

## Setting Up Quadrants

Students practice measuring and following directions as they create quadrants.

<b>Estimated Time</b> 15 minutes	<b>Materials</b> <ul style="list-style-type: none"><li>• String</li><li>• Markers (2 colors)</li><li>• Four stakes (pencils or short dowel rods can be used)</li><li>• Meter stick or tape measure</li><li>• Printout of directions</li></ul>
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**Background for teachers to share with students:** It is important to work in an area of the same size each time, so that you can accurately compare your data with the data from other groups or from other days. By creating a quadrant within which to work, you can be sure that you work in a square area with the same dimensions each time you do an experiment. If you know you're going to do several experiments, try to set up your quadrant somewhere that will not be disturbed so you can leave it in place and come back to it for the later experiments.

***Working within a quadrant acts helps to control variables of size and space and allows students to compare data meaningfully.***

### Directions:

Follow the trail map to your assigned location on the sanctuary (look for the marker). Find a spot within 20 feet of the marker. Then follow the directions below to set up a 50 cm by 50 cm quadrant. Tie a small loop in one end of your string.

1. From the end of the loop, measure and mark the string at 50 cm, 100 cm, 150 cm, and 200 cm.
2. Place a stake in the loop of the string, and push the stake into the ground.
3. Pull the string out straight and locate the 50 cm mark. Push a second stake into the ground at the 50 cm mark.
4. Bring the string around the second stake to form an 'L' shape, and place a third stake into the ground at the 100 cm mark.
5. Bring the string back around the third stake and locate the 150 cm mark. Push the fourth stake into the ground at the 150 cm mark.
6. Bring the string around the fourth stake and back to the first stake to create a square. Line up the 200 cm mark with the first stake.
7. Step back and look at your quadrant. The goal is to have a square area in which to work, that is 50 cm by 50 cm. If the area doesn't look square or if any of the marks on the string are not quite aligned with the stakes, adjust your stakes accordingly. Then tie or wrap the end of the string around the first stake.