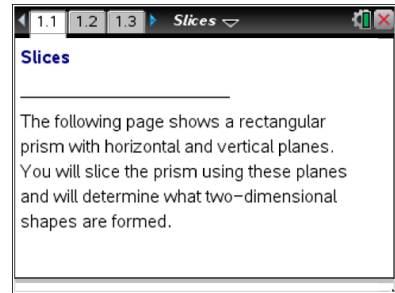




Open the TI-Nspire document *Slices.tns*.

In this activity, you will explore the two-dimensional figures that result from slicing three-dimensional figures with horizontal and vertical planes.

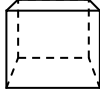









Move to pages 1.2 through 1.7.

Before you move the two-dimensional planes through the three-dimensional figures to slice them, first make a prediction and fill in the table on the next page as described in question 1. If you believe the shape will change as the two-dimensional plane slices the figure, draw multiple sketches that show how the shape changes as the plane slices from one end of the figure to the other.

1. For each of the 3-dimensional figures on Pages 1.2-1.7:
 - a. Make sketches for your predictions of what two-dimensional shapes will appear if you were to cut the figure **horizontally**. Make your sketch in the table provided below.
 - b. When you have made your predictions, check your answers by actually sliding the horizontal plane through the figure on each page. (When you are finished, be sure to return the horizontal plane to the bottom of the figure.)
 - c. Make sketches for your predictions of what two-dimensional shapes will appear if you were to cut the figure **vertically** from the back to the front. Make your sketch in the table provided below.
 - d. When you have made your predictions, check your answers by actually sliding the vertical plane through the figure on each page.
 - e. After you have drawn the sketches for the actual two-dimensional shapes, note how the two-dimensional shape changes as you move the planes through the figures



		Rectangular Prism 	Triangular Prism 	Square Pyramid 	Tetra-hedron 	Cylinder 	Cone 
Horizontal Slicing	Sketches of Horizontal Slice Predictions 						
	Sketches of Actual Horizontal Shapes						
	What changes?						
	What stays the same?						
Vertical Slicing	Sketches of Vertical Slice Predictions 						
	Sketches of Actual Vertical Shapes						
	What changes?						
	What stays the same?						

