Alejandra A Cantu & Ashely Rivera Lopez

Lesson Plan

Subject: Math **Grade Level:** 2nd

Texas standards:

§111.4. Grade 2

(b) Knowledge and skills:

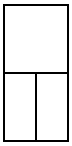
(8) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional shapes and three-dimensional solids to develop generalizations about their properties. The student is expected to:

(B) classify and sort three-dimensional solids, including spheres, cones, cylinders, rectangular prisms (including cubes as special rectangular prisms), and triangular prisms, based on attributes using formal geometric language.

Goals and Objectives

Lesson Goals:

-By the end of the lesson, students will understand how to classify, sort and create three-dimensional solids based on attributes using formal geometric language.
-Students are expected to use their listening skills when discussing about the objects in the "Mystery Bag" with their groups and when the teacher explains what are the attributes for each 3D shape.
-Students are expected to use their speaking skills when discussing with their groups about the objects in the "Mystery Bag".
-Students are expected to use their reading skills when reading the poem about 3D shapes.
-Students are expected to use their writing skills when writing about the 3D shapes and theor attributes.



Materials

Teacher	Per group	Per Student
3-D shapes	Clay	Scissors
Bag	Toothpicks	Glue
Computer	Construction Paper	Color pencils/crayons
Projector		Pencil
Anchor Chart		Construction Paper

Troubleshooting/Safety

- The teacher when students are using scissors will remind students to only use them to cut the paper and not to play with them since they could be dangerous and can cause harm to themselves and other classmates.
- The teacher when students are using the toothpicks, when creating the three-dimensional shapes, will explain to the students that the ends are pointy and should only be used to connect the clay and not to play nor to point to other classmates as it can be harmful.
- The teacher when students are using the clay will remind students that the clay is only to use to create the shapes and not to ingest since they are not food and can be harmful.
- The teacher will instruct that if any of the tools are used incorrectly the activities will be canceled and there will be consequences.
- The teacher will also remind students to share, play nice and be kind to one and other.

Procedures

Engage	● The teacher will have a paper bag called "Mystery Bag". The teacher will have some 3-D shapes in the bag. ● The teacher will ask students what they think is in the bag and after hearing some of the responses the teacher will give a mystery bag for every group of 5 or 4 students (depending on the total amount). ● The teacher will ask the students to talk about what it's in the bag and to create a discussion between them about the objects.
Explore	● .The teacher will show a video, using the projector, about a song of 3d shapes. The video introduces 3D shapes and shows real-life objects that haves 3D shapes. *Stop video at 2:40* ● The teacher will also show a catchy poem to the students. The poem will help students identify 3D shapes with it's real-life objects.The teacher will read the poem with the rhythm for the students to hear. ● The teacher will then read the poem one line at a time for the students to repeat each line. The teacher will then read the poem with its rhythm with the students at the same time. The teacher will then let the students repeat the poem with its rhythm by themselves by pointing to its words for the students to follow.

Explain	• The teacher will have a list of vocabulary words with the definition for kids to look at in case there is any confusion. • The teacher will explain to them each vocabulary word and ask if they have any questions over it. • The teacher will also provide an anchor chart explaining a few of the 3D shapes that compares them to something similar they know • 
Extend/Elaborate	• The teacher will handout 3 different handouts. One of a cube, rectangular prism, and a triangular prism. • The teacher will provide some time for the students to color the shapes. • The teacher will provide instruction on how to cut the handouts. • The teacher once every student has their pieces cut she will model on how to glue the pieces together to get a 3D shape. The students with the teacher will create all three 3D shapes. • The teacher once every student has their 3D shapes completed, will give a construction paper for the students to glue the base to them. The students will identify the 3D shapes by writing on the construction paper including their attributes.

Evaluate	● The teacher will tell the instructions and will remind the safety procedures to the students. ● The teacher will provide some toothpicks, clay and construction paper to each student. ● The students will create at least one of the 3D shapes either a pyramid, a cube, or a prism with the clay and toothpicks. While the students are creating the model the teacher will be walking around asking questions to assure that students are understanding the concept and to evaluate them.
Closure	● The teacher will conclude the lesson by reading the poem one more time (the one from explore) with its catchy rhythm with the students.

Options for Differentiation:

Accommodations

- The teacher could pair students according to ability and prior knowledge of the subject, monitor the pairs and give assistance where it is needed.
- Allow students to observe pictures of the three-dimensional shapes they will be building.
- Start simply, by asking them to build a two-dimensional shape out of the modeling clay and toothpick, such as a square, rectangle or triangle.
- For additional instruction, the students will do a one-on-one discussion with the teacher.

Extensions

- Students who are ready may use the materials to build and name other 3-dimensional shapes.
- Students could go on a "shape hunt," looking for and naming 3-dimensional shapes around the school and/or playground.