

Year 3

Remote Learning

Maths- Week 12- Overview of activities, learning and progression - Information for parents

This week we will be finding out about **horizontal, vertical, perpendicular and parallel lines**. We will be building on our work on angles and will be describing, identifying and drawing these lines.

The activities we have chosen are for children to reach the 'expected level', however you may need to simplify these activities or extend them, to suit your child.

End of year expectations in year 3 Geometry - properties of shape:

- Recognise **angles as a property of shape** or a description of a turn.
- Identify **right angles**, recognise that 2 right angles make a half turn, 3 make three-quarters of a turn and 4 a complete turn; identify whether angles are greater than or less than a right angle turn.
- Identify horizontal, vertical, perpendicular and parallel lines in relation to other lines

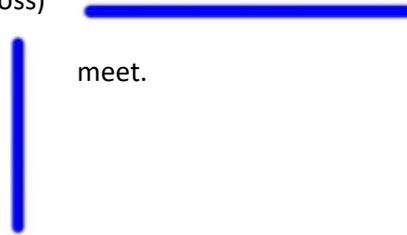
Video lessons

We have used some online lessons from the **Oak National Academy** again this week as they cover our learning around this unit of work. We recognise that this means the children will need more access to a screen for maths this week. We have therefore included ideas below that link to/reinforce some of the objectives in more practical ways. You might choose to do these as extras in or instead of some of the video lessons.

Practical activities that you can do around this learning that don't involve so much screen time:

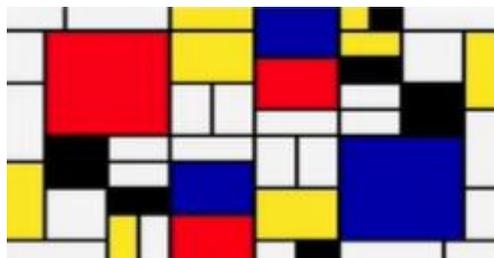
- **Perpendicular Line Hunt**- Look for perpendicular lines in the world around you. Remember that you find them where horizontal lines (lines that go straight across)

and vertical lines (lines that go straight up or down) meet.



They could be inside or outside. How many can spot? Doors, windows, books, tiles, tables... are all good places to start your search.

- **Perpendicular Poster**- Make a poster about perpendicular lines including pictures of real things you can see around you that have perpendicular lines.
- **Perpendicular Art**- Piet Mondrian was an artist who used perpendicular lines in his art. Have a go at creating your own art work using only perpendicular lines.



- **Design a Flag**-Can you design a flag that includes the following: an acute angle, an obtuse angle, horizontal, vertical, perpendicular and parallel lines. It could be the national flag for the new island country that you are creating in English.



Teaching and Activities – Perpendicular Lines

Session 1 starter

Introductory Quiz -This quiz will help you to check any previous learning and re-cap anything you may have forgotten.

<https://www.thenational.academy/year-3/maths/to-identify-perpendicular-lines-year-3-wk5-1#slide-2>

Main activity

This first lesson introduces the idea of what a perpendicular line is. The children can follow along with the lesson, but might need to pause at points.

<https://www.thenational.academy/year-3/maths/to-identify-perpendicular-lines-year-3-wk5-1#slide-3>

Session 2 Starter

Knowledge quiz- Let's see what you can remember about perpendicular lines

<https://www.thenational.academy/year-3/maths/to-draw-perpendicular-lines-year-3-wk5-2#slide-2>

Main Activity

In lesson 2, we will be looking in detail at horizontal and vertical lines and how these relate to perpendicular pairs of lines. We will then identify where we find these in the real-world and begin to draw them.

<https://www.thenational.academy/year-3/maths/to-draw-perpendicular-lines-year-3-wk5-2#slide-3>

Session 3 Starter

Knowledge quiz- Let's see what you can remember about angles.

<https://www.thenational.academy/year-3/maths/to-identify-and-explain-parallel-lines-year-3-wk5-3#slide-2>

Main Activity

In this lesson 3, we will be identifying and explaining parallel lines. We are building on our knowledge of lines and angles to identify pairs of parallel lines. We will identify these individually and within 2D shapes, as well as looking in detail at their meaning.

<https://www.thenational.academy/year-3/maths/to-identify-and-explain-parallel-lines-year-3-wk5-3#slide-3>

Session 4 Starter

Knowledge quiz- Let's see what you can remember about parallel lines.

<https://www.thenational.academy/year-3/maths/to-revise-parallel-and-perpendicular-lines-year-3-wk5-4#slide-2>

Main Activity

In this lesson 4, we will be revisiting pairs of parallel and perpendicular lines. We will look at how they differ and what they have in common, as well as where they occur in 2D shapes.

<https://www.thenational.academy/year-3/maths/to-revise-parallel-and-perpendicular-lines-year-3-wk5-4#slide-3>

Session 5

In this last lesson of the week we are going to be investigating some national flags and applying what we have learnt about shape, angles and lines.

You can access this activity online <https://nrich.maths.org/7749> or by opening the Maths Lesson 5- National Flag Activity document attached.



Pick a flag and investigate some of the following:-

What shapes can you see in it? Can you describe them and their angles?

Can you find any pairs of parallel lines? If so mark them on your flag.

Can you find any horizontal lines? If so mark them on your flag.

Can you find any vertical lines? If so mark them on your flag.

Are there any lines perpendicular to one another?

Can you find a way to classify the shapes in your flag?

Can you find out which country the flag belongs to?

Now try with another flag.

Applying and reasoning

We have attached an extra question that involves the children applying and practising their reasoning skills in relation to lines. It is a good chance for the children to apply what they have learnt this week.

The question and answer is attached on the Week 11 Applying and Reasoning Question/ Week 11 Applying and Reasoning Answer documents.

Useful website links to support learning this week:

BBC bitesize lessons - short clip about perpendicular and parallel lines to watch after the week's learning:
<https://www.bbc.co.uk/bitesize/topics/zb6tyrd/articles/zp327hv>

Explanation of geometric lines- <https://www.youtube.com/watch?v=P3AOoLbA3us>

Songs about lines- <https://www.youtube.com/watch?v=DQEVllmeWH4>
<https://www.youtube.com/watch?v=P3AOoLbA3us>

