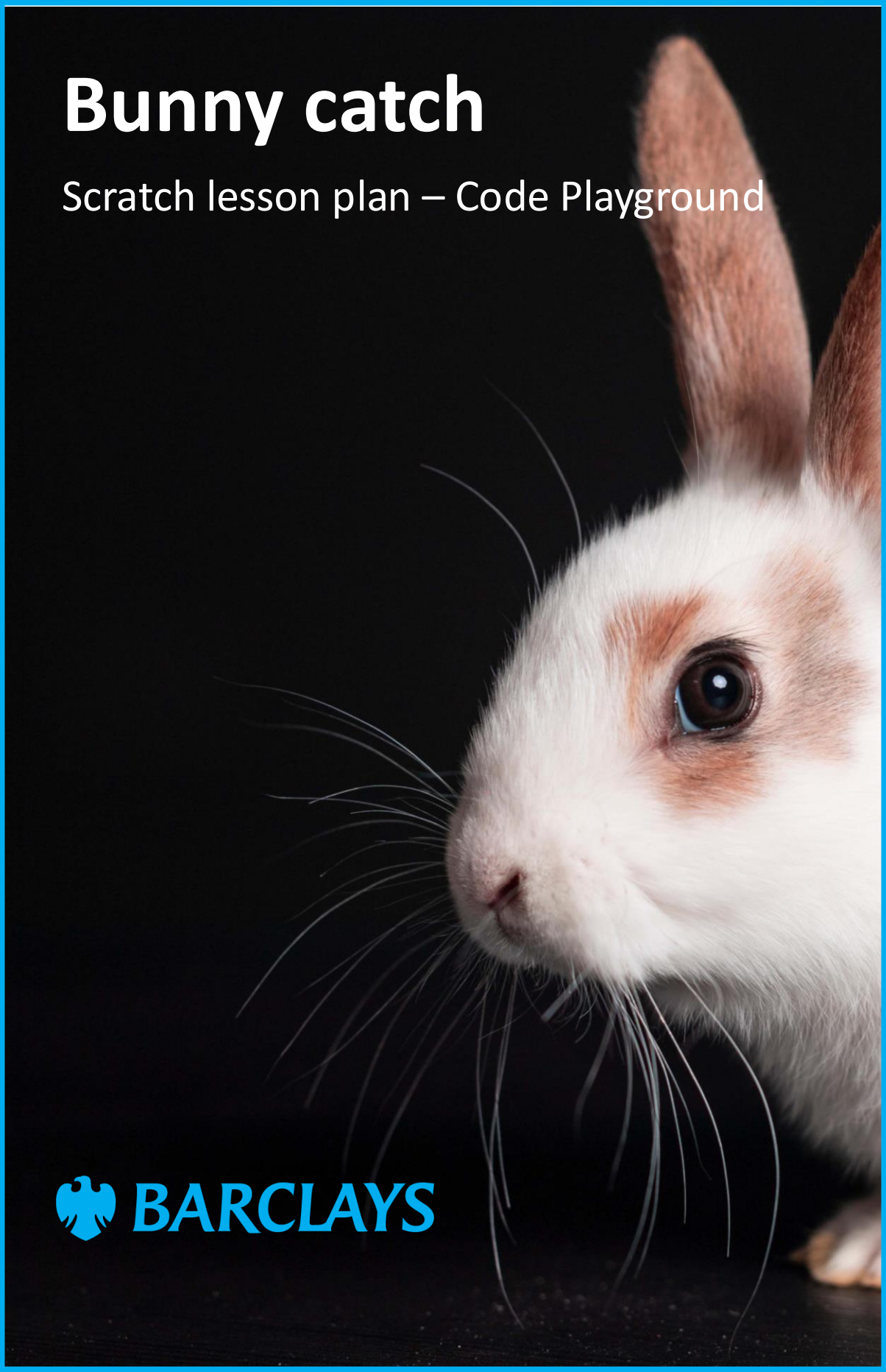
Bunny catch

Scratch lesson plan – Code Playground



BARCLAYS

Lesson overview

In this lesson, students will create a Scratch game called Bunny catch. Players will control a bunny sprite to catch falling eggs, earning points for each successful catch. Students will learn how to use loops, conditional logic, and variables to program interactive gameplay. Teachers will guide students through the project using the workbook and video.

Time	Key learning outcomes	Resources
40 mins	• Program sprite movement and interactions in Scratch • Use conditional logic to detect collisions and trigger events • Create and manage variables to track scores • Experiment with loops to repeat actions efficiently.	• Laptops or desktop computers • Access to Scratch website - https://scratch.mit.edu

Content

Introduction

Begin with a discussion about games where you catch objects: You could tie this into PE activities such as catching falling balls or bean bags.

"In many games, you need to catch something falling, like catching power ups or falling fruit. Today, we'll make a game where you try to catch falling eggs"

The activity in this project is to create a game where you direct a rabbit sprite to catch falling eggs which will randomly appear at the top of the screen and begin to fall downwards.

In this project you'll learn how to make a sprite appear at a random point, how to move a sprite to catch it, and how to keep score.

How to tie these concepts to a real world example: "Think of a fairground game where you try to catch a moving prize. What makes it challenging and fun?"

Scratch practical

Ask the children to log into Scratch and set up their workspace as described in the workbook.
Show the bunny catch 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 bunny catch game.

Activity – bunny catch

This project uses a number of features to create a fun egg catching game.

- Coding the character: Demonstrate how to program the character's movement using arrow keys or touch inputs
- **Coding the eggs:** Programme the eggs with random appearances.

Explain how to use sensing blocks to detect when an egg is caught and implement a response (e.g. target disappears, score increases).

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. You'll learn how to use loops to make the eggs fall, variables to track your score, and conditional logic to detect catches."

Activity wrap up

Prepare to share your project with the class:

- What happens if you change the number in the movement block? How does it affect the bunny's speed?"
- Why do we use a condition to check if the bunny and egg collide?"

Encourage customisation

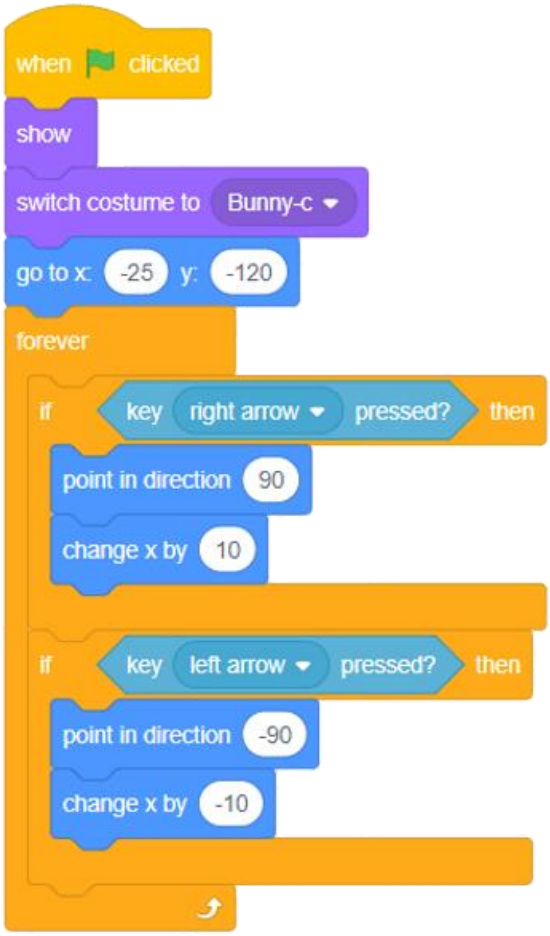
- Add more eggs to increase the difficulty

- Introduce obstacles like falling rocks to make the game more challenging

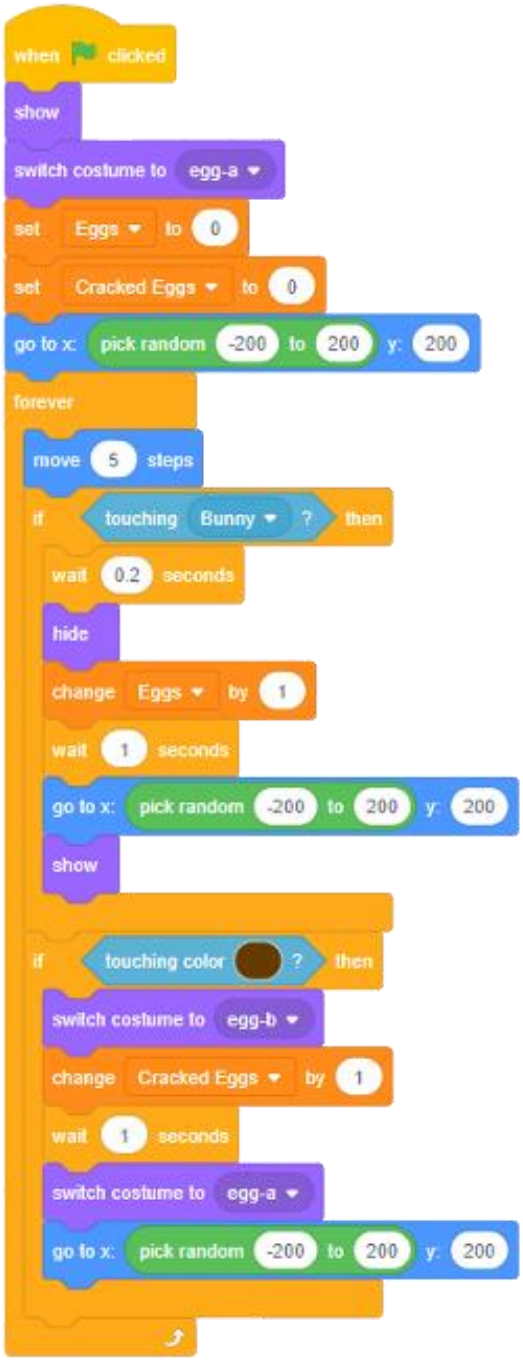
- Add a timer to track how long it takes to reach 10 points.

Code snippets

Bunny



Egg



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

- Focus on programming the bunny to move and catch one egg
- Provide pre-made starter code for the egg's movement
- Pair students for additional support.

Differentiation – Higher ability/extension

- Challenge students to add multiple eggs or obstacles
- Encourage them to use variables to track lives or add a timer
- Ask them to program additional features, like bonus items worth extra points.

Plenary

- What blocks did you use to make the eggs fall and reset?
- How did you program the bunny to interact with the eggs?
- What would you add to make your game more challenging?

Assessment questions

1. How did you program the bunny to catch the eggs?
2. What blocks did you use to make the eggs fall?
3. How does the score variable work, and why is it important?
4. What feature would you add to improve the game?