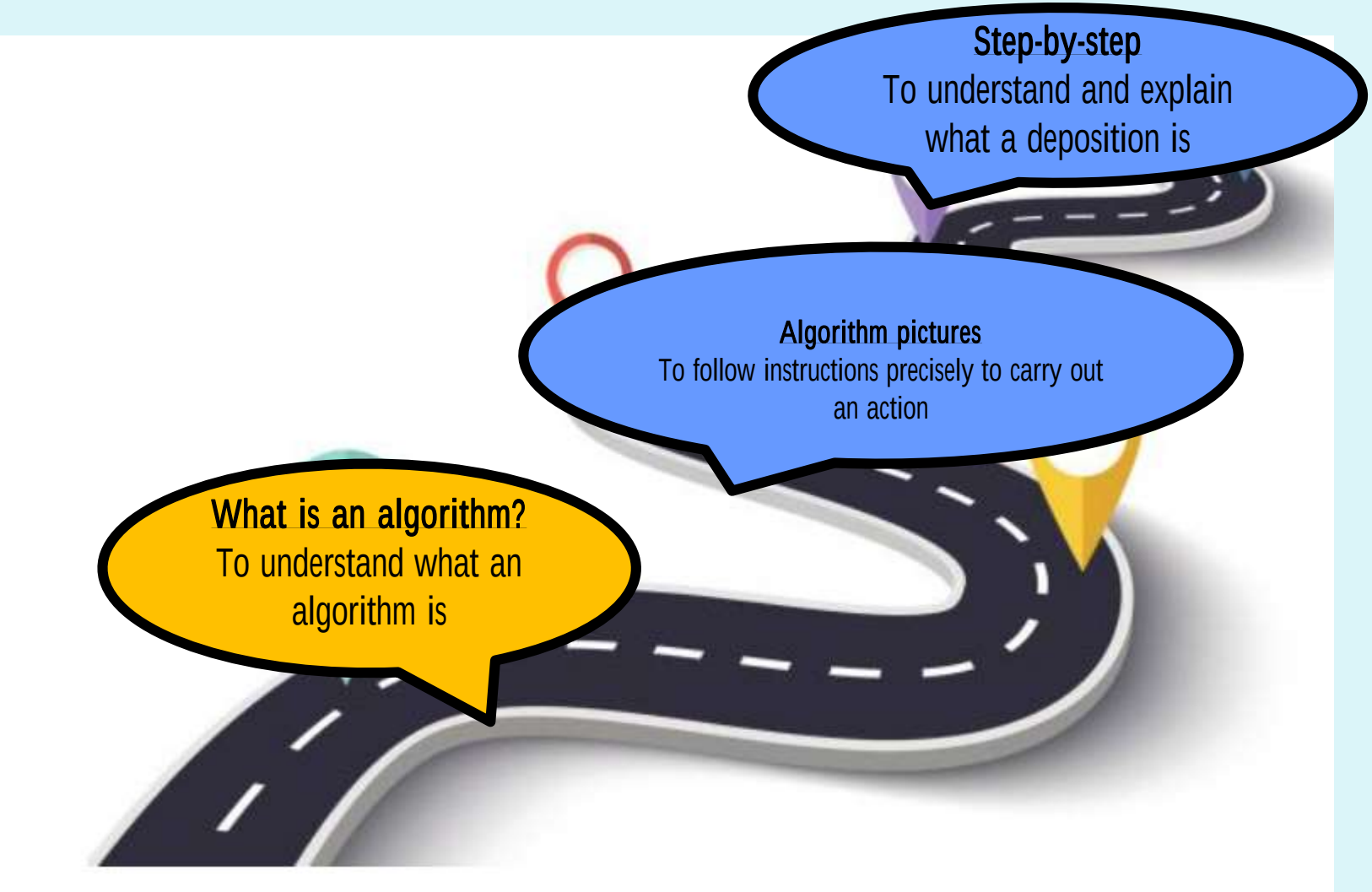
Our Computing Learning Journey - Algorithm

Key vocabulary:
Algorithm, order, command, instructions, computer,



Computing

Week 2

STAR WORDS

instructions

command

algorithm

Tuesday 27th February 2024

LQ: Can I understand what an algorithm is?

Steps to Success

I can explain that an algorithm is a set of instructions.

I can understand that these instructions sometimes need to be carried out in order.

I can understand there can be more than one way to solve a problem.

Dressing up

Who put their trousers on before their shirt this morning?

Does it matter which you do first?

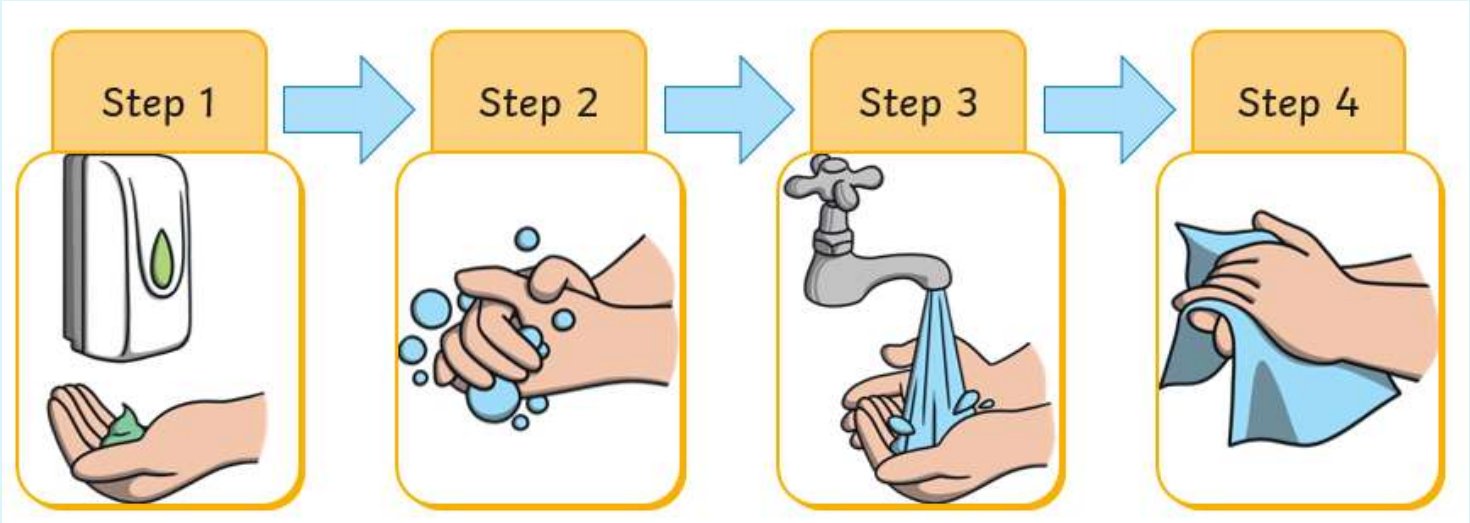
Do you think the person sitting next to you got dressed in the same order as you this morning?

What is algorithm?

An algorithm is a list of step-by-step instructions in order to get a task done. Computers can follow algorithms, just like people.

It is important that each step in an algorithm is completed to achieve the correct outcome.

TPs: What do you think the outcome of this algorithm is?



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Brushing Your Teeth

Brushing your teeth is an example of an algorithm you follow everyday.

1. Pick up your toothbrush.

2. Turn on the tap.

3. Wet your toothbrush with water.

4. Turn off the tap.

5. Put some toothpaste on your toothbrush.

6. Brush all of your teeth.

7. Spit out the toothpaste.

TPs: What might happen if you did not follow these steps in the correct order?

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Dressing up algorithm

We need 3 volunteers for this demonstration.

- ✓ Child A has a collection of dressing-up clothes.
- ✓ Child B gives clothes to Child A to put on and Child B chooses the order.
- ✓ Child C will close their eyes.

TPs: How can we make sure Child C dresses the same way as Child B?

Adult to have a selection of dressing up clothes for this demonstration.

Dressing up algorithm instructions

1. Give Child A a collection of dressing-up clothes.
2. Ask Child C to close their eyes while this demonstration takes place.
3. Child B should give clothes to Child A to put on.
4. Explain that Child B is responsible for choosing the order in which the clothes are put on.
5. Ask the children how to ensure that Child C dresses the same way. Write down what happens as a list on the board.
6. Ask Child C to follow the instructions and ask the class to evaluate whether they have dressed up the same way as Child A.

Self assessment

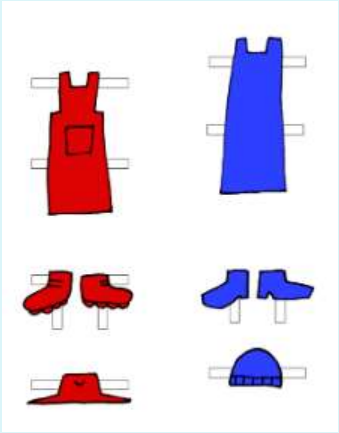
Do you understand the instructions?

Dressing up algorithm

Sometimes the order does not matter. However, other times the order is important, e.g. putting on trousers before a top does not matter, but putting on a jumper and then a T-shirt does matter.

https://www.bbc.co.uk/bitesize/topics/z3tbwmn/articles/z3whpv4

Now I will demonstrate cutting the clothes for a doll and writing the algorithm to dress the doll.



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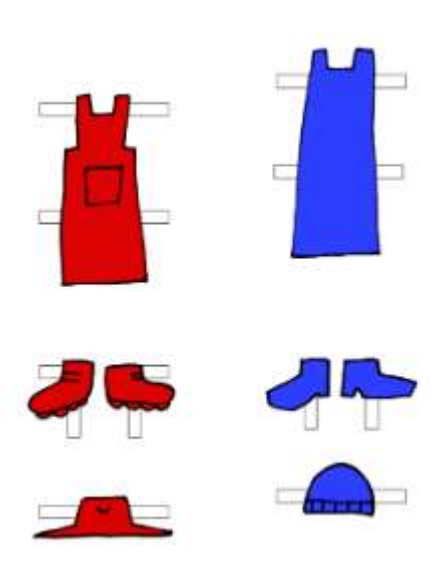
Task

In pair cut out the doll and dressing up clothes. Take turn to dress the doll and write your list of algorithm on your paper.



Self assessment

Do you understand what to do?