

**Year 3 Maths No Problem lesson plans Chapter 12, Lesson 3 - 7, Mind workouts and Review 12 and Chapter 13, lessons 1, week beginning 22/06/20**

Lesson 3: Finding Angles in Shapes

Textbook pages: 200 – 201

**Lesson Objective**

To be able to recognise angles as a property of shape.

**Lesson Approach**

To begin this lesson, provide pupils with a variety of 2-D shapes. Show them the In Focus task and ask them how many angles they can see in the stop sign. Let them discuss this. Then tell them your friend said that knowing the number of sides a shape is helpful in finding the number of angles. Is this true? Ask pupils to use the shapes in front of them to see if this is a pattern that applies to all shapes. Ask them to construct a chart and to record the number of sides and angles each shape has. Can they see a pattern? What is it?

During Guided Practice, pupils are identifying the number of sides and angles of different shapes and then marking the angles in each shape.

---

Lesson 4: Finding Right Angles

Textbook pages: 202 – 203

**Lesson Objective**

To be able to identify right angles.

**Lesson Approach**

To begin this lesson, provide each pupil with a sheet of paper. Show them the In Focus task and ask them to follow the directions to make their own 'right-angle tester.' Allow them time to look around the room to find and record right angles they can see. Ask them to mark the right angles on their testers with a square. Discuss the right angles they find around the classroom.

During Guided Practice, pupils are identifying right angles using their 'right-angle tester'.

---

Lesson 5: Comparing Angles

Textbook pages: 204 – 205

**Lesson Objective**

To be able to identify an acute angle as a smaller angle than a right angle.

**Lesson Approach**

To begin this lesson, provide pupils with their right-angle testers. Show them the In Focus task and allow them to inspect the letters shown to determine whether or not they have

any right angles. Ask them to mark the right angles in the letters. Then ask them if they can identify angles that are smaller than a right angle. Show them how they can use their 'right-angle tester' to do this and ask them to mark these angles. Tell them these angles are called 'acute' angles.

Guide pupils to see that right angles are all the same size, while acute angles come in different sizes.

During Guided Practice, pupils are drawing an acute angle and then finding right angles and acute angles in shapes.

---

## Lesson 6: Comparing Angles

Textbook pages: 206 – 209

### **Lesson Objective**

To be able to identify an obtuse angle as a greater angle than a right angle.

### **Lesson Approach**

To begin this lesson, show pupils the In Focus task. Ask them to find all the angles they can in the letters, paying special attention to the question which asks them to find angles larger than a right angle. Tell them they will have to look very closely. Structure the learning as in the Let's Learn section so that pupils are identifying the right angles and the acute angles before looking at the letter A. A has some special angles that look bigger than a right angle. Allow pupils to talk about this angle and see if they know what it is called and what makes it special.

Obtuse angles are larger than  $90^\circ$ . What must that mean about a right angle and an acute angle? Is one of them equal to  $90^\circ$ ? Is one of them smaller? What would make the most sense? Allow pupils some time to discuss this.

During Guided Practice, pupils are drawing an obtuse angle and then identifying whether angles are larger or smaller than a right angle. They will be naming all the angles they have learned, followed by finding angles on a clock face and letters.

---

## Lesson 7: Making Turns

Textbook pages: 210 – 212

### **Lesson Objective**

To be able to identify right angles and recognise that two right angles make a half-turn, three make three-quarters of a turn and four a complete turn.

### **Lesson Approach**

To begin this lesson, enlarge the In Focus task and display it in front of the class. Ask them to use right-angle turns to move the animal around the game board. Tell them to get started,

your friend said they need to make a right-angle turn clockwise. What would this do to the animal? Allow them to continue the game using right-angle turns.

After some time, tell them your friend played the game differently and introduce the terms 'half turn' and 'quarter turn'. What do they mean? How would you do a half turn? Is it like any of the turns you have done using right angles? Allow them to discuss how 1, 2 and 3 right-angle turns might look like when completed, using fractions to describe the movements (i.e. quarter, half, three-quarters).

During Guided Practice, pupils are describing the turns of cubes using right-angle turns and fractions.

---

## Lesson 8: Chapter Consolidation

Textbook pages: 213 – 214

### **Lesson Objective**

To be able to use knowledge of angles to solve problems.

### **Lesson Approach**

Mind Workout

Pupils find the number of acute angles in the figure provided in text book (page 213) and workbook (page 157).

Maths Journal

Pupils write about sports that involve an understanding of angles.

Self check

Pupils complete this as a chapter summary and discuss what to do with their teacher if any boxes are not ticked.

---

Review 12, pages 158 – 160 in the workbook.

---

## **Chapter 13 – Lines and Shapes**

### **Chapter Overview**

This unit has pupils exploring the different types of lines in addition to properties of shapes, both 2- and 3-D. To begin the unit, pupils will be identifying perpendicular and parallel lines, followed by horizontal and vertical lines. Pupils move on to describing 2-dimensional shapes and drawing them before making 3-dimensional shapes using nets and clay.

Lesson 1: Identifying Perpendicular Lines

Textbook pages: 216 – 218

### **Lesson Objective**

To be able to identify perpendicular lines.

### **Lesson Approach**

To begin this lesson, ask pupils to recreate their right-angle testers. Show them the In Focus task and ask them to use their right-angle tester to identify the right angles in the swing set. Ask them to show you which two lines meet to make the right angles. Explain the two lines that meet to make right angles have a special name. Do you know what they are called? Tell them they are called perpendicular lines. Can you identify any perpendicular lines in the classroom using your right-angle testers? Guide pupils to realise that if they can find a right angle, they can find perpendicular lines.

Show pupils Let's Learn 3. Lead them to see that lines can be labelled using letters. In the example, we can say that line AB is perpendicular to line CD. Ask them what makes the lines perpendicular in Let's Learn 3 and 4 and what makes them not perpendicular. Are there things that must always be in place for lines to be perpendicular? Can short lines be perpendicular? Can thick lines be perpendicular? What matters most?

During Guided Practice, pupils are identifying perpendicular lines in a picture, angles, shapes and letters.