

# Patterns Unplugged: Reusing Recipes

## LESSON OVERVIEW

In this activity, students try to spot patterns in pairs of similar recipes to identify common steps that they can reuse in new recipes that they create.

Example sets of simple recipes are provided on how to make sandwiches, pizza and milkshakes. The emphasis of this activity is on pupils thinking what is the same, what is different and whether there are general common elements that they can reuse.

## LESSON OBJECTIVES

Students will:

- Say what is the same/ different when pattern spotting
- Say what can be reused in a new version

## MATERIALS, RESOURCES AND PREPARATION

- L4- Recipe challenges (to annotate or discuss)
- Pens/ pencils
- Paper to draw a table (see example)

| Same | Different |
|------|-----------|
|      |           |

## LESSON SEQUENCE

**Activity 1-** Look at the two sets of instructions to make a sandwich (below) with a partner and both of you discuss what is the **same** and what is **different** about them.

## Pattern challenges

### Making sandwiches

- Here are instructions to make two sandwiches
- What is the same about the instructions? What is different?  
Can you make a new recipe reusing some of the steps to make a new sandwich e.g. ham on white bread?

| Cheese Roll                                                                                                                                                                                                                                                                                                                                                            | Tuna Mayonnaise on Brown                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>You will need<br/>Cheese, bread roll, butter, grater, plate, knife</p> <p><b>Instructions</b></p> <ol style="list-style-type: none"><li>1. Get the bread ready by cutting the roll and buttering it</li><li>2. Grate the cheese</li><li>3. Fill the roll with filling</li></ol>  | <p>You will need<br/>Tuna, brown bread, butter, knife, mayonnaise</p> <p><b>Instructions</b></p> <ol style="list-style-type: none"><li>1. Get the bread ready by slicing the loaf and buttering it</li><li>2. Mix the tuna and mayonnaise</li><li>3. Fill the roll with the filling</li></ol>  |

1. Write these on your same/ different table (see example above)
2. Check the bottom of this page to see if you both found similar answers to the table below.
3. Using as much information from the two recipes above, can you **rewrite** your own version for a **'ham and tomato'** sandwich?

## MAIN ACTIVITY – FURTHER RECIPE ANALYSIS AND PATTERN SPOTTING

Work through the **L4- Recipe challenges** by doing the following;

1. Look at the recipes presented to you. Can you find the similarities and differences?
2. What patterns did you spot?
3. Can certain parts of the recipe be reused in another recipe? If yes, which ones?
4. Present your findings to an imaginary audience (or whoever lives with you!)

## EXTRA COMPUTER SCIENCE UNDERSTANDING

In **computer science** we often look for patterns. This helps us find opportunities to reuse designs or code. For example, if we are designing a game, we might write code to control one character, rather than writing the code again so that we can reuse it for another character. If we write code to control a score in one quiz, we could reuse it in the next quiz we make.

Patterns are everywhere. For example, we use weather patterns to create weather forecasts; pupils might notice patterns in how teachers react to their behaviour to work out how to behave next time. By identifying patterns, we can make predictions, create rules and solve- this is the same with computer science

## ANSWERS

Activity 1 – Sandwich Recipes

| Same                                                                                        | Different                                                           |
|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| You will need<br>Instructions section.<br>3 step method.<br>Last step of method is the same | Ingredients<br>Way to get the bread<br>Way to get the filling ready |

Example of 'ham and tomato' sandwich recipe

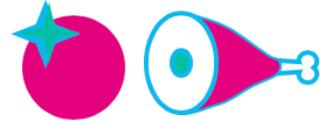
### Ham and tomato on white

You will need

Ham, tomato, white bread, butter, knife

#### Instructions

1. Get the bread ready by slicing the loaf and buttering it
2. Slice the tomato and cut up the ham
3. Fill the roll with the filling



Adapted from Barefoot Computing resources.