Year 1
Remote Learning

Maths Week 8 (w/b 11.5.20)

Message

Hi Year 1

We hope that you got on well with the different activities last week.

As it was a Bank Holiday last week, some of you may still have a lesson to do, so this week there are four Position and Direction lessons. If you have already completed last week's lessons, you could have a go at the investigations.

This week, we will be learning about position and direction. By the end of the week you should be able to:

- describe position, direction and movement, including whole, half, quarter and three quarter turns.

If you have time, you could also play numbots, do an online maths investigation/game or do an activity on MyMaths.

Good luck!

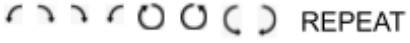
Love,

Ms Higgins, Ms Tapp, Ms McMillan, Ms Jones and Ms Crawford

Lessons

Lesson 1

<u>Making turns</u>
Find a nice clear space to stand in. Ask a grown up to give you the instructions:
1. Notice what you are facing (a window, a shelf, your bed?)
2. Now turn all the way around. A **full turn**. What are you facing? (you should still be facing the same thing!)
3. So what would be a **half turn**? What would you be facing? (If this is tricky to visualise, you could draw a big circle, with lines to halve and quarter it, to stand on as you make your turns).
4. If you know what a half turn is, can you work out what a **quarter turn** is? What are you facing if you make a **quarter turn to the left**? What about a **quarter turn to the right**? (If you find it tricky to remember your left and right, you could draw a big L on your left hand and a big R on your right hand!)
5. If your grown-up shouts out different turns, can you jump them?
6. **Problem**: What do you notice if you jump a **half turn** (notice what are you facing), then jump a **quarter turn**, then jump a **half turn** again? Are you facing the same thing you were facing last time you jumped a **half turn**? Why not? Can you explain?

<u>Dance turns</u>
Can you make (or jump) a pattern of turns? Clap a beat 1-2-3-4, shout out your turns and jump them. e.g. *half turn – full turn – half turn – full turn – quarter turn left – quarter turn right – repeat.* You can do the jumping whilst a grown up calls out the moves, or *you* could call out the moves and get your grown up jumping! See if you can add more turns. Can you combine your turns to create a dance.
Put on your favourite music. Call out the turns in time to the music and get jumping!
Tip: If it's hard to remember your pattern / routine, you could make up a symbol for each turn and write the moves down.
What do you think my dance is? 

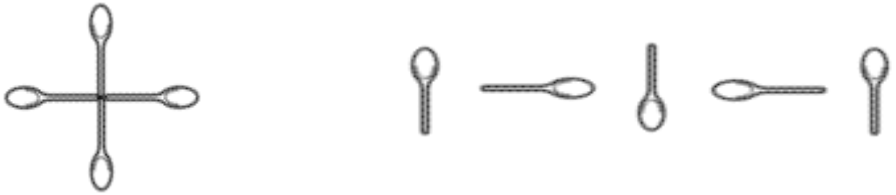
Extension: Of course, your dance doesn't have to just have turns in it. What other directions of movements could you use? How would you combine them into your dance routine? *(forwards, backwards, left, right, up, down)*

Lesson 2

Turning objects

1. Find an object that is easy to draw around and has a distinctive shape (a round or evenly shaped object will be really tricky, but something long or with a distinct end, like a spoon would work well).

2. Lay out the object on a piece of paper and draw round it.
3. Lift the object, turn it a QUARTER TURN and draw round it again.
4. Do the same again, turning it another quarter turn and again.
You should end up with 4 or 5 drawings of your object showing a quarter turn, a half turn, a three quarter turn and a full turn.



You might end up with a picture that looks like one of these.
5. See if you can label your drawing with the turns (¼, ½, ¾ or full).
This is now your 'checking sheet'.

Now you are going to play **The Visualising Game**.
Put the object in front of you. Your grown up is going to tell you a turn (¼, ½, ¾ or full). Your job is to try and imagine what your object will look like having made that turn and to draw it (just a quick sketch) in that position. You can use your 'checking sheet' to check your answer (10 points for every right move) but challenge yourself not to use it to *tell* you the answer. Have a few goes at this until you are really confident.

If you don't want to draw your answers, you could use two of your object (say 2 spoons).
One stays in the original position, the other shows the turn.
You could try it with different pairs of objects. Are some shapes easier to imagine turned than others?

You might enjoy doing the investigation Turning Man.

Lesson 3

<u>Describing position</u>

Think about where you are in the room. What can you see around you?
What is on front of you?
What is behind you? What is to the left of you?
What is to the right of you?
What is above you?
What is below you?

Now look at this picture. Can you complete the sentences?

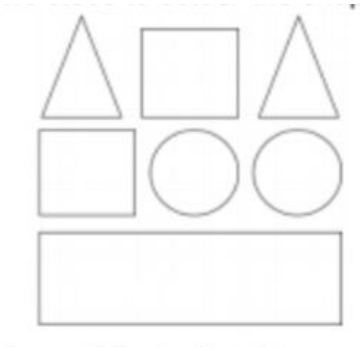
Complete these sentences using these words: top, bottom, above, below.

The football is _____ the cupcake.

_____ the books there is an empty shelf.

There is nothing _____ the football and books.

Here's another picture to look at. On a piece of paper, quickly sketch out the shapes exactly as you see them. Now follow the clues to colour the shapes. When you have finished, compare your drawing with the coloured version at the bottom of this maths remote learning page. How did you do?



The middle circle is blue.

The shape above the right circle is green.

The shape below the right triangle is red.

The shape below the circles is green.

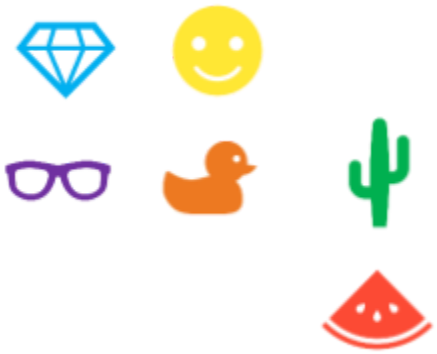
The square to the left of the green triangle is blue.

The other shape above the rectangle is blue.

The remaining shape is red.

Now that you are becoming so confident with the words that we use in maths to describe positions, it's time to put your knowledge to the test. Here's a challenge for you and a grown up.

First draw yourself a 3x3 grid (a noughts and crosses grid). Make it big enough to be able to easily draw something in each square. Next, secretly (do not let your grown up see) draw about 5 or 6 pictures, one in each of 5 or 6 squares of your grid.



Now, ask your grown up to draw their own 3x3 grid and, without showing them yours, instruct them how to fill it in so that it looks just like yours. Remember to use words like *above, below, left, right, top, middle, bottom*. Think carefully about how to give your instructions. In my picture, if I said, "there is a green cactus to the right of some purple glasses", it is correct but someone might draw the cactus right next to the glasses if I said that. I need to be more precise!
Your challenge is to make your grown up fill in their grid exactly like you drew yours (without them seeing it). You get a point for everything they put in the right place!

Extension: If you were good at that challenge, see if you can instruct a grown up to make a replica of a simple Lego model that you construct, or an arrangement of objects. Swap roles too – it's fun to be the maker and follow the instructions as well!

	Lesson 4 <u>Giving directions</u> If we were in school, we might programme the Beebots (bee shaped, simple robots) to move to specific places as a way of practising our positions and directions. We might make them move from one place to another on a map or try and get them to follow a route through a maze. In the absence of a Beebot, you are going to find a <u>Family-member-bot</u>. Family-member-bots don't have buttons, they use voice command. Before you start, you will have to find out roughly how far one step is for your Family-member-bot. The command to take one step is '**forward**', two steps is 'forward forward' or '2 forward' (whichever you prefer). Family-member-bots can also travel **backward** ('backward' 'backward backward' or '2 backward' etc.) they can also make **¼ ½ ¾ and full turns to the left or the right**. Your first task is to see if you can programme your Family-member-bot to move from one place in your house to another. Try a simple route first (e.g. chair to door). Then see if you can programme a more complicated journey (e.g. one room to another). The Family-member-bot can be very literal and might bump into things if you don't give precise instructions, so try really hard! If you were programming the Beebots, you wouldn't just give them one instruction at a time but string a row of commands together (3 forward, right turn, 2 forward, right ¼ turn, forward, left ¼ turn, 5 forward etc.) to follow a particular path. How many commands can you link together for your Family-member-bot to move accurately from one place to another? Your final challenge is to programme your Family-member-bot to find some treasure. You will have to secretly hide it first. You will also need to choose a starting place. Without your Family-member-bot seeing, plot the route from the starting place to the treasure. You will have to carefully take the steps of the route yourself and count how many steps forwards, which turns you make (and in which direction). See if you can write the steps and turns down as you walk the route. It might look a bit like this: 3F ¼ R 8F ¼ L 5F X When you are happy that you have worked out the route, programme your Family-member-bot to follow the route and find the treasure. If they find it, you win!

Investigations	Website Links
Click on the following links for some number investigations: Turning Man En-counters for two This activity is a version for one adult and one child, but there is a link on the page for a group version, should you want to play as a family. You will just need to find some sets of matching objects to play with (Lego pieces or similar). It's a very good activity for developing and refining the use of maths language (especially to do with position) and will build upon the skills of l Lesson 3.	For extra (football themed) resources and activities on position and direction have a look at https://plprimarystars.com/resources/position-direction https://www.topmarks.co.uk/Search.aspx?Subject=16&AgeGroup=2 https://www.twinkl.co.uk/resources/parents Twinkl are offering free subscriptions for parents, to support learning at home. https://play.numbots.com/#/intro You will have received an email with information about this and with login details. MyMaths Use our school log in (Username: **coleridge1,** Password: **success74**) and then your own log in details to access activities on the MyMaths website. We have added some more activities.