

Can I estimate and measure angles less than 180° ?

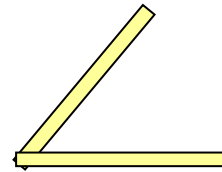
Teaching guidance

Key vocabulary

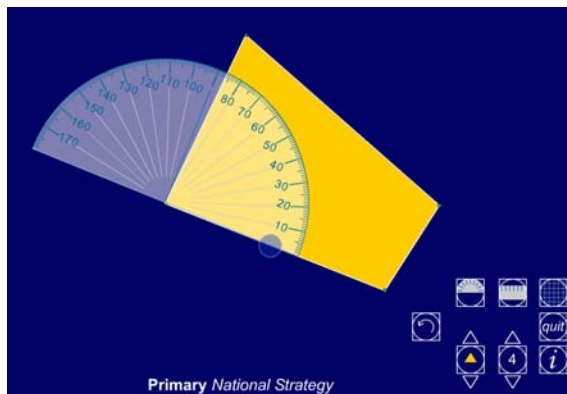
straight line, angle, right angle, acute angle, obtuse angle, reflex angle
degree, whole turn, half turn, quarter turn
angle measurer, protractor

Models and images

Use practical equipment such as strips of paper or a fan to make angles and model that angles are a measure of turn.

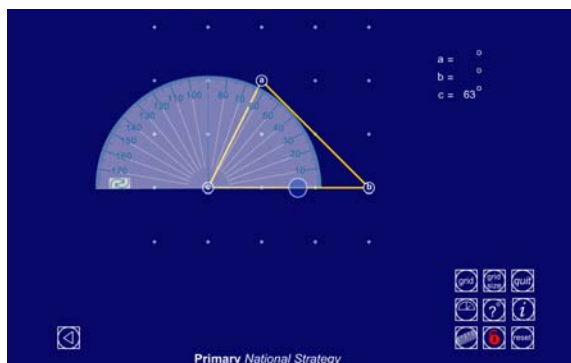


Use the *Polygon* ITP to model and discuss the accurate use of a protractor to measure angles.



Polygon ITP

Use the *Fixing points* ITP to estimate, measure and then check the size of angles.



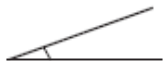
Fixing points ITP

Teaching tips

- Ensure children understand that an angle is ‘a measure of turn’.
- Provide opportunities for children to classify angles and use the correct vocabulary.



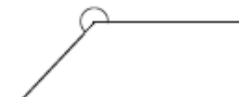
A right angle
= 90°



An acute angle
is less than 90°



An obtuse angle
is between 90° and 180°



A reflex angle is
bigger than 180°

- Demonstrate the use of a protractor and ensure children have plenty of practical experience of reading the scale correctly and accurately. Emphasise the importance of measuring accurately and aim for an accuracy of within one degree of the precise measurement.
- Discuss common misconceptions and errors with children, for example:



Measure this angle.



I put the protractor like this.

What did I do wrong?

- Encourage children to annotate angles when estimating their size. Model how to estimate the size of an angle, using ‘benchmarks’ such as 90° , 180° and 45° .
- Make relevant cross-curricular links in subjects such as design and technology, art and PE, to reinforce measuring and estimating angles.