



Year 2

Remote Learning

Maths Week 12 (w.b. 8.6.20)

Message

Hello Year 2,

We hope you had a wonderful week away from school work! But we are nearly 100% sure you've been using maths without even realising. Don't believe us?

This week, we are starting a unit of work called position and direction. You will be describing **movement** like 'forwards', 'backwards', 'left' and 'right' and **turns** using the language 'full turn', 'half turn', 'quarter turn', 'three-quarter turn', 'clockwise' and 'anticlockwise'.

By the end of the week, you will be able to give directions and describe movements and turns of objects/people, spot patterns and use and understand key words like: clockwise and anti-clockwise to describe rotations of objects and shapes.

Remember, you can send any of your learning to: year2@coleridgeprimary.net. We really love seeing what you have been up to.

Take care,
Ms Creamer, Mr Heidensohn, Miss Ibbotson and Mr Ibbotson

Parent Message

Dear Parent,

This week's maths is all about **position and direction**. This is a new unit of learning for the children. They will be using mathematical vocabulary to describe position, direction and movement including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise).

This is another very practical unit. If we were working on this at school, we would explore movement and turns further using ICT and PE. We would do a lot of practical games to direct partners and create maps with instructions to follow around the class/school.

The first activity in each lesson uses the Oak Academy online resource as a starting point for their learning. All further activities can run alongside this or as standalone fun suggestions and activities. We hope that using these lessons will suit the majority. The children can complete these lessons with relative independence, and if it suits your home situation, they can then dip into the Website Links section to further/consolidate their learning. As always, pick and choose whatever suits your situation best!

Best wishes,
The Year 2 Team.

Website Links

Take part in **Mr Ibbotson's Mental Maths test!** You just need a piece of paper and a pencil or pen. Good luck!

<https://youtu.be/nAsSAk4N1xo>

MyMaths- Login: coleridge1 Password: success724

1. Position and Direction lesson and activities.-

<https://app.mymaths.co.uk/3282-lesson/position-direction-and-movement>

2. Position and turning lesson and activities

<https://app.mymaths.co.uk/253-lesson/position-and-turning>

3. Patterns and sequences

<https://app.mymaths.co.uk/3279-lesson/patterns-and-sequences>

PE- Supermover

<https://www.bbc.co.uk/sport/av/supermovers/42626760>

Games:

Play **Scratch**- Create a maze for a sprite to move left, right, forwards, backwards, clockwise, anti-clockwise, full turn, half turn, quarter turn, and three quarter turn!

<https://scratch.mit.edu/projects/editor/?tutorial=getStarted>

Lesson 1 – Looking at how to describe the movement of an object

You will need: Pen and paper, the position and direction help sheet document.

Key words: forwards, backwards, left and right.

Introduction: Today, you will be using the key words to describe the movement of an object. Before you begin, familiarise yourself with left and right. Use the help sheet document for support.

Activity 1: Video and activities- Oak National Academy- Year 2- Maths- Lesson 9 -To be able to give directions. In this activity, you will be understanding and giving directions from certain points. You will be asked to give directions to prove you understand and finally take a short quiz to prove what you know! You could complete this within 15mins, including time spent marking your work. Make sure you pause at the parts suggested to complete the main activity. <https://classroom.thenational.academy/subjects-by-year/year-2/subjects/maths>

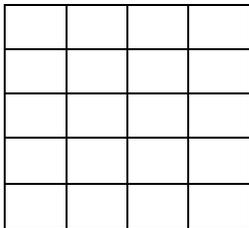
Activity 2A (practical): In this activity you will need to follow and give directions! Ask an adult/sibling to play along with you, giving them some instructions to follow when moving around a room or garden. You must use the **key words**. If no one is free, you can even give your teddy some instructions and make sure they follow them correctly!

***Stop and think question!** What direction are you facing at the start? Why is this important?

Your instructions could look like this:

1. Move ____ step/s right.
2. Move ____ step/s forward.
3. Move ____ step/s left.
4. Move ____ step/s backward.

Activity 2B: Could you record these movements on a grid? Use the grid provided (or draw one like the one below!) and record all the movements made. Draw your buddy at the starting position and the direction they travelled using arrows.



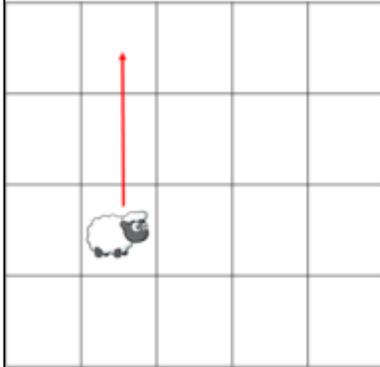
Activity 3 (reasoning and problem solving): Look at the attached sheet for lesson 1- activity 1. You could print off the page or write your answers on a separate page.

A

Amir says the sheep has moved 2 squares forward.

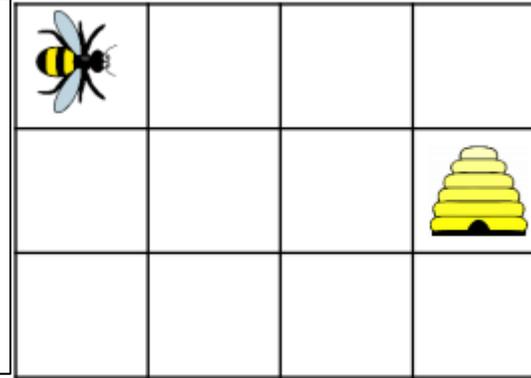
Is Amir correct?
Explain your reasoning.

Hint: What way is the sheep facing?



B:

How many different routes can you write for the bee to get to the hive? Use the words forwards, backwards, left and right.



Lesson 2 - Looking at how to describe turns (rotations) of an object

You will need: Pen and paper, the position and direction help sheet document.

Key words: Clockwise, anti-clockwise, full turn, half turn, quarter turn, and three quarter turn.

Introduction: Before you begin, familiarise yourself with the words used to describe turns/rotations. Use the position and direction help sheet document. It is important to encourage the children to take into consideration which direction the object/person is facing to begin with before they turn or rotate.

Activity 1: Video and activities-Oak National Academy- Year 2- Maths- Lesson 10- to use the language of rotations. In this activity, you will explore rotation (turns), including a quarter, half, three-quarter and full turn. It includes 2 quick quizzes, a 10minute video and a worksheet activity (printout attached) where you will need to draw what a tree would look like after three different rotations.

<https://classroom.thenational.academy/lessons/to-use-the-language-of-rotation>

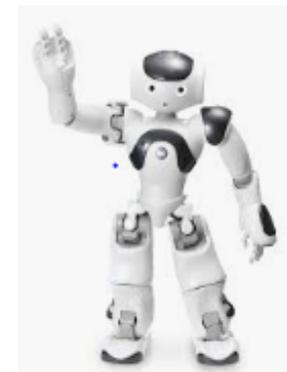
Activity 2 (practical): Practise making quarter, half, three-quarter, and full turns both clockwise and anti-clockwise. Use the help sheet document for support if needed. You could pretend you are a robot and will only turn when you have been given a very clear instruction. Ask someone to call out rotations and see if can you complete it!

Activity 3 (reasoning and problem solving): 'If two objects turn in different directions, they will not be facing the same way.'

Would you say that this is **Always**, **Sometimes** or **Never** true to this statement? Explain your reasoning and send your answer to year2@coleridgeprimary.net . We would love to know what you think!

Bonus: Play Robin Rotations (attached). This is a **2 player game**. You can print out the game (3 levels of difficulty) or draw your own version with a ruler on a blank piece of paper. You could use a pencil as your spinner.

For additional learning or consolidation, look at the website links to **MyMaths** above.



Lesson 3- Looking at how to describe movement and turns together

You will need: Pen and paper, the position and direction help sheet document, a blind-fold, corner markers, random objects (see activity 2).

Key words: Clockwise, anti-clockwise, full turn, half turn, quarter turn, three quarter turn, forwards, backwards, left and right.

Introduction: You will need to apply what you know from the last 2 lessons using all the key words! **Remember** it is important to think about where the person or object is facing to begin with and you always give directions from your point of view (Meaning **YOUR** left or right).

Activity 1: Video and activities-Oak National Academy- Year 2- Maths- Lesson 14- to follow a route around a map - In this lesson, you will be following directions of movements and turns. The lesson is 14 minutes with an activity and 2 quizzes to check for understanding. You will be giving a zoo keeper directions to his escaped animals as well as writing down the directions to your fridge starting from your bedroom! We have attached the independent worksheet for you to complete. Have fun!

<https://classroom.thenational.academy/lessons/to-follow-a-route-around-a-map>



Activity 2 (practical): Create an obstacle course with a twist! In this activity, you will need to map out an obstacle course to match the *grid provided (*You could draw your own with a ruler). Each square is the same as one step wide, so your course will be **four steps wide** and **five steps long**. Use socks or anything you can find to mark out the 4 corners of your square. Draw in the square where you want to put some objects or obstacles. Then you'll need to write some instructions to find it or avoid it! Scarves work well as blind folds! Have fun!
*Remember when you give instructions you are talking from your point of view. (So stand behind the person to give the directions so your left and rights match!☺)



Activity 3 (reasoning and problem solving): Is Whitney correct?



A quarter turn clockwise is the same as a three-quarter turn anticlockwise.

Convince me! You can use a small object or person to show your reasoning.

Bonus (game): Pirate Paraphernalia- Follow instructions to help the pirate collect up all his stuff. There are 3 levels of difficulty with this game! Game is *attached for printing (*You could always look at the screen and write down the answers onto a blank sheet of paper).

Lesson 4- Looking at spotting and creating patterns with shapes

You will need: Pen, paper, ruler, colouring pencils or markers

Keywords: Patterns, rotations/turns, clockwise, anti-clockwise, full turn, half turn, quarter turn, and three quarter turn.

Introduction: You will be building on previous knowledge of patterns and repeating patterns from Year 1. You will now be using keywords to describe what is happening in the pattern. As well as spotting and creating patterns that involve direction and turns.

Activity 1: Video and activities -Oak National Academy- Year 2- Maths- Lesson 13- to identify how patterns have been created through a rotation- In this activity, we will look at how patterns have been created through rotation and we will be describing the rotation. The video is 11 and half minutes, with a quiz and an independent task. You will be asked to draw shapes on a piece of paper. You can use a rule or try your best to draw it free hand. You will also be looking at different patterns and thinking about what rotation (clockwise or anti-clockwise) they are making. After you complete the independent task you can check your answers using the video.

<https://classroom.thenational.academy/lessons/to-identify-how-patterns-have-been-created-through-rotation>

Activity 2 (reasoning and problem solving):

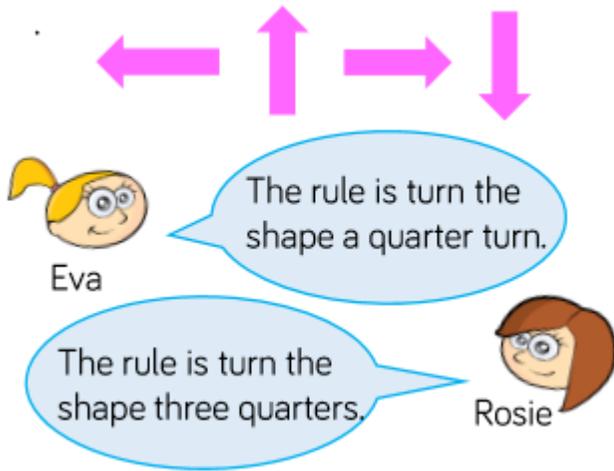
2A: How many different patterns can you create using this shape? Think about all the different rotations it can make and draw the patterns on a piece of paper or in the space provided below.



2B: Spot the mistake in this pattern:
Explain why it is incorrect.



2C: Who is correct? Write your explanation.



Activity 3 (worksheet): Turning shapes clockwise and Anti-clockwise. In this activity, you must draw each shape after making a quarter turn, half turn, three-quarter turn and a full turn. Worksheets for activity attached. Alternatively you can cut out shapes provided and stick them in the right position.

Bonus Activity (Online game): Simple shape patterns game with 3 levels of difficulty. <https://www.topmarks.co.uk/ordering-and-sequencing/shape-patterns>

Lesson 5 – Consolidation and Investigations

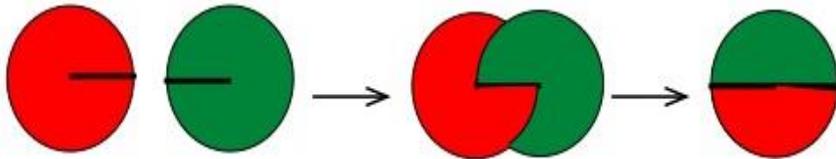
You will need: Pen and paper, paper plates, scissors, colouring pencils/markers.

Introduction: This lesson is all about testing yourself with quizzes and applying your learning in investigations. If you find quiz A difficult, or you would like to go do some further activities on this learning, please use the **MyMaths** lessons linked at the top of this page. **Login:** coleridge1
Password: success724.

Activity 1: Quiz A and Quiz B are attached- You can ask a grown up to check your work or send it to year2@coleridgeprimary.net for your teacher to correct.

Investigation 1(1 star difficulty): Turning- Link here: <https://nrich.maths.org/5656>

To have a go at this task, you'll first need to make this interactive by using two differently-coloured discs of thick paper or card. Cut a slit into each from the edge to the centre in a straight line. Overlap the two slots and turn them to link the two discs together. This YouTube video will demonstrate how from **5:30 to 6:30**- <https://www.youtube.com/watch?v=1frjFNj5dMc&feature=youtu.be>



Can you turn your discs to show what:

- a) a book being opened looks like from above?
- b) turning a volume knob on your music player looks like?
- c) a bicycle wheel looks like when going along?
- d) a door would look like from above as it's being opened?
- e) what a hamster wheel looks like when the hamster's running inside it?

Describe and then show some other things that you do or have seen, that turn in this way.

Investigation 2 (2 star difficulty): Coloured Squares- This problem needs you to work in a systematic way, which is very important for maths. Following clues, you will need to decide which colour goes in each square. We have attached a sheet of blank squares for you to colour or you can follow the link and do it interactively. <https://nrich.maths.org/234/note>

Use these clues to colour each shape:

- Blue is between green and red
- Orange is below green
- Yellow is to the left of both purple and orange

Questions

1. Where could the blue counter go? (Or which square could be blue?) How do you know?
2. How does the second clue help?
3. Try colouring the squares, or use counters to try out an idea. Does your arrangement fit the clues?

Challenge:

Make your own version of the challenge for a friend to solve (or Teacher!).

