



# Strengthen Activities

## MISCONCEPTION

**Children may struggle to recognise right angles that are oriented 'diagonally', where neither line is horizontal or vertical. They may not be able to identify angles that are smaller or larger than a right angle.**

### STRENGTHENING UNDERSTANDING

1. Show children how to make a right-angle measurer by folding a paper circle in half and then in half again. This will show quarters, or four right angles together.
2. Show several right angles in different orientations and encourage children to measure with their right-angle measurers. Draw out that a right-angle doesn't always look like a typical 'corner'.
3. Pick some angles in the classroom that include angles smaller or larger than right angles as well as right angles that are not 'corners'. Ask children to guess which are right angles, then use the measurer to check if angles are less than, equal to or more than a right angle.

### ASSESSMENT CHECKPOINT

Can children estimate and then check angles close to or equal to a right angle?

### RESOURCES

Paper circles

## MISCONCEPTION

**Children may think that an angle is a measure of the size of the space between two lines, and so may think that a given angle is larger if the lines extend further.**

### STRENGTHENING UNDERSTANDING

1. Show some different angles which are the same but drawn with different length lines. Discuss what children see. Ask: *What is the same? What is different?* Erase part of the lines. Ask: *What stays the same?* Agree the angle in between has not changed.
2. Choose two of the angles. Ask: *How could you compare the size of these two angles to see which is smaller/larger?* Draw out that they must measure the angles, not compare the size of the lines.
3. Discuss the notion of the angle being a measure of the turn from one line to the other. Show how to use a dynamic angle measurer to compare angles.

### ASSESSMENT CHECKPOINT

Can children identify the smaller from a large angle with short lines and a small angle with long lines?

### RESOURCES

Angle measurer

## MISCONCEPTION

**Children may assume that parallel lines must be of identical length. They may assume that any two lines which do not intersect are parallel.**

### STRENGTHENING UNDERSTANDING

1. Remind children that parallel lines are lines that never meet. Draw two parallel lines of different lengths. Ask: *Are these lines parallel? How can you tell?* Now make the lines the same length. Ask: *What has changed? What has stayed the same?*
2. Discuss the idea of the lines always being the same distance apart and never crossing if extended, no matter how long you make the lines. Think of examples in life where parallel lines are found, for example the opposite sides of doors and windows, railway lines and so on.
3. Show two lines that are not parallel. Ask: *Would these two lines cross if they were continued? How do you know?* Continue the lines to show that they would.

### ASSESSMENT CHECKPOINT

Can children identify and describe parallel lines in different contexts?

### RESOURCES

Ruler