Katlyn Birkes

Geometry Unit

2nd Lesson Plan

**Title:** Discovering Solid Shapes in the Classroom

**Grade Level:** Kindergarten

**Objectives:**

1. Students will identify classroom objects that have the shapes of certain solid figures.
2. Students will identify, sort, and classify pictures of solid figures.

**Common Core Standards Addressed:**

K.G.1. Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.

K.G.2. Correctly name shapes regardless of their orientations or overall size.

K.G.3. Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”).

**Materials:**

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|  | 1. Solid figures in the shapes of rectangular prism (tissue box), cone (cheerleader megaphone), sphere (ball or fruit), cube (ABC wooden blocks), pyramid (picture of pyramid on wall or Toblerone candy bar), and cylinder (new piece of chalk). Find any other objects that make these shapes.
2. Pictures showing solid figures
3. Geometric foam solids
4. Cameras (maybe iPads depending on the students)
5. Computer
6. Photo Story program
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**Procedure:**

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|  | 1. The students will review the term "solid shape" as well as the shapes of the following solid shapes: rectangular prism, cone, cylinder, sphere, cube, and pyramid. They will look at different pictures or the foam shapes to identify them. They get into small groups or do this individually.
2. I will hold up objects for the students to observe. Example: Hold up an orange and have the students examine it. They will then identify it as a sphere rather than an orange. Continue this process until each solid figure shape has been correctly identified.
3. Students will then walk around the room searching for solid shapes. They will independently record any solid figure classroom objects found by filling in the chart titled "Everyday Solid Figures Found in the Classroom" (see attached).
4. I will have the students take pictures of the solid shapes they found throughout the classroom. As a class we will go through the pictures the students took and will discuss what shape they are. As a whole class, we will make a photo story that includes all the shapes the students found. I will upload the pictures. I will have all the students record their voice on photo story describing the shapes. The students will be able to talk about the pictures they took and why they decided to use those shapes. The photo story will be a way for students to review shapes and show their parents what we are doing in class. (Before this part I will explain how to use a camera and why they need to be careful when handling one.)
5. Once they are done I will be able to make a book called, “Our Solid Shapes.” I will include each “Everyday Solid Figures Found in the Classroom” sheet the students were working on. I will also make copies of the book to put in each students portfolio. I will also name the photo story “Our Solid Shapes.” This will be a way to show parents at conferences what we are doing and how their child is progressing with understanding shapes.
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**Assessment:**

I will be assessing the students on whether they understand what 3-dimensional or solid shapes are. During this activity I will ask students various questions that pertain to solid shapes. The questions may be, “What solid shape is this?” “How do you know this is a solid shape?” “What are other objects that represent this solid shape?” These questions will allow me to know whether the students understand what solid shapes are and the different components that differentiate them from 2-dimensional shapes. During this time I will use anecdotal noting to keep track of what each student says. I will later be able to reference these questions when I am planning other lessons or if I need to inform a parent about something that may need to be addressed with a student. The “Everyday Solid Figures Found in the Classroom” sheet will also be a way for me to assess their understanding of solid shapes. The students will write the names of the shape and what object it connects with. When I make the book out of these worksheets I am able to show the parents at conferences what we are doing in the classroom and how their child understands solid shapes. I will also make copies of the book so each student has one in their portfolio. This portfolio will be used to see their progression through different math concepts.

**Differentiation:**

For my students in the class who are having difficulties with understanding solid shapes I will give the option of also taking pictures of 2-dimensional shapes. The students will still be expected to at least identify one or two solid shapes but I still want them to participate and not feel excluded. I will also have time set aside for students to come to me and work on identifying solid shapes. This will not take them away from the actually activity but I will add time for ALL the students experiment with foam shapes. For my students who are excelling through this activity I will extend the amount of shapes they need to find. I want them to still continue to work on the same shapes as the rest of the class but find more objects that represent the shapes. Example, I will have them find 2 or 3 more objects that are cube shaped and I will continue this through the different shapes. If some of my students are having a harder time handling the camera because it is too small, I will give them the iPad to take pictures. Once I do this, more students may want to use the iPad instead of the camera so I will give the whole class the option.

**Integration Activities:**

For this unit I am able to connect technology. I want my students to be familiar with different online programs so I will have them work with Photo Story. We will work on this project as a whole class but the students will be able to contribute ideas and even add their voice to the story. My students will also work with cameras. This will give them a chance to see how cameras work and how they can capture an object so the students are able to later refer to them.

**Credit for this lesson is given to the website, Alex: Alabama Learning Exchange. I changed the lesson with adding photo story.**