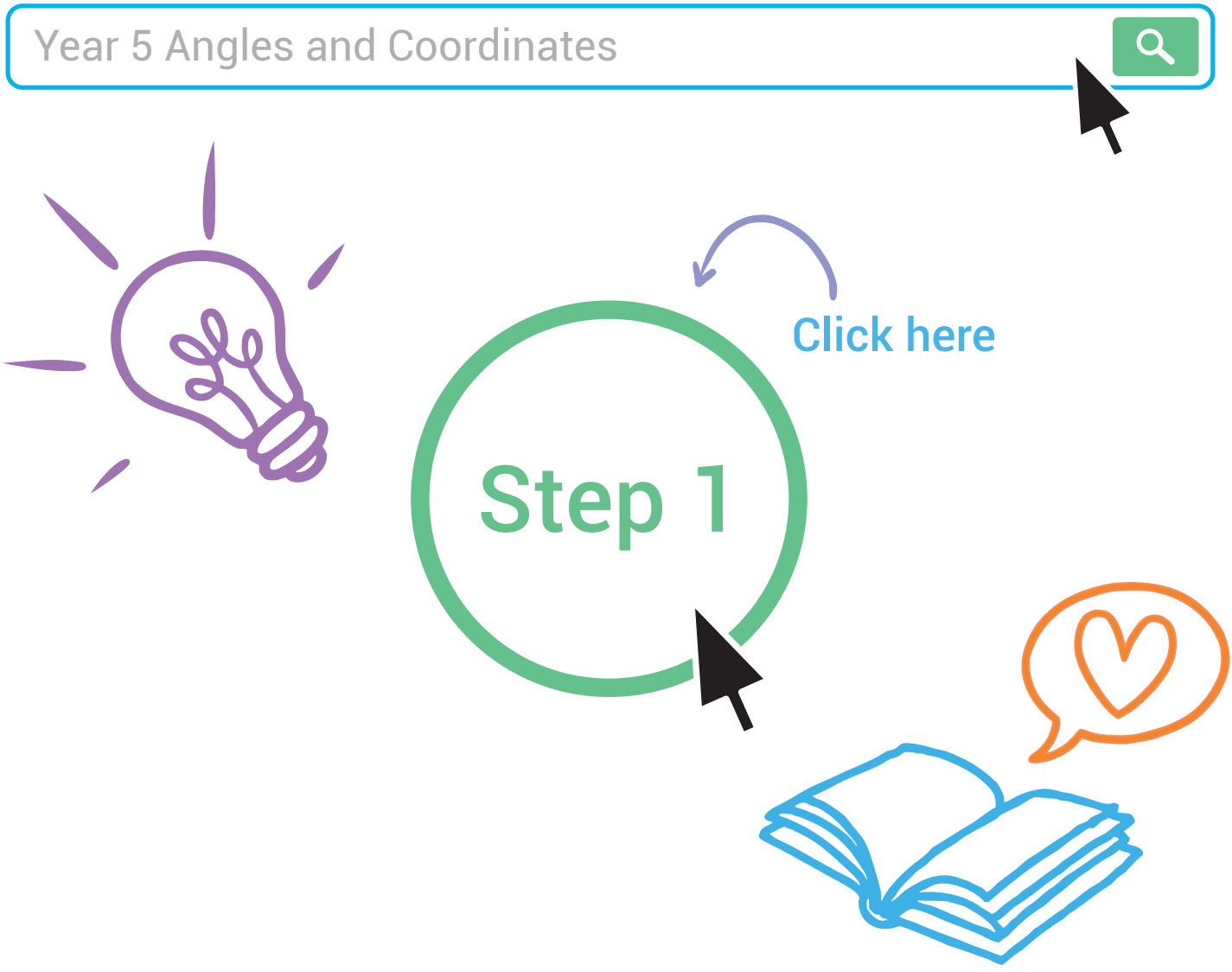
Year 5 Angles and Coordinates: A Step-by-Step Guide for Parents

This step-by-step explanation to year 5 angles and coordinates can help you support your child's learning at home. The subject is broken down into manageable chunks, providing you with a simple guide to follow when learning about year 5 angles and coordinates, either to support your child's homework or if you decide to give your child some extra support. In this guide, you will find a step that matches your child's level of understanding and then have suggested activities which can be used to support that step.

Within **this area of the website**, you will find a selection of resources intended to help your child learn about each step of this guide. Each step also contains a keyword or phrase that you can use to search the Twinkl site for more resources and activities, designed to support your child in achieving that stage. Simply type the keyword or phrase into the search bar and press enter to explore together.



We hope you find the information on our website and resources useful. The contents of this resource are for general, informational purposes only. This guide is intended to offer parents general guidance on what subject areas tend to be covered in their child's year group and where they could support their children at home. However, please be aware that every child is different and information can quickly become out of date. There are some subject areas that we have intentionally not covered due to the nature of how they are taught or because a trained professional needs to teach these areas. We try to ensure that the information in our resources is correct but every school teaches the national curriculum in its own way. If you would like further guidance or are unsure in any way, we recommend that you speak to your child's teacher or another suitably qualified professional.

Angles and Coordinates

What Are Children in Year 5 Taught About Angles and Coordinates?

Throughout year 5, children are taught to:

- estimate and compare acute, obtuse and reflex angles;
- draw given angles, and measure them in degrees (°);
- identify the degrees in one whole turn (360°), on a straight line and a half turn (180°) and in right angles (90°) and multiples of right angles;
- identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.

This guide can help you support the learning of year 5 angles and coordinates at home. Each step contains an explanation to that stage and a link to an appropriate resource which can be used at home to support your child's learning.

As well as using the resources in this category and the keyword searches to help your child, below are a few ideas for games and activities to help them practise angles and coordinates at home.

Map Reading

Find examples of maps with grid lines and coordinates (you can use atlases, books of maps or online maps). Practise reading these with your child, asking them to say the coordinates for specific images/places on the map.

Reflecting Objects

Provide your child with squared paper (you can find some **here** on the Twinkl website). Draw several shapes on the paper with a mirror line by each shape. Ask your child to draw the shape reflected over the mirror line.

Angle Hunt

Once your child is familiar with acute, right and obtuse angles, you can complete an angle hunt at home. Ask your child to find and note all the places they can spot a different type of angle in your home. You could ask them to take pictures of the different angles on a smart phone or tablet and then make an angle poster, identifying different types of angles, with the photos they have taken.

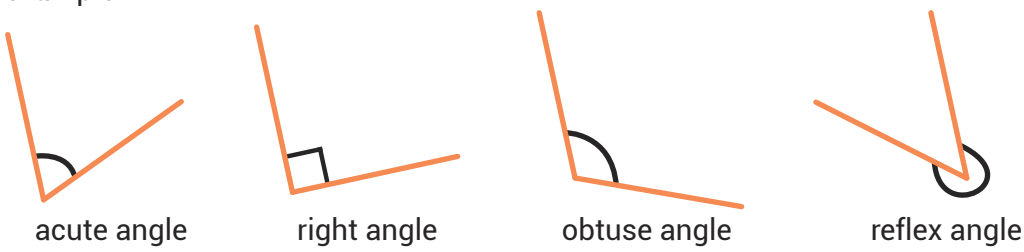
The Turn Game

This is a fun, physical activity to help your child recognise that angles can be used to describe turns. Whilst standing on the spot, ask your child to turn different amounts of right-angles to the left or the right. For example, 'turn 1 right-angle to the left' or 'turn 3 right-angles to the right', etc.

Step 1

Estimate and Compare Acute, Obtuse and Reflex Angles

An acute angle is an angle smaller than 90° (a right angle). An obtuse angle is bigger than 90° (a right angle) but smaller than 180° (a straight line or two right-angles together). A reflex angle is bigger than 180° and smaller than 360° (a full turn). For example:



acute angle | right angle | obtuse angle | reflex angle

In year 5, children continue to build on previous work on acute and obtuse angles by now learning about reflex angles too. At home, try these **Estimating Angles Worksheets** to help your child practise recognising and comparing different types of angles.

Step 2

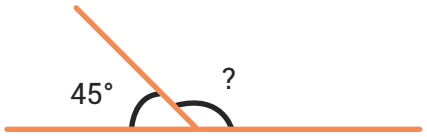
Draw Given Angles and Measure Them in Degrees (°)

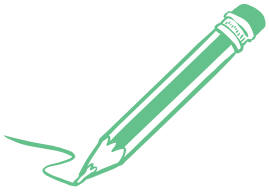
In year 5, children begin to use a protractor to measure and draw angles. It is always tricky for children to master using a protractor and they need lots of practice to perfect it. Try using this **Draw and Measure Angles Activities Resource Pack** at home which you can use with your child to help them practise measuring and drawing angles.

Step 3

Identify the Degrees in One Whole Turn (360°), on a Straight Line and a Half Turn (180°) and in Right Angles and Multiples of Right Angles

Once children have learned by heart the amount of degrees in a full turn (360°), in a half turn (180°) and in right angles (90°), they can use this knowledge to calculate missing angles around a point or straight line. Below is an example of a missing angle on a straight line:





You can calculate the missing angle if you know that the angles on a straight line total 180°. In this example, you can use the calculation 180° - 45° = 135°. So, the missing angle is 135°.

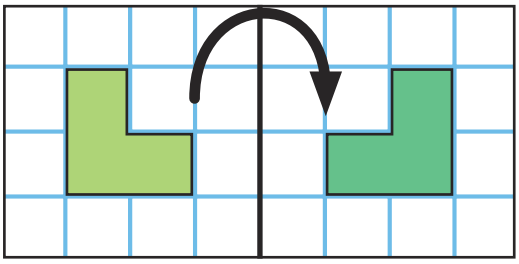
The same method can be used to calculate a missing angle around a point because you know that the angles need to add up to 360°.

At school, and at home, providing children with lots of opportunities to practise calculating angles can help them to learn this skill. Try this **Calculating Angles on a Point Teaching Pack** to support your child at home.

Step 4

Identify, Describe and Represent the Position of a Shape Following a Reflection or Translation, Using the Appropriate Language

Carrying on from their work on translation in year 4, children in year 5 learn to reflect shapes and write the new coordinates. Reflection is when a shape is flipped over a line of reflection but, like in a mirror, the shape is reversed. For example:



These **Drawing Reflected Shapes Worksheets** can be used at home to help your child practise drawing reflected shapes over mirror lines.

Explore and Discover More

Twinkl Go! is a digital platform, hosting interactive content such as videos, games, audiobooks and more. Twinkl Go! enables digital content to be streamed to your computer or mobile device.

Twinkl Book Club is our book subscription service. Enjoy our original works of fiction in beautiful printed form, delivered to you each half-term and yours to keep!

Twinkl Boost is a range of intervention resources, created to support and lift learning with children at every level. These include our easy-to-use SATs and Phonics Screening resources.

Imagine resources are designed to help your children to think creatively, question and imagine. Every week, a new topic consisting of five photos, each with related activities, is created.

Twinkl Originals are engaging stories written to inspire children from EYFS to KS2. Designed to encourage a love of reading and help curriculum-wide learning through accompanying resources.

Twinkl Kids' TV is our wonderful YouTube channel dedicated to fun and informative video-style resources full of new and creative activities you can try at home!