



Take It Outside Maths KS2

Angle Adventure!



Introduction

Obtuse, acute, right angle ... do you know the difference? Take maths outside to support and secure your understanding of right angles. Find them in your environment, measure them and compare with angles that are smaller or bigger. Who can find the most right angles? Who can make a shape with the most right angles? Let the Angle Adventure begin!

You will need:

A plan of your playground, camera or tablet, protractor or angle checker, sticks, cubes.

You may find these resources useful:

- [Right Angle Finders](#)
- [How to Use a Protractor Display PowerPoint](#)

Key Questions

- How do you know that's a right angle? Can you prove it?
- Is your measurement precise? How do you know?
- What do you need for a right angle?
- Can you find an acute angle? An obtuse angle? What are the differences?

What to do:

1. Begin by determining what a right angle is. You could use some 2D and 3D shapes for the children to handle and use to model their definitions.
2. How can we prove the angle we see is a right angle? Rehearse using the right-angle checker or protractor to check for right angles. Even using a simple cube offers a quick and simple check.
3. Where can we see right angles in our environment? Model the process of identifying and checking for right angles in the environment. Then, it's time for the Angle Adventure to begin! [How many right angles can you find?](#)
4. You could provide an enlarged map of your playground that the children can add their findings to. As a challenge, you could ask children to double-check the angle someone else identified and say if they agree or disagree. This could lead to all sorts of discussions about accuracy or whether an angle is acute or obtuse.



5. Alternatively, the children could map their own Angle Adventure. They could swap maps with another child and check their work.
6. Why not try making your own right angle pictures? Use sticks or rulers to create a shape or picture that has as many right angles as possible. Use your right-angle checker, protractor or cube to check for right angles. **How many right angles can you make? Can you make more and beat your teacher?!**

Are you ready to take your Angle Adventure to the next level? Try these **challenge cards** to test your skills!

Ways to Support

Group work will aid discussion. Give photographs of right angles in the environment for the children to locate and measure. Ask – is this a right angle? How do you know?

Ways to Extend:

Encourage accuracy in measurement. Pick out an angle in the environment that is acute or obtuse and ask – is this a right angle? Expect reasoning. Use the open-ended picture task as a way of children to explore possibilities.

Curriculum Links:

Maths: (Y3) Identify right angles; identify whether angles are greater than or less than a right angle; (Y4) Identify acute and obtuse angles and compare and order angles up to two right angles by size; (Y5) Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.