



# Geometry


## Shapes

Nine basic geometric shapes are included in the Shapes mode.

- After a shape is placed in the workspace, you can flip or rotate it. You can also change its color and relocate it in the workspace.

## Practice Using Geometry Shapes


1 Place a shape in the workspace. Use a square.

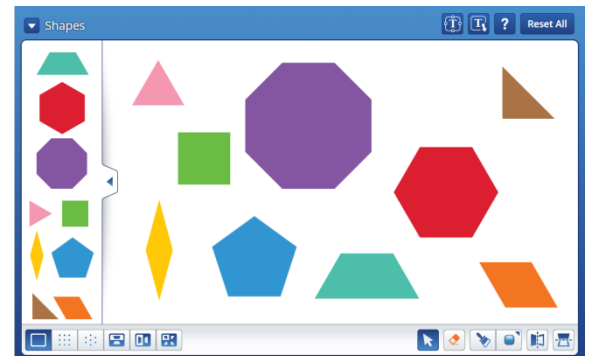
- Click and hold . Drag the shape onto the workspace.
- Move the cursor to the location in the workspace where you want to place the square and release.



2 Place one of all the other shapes in the workspace.

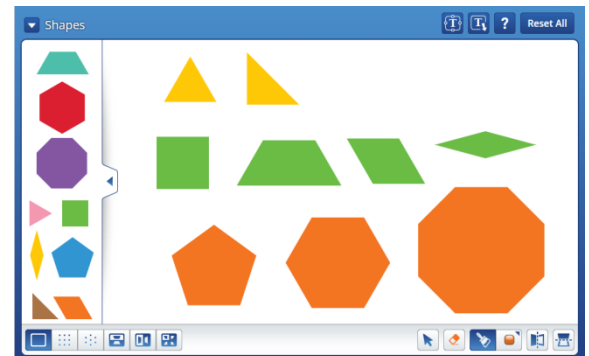
- Use the same procedure as you did for Step 1.

3 Classify and organize the shapes. Form groups of triangles, quadrilaterals, and other polygons.



- Use  to select and reposition the shapes in the workspace.
- Move both triangles to a row along the top of the workspace.
- Move the quadrilaterals to a row in the middle of the workspace.







- Rotate the  so that it looks like . To rotate a shape, drag any corner of the shape in a clockwise or counterclockwise direction.
- Move the other polygons to a row along the bottom of the workspace.



4 Change the colors of the shapes.


- Make all triangles yellow. Make all quadrilaterals green. Make all other polygons orange.
- Click  and select yellow . Move the cursor over the triangle and click. Its color will change to yellow. Click on the other triangle to change its color.

- Click  and select green . Move the cursor over the quadrilateral and click. Its color will change to green. Click on the other quadrilaterals to change their color.
- Click  and select orange . Move the cursor over the pentagon and click. Its color will change to orange. Click on the hexagon and octagon to change their color.



## Tangrams

Five tangram pieces of different colors are included in the Tangrams mode, along with a large square piece that is made from the tangram pieces. To get to the Tangrams mode,


click  to see the drop-down menu and select **Tangrams**.


- You can drag the pieces onto the workspace multiple times as long as the new piece dragged does not overlap with an existing piece. Each tangram piece can be flipped.
- The pieces that make up the large square can be taken apart after the square is on the workspace.


## Practice Filling an Outline Figure with Tangrams

1 Choose the outline that you want to fill with tangrams.

- Ten different outlines will appear from which you can choose.


- Click the  button in the bottom left of the screen.


- Click the  and drag it onto the workspace.

- Since the outline you chose appears to involve triangular tangrams, click on the  button to help you choose the right tangram for the outline and for easier placement.

2 Place the first tangram piece to fit in the bottom of the outline, where the bigger tangrams will be placed.

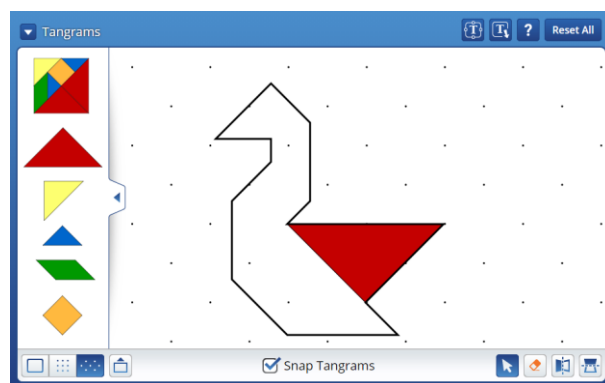
- Click and drag the  onto the workspace.

- Click the , and then click the tangram to flip it vertically.


- Click the  to activate the pointer again. You can now drag the tangram into the outline.

3 Rotate a tangram to position in the outline.

- Click and drag another  onto the workspace.




- Click on any corner of the triangle and drag it in a clockwise or counter-clockwise


direction so that it looks like .


- Drag the rotated tangram so that it snaps with the first piece into the bottom of the outline.

#### 4 Flip and rotate a tangram to position in the outline.

- Click and drag  onto the workspace.

- Rotate the piece so that it looks like .

- Click the  and then click the tangram to flip it horizontally.

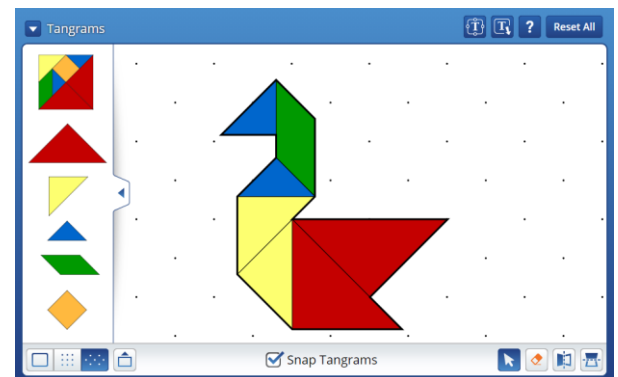
- Click the  to activate the pointer again. You can now drag the tangram into the outline.

#### 5 Fill in the outline with other tangram pieces.

- Click and drag 2  and 2  tangrams onto the workspace.

- Rotate or flip certain tangrams so that the pieces can be positioned in the outline as seen to the right.


- Click and drag the tangrams into the outline to fill it completely.





# Geometry

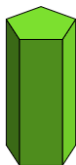
## Exploring Solids

Click  to see the drop-down menu and select **Exploring Solids**. Fifteen solids are available for you to explore their characteristics from different perspectives.

- After a solid is placed in the workspace, you can rotate it or unfold it to see its net.
- You can drag as many solids onto the workspace as will fit.


## Practice Exploring Solids: Pentagonal Prism

1 Choose a solid to explore.




- Click the pentagonal prism , and then drag it onto the workspace


2 Rotate the solid.

- Click , and then click and hold on the solid (do not release it). Move the cursor left


and right to rotate it on the vertical axis. Unclick the solid so that it looks like .

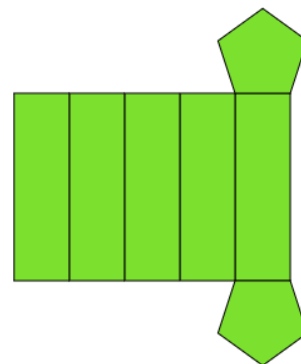
- Click , and then click and hold on the solid (do not release it). Move the cursor up and down to rotate it on the horizontal axis. Unclick the solid when done viewing the rotation.




3 View the net of the solid.

- Click . Click on the solid. It will unfold so that you can see all of its faces that form the net of the prism.


4 Fold the net together to view the solid.

- Click . Then click on the net.
- The net will fold up so you can see how to put it together to form a solid and how it looks in solid form.



5 You can click    in the left side solids menu to view other solids to explore.



## Building Nets

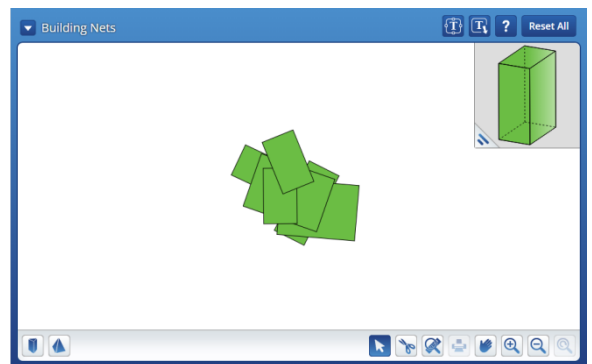
Six prisms and six pyramids are available for which you can build nets that form the geometric solid. To get to the Building Nets mode, click  to see the drop-down menu and select **Building Nets**.

- You can rotate and relocate the shapes that make up the net.

## Practice Building Nets: Rectangular Prism


- Choose a geometric solid for which to build a net.

- Click . Move the cursor over the icon for rectangular prism  and click.
- The prism appears in the upper-right of the workspace, and the pieces that form the net are in a pile in the middle.




- Put similar pieces of the net together.

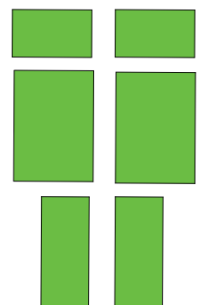
- Click and drag each piece from the center away from the pile.

- On the left side of the workspace, place the 2  shapes together. Place the 2



shapes together. Place the 2  shapes together.



- Rotate each piece by dragging any corner of the shape in a clockwise or counterclockwise direction. Organize the pieces like this:





- Put the four side pieces together.

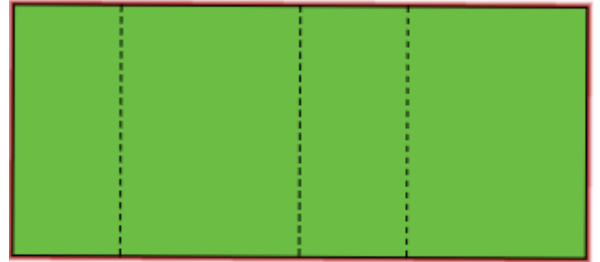


- Drag one  to the left-center of the workspace to start the net.


- Drag one  just to the right of the . They will snap together at a dotted line.


- Drag the other  to right of the last piece that you placed.



- Drag one  just to the right of the last piece that you placed. This will form a long rectangle with the four pieces.

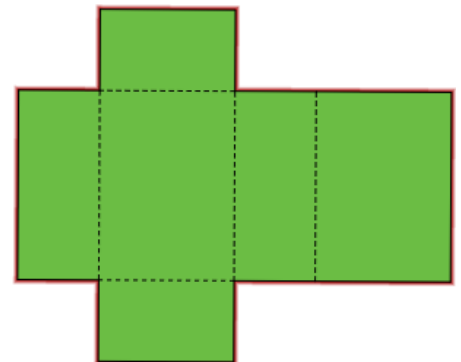


#### 4 Put the top and bottom pieces of the prism onto the net.



- Drag one  so that it connects to the top of the second piece from the left of the net.

- Drag the other  so that it connects to the bottom of the same piece of the net. The net is now complete.

- To separate a piece from the net, click the . Then click on the dotted line that connects the piece to the net. Click on the  and drag the detached piece to connect at another location on the net.



#### Additional Features

- Click  to print the net.
- Use  to move the net in the workspace.