

Shape Lesson Plan

Pre-Lab Activity 2 - Teacher Guide

Grades K-1

Overview

This lesson plan introduces (or reviews) five shapes (triangle, square, pentagon, hexagon, and octagon). The lesson provides direct instruction on the attributes of the shapes, takes students on a shape hunt around the school, and concludes with a game on constructing the shapes.

Materials

Math Chat Sheet (attached below) - 1 copy

One Minute Timer

Shape Hunt Recording Sheet - 1 copy per student

Pencils

Clipboards (optional)

Build a Shape Sheet - 1 copy per student (precut and placed in a baggie)

Getting Ready

- Print 1 copy of the *Math Chat* Sheet
- Print 1 copy **per student** of the *Shape Hunt* Recording Sheet
- Print 1 copy **per student** of the *Build a Shape* Sheet
- Cut apart **EACH** *Build a Shape* sheet and place the game pieces in a baggie for each student
- Assign students into groups (see lesson plan for details)

Procedure

Begin the lesson by displaying the "*Math Chat*" for the class to see. Please note that there are two different Math Chats. *Math Chat 1* is the simplest version, whereas, *Math Chat 2* is more complex (choose the best version for your class depending on grade level, introduction to shapes vs. review of shapes, etc.). Assign students into groups or partners. Explain to your students that you are going to set a timer for one minute. In that one minute they are to discuss with their group what they see on the display in the front of the room (name of shape, how many shapes, what these shapes make you think of, etc.). For the display you may use a copy of the Math Chat worksheet, shapes already cut out, or a poster with the shapes on it. Feel free to model an example if you wish (i.e. I see a shape with three sides and I know it is called a triangle). Set timer for one minute and allow students to discuss or "chat" about the shapes. If you feel one minute is too long or too short, please adjust. Allow your students to share what they talked about with their partner. After a team shares a response, please comment about it and ask all students to raise their hand if that comment was mentioned in their group. The point of the *math chat* is to allow the students time to brainstorm (in their small group) and then have a class discussion with their ideas. This way all students are more willing to participate in the large group discussion because they have gained confidence in the small group. The class discussion is going to be your direct instruction on shapes, so please feel free to add any pertinent information you feel is necessary on shapes.

Once your *Math Chat* is finished, explain to the students that they are going to go on a shape hunt around the school. Distribute one *Shape Hunt Recording Sheet* and a clipboard (optional) to each student. Explain to the students they are about to go on a walk around the school. Their goal is to try to find at least one example of each shape. Periodically through your walk have "stop and draw" times - allowing the students to record their ideas. Before you take your students on a walk, you may wish to do the walk yourself to ensure all the shapes are present (if there is no example of a certain shape you may wish to add them accordingly). Enjoy the walk around school! Upon returning to the classroom allow students to share their findings with each other.

The lesson will conclude with a math game. Print one copy of the *Build a Shape* sheet for each student (the game pieces need to be cut apart ahead of time) and place the pieces in a baggie. Each student should have their own baggie. Assign students a partner. Each student will pick one piece out of the bag at the same time. They will say the name of the shape on their piece and lay it on the table/floor beside them. Then the students will pick out the next piece. If the piece is the same as the previous shape have the student begin to construct the shape (i.e. if two triangle cards are chosen, the student should place one corner on top of the other corner to begin the shape of the triangle). If the shapes are different the student will put it in a different spot than the original shape and continue on with the next turn. The winner of the game is the student who can make a shape first. Students can play the game multiple times while other groups are finishing their games.

Explanation

Learning about shapes in an integral part of studying geometry. During the videoconference part of this e-Lab students will learn that bees have the hexagon shape within their hive.

Assessment

Informal assessments can be taken throughout the lab (Math Chat responses, discussions during math game, observing students physically building the shapes during the game, etc.). Formal assessment can be evaluated per the student's responses on their *Shape Hunt Recording Sheet*. Assessment information can be very valuable to understand what your students understand and what information may require re-teaching.