



The Classroom Computer as a Learning Station

SESSION OVERVIEW

Learn to turn your classroom computer into a cooperative learning center. Discover how to design a technology enhanced learning center activity that improves student learning, productivity, and research.

Center 1: Mathematics

At this center, students enter data about the transportation they use to get to school. One at a time they add one more number to the method of transportation they use, and the graph automatically changes as they enter their data. This same spreadsheet can be modified by the teacher to include any kind of topic for which she might want to gather data, such as number of different pets students have, colors of students' eyes, favorite TV shows, favorite holidays, etc.

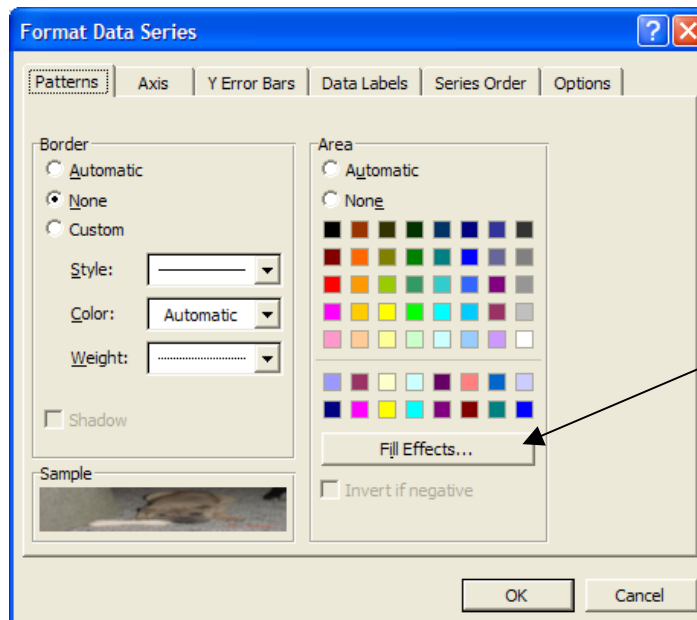
Once the data from the entire class is collected, the teacher can display the finished graph on a computer connected to a TV monitor, or gather the class around the center, and ask questions about interpreting the graph, using fractions, decimals, and terms such as greater than, less than, etc.

When working with students at different grade levels, use these instructions to make a bar graph, but rather than using the Fill Effects feature to create a pictograph, use the plain bar graph or change the colors of each bar, following the same procedure as below.

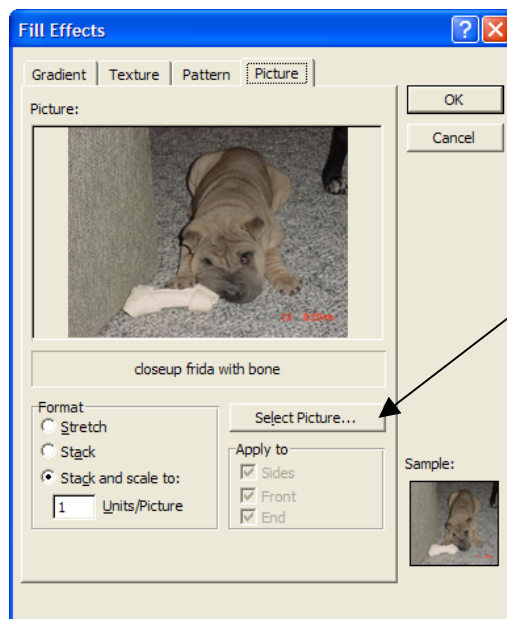
The teacher can also select a horizontal bar graph, pie chart, or other type of chart to give students lots of experience in interpreting different types of graphs.

Using *Excel* to Make a Pictograph --the Easy Way

1. In *Excel*, enter data and highlight to make a chart. Click on the **Chart Wizard** tool at the top of the screen.
2. Select a bar graph, clicking **Next** as prompted, typing in a **Chart Title**, labeling the x and y axes.
3. Click **OK** to have the graph as an object in *Excel*.
4. Click once on the bars to select all of the bars.
5. Right-click on the bars, choosing **Format Data Series**.
6. In the **Format Data Series** window, click on the **Patterns** tab, and then click on the **Fill Effects...** button.



7. In the **Fill Effects** window, click on the **Picture** tab, then on the **Select Picture** button. Navigate to any picture in any folder on your computer, select it and click on **Insert**, even if it has nothing to do with your topic.



8. In the same window, under **Format**, click in front of **Stack and scale to:** and type **1** in the box in front of **Units/Picture**. (In a pictograph, you will want one picture for each unit). Click **OK**.
9. You will now see the picture you selected filling each bar on your graph.
10. Click once on the first bar, so that only that bar is selected. At the top of the screen on the **Menu Bar**, click **Insert...Picture...Clip Art**. Type the name of an object you're looking for such as **school bus**. When you select a clip art, it will automatically fill the bar with small pictures of a school bus (or whatever).
11. Continue selecting a different picture for each bar, by first clicking on the bar and then **Inserting...Picture...Clip Art**.
12. Once you have completed the chart, erase the numbers you have typed in as data and **save the file**. While the bars from the graph seem to disappear, when a student types in data, the bars will magically appear as they type.
13. **Note:** You might want to save the file under a different name, so that one file remains with no data, ready for modification.
14. You can always change the topic of the graph, say from Transportation to Pets, by typing in new information on the same spreadsheet. The graph will automatically be updated. You will need to click on one bar at a time in the graph to repeat the process for changing the pictures.

Center 2—Science

In this center, students will be accessing the Internet to do research on Facts About Planets, trying to decide on which planet they might want to build a home. They will be clicking on links already created by the teacher in a *Word* document or in *Netscape Composer*. Instructions for the student are included here, as well as instructions for the teacher to create a “links” page. Also included is a worksheet created in *Excel* for the students to complete as they do their research, and “links” pages both in *Word* and in *Netscape Composer*.

Lift Off!

To Find Facts About Other Planets:

To help you decide on which planet you will be building a home, you will need to collect some facts about how far it is to your planet (distance), how hot or cold it is there (temperature range), the number of moons you might see out your window (satellites), and what the surface of the planet is like.

First, write down your name and teacher’s name on the **Lift Off Facts sheet**.

Then, using either the books or fact sheets that your teacher has provided (or accessing the Internet), record the data necessary for you to make your decision.

When you are finished, write down the name of the planet where you think you might like to live at the top of the page.

Begin thinking of three reasons why you would like to live on the planet you selected. You can list them on the back of the sheet.

Links for Lift Off!

Windows to the Universe site:

http://www.windows.ucar.edu/tour/link=/our_solar_system/planets.html

Choose a planet you’re researching, and then click on **Planetary Facts** to find out more.

Star Child site:

http://starchild.gsfc.nasa.gov/docs/StarChild/solar_system_level2/planets.html

At this site, click on the planets one at a time, and at the bottom of each page, click on **Facts** to find out more.

Solar System Central:

<http://www.spacekids.com/spacenews/solarsystem-ez.html>

One at a time at the bottom of the page, click on the planets to find out more information.

The Observatory at the Exploratorium

<http://www.exploratorium.edu/observatory/index.html>

Here are links to build your own solar system, and to find your age and weight on other planets.

NASA for Kids

<http://kids.msfc.nasa.gov/Sites/ExternSite.asp?url=%2FSolarSystem%2FPlanets%2F>

This site is great for images and MP3 files to listen to information about the planets.

Creating a Page of Internet Links

When a teacher creates a list of Internet links for students to use as a research tool, it saves the students time in finding appropriate links, and these same instructions will work for creating a links page in *Word* or in *Netscape Composer*.

1. Open two documents at the same time, *Word* and either *Netscape* or *Internet Explorer*.
2. Browse the Internet until you find a site that you want to add to your list.
3. Click once in the box next to **Address**. This highlights the entire address. Hold down the **Ctrl** key and the **C** key (Ctrl + C) at the same time to **copy the address**.



4. Click on the *Word* document where you are making the list. **To paste** the URL (address) of the site you have selected, click on the line where you want it, and then hold down the **Ctrl** key and **V** key (Ctrl + V) at the same time. (an easy way to remember these keys is to think of **V as in Velcro** for sticking or pasting).
5. Once you press the **Enter** key, the link will be underlined, and you need only click on it to go to that site. You may want to type some instructions about where to go on the page to help students navigate the site.
6. Press **Enter** and position the cursor where you want the next link to go. Minimize the page, click back on *Netscape* or *IE* to go to the next site, to copy and paste the next URL.

7. When your list is completed, save the document. When this file is posted on a computer that is to be used as a center, the students have a list of sites that you have selected from which to choose for their research.

Center 3—Science and Writing

Once students have completed their research, gathering data about planets, and having decided on which planet they would like to build a home, listing three reasons why they have selected this planet, they will come to this center to access an Internet site where they will choose an image of their planet and compose and email a postcard listing the reasons they made their selection. Included here are student instructions for the activity, for the center itself, and instructions for the teacher to add a Shortcut on the desktop for a particular Internet site.

Postcards From Space

Usually when you go on vacation, you send a postcard to someone to let them know what the place is like where you are visiting.

Well, you are going to email a postcard, using the computer, to tell your teacher, your principal or the school librarian 3 reasons why you've decided to travel to this planet and build a house.

Step 1:

Write your name at the top of a sheet of paper.

Step 2:

Write the name of the planet you have selected for building a house on the first line.

Step 3:

List 3 reasons why you would like to live there.

Step 4:

Go to the **Postcard Computer** and follow the directions at the computer.

Computer Directions: Postcards From Space

Now that you have your reasons for selecting a planet where you want to live, you can send a postcard by email to someone and tell them all about that planet.

Step 1:

Double-click on the icon on the desktop that says **Postcard**.

Step 2:

Click on the planet you'll be visiting.

Step 3:

Click on one of the images you would like to send.

Step 4:

Compose your postcard by typing in:

- 1) Your parent's, principal's, teacher's, or librarian's email address.
- 2) Your name
- 3) Your teacher's email address
- 4) The name of the planet you're traveling to
- 5) Your message (3 reasons why you want to live there)

Step 5:

Click on **Preview Postcard**.

Step 6:

Click on **Send the Postcard**.

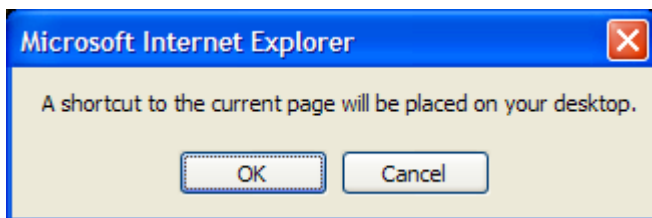
Step 7:

Click on **File...Exit**.

How to Create an Internet Shortcut on the Computer Desktop

If you have a computer as a center in which the students are to go to one particular Internet site, it is easy to create a shortcut to that site right on the Desktop, so the site will be easy to access.

1. Use *Netscape* or *Internet Explorer* to find the site which your students are to access.
2. Right-click on the page that you want your students to access and select **Create Shortcut**.
3. In the window that appears, click **OK** if you want the shortcut to be placed on the desktop.



4. Close the browser, look on your desktop for the shortcut. Try it out by double-clicking on it to make sure it works.
5. If you want to rename it so it's easier for your students to read, right-click on the shortcut, choosing **Rename**. Type a shorter name if you want. Press **Enter** to save the changes.

Center 4—PBS Teacher Source

In this center, you as teachers will explore numerous activities posted at the site for PBS Teacher Sources. You will be able to explore online courses being offered, look at tutorials being offered in technology, and find activities by grade level, subject, and state standards.

PBS Online Resources for Teachers

Texas PBS Teacherline:

<http://www.texasteacherline.org/>

Use this source to **explore courses being offered** as well as links for registration and resources. You can look at the syllabi for these courses to decide which one is right for you and your needs.

PBS Technology and Teaching:

<http://www.pbs.org/teachersource/teachtech.htm>

Here you will find links to **practice learning online** to see if online learning is for you, as well as links to **tutorials** so you can brush up on your learning on different software applications, such as *PowerPoint*, *Word*, etc.

PBS Teacher Source:

http://www.pbs.org/teachersource/sci_tech.htm

Find activities and exemplary lesson plans **by grade level, subject area, and state standards**. Also create a profile by logging in and entering a password so that you can access discussion boards and portfolio tools.

Center 5—RubriStar4Teachers

Rubistar4Teachers

On this site, teachers can try out creating a rubric by clicking on **Try it Out**, then selecting any topic such as Writing a Research Paper, Creating a Brochure, Evaluating a Science project, etc. By entering your name and zip code, you can create a rubric from templates, saving it to your computer or printing it out.

For example, if you choose to create a rubric for **Creating a Brochure**, and select the **Category, Content—Accuracy**, immediately a list of four possible ways to score for accuracy is generated. By the way, you can change the wording in each category if you want, too! Teachers can choose from up to 10 categories, preview and modify the completed rubric, then either download it to their computer or print.

<http://rubistar.4teachers.org/index.php>