

DRAW ELLIPTICAL ORBITS: DIFFERENCE BETWEEN



All planets and the moon travel in orbits that are more like ovals than perfect circles. These are called elliptical orbits. In this activity you will draw both a perfect circle and an ellipse so that you understand the difference.

WHAT YOU NEED:



string
or yarn



pins

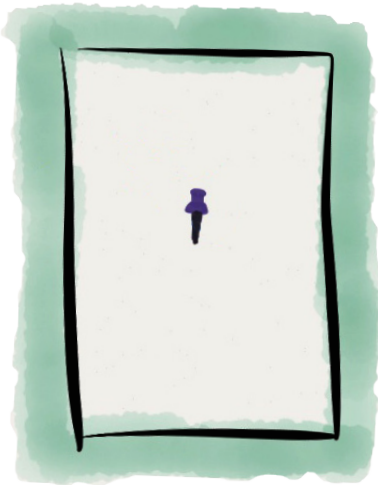


pencil or pen

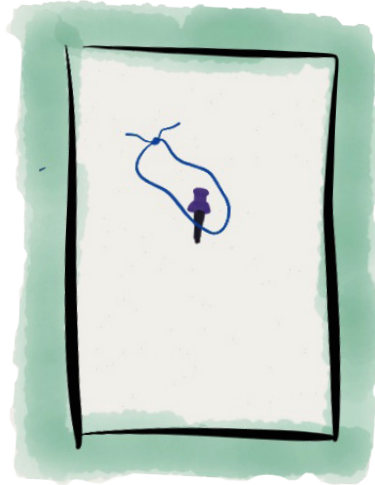


papers

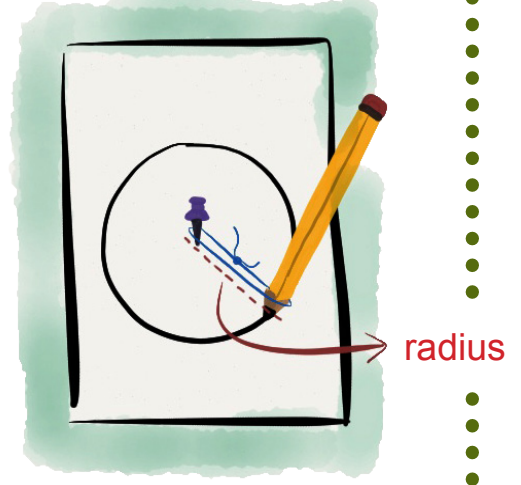
DRAW A CIRCLE



1 Put a pin in the center of a paper.

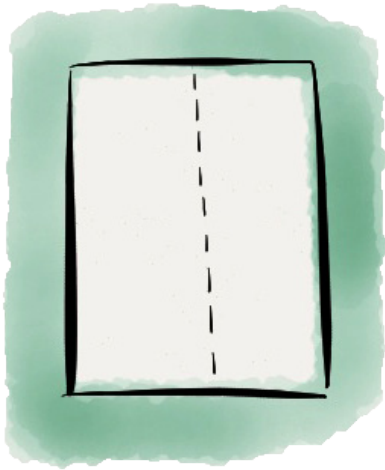


2 Make a loop with some string or yarn.

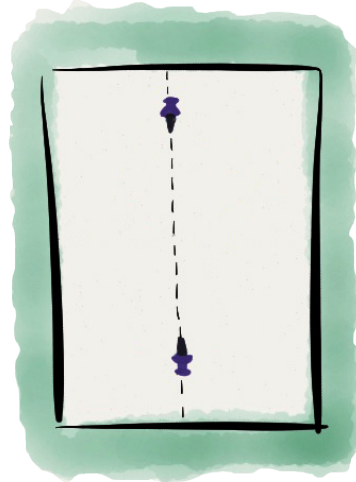


3 The string should be no longer than the width of the paper. (The length of the loop will be the **radius** of the circle.)

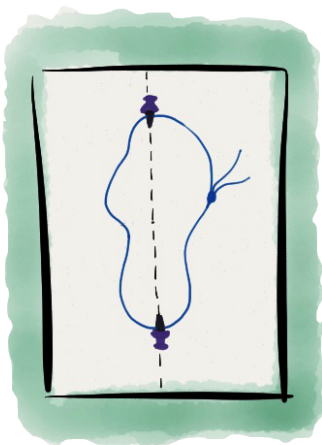
DRAW AN ELLIPSE



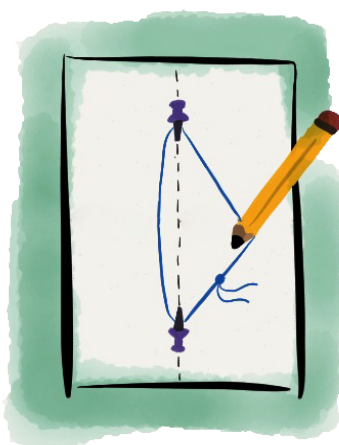
1 Fold a paper in half lengthwise, then lay it flat.



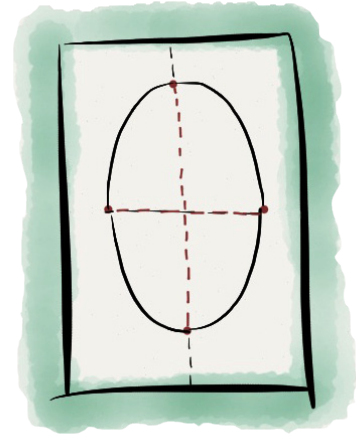
2 Put a pin near the top on the fold and another near the bottom in the fold.



3 Loop a string around the two pins, but not too tightly.



4 Use the string as a guide, running a pencil along the string pulling it taut.



5 When you have gone around the entire loop, you will have drawn an ellipse.