## Year 6 - Summer Block 1 - Properties of Shapes - Measure with a Protractor

## About This Resource:

This PowerPoint has been designed to support your teaching of this small step. It includes a starter activity and an example of each question from the Varied Fluency and Reasoning and Problem Solving resources also provided in this pack. You can choose to work through all examples provided or a selection of them depending on the needs of your class.

## National Curriculum Objectives:

Mathematics Year 6: (6G2a) Compare and classify geometric shapes based on their properties and sizes
Mathematics Year 6: (6G3a) Draw 2-D shapes using given dimensions and angles
Mathematics Year 6: (6G4a) Find unknown angles in any triangles, quadrilaterals, and regular polygons
Mathematics Year 6: (6G4b) Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles

More Year 6 Properties of Shapes resources.

Did you like this resource? Don't forget to review it on our website.

## Part 1

## WALT: Measure with a Protractor

 See my green notes to help you!Follow the directions to discover where the ladybird is going.


1. Move forwards 2 squares.
2. Turn $90^{\circ}$ clockwise and move forward 1 square.
3. Turn $360^{\circ}$ anticlockwise and move forward 1 square.
4. Turn $90^{\circ}$ clockwise and move forward 2 squares.
5. Turn $90^{\circ}$ anticlockwise and move forward 1 square.

Can you plan your own route for the ladybird to follow?

Follow the directions to discover where the ladybird is going.


1. Move forwards 2 squares.
2. Turn $90^{\circ}$ clockwise and move forward 1 square.
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5. Turn $90^{\circ}$ anticlockwise and move forward 1 square.
Can you plan your own route for the ladybird to follow?

## Varied Fluency 1

## What type of angles are these?





## Varied Fluency 1

## What type of angles are these?



acute

obtuse

| acute | obtuse | reflex |
| :---: | :---: | :---: |

## Varied Fluency 2

Estimate these angles.


## Varied Fluency 2

Now measure them! Notice how the protractor is lined up - you will need to do this yourself later!


## Varied Fluency 2

Estimate, then measure these angles. Estimations can be up to $20^{\circ}$ either side of the answer. $a-50^{\circ}, b-135^{\circ}$


## Varied Fluency 3

Estimate the size of the angles $a$ and $b$.


## Varied Fluency 3

## Now measure a.



## Varied Fluency 3

## Now measure b.



## Varied Fluency 3

Estimate, then measure the size of the angles $a$ and $b$.
Estimations can be up to $20^{\circ}$ either side of the answer. $a-76^{\circ}, b-104^{\circ}$


## Varied Fluency 4

## Fill in the blanks.

A reflex angle is between
${ }^{\circ}$ and

## Varied Fluency 4

Fill in the blanks.

A reflex angle is between $180^{\circ}$ and $360^{\circ}$.

## Well done! It's over to you now.

Go to Part 2 and choose your challenge! Normal rules apply: page 1 will give you an easier challenge, page 2 will be about the same as what we've just practised and page 3 will be more of a stretch.

You only need to do the first set of questions on your chosen challenge - the ' $A$ ' questions. If you want extra practice, you can then do the ' $B$ ' questions of your chosen challenge page. When you finish, don't forget to mark your answers before sharing, so I can see where you need help.

