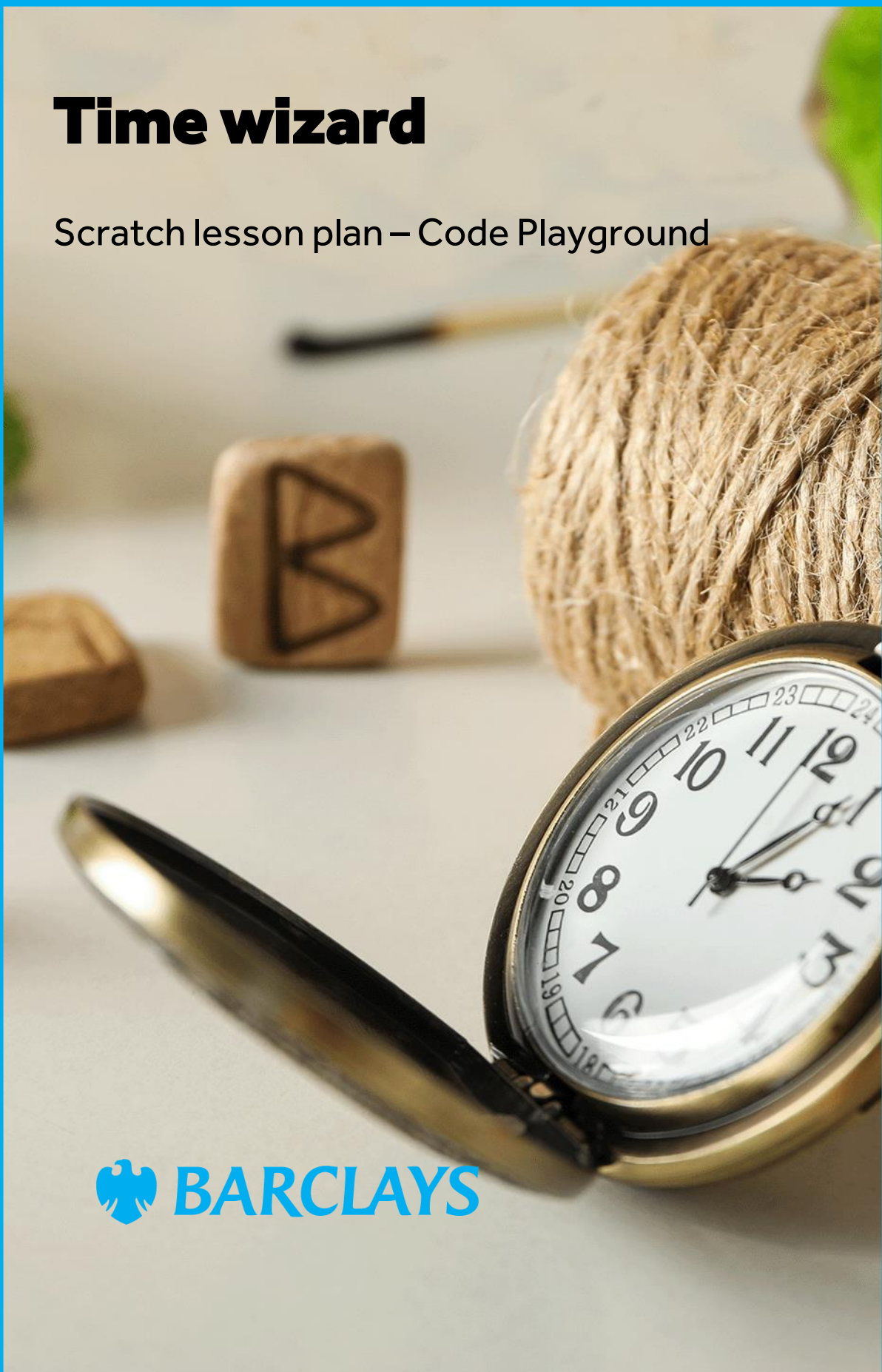# Time wizard

Scratch lesson plan – Code Playground

Lesson overview

In this lesson, students will create a maze-like project called 'Time wizard' using Scratch. They will navigate a wizard to reach an exit while avoiding time constraints. By catching the wizard's hat, they can slow down time. This project explores conditional statements, selection, repetition, and variables to create an interactive game.

Time	Key learning outcomes	Resources
60 mins	• Understand selection and loops to control sprites • Work with variables and booleans to change how the game behaves (e.g. slowing time) • Understand what a conditional statement does and how to spot when conditions are met.	• Laptops or desktop computers • Access to Scratch website - https://scratch.mit.edu

Content

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Activity introduction

Introduce the concept of the project:

"Imagine you are a knight trapped in a magical maze. Time is moving too fast to escape. But somewhere in the maze, the wizard's hat is hidden. If you find the hat, you can slow down time and safely reach the exit."

"Today, you'll build the rules of this game, telling the knight what to do when certain things happen. You'll use conditional statements to check 'if' something is true, 'then' the code will continue."

Real-life connection:

"If I press the light switch, then the light turns on."

"If I'm at a zebra crossing and the green man is showing, then I cross the road."

This mirrors 'if…then' logic used in coding.

"How will the knight know which way to move when you press the arrow keys?"
Lead into the idea of using if <key pressed> then move that direction.

Scratch practical

Ask the children to locate the link to the starter project, as described in the workbook.
Show the time wizard 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 time wizard project.

Activity – Time wizard

This project uses conditional statements, selection and loops. These let us tell the knight to do something only if a certain condition is true – just like giving instructions in real life.

Conditional blocks are sometimes called C blocks because of their shape. You can easily identify a conditional block, if it contains a diamond shaped space to add another block.

The diamond shaped blocks are called booleans and they are conditions that are checked before moving on to the rest of the code. Boolean blocks will always be true or false.

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.

Do all sprites respond and are all conditions working correctly?

Encourage customisation

- Design a new maze backdrop
- Add obstacles and decide what happens on collision
- Create an instructions page with a new backdrop.

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Code snippets

Add to knight

Add to wizard hat

Add to exit

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	**Differentiation – Higher ability/extension**
• Provide step-by-step visuals from the workbook to support coding tasks • Focus on getting the knight to move in all four directions • Allow paired work to help students learn collaboratively.	• Implement if…else blocks to create alternative behaviours (e.g. else gradually return speed to normal) • Track best time with variables and show it on screen • Add a timer variable that decreases, creating a countdown challenge.

Plenary

• "Where did you use selection?"

• "What is a boolean and where did you see one today?"

• "Why do we wrap our code in a forever loop?"

Assessment questions

• What does the if…then block do in your project?

• Can you predict what would happen if you removed the forever loop around your code?

• What would happen if you added more hats with different effects?

• How would you make the project harder or more exciting?