Year 4 Maths No Problem workbook, Chapter 12, lessons 9 – 10, Mind Workouts, Review 12 and Chapter 13, lessons 1 - 2, 22/06/20

Lesson 9: Completing Symmetrical Figures

Textbook pages: 187 – 189

Lesson Objective

To complete symmetrical figures.

Lesson Approach

To begin this lesson, show pupils the In Focus task. Ask them to discuss the task with their partners and then share their ideas with the class. Where could the mirror lines be? Work through Let's Learn using the images to support class discussion. Is it possible to have more than one line of symmetry on the grid? How will this affect how the figure looks? How can we check? In Let's Learn 4, discuss the image with pupils. Is this figure symmetrical? Is the dotted line a line of symmetry? How do we define a line of symmetry? A line of symmetry is a folding line; it folds the figure into 2 halves which completely overlap each other. Does the dotted line fit this definition? Discuss this with pupils.

During Guided Practice, pupils are completing symmetrical figures about a line of symmetry.

Lesson 10: Sorting Shapes

Textbook pages: 190 – 193

Lesson Objective

To be able to compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.

Lesson Approach

To begin this lesson, show pupils the In Focus task. Ask them to work in groups of 4 to classify the shapes into groups and record this using flip charts. Ask them to do it in at least two ways.

Gather pupils' examples and ask each group to explain one way they have classified the shapes. Then show them the Let's Learn classifications. Has any group classified the shapes in the same way? Has any group sorted the shapes in a way that is not shown in the textbook? Ask those groups to present and explain how they did it.

During Guided Practice, pupils are classifying shapes according to the criteria given.

Lesson 11: Chapter Consolidation

Textbook pages: 194 – 196

Lesson Objective

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

Lesson Approach

Mind Workout
Pupils solve a problem on symmetry in textbook (page 194) and workbook (page 147).

Maths Journal
Pupils explain whether or not Ravi's and Emma's statements are correct.

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 148 – 150.

Chapter 13 – Position and Movement

Chapter Overview

In this chapter, pupils will learn how to describe the positions of objects and figures. They will learn how to describe positions on grids using coordinates. They will be introduced to the x and y axes and build an understanding of how coordinates are written. They will learn how to translate shapes using the terms 'left', 'right', 'upwards' and 'downwards' and will use coordinates to describe a figure following a translation.

Lesson 1: Describing Position

Textbook pages: 198 – 201

Lesson Objective

To be able to describe positions on a 2-D grid as coordinates in the first quadrant.

Lesson Approach

To begin this lesson, show pupils the In Focus task. Give them time to discuss how they can find the position of the fly, then share their ideas with the class. Display the image from Let's Learn 1. How does drawing the grid lines help us when describing the position of the fly? Ask pupils to talk to their partners and share their thoughts.

Tell the class your friend says the fly is 3 units from the blue wall. Is my friend correct or incorrect? How do you know? What about the red wall/yellow wall? Ask pupils to solve this with their partners and feed back their solutions. What did you do? Did anyone get a different answer? How far is the fly away from 2 walls/3 walls/4 walls? How can we say

these sentences? Display Let's Learn 2. Give pupils time to discuss the suggestions and share their thoughts. Then ask them if they agree or disagree and to justify their answers.

During Guided Practice, pupils are describing the location of points on a map and the position of vertices on a grid.

Lesson 2: Describing Position

Textbook pages: 202 – 204

Lesson Objective

To be able to describe positions on a 2-D grid as coordinates in the first quadrant.

Lesson Approach

To begin this lesson, show pupils the In Focus task and give them time to think about how this problem is the same or different from the problems they solved in the last lesson. What do the numbers mean? Ask pupils to discuss this with their partners and feed back their thoughts.

Introduce the term 'coordinates' as a way to describe a position. Then work through Let's Learn, using the images for support, to show the class what each number in the coordinates represents. Alternatively, invite a volunteer to model this. If required, plot different positions on a grid and prompt pupils with questions, such as: Who can describe the position in words? Who can describe the position in numbers? Can anyone give us a different position that we can plot? Who can find that position on the grid? What do the coordinates mean?

During Guided Practice, pupils are finding the coordinates to describe the positions of three insects.