Overview:
In this challenge you will look at two parts of computing called **"Algorithms"** and **"Debugging"**

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

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

The Task:
This week you will work together with your family members to create instructions that can be followed for making a pizza, and debugging (fixing) the order of those instructions if they find any errors.

Materials you will need

- Ingredients from Pizza recipe (or exchange for your own ingredients)

- Pizza making steps

- Party decorations (Optional - you could research how to make your own)

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

Shopping List

These are the ingredients for making **one pizza**.
Please double, triple, quadruple (etc.) for each one you wish to make.*

The base

- 350g plain flour
- 3 teaspoons baking powder
- 1 teaspoon salt
- 1 tablespoon olive oil

The topping

- 75g passata
- 100g mozzarella (grated)

Meat eater options

- 100g wafer ham (chopped)
- 40g cooked chicken

Veggie options

- 75g mushroom (sliced)
- 40g cherry tomatoes (halved)
- 25g baby spinach

...and whatever else you fancy!

Quick tips

No ovens? No problem!
Use a wrap, spread with soft cheese, then add your toppings and enjoy!

Any allergies? Any way!
Use gluten-free flour to make the bases, or even gluten-free wraps. You can find both in the free-from section of any supermarket. You can also use lactose-free cheese for dairy-free pupils.

Very veggie? Very nice!
Add a rainbow of vegetable toppings for a healthier option. Vegan cheese makes a great pizza topping too!

I prefer to use tomato puree instead of passata!

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 the 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?

Recipe

1. Heat the oven to 200C/180C fan/gas mark 6
2. Mix together 350g flour, 2 ¾ teaspoons baking powder and 1 teaspoon salt in a small bowl
3. Add 1 tablespoon oil and 170ml water then stir until it forms a soft non-sticky ball
4. Sprinkle flour onto a surface and knead for 3-4 mins
5. Roll dough into a ball, then flatten out using a rolling pin
6. Spread a generous layer of your chosen sauce on the dough
7. Add toppings
8. Bake in oven for 15-20 minutes until crisp

I like to make a really crispy pizza using a flat bread or pitta bread, or you could use a pre-made pizza base

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! Take photographs along the way to share on Seesaw with your teacher.

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 -

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.

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.

Pizza recipe cut outs

Heat the oven to 200C/180C fan/gas mark 6

Mix together 350g flour, 2 ¾ teaspoons baking powder and 1 teaspoon salt in a small bowl

Add 1 tablespoon oil and 170ml water then stir until it forms a soft non-sticky ball

Sprinkle flour onto a surface and knead for 3-4 mins

Roll dough into a ball, then flatten out using a rolling pin

Spread a generous layer of passata on the dough

Add toppings

Bake in oven for 15-20 minutes until crisp

Pizza recipe cut outs

Heat oven to 200 degrees/Gas mark 6

Make the pizza base

Spread the tomato sauce on the base

Add oregano or herbs

Add your toppings

Add ....

Add ....

Add ....

Add ....

Add ....

Add ....

Add the cheese

Put in the oven

Cook for 15 minutes

Take out of the oven