

**Math - Space Figures - 3<sup>rd</sup> grade, 2<sup>nd</sup> quarter**

Strand(s): Math	SOL objectives: Math: Geometry 3.18 Technology: 3.3.4, 3.3.6, 3.6.2
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**1. DESIRED RESULTS**

*Enduring Understandings (BIG ideas)*

Space figures are geometrical, 3-D shapes. We can find examples of space figures in our world.

*Essential Questions*

*Knowledge and Skills*

What is a space figure? How is it different from a 2D figure?

How are space figures used in our world? Where can we find space figures?

Identify and name space figures.  
Identify edges, vertices, surfaces.  
Recognize real-life examples of space figures and geometrical space figures.  
3D shapes take up space (length, width, height/depth).

**Math Vocabulary**

Space figures – cone, sphere, rectangular prism, square pyramid, cube, cylinder  
Edge, Vertex, Side

**2. ASSESSMENT EVIDENCE**

Prior knowledge	Ongoing throughout lesson	By the end of the lesson
Identify and define 2D figures Name space figures	Manipulate space figures Create an Excel Spreadsheet to record name of space figure, to paste a picture of the space figure, to paste a picture of a real life example of a space figure, and to record number of faces, edges, and corners. Students will watch the space figures graph grow as they enter the information for faces, edges, and corners.	Students will have completed the spreadsheet for the six space figures and will check it against an answer key.

**3. LEARNING ACTIVITIES/INSTRUCTION (35-45 min)**

Introduction (hook)	What students are doing	Conclusion
Students will be given the 3-D space figures to examine.	Students will use the 3-D space figures to record data about the figures into a spreadsheet.	Students will determine which space figures have the least/most edges, faces, and corners. In addition, students will analyze their work to see if any patterns or rules exist.

*Accommodations*

*Materials and Resources*

<b>Extra support</b> – actual space figure manipulatives will be given to students to hold and examine, additional real-life examples of the 3D space figures can be collected, sorted, and labeled in the classroom	3D space figures computer lab
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<p><b>Enrichment or early finishers</b> – Determine what patterns and rules exist, if any, for any of the space figures. Have students brainstorm and look for other space figures in their classroom.</p> <p><b>Various learning styles</b> –tactile learners</p> <p><b>Limited English proficiency</b> – create a 3D museum of space objects to help with language development</p>	
<i>Related Technology</i>	<i>Literature Connections</i>
<p>3.3.4 – create and use a spreadsheet  3.3.6 – create graphs from spreadsheet data  3.6.2 – use graphing and spreadsheet software to create and manipulate graphs</p>	
<b>4. WRAP-UP (5-10 min)</b>	
<i>Assessment</i>	<i>Homework</i>
<p>Evidence of student learning/understanding  Accuracy of Space Figure spreadsheet (self-check against answer key)</p>	<p>Look for space shapes in your home, review Space Figures spreadsheet</p>
<b>5. TEACHER REFLECTION</b>	
<ul style="list-style-type: none"> <li>• Were my students talking about the mathematics, or was I doing all of the talking and students were just listening to me?</li> <li>• Were my students engaged at the beginning of the lesson?</li> <li>• How much time did I spend reviewing homework, and how much time did I spend on new material?</li> <li>• Did the students respond to “How” and “Why” questions?</li> <li>• Did my students have an opportunity to discuss and/or write about mathematics?</li> <li>• Did I use a curriculum check up?</li> <li>• What changes would I make next time the lesson is taught?</li> <li>• What steps do I need to take next in this topic?</li> </ul>	