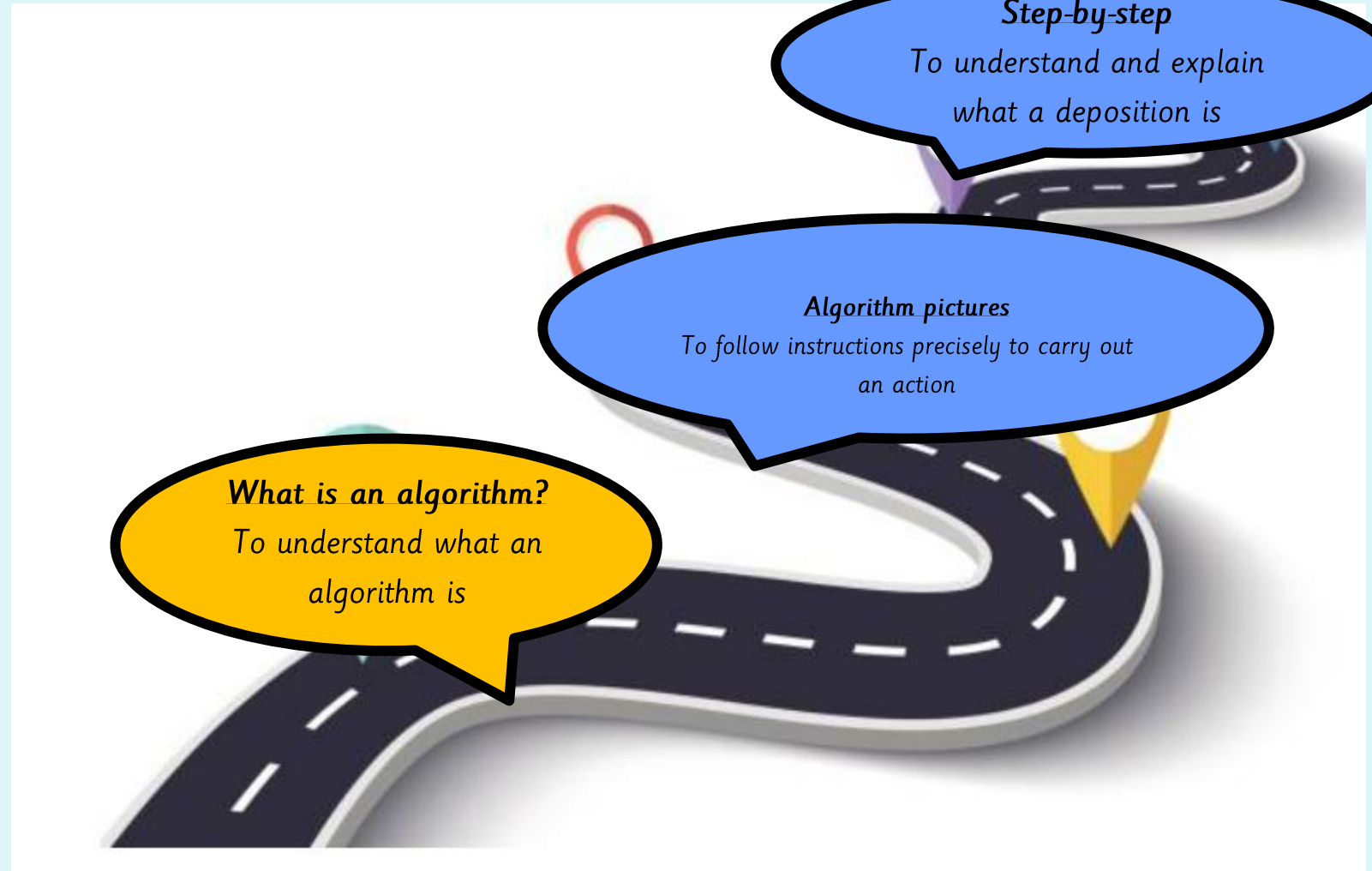


# Our Computing Learning Journey - Algorithm

Key vocabulary:

Algorithm, order, command, instructions,  
computer

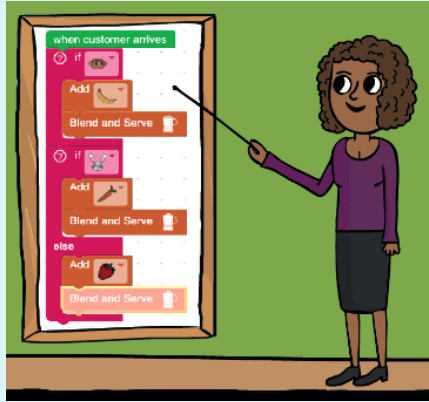


# Computing

*Week 2*

# STAR WORDS

*instructions*



*command*



*algorithm*



*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?*

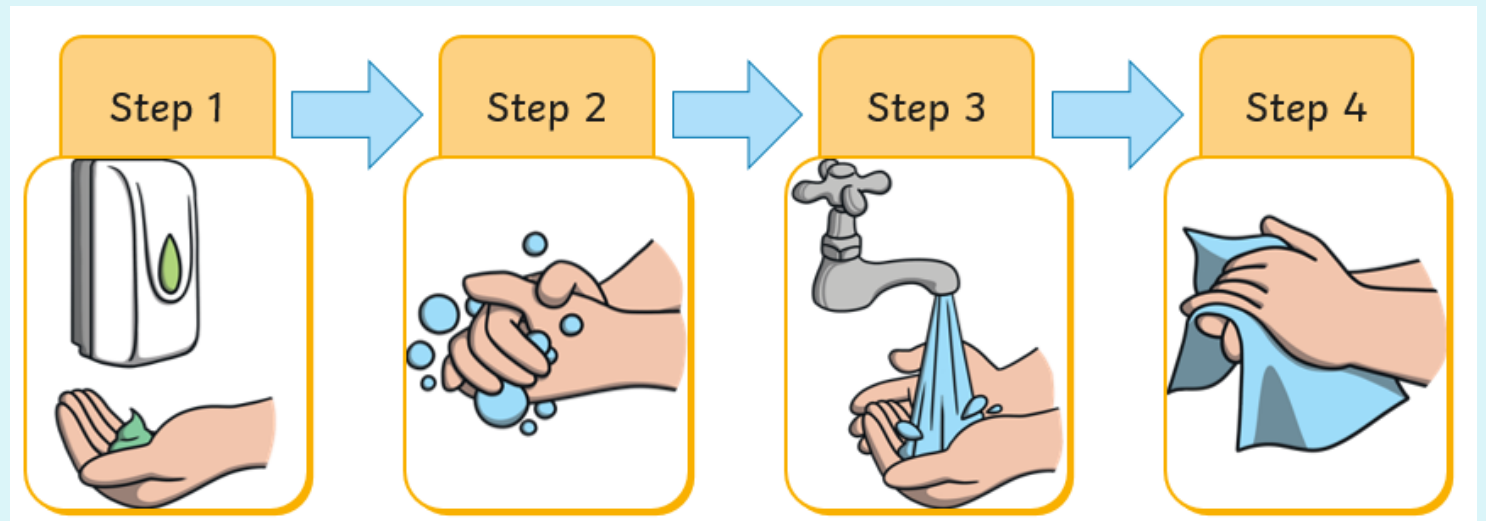


## What is algorithm?

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

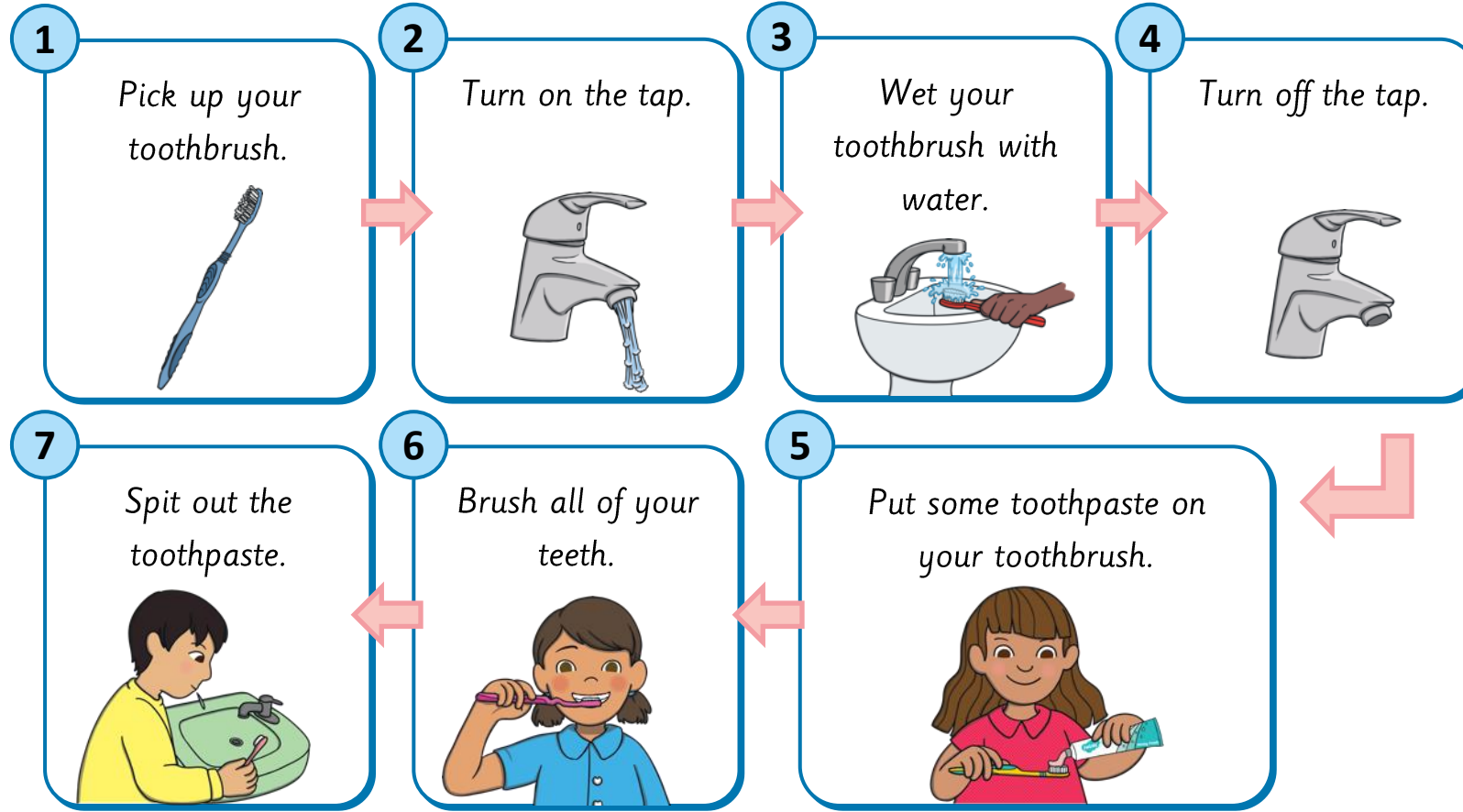
It is important that each step in an algorithm is completed to achieve the correct outcome.

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



## Brushing Your Teeth

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



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

## 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.

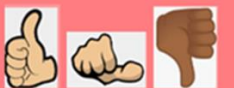


## Dressing up algorithm instructions

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>



# Task

In pairs cut out the instructions for brushing your teeth or washing your hands and put them in order. Make sure you take turns.

**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?

Step 1 → Step 2 → Step 3 → Step 4

Self assessment  
Do you understand what to do?