



## Grade 2 Mathematics

### Overview

In Grade 2 Mathematics “Students will describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.” This statement leads to the general outcome that students will “name, describe and construct a variety of 3-D objects and 2-D shapes” and also “describe, classify, construct and relate 3-D objects and 2-D shapes.” Using pictures of streets with buildings and wider city scenes that depict larger areas of urban construction, students will be introduced to the idea that buildings have various shapes that fit together.

### Rational

Students will then participate in a group activity to create their own buildings using construction paper and a variety of boxes. These buildings will be placed together and used to create streets and communities. The students will discuss the shape and size of the buildings in relation to each other. The buildings will be placed on a table covered in paper and students will draw roads and other places or things they may want to include, such as parks and benches.

### **Mathematical Processes**

There are critical components that students must encounter in a mathematics program in order to achieve the goals of the curriculum and to encourage lifelong interest in mathematics.

Students are expected to:

*Communication* [C]

*Connections* [CN]

*Estimation and Mental*

*Mathematics* [E]

*Problem Solving* [PS]

*Reasoning* [R]

*Technology* [T]

*Visualization* [V]

- communicate using mathematics
- connect mathematical ideas to other concepts in mathematics, to everyday experiences, and to other disciplines
- use estimation and mental mathematics where appropriate
- relate and apply new mathematical knowledge through problem solving
- reason and justify their thinking
- select and use appropriate technologies as tools to solve problems
- use visualization to assist in processing information, making connections and solving problems. The Kindergarten to Grade 6 Mathematics program of studies incorporates these seven interrelated mathematical processes that are intended to permeate teaching and learning

Mathematics (K-6), (1997), ©Alberta Learning, Alberta, Canada p. 4.

<b>Grade 2 Mathematics</b>	
<b>Strand:</b> Shape and Space (3-D Objects and 2-D Shapes)	
<i>Students will:</i>	
<ul style="list-style-type: none"> <li>describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.</li> </ul>	
<b>General Outcome</b>	<b>Specific Outcomes</b>
Name, describe and construct a variety of 3-D objects and 2-D shapes. Describe, classify, construct and relate 3-D objects and 2-D shapes.	18. Explore faces, vertices and edges of 3-D objects. [R]
	19. Identify, name and describe specific 3-D objects as: <ul style="list-style-type: none"> <li>cubes</li> <li>spheres</li> <li>cones</li> <li>cylinders</li> <li>pyramids.</li> </ul> [C]
	20. Build a skeleton of a 3-D object and describe how the skeleton relates to the object. [E, PS, V]
	21. Build and rearrange a pattern, using a set of 2-D shapes. [E, PS, V]
	22. Match and make identical (congruent) 2-D shapes. [PS, T, V]
	22. Identify and count faces, vertices and edges of 3-D objects. [E]
	23. Identify and name faces of a 3-D object with appropriate 2-D names. [C, V]
	24. Describe and name pyramids and prisms by the shape of the base. [C]
	25. Demonstrate that a rectangular solid has more than one net. [PS, V]
	26. Compare and contrast two 3-D objects. [C, CN]
27. Recognize congruent (identical) 3-D objects and 2-D shapes. [CN]	
28. Explore, concretely, the concepts of perpendicular, parallel and intersecting lines on 3-D objects. [R, V]	