

Building With Shapes		Kindergarten Structures and Mechanisms
Lesson Plan	Safety Notes	Build structures on a low flat surface to reduce the risk of them falling on you.
Description		
Let's get building! In this lesson students will review the shapes they know and then explore how shapes can be used in different buildings. Students will identify shapes in different structures and will build their own structures using shapes.		
Materials		
<ul style="list-style-type: none"> ● 6-8 popsicle sticks or other equally sized materials (markers, straws, pencils) ● Crayons ● Handout ● Paper ● Blocks or other building materials 		
Science Background		
Shapes can be found in buildings and structures all around us. To make a strong structure, shapes that are easily stacked such as squares and rectangles should be on the bottom of a structure and shapes with less flat edges such as triangles should be on the top of the structure.		
Activity Procedure		
Shape Review:		
Give your student 6 items that are the same size such as markers, popsicle sticks or straws and ask them to build shapes without naming the shape. For example:		
<ul style="list-style-type: none"> ● Can you build a shape with 3 sides? (triangle) ● Can you build a shape with 4 sides? (square) ● Can you build a shape using 6 popsicle stick but has 4 sides? (a rectangle) ● Can you build a shape with 4 sides that is not a square or rectangle? (Diamond) 		
Handout:		
Give your student the handout and ask them to outline the shapes they can see in each structure. Ask your students questions such as:		
<ul style="list-style-type: none"> ● "Are the triangles on the top or the bottom of the building?" ● "Are the squares on the top or the bottom of the structure?" ● "Why do you think that is?" 		
You want students to start to think about how to make a strong sturdy building out of shapes.		

Let's Get Building!:

We are going to get to be architects, the people who design buildings. When a building or structure is being designed, architects and engineers work together to make sure a building design looks the way they want and is strong. Use the back of the worksheet or get a new piece of paper and have your student design a building they would like to make. You can have them do this with building materials you have on hand in mind or the design can be adapted to materials later.

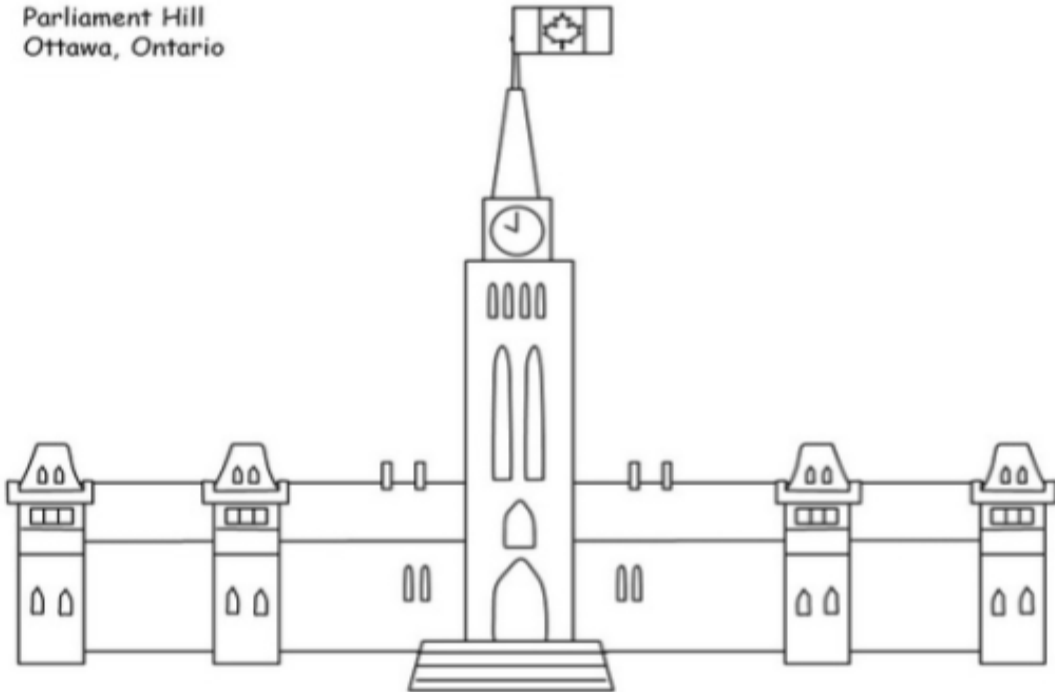
Once their design is done look at the building materials you have around the house, this could be blocks, recyclables or even Tupperware containers. Have your students build a structure based off of their design. Along the way ask them questions such as “why did you choose to put those blocks on the bottom of your structure?” “ Did you follow your design or did you have to change it to make your structure strong?”.

Debrief

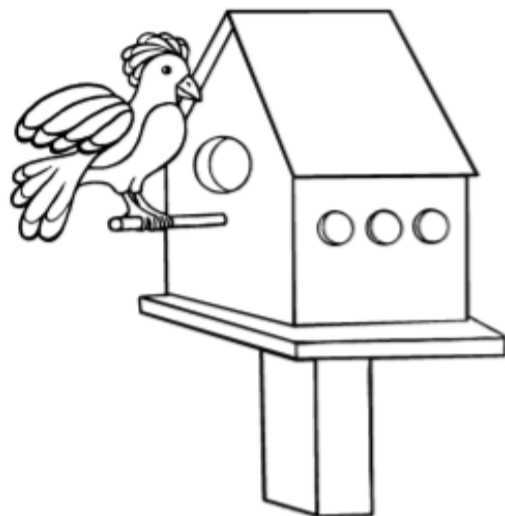
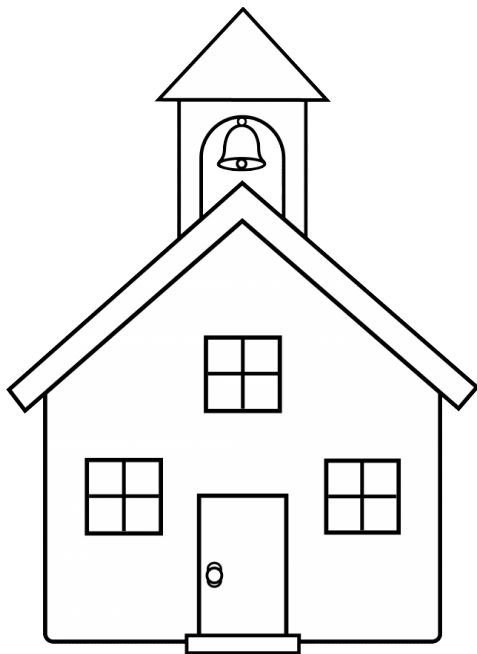
You can continue the learning with this activity by going on a shape scavenger hunt around your home or neighbourhood. Go for a walk outside and look for shapes that different buildings are made out of or go around your home and discover what shapes are used to make beds and look shelves.

Outline the shapes you see in the pictures below.

Parliament Hill
Ottawa, Ontario



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