Grade 1	Lesson: 15-7 Flat Surfaces and Vertices	Reference to English

Math Standard(s): 1.G.1　　　　**Domain: Geometry**

Content Objective(s):	Language Objective(s):
Students will solve addition problems by recognizing and recording its parts in small groups. *I can solve addition problems by recognizing and recording its parts with a small group.*	Students will speak the words inside, outside and in all while adding parts. *I can speak the words inside, outside and in all while adding parts.*
Essential Understanding: Many solid figures are comprised of flat surfaces and vertices.	**Academic Vocabulary:** **Listen:** **Read:** **Write:** **Speak:** **Sentence Frame:**
Materials: • 　Solid Figures (Teaching Tool 19)	**Language and Word Wall:** Flat surface, vertex (vertices)
Lesson:	**Instructional Time:　25 minutes**

Opening: (2 minutes)

T: "You have learned how to identify solid figures, say them with me, cube, rectangular prism, sphere, cylinder and cone."

• 　Teacher will point at the shapes as they are stated.

T: "Today you will learn how to describe solid figures according to the number of flat surfaces and vertices they have."

T: "In the front of the class we have solid figures. How can you describe them?"

Introduction to New Material (Direct Instruction): (3 minutes)

T: "Look at the cube. It has flat surfaces. How many flat surfaces does it have? Let's count."

• 　Teacher will put their hand on each surface as the class counts.

S: *will count, 1,2,3,4,5,6*

T: "There are 6 flat surfaces on a cube. How many vertices are there? Vertices are the corners. Let's count them together."

• 　Teacher will identify the vertices on the cube.

S: *"will count the vertices, 1,2,3,4,5,6,7,8.*

T: "There are 8 vertices and 6 flat surfaces."

• 　Teacher will go through one more solid figure the same way.

Guided Practice: (8 minutes)

Use the modeling cycle:

Teacher Does:

T: "Now, I am to separate you into groups of 2. You will need to work together to fill out the chart. On the left you will find a solid figure. You will need to write how many flat surfaces each shape has and how many vertices."

1 Student Does with Teacher:

T: " I need a student to come up and demonstrate."

• 　Teacher will choose a student.

T: "I am holding a cylinder. How many flat surfaces does a cylinder have?"

S: *will respond, "2"*

T: "Perfect, write it down. How many vertices does a cylinder have?"

S: *will write down 2 in the correct spot and then respond, "0"*

T: "Perfect, it does not have a vertex. Write down 0."

S: *will write down 0.*

T: "Well done! Please sit down."

All Students Do:

T: "Now I want every one to participate! I will separate you into groups and you need to fill in the chart. If you need to touch the solid figures they are up in the front of the classroom. Please put them back quickly so other can use them too."

S: *will separate into pairs and do the activity.*

• 　Walk around the classroom keeping the students on task.

• 　After 4 minutes bring the students back together.

Independent Practice: (7 minutes)
T: "Now it is your turn to do some problems on your own. Each of you will be given this paper. You need to fill in the blanks. First you will write the # of flat surfaces here, and the number of vertices here. We will do the first one together."
- Use the document cam to show the paper.
T: "Look at question #1. What is the name of this solid figure?"
S: *will respond with "rectangular prism"*
T: "Correct, it is a rectangular prism. How many flat surfaces does it have?"
S: *will respond with, "6".*
T: "Let's count together. 1,2,3,4,5,6. 6 flat surfaces. How many vertices does it have?"
S: *will respond, "8"*
T: "Let's count together. 1,2,34,5,6,7,8. 8 vertices. I have written everything down, now it is your turn."
T: "I need you to finish questions 2-9. When most of you are done, I will clap my hands and bring you back together. You have 4 minute."
S: *will go to their table and complete questions 2-7.*
- Teacher will clap hands and bring the students back together.
T: "Let's do questions 9 together. It is a pattern and we need to finish it. Say it with me, sphere, sphere, cube, sphere, sphere, cube, sphere, sphere, cube, what comes next?"
 S: *will say the pattern with the teacher and then fill in the blank with "sphere"*

Closing: (2 minutes)
- Hand out whiteboards, markers and erasers.
T: "Let's do problems 10-13 together. As I read you the problem I want you to draw the solid figure."
T: "I have 2 flat surfaces and NO vertices. What solid figure am I? Draw the solid figure."
S: *will draw the solid figure.*
T: "3,2,1 Show me the solid figure."
S: *will show the solid figure they drew."*
T: "Now say its name with me, cylinder"
S: *will say, "cylinder"*
- Continue with questions 11-13 as a whole class.
T: "Good job today!

Assessment:
Guided Practice