UNIT 1 LESSON 7

START (5')

With two rulers form an angle and show it to the class. Ask for the type of angle:

Is this angle acute, obtuse or right- angled?

Say the children are to write A, O or R on their whiteboards as you count to 5 then show their answers.

Repeat showing a mixture of acute and obtuse angles in different orientations.

MAIN TEACHING (45')

Take four strips of card, joined together by a split pin, and attach to the board to show four right angles.

Establish that each is a right angle. Rotate one strip through 90º, then 180º, 270 and 360º, each time ask how many degrees has the strip turned:

How many degrees has the strip turned?

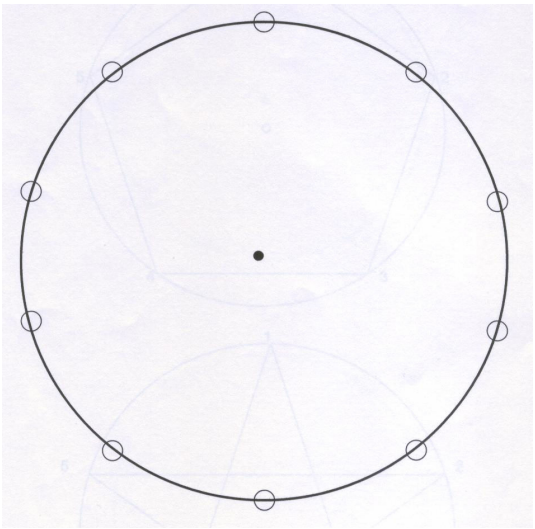
Record on the board: A whole turn = 360º.

Remind children that it is possible to turn through more than 360º. Turn the trip a whole turn and another 90º. Ask how many degrees the strip has turned now:

How many degrees has the strip turned now?

Establish it is 360º+90º = 450º.

Show a circle with ten points equally spaced around the circle.



Rotate a pencil through one revolution about the centre and ask how many degrees did the pencil turn:

How many degrees did the pencil turn?

Agree it was 360º. Rotate the pencil about the centre between two adjacent points. Ask how many degrees the pencil turned this time:

How many degrees did the pencil turn this time?

Establish it was 36º. Rotate the pencil through different combinations of 36º starting from different points, moving clockwise as well as anticlockwise. Ask what the angle of turn is:

What is the angle of turn?

Explain how to use a protractor. The upside down "T" in the middle of the straight line on your protractor needs to be exactly on the vertex of your angle.

Draw some angles on the board and use the class protractor to measure them. Ask what kind of angle is and tell them to estimate the measure before measuring:

What kind of angle is?
What is the estimate measure?

Ask a student to draw an angle of 25 degrees on he board.

Children draw on their whiteboards the angles you say. They first estimate and then measure.

Students do worksheet 1.9 and 1.10 individually. Correct the answers asking how they used the protractor and the difference between the angles they estimated and the exact measure:

What is the exact measure?
How did you use the protractor?
What was the difference between the estimate and the exact measure?

ENDINGS (10')

Encourage children to think about uses of degree measures in the real life:

Could you think about some uses of degree measures in real life?

Think about planes orientation, boats orientation, maps, atlas,…

Give out worksheet 1.11. Measure the angle and talk about the importance of the angle measure for a ship orientation:

Why do you think is important for a ship to turn the correct angle?

"The total angle in a circle is 360º."
"Turn measures have important uses in real life."

RESOURCES

Two rulers for the teacher, whiteboards, whiteboard pen, 4 strips of cards, a split pin, a circle with 10 points, a board protractor, individual protractor, worksheet 1.9, 1.10 and 1.11, P. Point using a protractor U1L7,
http://www.amblesideprimary.com/ambleweb/mentalmaths/protractor.html