

Mondays at the Museum

(at home!)



ORANGE REGIONAL MUSEUM

This week we are looking at **coding and commands**.

Our new exhibition at the Museum is called *Code Breakers: Women in Games*. We are learning about computer games and the women who create them.

Computers don't understand human languages, but can understand special languages called 'codes'. We can use code to write instructions, or commands, for computers. In this activity we will create our own game, and write step-by-step commands to get our character from the beginning to the end of the game.

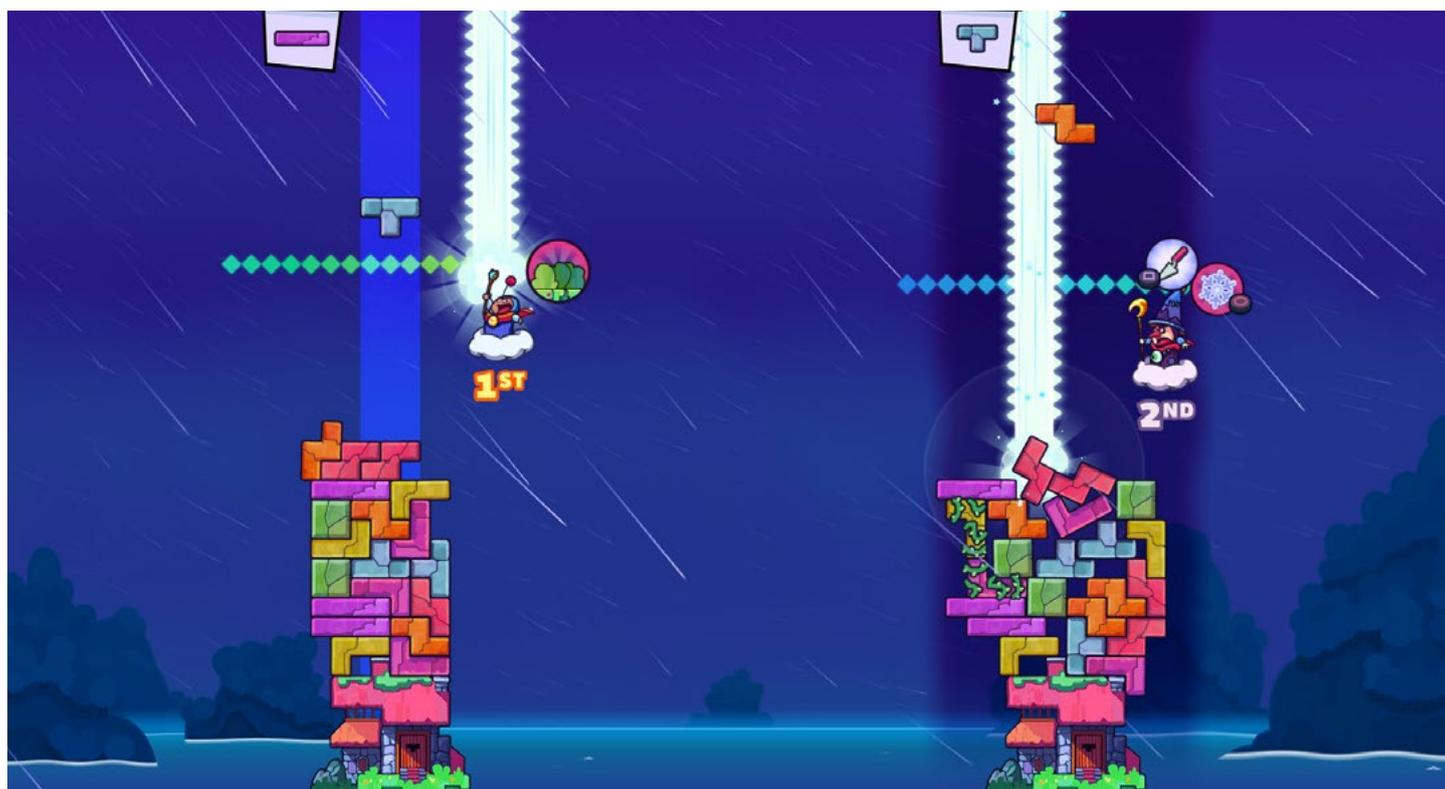


Image: Some video games in *Code Breakers: Women in Games*, like 'Tricky Towers' use code and commands to move game pieces. (Tricky Towers: Licensed courtesy of WeirdBeard).



Command and Code Game

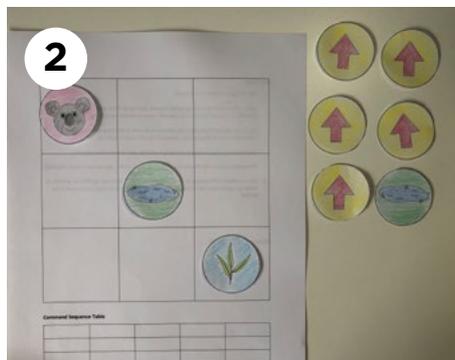
This week we are going to make a simple game which uses commands. The goal is to use the arrows to show the koala how to get to the gum tree. The koala needs to avoid the lake. We will record the arrow directions in the Command Sequence Table. This will become our code.

What you'll need:	Substitute
Printed copy of tokens	Draw your own
Printed copy of the Game Grid and Command Sequence Table	Draw your own
Coloured pencils, crayons or markers	
Scissors	

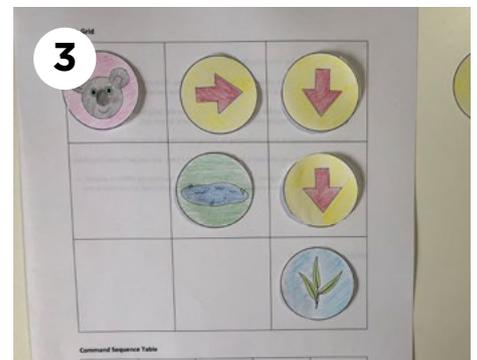
Instructions



1 Cut out all the tokens and colour them in.

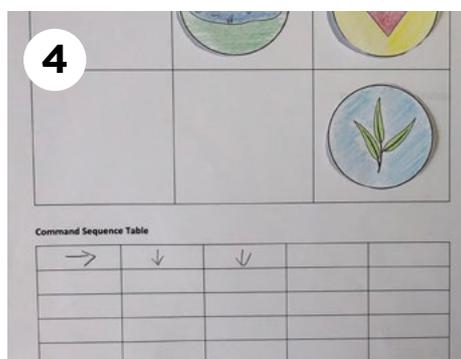


2 Get your Game Grid and place the koala in top left corner and the gum tree in bottom right corner. Place lake in the centre square.



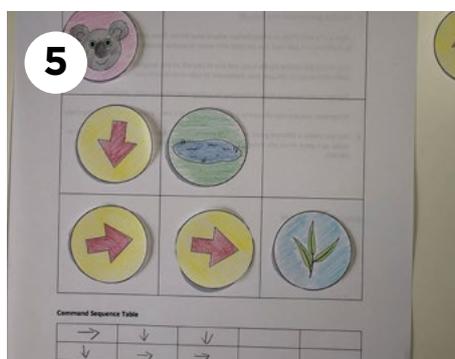
3 Use your arrow tokens to show the koala the steps it can take to get to the gum tree. Each arrow is a command. Remember:

- you can place an arrow facing up, down, left or right, but not diagonal.
- you can't place an arrow in the lake.



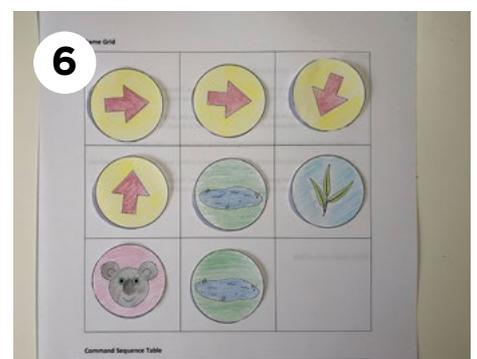
4 Draw the steps you work out in the Command Sequence Table below the grid.

Congratulations! You have just written a code to get the koala to the gum tree.



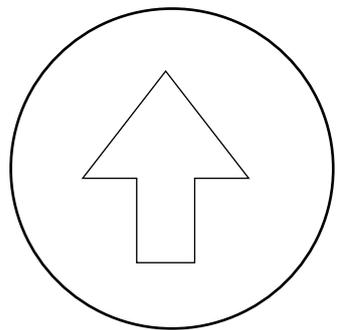
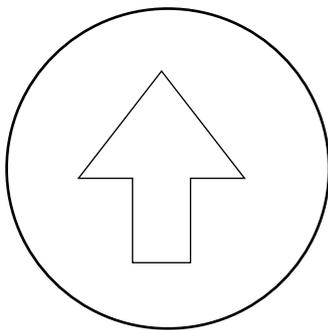
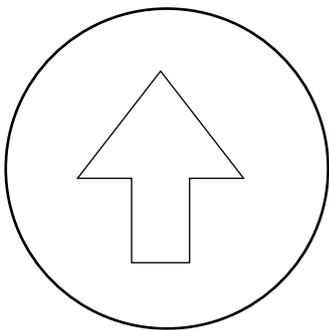
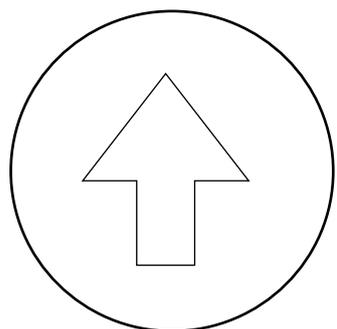
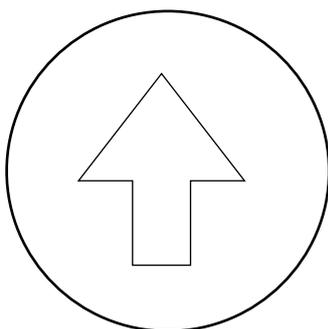
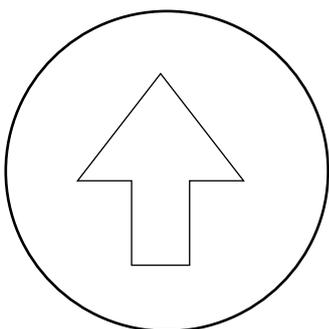
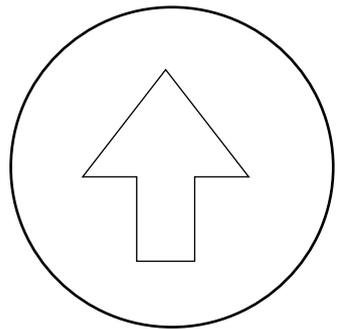
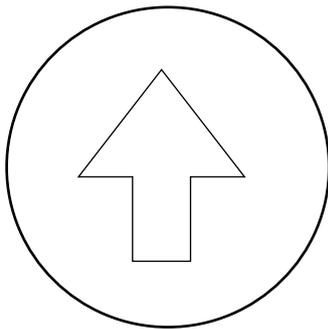
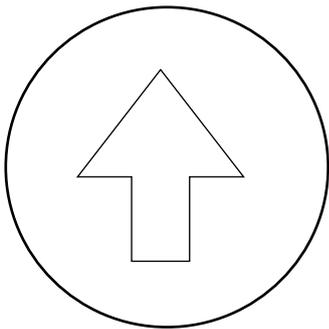
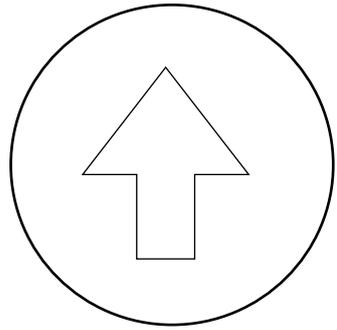
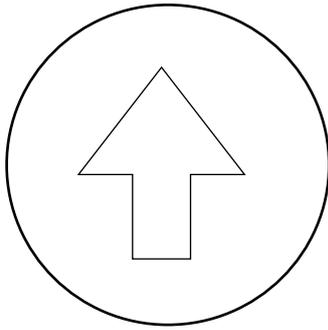
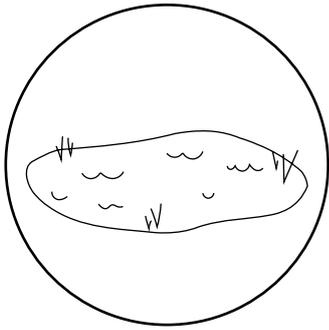
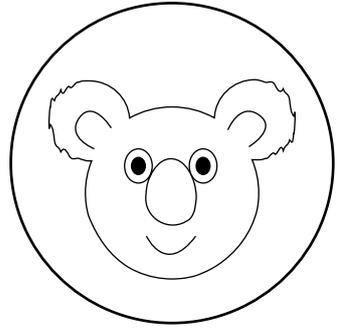
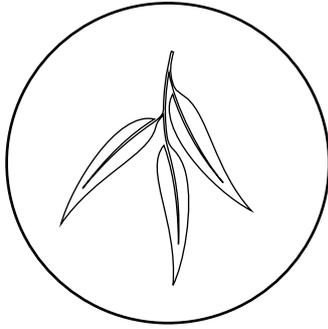
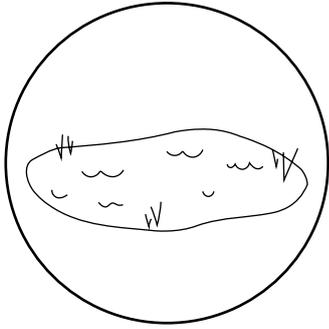
5 Can you find a second way for the koala to get to the gum tree?

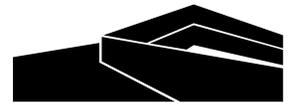
Remember to record the directions in the Command Sequence Table.



6 Ask a friend or parent to choose another square for the koala, gum tree and lake. You could even add a second lake! Can you work out the new commands for the koala to reach the gum tree?

For an extra challenge, you may like to draw a bigger grid with more squares.





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Extra Time:

1. Take the game outside with a friend!
 - Draw a grid with chalk on a hard surface around your house. Place some leaves in one square to represent the gum tree. Put a bucket with water in another square for the lake.
 - One of you will need to be the koala and one of you will be the 'programmer' to give the commands to get to the gum tree. Remember to take turns in each role.
 - You can make the game more challenging by adding more lakes or other obstacles.
 - Remember: you are only allowed to move one square at a time, and you can't move diagonally.

2. Can you create a different game using different characters? You could try different animals, or make up a game about you trying to sneak around your parents to reach a tasty treat in the kitchen.