

NOTE: Be sure to read through this lesson a few days before class if you've never worked with Paint (in Microsoft Office or AppleWorks) before. Today is a computer lab lesson. Please make sure you have signed up for the lab in advance.

TITLE OF LESSON

Geometry Unit 1 Lesson 24 – Computer Lab, Part 2
Prove it! What's on the outside? What's on the inside? Of Geometry

TIME ESTIMATE FOR THIS LESSON

One period

ALIGNMENT WITH STANDARDS

California – Geometry

Introductory lesson necessary for:

4.0 Students prove basic theorems involving congruence and similarity.

5.0 Students prove that triangles are congruent or similar, and they are able to use the concept of corresponding parts of congruent triangles.

MATERIALS

Computers lab
MS Paint program or similar basic drawing program

LESSON OBJECTIVES

- To work on drawing triangles using paint
 - To give students some facility with paint and the use of the computer
 - To review concepts learned to date
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EXPLANATION OF LESSON

You will be drawing various types of triangles using the Paint program. It is most important that you have some facility with opening paint, drawing straight lines, drawing labels, using the redo command and saving files.

FOCUS AND MOTIVATE STUDENTS

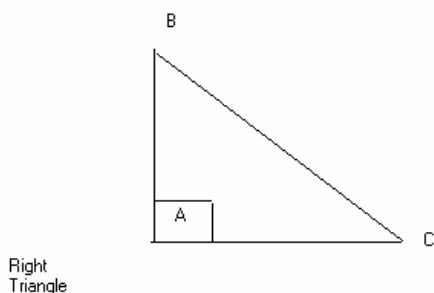
- 1) Homework Check – Stamp/initial complete homework assignment. Pass back graded work and have students place in the appropriate sections of their binders.
 - 2) **Agenda** – Have students copy the agenda.
 - 3) Computer Lab Review – (5 minutes) Each student should sit at a workstation. It is important that they remember the rules for the computer lab that were laid out for them two weeks ago. You may want to review them quickly. Make sure that everyone's computer is turned on and that they are ready to start working.
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ACTIVITIES – INDIVIDUAL AND GROUP

1. Introduction to Paint – (10 minutes) You will demonstrate how to open Paint, how to make a drawing, how to correct a mistake, how to label a drawing and how to save the drawing.
 - a. Open Paint – If Paint is on the desktop you can instruct the students to double click on the icon for paint. This will open the program. If paint is not on the desktop you will need to open it using the start button. Click on START. This will bring up a list of choices. Among these choices is PROGRAMS. Move the cursor to PROGRAMS. This will in turn open a new list of choices. Among these choices is Accessories.

Move the cursor to Accessories. This will open a new list of choices. Among these choices is PAINT. Move the cursor to PAINT and click on PAINT. This will open the application. (If you are unfamiliar with all of this it is important that you practice so that you have a good deal of facility when demonstrating it to the class.) If you are using a Macintosh, open AppleWorks or ClarisWorks and use the included Paint program.

- b. Draw Triangles and Label Them – Once Paint is open you can start drawing. The purpose of this lesson is to draw triangles and to practice labeling them. This can be a bit frustrating. You will find that you start over a lot and often abandon the last part of the drawing. It is important that you know how to do each of these tasks.
- c. Straight Lines – Start off by clicking on the button for drawing straight lines. Once this button is pressed whenever you draw it Paint will draw lines. (If you wish to draw characters or letters you will need to press the button with the A on it. If you wish to draw squares or ovals there are buttons for these also. The students will want to experiment. This should be encouraged but it is important that they also complete the assignment.) Draw a straight line. Draw another straight line that forms an angle with the first straight line.
- d. Erasing – Demonstrate how to erase the last line that you have drawn by clicking on edit and then clicking on undo. The last line drawn will be erased.
- e. Start Over and Save – Now demonstrate how to start over. Click on File and then click on new. You will be asked if you wish to save untitled. If you click on yes, you will be prompted for a name of the file. If you actually wish to save the file, give it a name and save it by clicking save. You will want to pay attention to where you are saving the file. If the computers in the lab are set up properly the files will be saved in a student directory, if not it is hard to say where they are being saved. You will want to have the systems administrator set up student directories to make maintenance easier. If you do not wish to save the file when prompted with the question “Save changes to untitled?” simply click on No.
- f. Copy Right Triangle – Now replicate the following drawing.



You may want to practice before you do it in front of the class. All the straight lines are done using the straight line button, and the characters A, B, and C, as well as the title Right Triangle, are drawn using the character button. There can be a lot of difficulty with the labels since sometimes you end up drawing over part of your figure.

- d. Save – When you have finished with the drawing save it. Click on file and then save. You will be prompted for a name. Give the file an appropriate name. In this case “right triangle” is appropriate.
2. Individual Work – (35 minutes) Post the concepts below on the front board or project them. Explain to students their job is to make drawings of as many of the following concepts as possible:

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|------------------------|---------------------------------|----------------------------|
| • Isosceles Triangle | • Base | • Perpendicular |
| • Right Triangle | • Leg | • Altitude |
| • Equilateral Triangle | • Base of an isosceles triangle | • Hypotenuses |
| • Acute Triangle | • Legs of an isosceles triangle | • Legs of a right triangle |
| • Obtuse Triangle | • Base Angle | • Median |
| • Scalene Triangle | • Vertex Angle | • Angle Bisector |

They should be labeled correctly. Let them use their binders to find definitions and examples. You might want to make this a little contest to see who can do the most drawings during the time remaining.

3. Print – Ten minutes before the end of the period, have students print the work they have completed. Ask them to make sure their names are on them. Or you can have students save to a disk and turn the disk in to you. Or you can have students attach their work to an email and email you their assignments.
 4. Clean Up – Have students shut down their computers, clean up their work stations, and push in their chairs before they leave the lab.
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HOMEWORK
None

GROUP ROLES
None

DOCUMENTATION FOR PORTFOLIO
Paint Drawings of Triangles