

## Overview

In this activity, children will create instructions that can be followed for making a pizza, and debugging (fixing) the order of those instructions if they find any errors.

### Concepts:



Algorithms    Debugging

**Age group:** 5 – 11

**Duration:** 15 – 45 minutes

### Materials you will need:

To download or copy:

- Pizza recipe
- Pizza making steps
- Party decorations, optional!

## What will your child/children learn?

**Algorithms** – An algorithm is a precise sequence of instructions, or set of rules, for performing a task.

**Debugging** – Debugging is about finding out what is wrong in an algorithm or program and fixing it.

The behaviours **creating**, **persevering**, **collaborating** and **tinkering** (changing things to see what happens), are approaches to learning that are encouraged throughout our home activities.

## Getting started

- 1)** You need to show a pizza recipe for making pizzas where the order of the steps are mixed up. An example is provided for you to copy or download and cut up. Your child/children can help you with this. You could put instructions (algorithm) out on the table or stick on a board.
- 2)** Make a list together with the ingredients that you all want to put on your pizza and think about what equipment you will need. Eg bowl, spoon, scales.

- 3) Set up the kitchen together with the ingredients and utensils ready to make the pizzas. You could pretend that you don't realise that your list of instructions that you laid out earlier is muddled up and start to make your pizza...
- 4) Work with your child/children to sort and rearrange the cut up instructions (algorithm) into the right order or sequence.
- 5) Ask: How did you debug (fix) the algorithm? Which steps were incorrect? Why?
- 6) Ask: What problems did you have and how did you overcome these? How did you fix them?
- 7) Ask: What tips would you give to someone else wanting to make their own pizza?

Think together: Could a machine follow the algorithm? Why or why not?

## Their turn

- 1) **Pizza making** – Ask your child/children to follow the recipe algorithm and make their pizzas
- 2) **Pizza party!** – When the pizzas are cooking you can all get ready for a pizza party!
- 3) Once the pizzas are ready, enjoy them and your pizza party!

Get into the pizza party spirit with some party music and decorations. You could make some paper chains or placemats out of A4 paper and draw pictures of your guests so they know where to sit.

## Time to talk

- 1) Remind your child/children that a recipe can be thought of as an **algorithm** that a person can carry out and they have just **debugged** it so that it is in the right order.

## More ideas

- Help or encourage your child/children to make a pictorial set of instructions by drawing the steps, or taking photos of each step with another favourite recipe or for another pizza.