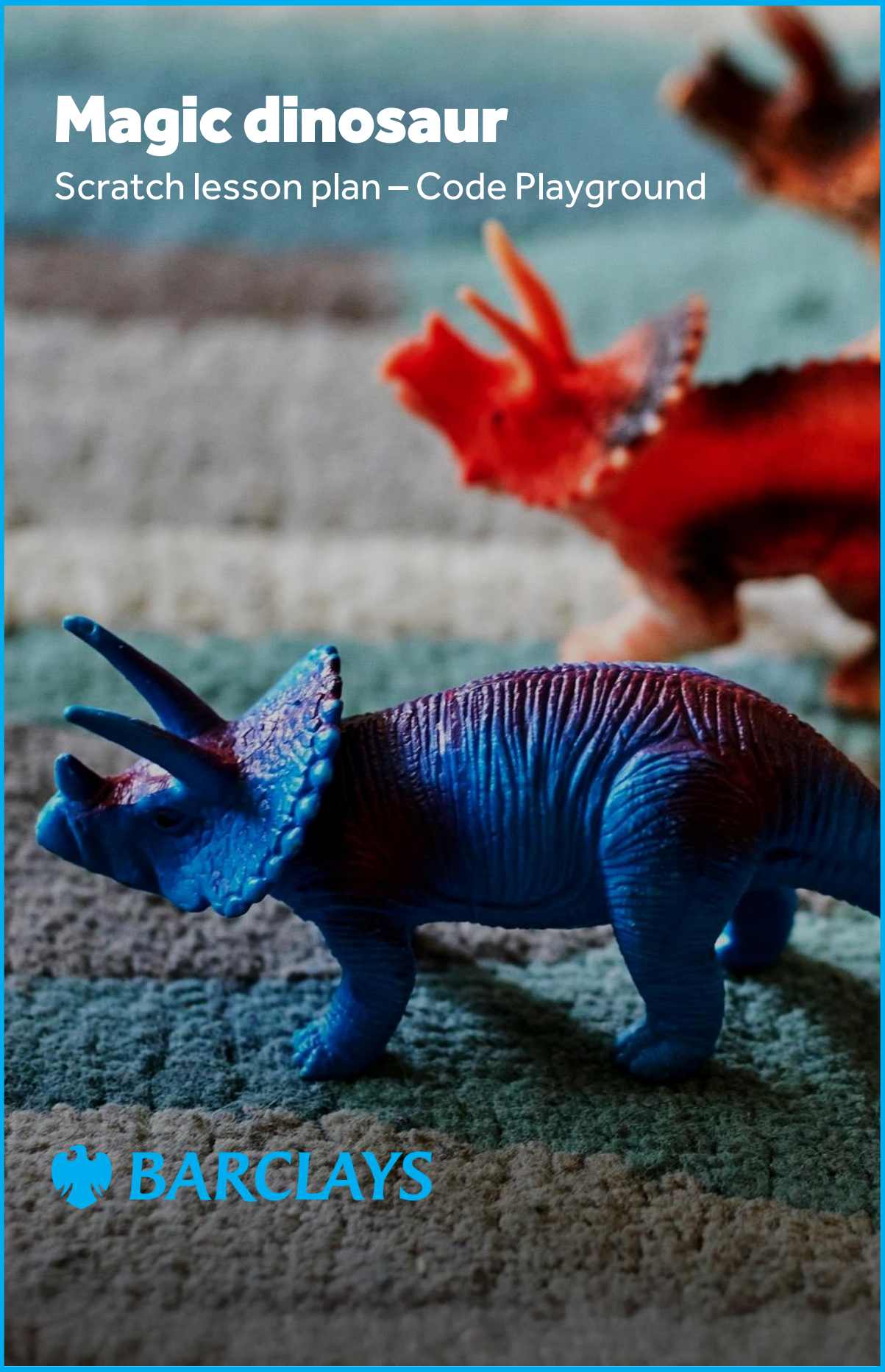

Magic dinosaur
Scratch lesson plan – Code Playground
BARCLAYS

Lesson overview

In this lesson, students will create an interactive project in Scratch called "Magic dinosaur." The dinosaur will answer yes/no questions using a list of pre-set responses. This lesson introduces students to the concept of lists in programming, showing how to store and retrieve data dynamically. By the end of the lesson, students will have a fully functioning magic dinosaur project and understand how lists can be applied to store and manipulate data in Scratch.

Time	Key learning outcomes	Resources
35 mins	• Learn how to create and manage lists in Scratch • Understand how to use lists to store and retrieve data dynamically • Program sprites to interact with lists and provide outputs based on user input.	• Laptops or desktop computers • Access to Scratch website - https://scratch.mit.edu.

Content

Activities	Time	Page
Introduction	5 mins	3
Activity – magic dinosaur	30 mins	4
Code snippets	-	5
Summary	-	6

Activity introduction

Today, we'll create a magic dinosaur that can answer your yes/no questions. This is a fun way to learn about lists in Scratch.

Lists are like notepads where you store information. Imagine writing down answers to questions you'd ask a fortune teller. In this project, the dinosaur uses a list to choose its answers.

The activity in this project uses the lists function to catalogue answers to questions. The larger the lists the more questions that the dinosaur is able to answer.

This project will function like a magic 8 ball and provide randomised answers from the list created.

Scratch practical

Ask the children to log into Scratch and find the starter project. The link is provided in the workbook.
Show the magic dinosaur video as a guided lesson pausing regularly when the pupils need to catch up.

- Children should be able to follow along with the workbook or the guided lesson video
- By the end of the lesson children should be able to create a working program showcasing the magic dinosaur activity.

Activity – Magic dinosaur

The magic dinosaur project introduces the list feature. This will give the impression that the dinosaur is able to respond directly to the question.

The code for this project is fairly simple and uses a forever loop. More confident coders can expand this project using some of the further ideas below.

Ask your class

- How does the program know which answer to pick from the list?

Scratch practical

Using the video and workbooks support the children to follow the instructions and complete the coding project. Have them think of other ways to enhance the project if they have extra time.

Activity wrap up

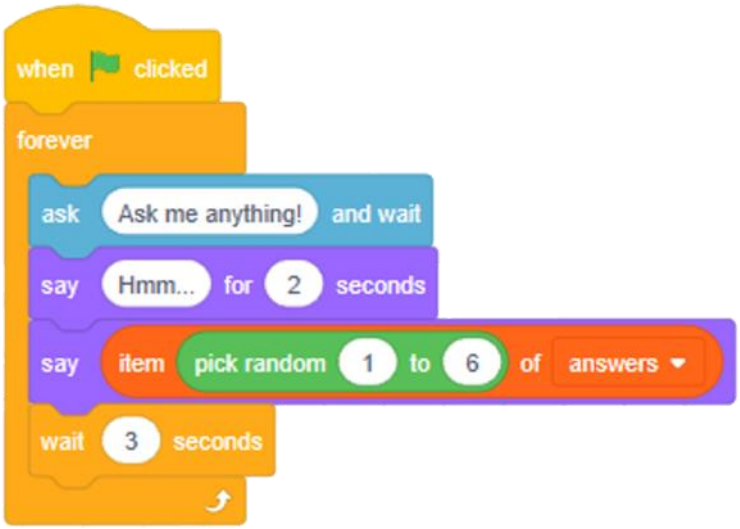
Prepare to share your project with the class.

Ask different questions and see how the dinosaur responds.

Encourage customisation

- Add more answers to the list
- Add a timer or counter to track how many questions the dinosaur has answered
- Create a second list with questions for the dinosaur to ask the user
- Add animations or costume changes to make the dinosaur more expressive
- Use text-to-speech blocks to give the dinosaur a voice.

Code snippets



Summary

The following information is an example of what a child at an expected level would be able to demonstrate when completing these activities with additional examples to demonstrate how this would vary for a child with emerging or exceeding achievements.

Assessment guidance

Differentiation – Lower ability/ASN

- Provide a step-by-step guide with screenshots for each block
- Focus on setting up the list and adding basic answers
- Allow paired work for additional support.

Differentiation – Higher ability/extension

- Challenge students to create multiple lists for different categories of answers
- Add a feature to let the user reset the list or add their own answers during the game
- Encourage experimentation with voice and animations.

Plenary

"What did you learn about lists today?"

"How does the dinosaur decide which answer to give?"

"What other projects could you create using lists?"

Assessment questions

- What is a list, and why is it useful in Scratch?
- How did you program the dinosaur to choose a random answer?
- What happens if you add more items to the list?
- What feature would you add to make the dinosaur more interactive?