name of Fish	Maximum Length in Inches
Largemouth Bass	
Carp	
Trout	
Bitterling	
Spectacled Caiman	
Platypus	

Ponds and Lakes Habitat
Job Assignment: Zoologist

Name of Animal:
Facts:



Name of Animal:
Facts:



Ponds and Lakes Habitat
Job Assignment: Geographer

Directions:

Go to the Evergreen Project site.
http://mbgnet.mobot.org/fresh/index.htm

Click on Ponds and Lakes. Use the information included on the site to answer the following questions.

1. What is the difference between a lake and a pond?

2. What is an Oxbow Lake? How is it formed?

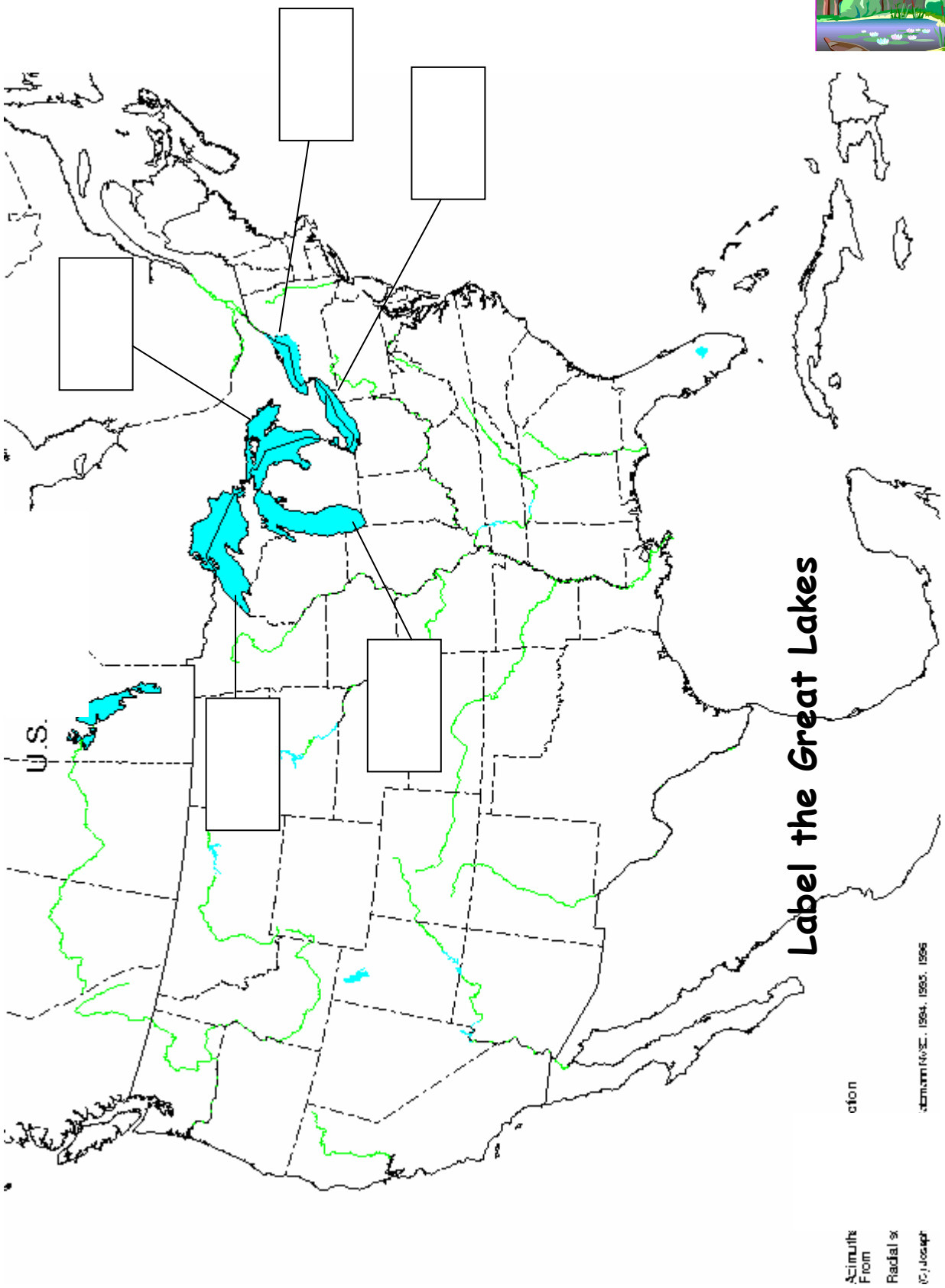
3. Find the Great Lakes on the map and label them.

Ponds and Lakes Habitat
Job Assignment: Geographer

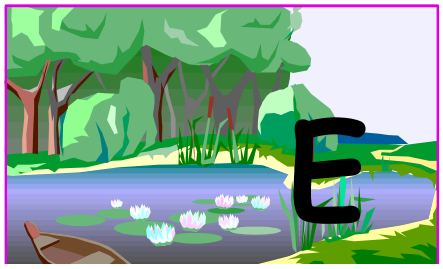
Fill in the missing information about the Great Lakes.

How great are the Great Lakes?

Name of Lake	Area in Square Miles
Superior	
Huron	
Michigan	
Erie	
Ontario	



Ponds and Lakes Habitat
Job Assignment: Environmentalist



Directions:

Go to the Evergreen Project site.
http://mbgnet.mobot.org/fresh/index.htm

Click on Ponds and Lakes. Use the information included on the site to answer the following questions.

1. What is lake effect snow?

2. How do ponds fill in over a period of time? Write the steps below.

3. What are algae and why is it important to the environment?

Ponds and Lakes Habitat
Job Assignment: Environmentalist

Fill in the missing information.

Largest Lakes in the World

Name of Lake	Continent	Area in Square Miles
Caspian Sea		
Superior		
Victoria		
Aralb		
Huron		

Group Fact Sheet

Collect information from your fellow scientists about their discoveries.

River & Stream Scientist

Facts- ***(share info about rivers & streams, dams & animals) Minimum of 3 facts***

Collect information from your fellow scientists about their discoveries.

River & Stream Scientist

Facts-*(share info about rivers & streams, dams & animals) Minimum of 3 facts*

Group Fact Sheet

Collect information from your fellow scientists about their discoveries.

Ponds & Lakes Scientist

Facts- ***(share info about Lakes & ponds & animals) Minimum of 3 facts***

Collect information from your fellow scientists about their discoveries.

Ponds & Lakes Scientist

Facts- ***(share info about Lakes & ponds & animals) Minimum of 3 facts***

Fish Fact Sheet

Name of your fish: _____

Diet: _____

Size: _____feet, _____inches
(*Convert all measurements to inches)*

Habitat: _____

Collect 3 facts about your fish from the description on the web page and write them below.

Fact #1

Fact #2

Fact #3

Facts from searching:

Fish Poster Rubric

Name _____ Date _____

- The poster included at least three detailed facts about a fish.
- The poster was easy to read and made sense.
- The poster was edited for punctuation, spelling and grammar mistakes.
- The poster included a graphic of a fish.
- Graphic sources were cited.

Teacher Comments:

_____

_____

_____

_____

Student Comments:

_____

_____

_____

_____

Lakes and Rivers Research Presentation Assessment

Name _____ Date _____ Score _____

Scale:

4= job is well done; exceeds requirements

3= job is adequate; meets requirements

2= only partially accomplishes task; needs revision

1= needs to restart; meets little or none of the requirements

Oral

Good eye contact.

1 2 3 4

People in the back of the room could hear.

1 2 3 4

Shows enthusiasm.

1 2 3 4

Mechanics

Basic grammar rules applied.

1 2 3 4

Logical sequence of ideas and events.

1 2 3 4

Information is supported by relevant facts.

1 2 3 4

Graph

Accurately explains the purpose of the graph.

1 2 3 4

Includes two different types of graphs.

1 2 3 4

Internet Helper
Internet Safety Tips for Kids

- Do not give personal information such as your address, telephone number, parent's work address or telephone number, or the name and location of your school.
- Tell your parents if something that you come across online makes you feel uncomfortable.
- Never agree to get together with someone you "meet" online without your parent's permission.
- If your parents agree to the meeting, be sure the meeting is in a public place and that you bring them along.
- Never respond to messages or bulletin board items that are suggestive, obscene, belligerent, threatening, or make you feel uncomfortable.
- Give a copy of such messages to your parents and have them forward it to your Internet service provider.
- Never send pictures of yourself or any other personal material to a friend you meet online without telling your parents first.
- Follow the rules that your parents set for your online activities.
- There are places on the Internet that are for adults only. If you find yourself in one of those areas LEAVE and go to one of the cool places on the Internet for kids.
- Don't give out personal information about your family situation, school, telephone number, or address.
- If you become aware of the transmission, use, or viewing of child pornography while online immediately report this to the US Customs Cyber Smuggling Center at 1-800-BE ALERT or email icpicc@customs.treas.gov.
- When chatting in chat rooms, remember that not everyone is who they say they are, for example, a person who says "she" is a 14 year old girl from New York may really be a 42 year old man from California.

- If someone harasses you online, says anything inappropriate, or does anything that makes you feel uncomfortable, contact your Internet service provider.

Tips for Parents

- Learn about computers so you can monitor your child's use.
- Spend quality time with your children, thereby preventing them from depending on computer technology for recreation, communication, and companionship.
- Keep the computer in a common area of the house.
- Don't EVER allow a child to give out personal information on-line, not real name, address or telephone number.
- Don't allow a child to meet someone they have met on-line face-to-face.
- Remember that people on-line may not be who they seem. A "12 year old girl" may actually be a 40-year-old man.
- Though they are not fool proof, consider purchasing and installing a pornography blocking software package such as CYBERsitter, SurfWatch, Cyber Patrol, Rated-PG or Net Nanny.
- Periodically check the Web sites your children are visiting and look at the files they are storing.
- If you become aware of the transmission, use, or viewing of child pornography while online immediately report this to the US Customs Cyber Smuggling Center at 1-800-BE ALERT or email icpicc@customs.treas.gov.

Safe Sites to get you started

Student Web Directories

Yahooligans: http://www.yahooligans.com/
Ask for Kids: http://www.ajkids.com/
Kids Click: http://www.kidsclick.org/

Games and Activities

Kids Space: http://www.kids-space.org/
Share your artwork, stories and songs with other kids on the net.

Billy Bear 4 Kids: http://www.billybear4kids.com
A great place to find printable activities and on-line games for grades K-5.

Puzzlemaker: http://puzzlemaker.school.discovery.com/
Create your own puzzles and mazes from vocabulary or spelling words.

Fun Brain: http://www.funbrain.com
This is a super site for reinforcing skills in Language Arts, Math and more.

Education Place: http://www.eduplace.com
Check out the parent's section for tips on using the site and other activities you can do with your child to reinforce reading and math skills.

Software Helpers

Software Helper
Graph Club

The Graph Club is a versatile elementary school graphing tool. The Graph Club begins with a short introduction featuring Fizz and Martina. Following the introduction (which you have the option of skipping) you come to The Graph Club's main menu. This menu lets you select one of The Graph Club's four modes, each of which emphasizes a different set of graphing skills. Simply click one of the boxes and you will find yourself ready to start graphing.

Explore Mode
Explore mode allows you to create graphs. When you enter Explore mode, a pair of blank graphs automatically appears on your screen -- one picture graph and one bar graph. When you add or delete data in one of the graphs, the other graph changes automatically, allowing you to view the same data side by side in different formats.

Enter and Delete Data

Click an icon (from the row of icons at the top of the graph), hold the mouse button down, and drag the icon into the graph. Watch for the bar to appear over the icon at the bottom. When the column is highlighted, release the mouse. One unit will be added to your graph. You can delete an entry by clicking on it when the X appears.

Change Axis Labels, Icon Labels, or Table Title: To change axis labels, go to your bar graph and click "What" (above the Graph Type buttons). Enter a label for the X axis. Do the same for the Y axis by clicking "How Many."

To add or change icon labels, click the little icons along the X-axis and enter a label for each one. (Each item in your graph can be labeled with either an icon or text.)

Graph Menu:

Graph Kinds: This option lets you choose how many kinds of objects you will be graphing.

Choose Scale Maximum: This does the same thing as clicking on the words each=1 in the upper left-hand corner of the graph. You can choose what value each picture has in your graph.

Choose Symbols: Click and drag on the symbol that you wish to use to replace those currently on the graph. Design Your Own Icons. You can import your own graphics to use as icons. Copy the graphic you want into the Clipboard. Open The Graph Club. Choose 'Choose Symbols' from the Graph menu. Click Paste from Clipboard. The cursor will change to your icon. Now just click the icon bin where you wish to place your icon!

Options Menu:

Graph Vertically, Graph Horizontally: This allows you to change the orientation of your graphs on the screen.

Show bar and line grid: This enables you to show or hide the grid.

Show axis labels: This enables you to show or hide the axis labels.

Special Menu

Edit Groups: Add and edit classes for use with the Random Student Picker™. The Random Student Picker lets you randomly select a student to enter data, answer a question, interpret a graph, or offer his or her opinion. It is a fun way to involve the entire class and keep students on their toes!

Here is how to enter and edit data for a class or group:

1. Choose Edit Groups from the Special menu. Then click New Group and enter a name for your class.

2. Click New Student and enter the name of a student in the class. You can enter as many names as you want.

3. To edit a class list, select the name of the group in the Groups box on the left. You will then see a class list in the box on the right. You can now add or remove students from the list. To remove a student, just select the appropriate name and click Remove Student.
4. To remove a group, select the name of the group in the Groups box and click Remove Group.

5. To determine which group the Random Student Picker will use, select that group from the Groups box, click Close Group Editor, and Keep Any Changes. Now you are ready to pick a student!

Pick Student: Activates the Random Student Picker. If you have more than one group set up, you'll need to choose Edit Groups and select the group you want the program to pick from before you choose Pick Student. To leave the Random Student Picker, just click the graphic.

Print Special Setup: Select custom options for printing the special graphics that come with The Graph Club (including Match Certificates). Blank Match Certificates, for example, should be printed landscape rather than portrait.

Print Special: Choosing Print Special from the Special menu lets you print special graphics. The lesson pictures are from a special Graph Club Curriculum Kit that can be ordered separately.

Teacher Options: Choosing Teacher Options from the Special menu lets you customize preferences to meet the needs of your students. This option is always grayed (to restrict access). To select Teacher Options hold down the Shift and Control keys and, without letting go, pull down the Special menu and choose Teacher Options. (Note: If you pull down the Special menu before pressing Shift and Control, Teacher Options will remain grayed.)

The Teacher Options menu allows you to set the following preferences:

General Options

Checking the first option lets you allow multiple graph sets to be opened.

Checking the second option lets you disable line graph buttons when more than one symbol is chosen. (Line graphs chart changes of one thing over time. A line graph with multiple symbols could be confusing.)

Allow Students to Use

This option lets you restrict the types of graphs (table, picture, bar, line, circle) students can use.

Match Activity Settings

These settings allow you to control a number of Match mode features. You can:

- Select the graph type for the randomly generated graph (the "from" graph). This one appears on the left of your screen.
- Select the graph type students will create (the "to" graph).
- Determine how many kinds of things will be graphed (from 1 to

- Restrict students from changing the type of graph they match "from" and "to" (by graying the Graph Type buttons in Match mode graphs).

Sound Preferences
These options allow you to turn various program sounds on and off.

Match mode generates a random graph and challenges students to create a different type of graph that represents the same data. Match mode gives students hands-on experience reading graphs and lets them see the transformation of data from one form to another.

After opening a new file in Match mode:

- Complete the Match challenge; then click Check My Match!

- If the program finds an incorrect match, it tells you, "Now match the others!" The Graph Club gives students as many tries as they need to match the graph correctly.

- If all matches are correct, a graphic will appear saying, "Great Job! You Matched It!" Click this graphic to make it disappear.

- After successfully completing a match, click Print Certificate. This is a great way to reward students' success with graphing. Click Next Match to try another matching challenge!

Cool Feature: Using Teacher Options... in the Special menu, you can change the Match mode graph types and control a number of other Match mode features.

Create Mode
This mode addresses the cognitive challenge of transforming data from numeric to graphic form. Create mode automatically brings up a table with each data value set to zero. Students can then collect a set of data, enter it into the table in numeric form, and explore how those numbers are transformed as views of other graph types (picture, bar, line, or circle) are created.

After opening a new file in Create mode:

- Click each zero and enter data for your table. The default scale maximum is 10, a setting you can change by choosing Choose Scale Maximum... from the Graph menu.

- Once you have entered data for each item, go to the Graph menu and choose Make Another Graph. This allows you to see your data represented in different forms. (As you open additional graphs, you may need to resize them to see them all at once.)

Guess Mode

Guess mode is designed to build critical-thinking and graph-reading skills, and help students understand that there are often many good answers to a question. This brainstorming activity also develops an awareness of the many different types of data that can be represented in graph form.

Guess mode randomly generates graphs and challenges students to hypothesize about what the data might represent, why someone would have made that particular graph, and what people could conclude from the graph. (While the data is generated randomly, you can change the icons to graph any type of information you choose.)

Cool Activity: Using New in the File menu, open several Guess graphs at once (each will have the same symbols, but different data). As each graph is generated, ask students to compare the data. Challenge them to explain what underlying differences the graphs could be representing.

Cool Feature: Change the icons in the graph for a variety of critical thinking challenges.

Suggested Activities

Favorite icecream flavors: chocolate, vanilla, strawberry, mint

Pets: dog, cat, rabbit, fish, bird

Favorite fruit: apple, orange, strawberry, cherry, lemon, lime, banana, pear, pineapple

Favorite Holiday: Fourth of July, Thanksgiving, Christmas, Hannakah, Halloween, Easter

Favorite Season: Spring (flower), Summer (sun), Fall (leaf), Winter (snowflake)

Weather: Sunny, Partly Cloudy, Rainy, Thunderstorm, Snow

Favorite Sport: Soccer, Basketball, Football, Skating, Baseball

