

NOTE: 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 14 – Computer Lab, Part 1: Introduction
Prove it! What's on the outside? What's on the inside? Of Geometry

TIME ESTIMATE FOR THIS LESSON

One class 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.
 - 6.0 Students know and are able to use the triangle inequality theorem.
 - 7.0 Students prove and use theorems involving the properties of parallel lines cut by a transversal, the properties of quadrilaterals, and the properties of circles.
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MATERIALS

Computer lab
Basic painting/drawing program (MS Paint or similar)

LESSON OBJECTIVES

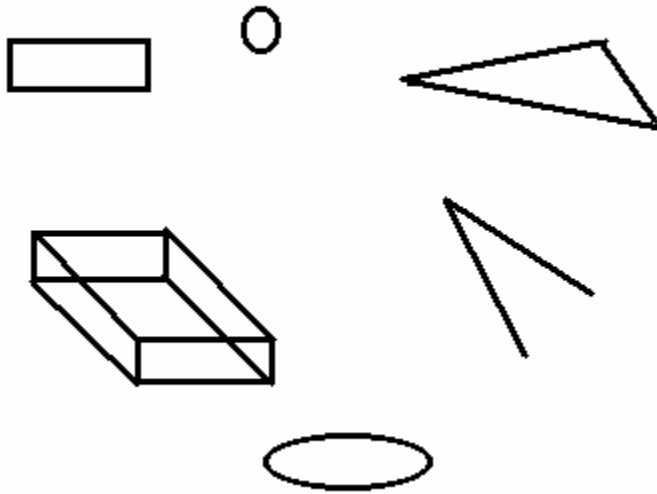
- To give students an introduction to the computer and the computer facilities
 - To impart a sense of fun and confidence in using the computers
 - To assess students' abilities regarding the use of a computer
 - To reinforce through the use of the computer in particular through drawing and art that math and geometry are all around us
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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.
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ACTIVITIES – INDIVIDUAL AND GROUP

1. Assign Computers – (5 minutes) The students will choose a computer to sit at or you may wish to assign them each a place. In subsequent sessions, we will do some teamwork and want students to sit near each other based on our determination of which students will work best to enhance each other's learning styles.
2. Computer Protocol – Tell them, "DO NOT TURN ON THE COMPUTER!" You may have students who will turn it on anyway as they may be more experienced with computers and may actually have had you for a previous class. Be sure to reinforce the rules of the lab (you may want to consult with your site technology person to find out what the lab rules are prior to class). Let them know that the sooner we can get started, the sooner we can get on the computer and begin to do some fun work. Lay out the ground rules for using the computer and the computer lab and the consequences for any misbehavior.



3. **Vocabulary** – (10 minutes) Before they turn on their computer write the following terms: Monitor, CPU (computer), Keyboard, Mouse. Tell students they will be defining these terms because you will be using them frequently and so will they. For each term, before you write the definition, ask if anyone knows what it is and what it does. If the students give the correct answers, write them next to the words. Otherwise, clarify and write the correct definitions next to the word. We can create group definitions if they are as adequate as the definitions we have supplied.

Monitor – The screen (You may want to note that some people use TV screens as monitors also.)

CPU – Central Processing Unit – This is the brain of your computer, where all of your information is stored. It is like the filing cabinet for your computer. (This is normally what people mean when they speak of the “computer”)

Keyboard – Your typing pad that allows you to tell the computer what to do

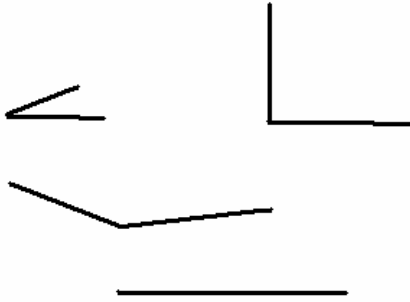
Mouse – a tool for communications with and navigation of your computer.

Have them add this definition to the terms and definitions section of their binders. Have them create a subsection for computer definitions or at least have them label the page clearly as a page of computer terms. Now the students are ready to turn on their computers. To turn on a PC (generally used to refer to any computer that is not a Macintosh), the students will have to press the power buttons on both the monitor and on the computer itself. There is some variation in the location of these buttons so you will want to be somewhat familiar with the locations. To turn on a Mac, it depends on what kind of Mac; there will either be one button on the keyboard, monitor or computer, or there will be two buttons, one on the computer and one on either the monitor or the keyboard. You will want to familiar with the variations in your lab. If you are unable to quickly assist them in the rudimentary task of turning on the computer you may lose a bit of credibility with the students. Younger people are usually more knowledgeable about computers than we are so we need to be cognizant of this possibility. We want to the sense that we are the teachers. So at least we need to be able to turn all the machines on. There will be times when the computers freeze and there seems to be no explanation. Will also need to be familiar with rebooting in order to restart the computer.

When the computer finishes booting up and the Windows screen comes up, explain first that what they’re looking at is what’s known as the desktop. The function of the desktop is just what it sounds like – they can imagine that they’re sitting at a desk, and any files or documents they open, they’ll open on their desktops

4. **Individual Work** – (25 minutes- sections 4, 5, and 6) Introduce a painting program. Have some artwork already loaded and demonstrate how to open an existing drawing. Microsoft Windows comes with MS Paint. (Usually found in Start>Programs>Accessories.) There is a similar product on Apple computers. Show the students how to do a simple drawing. Let them play around for a while. Ask them to try to draw and label some geometric objects. Give them a specific list of objects to draw. For instance, have them draw a rectangle, a circle, a triangle, a box (or cube), an oval, and an angle. See images below.

5. Then have them draw and label an acute angle, a right angle, an obtuse angle and a straight angle. These must



be finished and printed before the period ends to receive credit.

6. One Real Life Object – Have them spend any time remaining from the 25 minutes constructing various objects using geometric shapes. Suggest that they can draw a human or a city or a building or a car or a train using simpler geometric shapes. They should have at least one of these complete and printed before the end of the period.
7. Print – Five minutes before the bell rings, have students type their names in the top right hand corner of their documents. Then ask them to print.
8. Clean Up – Before the bell rings, ask students to shut down their computers, clean up their work stations, and push in their chairs.
9. Homework Review – Remind students their homework tonight is the same as last night.

HOMEWORK

- 1) For Lesson 16: Make ten observations of objects, buildings, roads or anything else that is in the configuration of one of the types of angles we have described.
- 2) [Binders](#) – Organize binders by date and section. Due Lesson 15.

GROUP ROLES

None

DOCUMENTATION FOR PORTFOLIO

None