



# Stories with Oti-Bot

This activity which uses QR codes is a great way to introduce children to Oti and support learning around cause and effect.

## LEARNING & SKILLS

- Develop an understanding of cause and effect.
- Engage and interact with technology.
- Use and apply speaking and listening skills.
- Work collaboratively with others.

## RESOURCES

- Oti-Bot
- Oti-Bot's QR codes
- Speech bubble templates, either printed or using whiteboards.

## INTRODUCTION

- Introduce Oti-Bot to the children, exploring the different features they can see on Oti.
- Together, look at the collection of QR codes that come as cards with Oti. Explain that Oti will respond when we show different QR codes to the camera.
- Ask children if they have ever seen QR codes before? If so, discuss where they have seen them and what they have used them for.
- Look at each of Oti's QR codes and predict what they think will happen when they use each one.

## ACTIVITIES

- In groups, children can explore and test Oti's reaction to each QR code. Did Oti respond as you predicted?
- Ask children to share which is their favourite and why.
- Next, have a collection of speech bubbles for children to use. Show one of the QR codes to Oti's camera and, in pairs, ask children to create their own speech bubble of what they think Oti might be thinking, feeling or saying. Use the QR code again and ask children to share their ideas.
- Using their ideas, children can then create their very own Oti story and use the QR codes to bring their story to life. As they read their story aloud, they can use the QR codes to show how Oti is feeling with each story event.
- Plan in time for children to share their animated stories with each other.



## REFLECTION

Take time to discuss what they have learnt about Oti-Bot and QR codes, for example:

- When have you used QR codes before?
- When might it be useful to use QR codes like this?



# Oti-Bot's Great Escape

This activity can support children's control and programming skills as they help Oti-Bot to plan a great escape!

## LEARNING & SKILLS

- Develop skills in control and programming.
- Create and debug simple programs.
- Engage and interact with technology.
- Use critical thinking to help solve problems.
- Work collaboratively with others.

## RESOURCES

- Oti-Bot and App
- Materials to create tunnels, such as cardboard, boxes, paper, etc.

## INTRODUCTION

- Introduce Oti-Bot and the Oti-Bot App.
- Look at the different features and functions and explore how Oti-Bot moves using the caterpillar tracks underneath.
- Use the Oti-Bot app to explore the different ways they can programme Oti to move, either using the manual control arrows or in the block-based programming environment.
- Discuss - have children used any other robots/devices that they have been able to programme to move? What are the similarities and differences that they can see?

## ACTIVITIES

- Create your very own Oti-Bot maze with different tunnels and routes. You could also add characters or checkpoints for Oti to find.
- Place Oti-Bot somewhere in the maze and set children the challenge to help Oti escape!
- Depending on children's previous programming experience, you may want to use one (or both) of the following options:
  - Children can use the manual control arrows to help navigate Oti out of the maze, or
  - They can measure the distances and path to escape and then programme the route using the block-based environment.
- Watch the live camera as Oti travels through the maze. Did their great escape plan work? if not, can they debug their programme?
- Develop speaking and listening skills by asking children to create a commentary for Oti-Bot's journey. Who might Oti meet and see on his great escape?



## REFLECTION

Spend time reflecting on the activity and encourage children to reflect on their learning.

- Did you manage to help Oti-Bot escape the maze?
- If so, what worked well? Is there anything you would change?
- If not, what happened and what might you do differently next time?



# Feelings and Emotions with Oti-Bot

Use Oti-Bot to help explore and develop children's understanding of feelings and emotions.

## LEARNING & SKILLS

- Develop understanding of feelings and emotions.
- Use technology to support cross-curricular learning.
- Interact and engage with technology in different ways.

## RESOURCES

- Oti-Bot and App
- Oti-Bot QR codes
- A book that explores emotions or characters' feelings.
- Mirrors (optional)

## INTRODUCTION

- Introduce Oti-Bot if children haven't met Oti before.
- Using the app and QR codes, look at the different emotions that Oti can show.
- Discuss - Which emotions can be programmed and how does Oti-Bot show them?
- Spend time talking about the different colours, noises and facial expressions that are used.
- How do you show those emotions and what is the same or different with Oti? You could use mirrors so children can see how their own facial expressions compare to Oti's.

## ACTIVITIES

### Activity 1

- Show children a picture that might create a specific feeling or emotion, such as being on a rollercoaster or being at the beach. Use the programmable emotions to show how Oti feels in this situation. Ask children - so, how does Oti feel about this? Why do you think he feels this way?
- Encourage children to talk about how they would feel. Would they feel the same as Oti or not?
- Discuss and explore the idea that we all may feel differently about the same situation.

### Activity 2

- Share a book with children that explores different characters and their emotions. As you read the book, ask children to use Oti to show the different characters' emotions. They might use the QR codes or the Oti-Bot app.



## REFLECTION

- Recap the different emotions that Oti-Bot can show. Discuss the colours for the emotions and ask children to think about whether they would use the same colours for each emotion. If not, what would you use and why?
- Finally, are there any emotions that are not shown? If so, ask children to choose the colour and design their own Oti-Bot expression.



# Shape Up with Oti-Bot

Use these activities to bring computing and programming into your maths lessons and help develop pupils' understanding of shape.

## LEARNING & SKILLS

- Develop understanding of the properties of shapes.
- Learn to use the pen mechanism.
- To design, write and debug programs.
- To use sequence and repetition in programs.
- To use logical reasoning and critical thinking skills.

## RESOURCES

- Oti-Bot and App
- Pen (for pen holder)

## INTRODUCTION

- Introduce Oti-Bot's pen mechanism and show children how this can be programmed using the block-based environment on the Oti-Bot app. Look at the pen up and pen down functions.
- Ask children to consider different ways that we might use Oti's line drawing to help us in our learning.
- Explain that today we are going to use this to help with our learning about shapes.
- Use one of the preloaded programs to demonstrate how Oti can draw a shape, looking carefully at each different part of the algorithm.

## ACTIVITIES

Ask children to choose and draw a shape of their own using Oti. It might be good to start by drawing the shape themselves by hand and writing out the steps to create their algorithm. They must use their knowledge about length of sides and angles to help them. When they are happy, use the app to program Oti-Bot and see if their steps were correct. If the shape goes wrong, encourage children to identify which step they need to review and *debug* their program to make the change.

When ready, extend learning by looking at the repeat function to simplify the program if possible, for example when drawing a square.

You might also want to extend learning with some mini challenges. *You may need to adjust these based on the mathematical areas you have taught.*

Here are a few examples you could try:

- Can you draw a symmetrical shape?
- Can you create a shape with a specific area? E.g. programme Oti to draw a square with the area of  $16 \text{ cm}^2$ ?
- Can you draw a shape with a right angle?
- Can you programme Oti-Bot to create a symmetrical pattern?



## REFLECTION

Embed children's learning by finishing with a quick debugging activity. Show children a program for drawing a square (or other shape), but make sure there is at least one error in it. Ask children to try and spot the mistake and suggest what they would change. Try out the suggestions using Oti-Bot. Suggested reflection questions:

- What have you learnt today?
- What are your 3 top tips for programming and debugging?





# Around The World with Oti-Bot

Use Oti-Bot to help children learn about different countries around the world.

## LEARNING & SKILLS

- Design, write and debug programs.
- Use and apply programming and computing skills.
- Develop an understanding of countries around the world.
- Use and apply problem solving and critical thinking skills.

## RESOURCES

- Oti-Bot and App
- Large floor world map, such as the Bee-Bot World Map Mat.
- Flag cards for different countries.

## INTRODUCTION

- Recap prior learning around Oti-Bot with the children, including how to program Oti-Bot within the block-based environment.
- As a quick reminder, create your own class top tips to remember when programming with Oti-Bot.
- Explain to children that today we are going to be helping Oti-Bot to travel the world and visit different places. Share and introduce the large world map, looking closely at the countries you have identified with your flag cards. For these cards, choose the countries you are particularly learning about, for example countries within a particular continent.

## ACTIVITIES

- Children must choose 3 (or more if you wish) flag cards and place them in order. Their challenge is to help programme Oti's journey to visit each of these countries in turn.
- Encourage children to start by measuring the distances between the countries on the map and create their own algorithm to test. Once they have written this out, they can try it with Oti-Bot. If there are any problems, they must work together to *debug* their program.
- You could extend children's learning by adding in some extra requirements. For example:
  - Can they programme Oti's tummy to change to the colours of the countries flag when crossing the border?
  - Can they programme Oti to say hello in that language when entering the country?
  - You could block certain routes of travel, for example, Oti can only travel by sea.
  - Can they find out a fact for each country too share with Oti?



## REFLECTION

- Review your class top tips for programming that you created together at the start of the lesson.
- Do we still agree with these?
- Would we change or add anything based on what we have learnt today?