



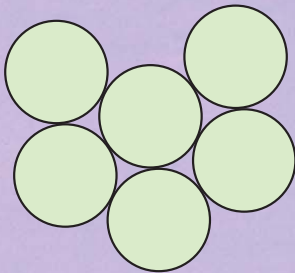
Honeybee cells

You'll need:

a jar lid
paper and pencil
thin wire
a ruler

The rooms or cells in a honeybee's home are in the shape of a hexagon (six-sided). Why don't honeybees use other shapes? Try this experiment to find out.

1. Use the lid to trace circles on paper, making sure they touch each other. Do you see the space in between the circles? If beehive cells were round, there would be a lot of wasted space in the hive.



2. Look at the hexagon shapes in the beehive on page 7. The walls touch on all sides. This pattern saves space and allows bees to use wax for two cells at a time. If the cells were circles, bees would need more wax for the parts that don't touch.

3. To find out why bees don't use triangle or square cells, measure the distance around the three shapes on the right. Each shape has the same area, or space, inside. Start at one corner and lay the wire along the sides until you come back to the starting point. Make sharp corners. Make a mark on the wire. Straighten the wire and lay it along the ruler to see how long it is.

4. After you've measured all three shapes, you should find that the hexagon has the shortest perimeter, or distance around. It needs the least amount of wax to build. By building their cells out of hexagons, bees need to work less.

