Money mission bus edition

Scratch lesson plan – Code Playground

BARCLAYS

Lesson overview

In this lesson students will build and play a game called money mission bus edition. They'll code a moving bus that follows the mouse pointer along a road. Using selection, players pick different routes, earn money by picking up passengers, and risk losing money by visiting shops or falling victim to scams. The goal is to reach the station with money saved in the bank. This project develops key programming concepts, especially selection, variables, and sensing, while linking them to money choices in real life.

Time	Key learning outcomes	Resources
60 mins	• Understand how to use selection and variables in Scratch • Use sensing blocks to interact with the environment (mouse pointer and colour) • Apply financial concepts like savings, spending, and scams • Improve navigation skills and logical thinking through interactive gameplay.	• Laptops or desktop computers • Access to Scratch website - https://scratch.mit.edu

Content

Introduction

Introduce this project and begin a class discussion using the following questions:

- "What are you saving up for? Where do you keep your savings?"
- Suggest examples: a jar, a money box, under the bed, or in a bank account
- "What would you do if you saw an amazing online offer that sounds too good to be true?"
- "Can you give me an example of a scam you've heard of?"

Real life connection:

- Explain how smart money choices help us reach goals
- Introduce the idea of scams and impulse spending.

Describe the project and explain the game goal: Get to the station with money saved in the bank.

"Using selection, each passenger picked up will earn you £10, and using random selection, if the passenger displays a safety message you save £20 in the bank."

"Along the bus journey, the bus can stop at a variety of shops. Which shops do you choose to spend your savings at? The bank balance will reduce by £10 for each shop visited along the chosen route. However, not everything is at it seems. Offers that sound too good to be true, often could be a scam. For each scam, you'll lose £20 from the money saved in the bank."

Scratch practical

Ask the children to log into Scratch and set up their workspace as described in the workbook.
Show the money mission bus edition 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 money mission bus edition game.

Activity – Money mission bus edition

Before starting the project, recap key coding concepts:

Selection: if...then and if...then...else blocks

Variables: timer, bank, high score

Sensing: touching mouse pointer, touching colour

Motion: move towards mouse pointer.

By creating variables which are dependant on different actions this game teaches multiple uses for them.

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:

- Why do we need variables like bank and timer in the game?
- How can we make the bus movement smoother or faster?

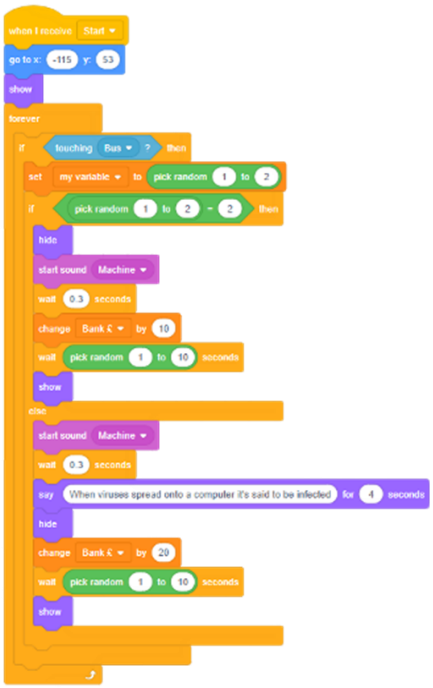
Encourage customisation

- Add a high score leaderboard if you have time
- Create a speed variable to test quicker routes
- Add in new features using the text to speech extension.

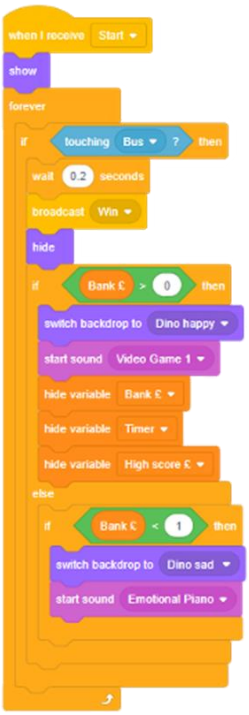
Code snippets

Bus

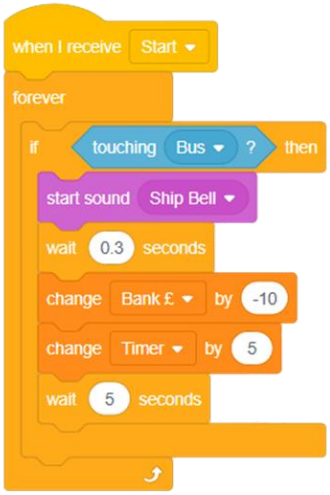
Passenger



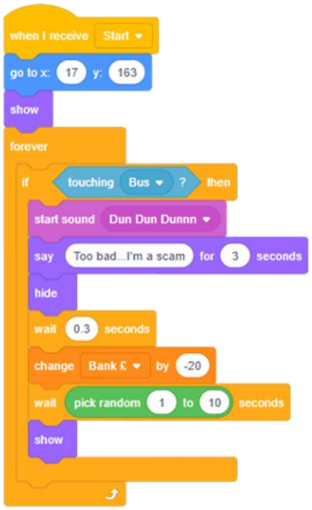
Station



Games shop



Too good to be true



Stage

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 getting the bus to follow the mouse pointer and use basic sensing
- Help implement just one passenger interaction and one shop
- Allow paired work for additional support.

Differentiation – Higher ability/extension

- Encourage randomisation, high score tracking, and the text to speech extension
- Challenge students to add different types of scams and more complex routes
- What happens if you change the speed of the bus?

Plenary

- What choices helped you save the most money?
- Did you fall for a scam? How can we avoid scams in real life?
- What coding block was used to decide if a passenger displayed a safety message?

Assessment questions

1. What selection blocks are used to check the savings?
2. How did you use variables to take money away?
3. What makes a scam look tempting in the game?

Enhance your skills by completing our 'Keeping children safe online' module. You will learn about online reputation, online risks, gaming safely and tips to help children manage screen time.