

KS2 Lesson Plan - A428

Biodiversity Game

Introduction

Working with ecologists on the A428 road scheme in England, this game was developed to showcase how biodiversity is protected by ecologists on engineering projects. In this game they will identify multiple species of animals that live along the road scheme in real life and then build a road that avoids the animals habitats.

Learning Objectives

- “ 1. Identify six species of animals that live along the road scheme.
- 2. A basic understanding of how road schemes consider the environmental impact on wildlife.
- 3. A basic understanding of the job roles involved in a scheme like this.

Guiding Ideas and Questions

- “ 1. Why is it important to protect natural habitats?
- 2. What is a habitat and how do they help animals and insects thrive?

Performance expectations

The students will be expected to build a road that avoids all of the animals habitats.

Lesson Structure

The video below is a guide on how to play through the lesson

Part 1 –

Before they start please explain what Highways England does -

'Highways England manage and improve England's motorways and major A roads, helping our customers have safe, smoother and more reliable journeys. We're the government company which

plans, designs, build, operates and maintains England's motorways and major A roads, known as the strategic road network (SRN). Make up of 4,300 miles of motorways and major A roads which are at the core of our national transport system.'

Students will spawn into the Highways England offices. Here they can interact with the NPCs (non-player characters) who will either give them bits of information or say generic greetings.

Allow them to explore for 5 minutes.

At the end of the 5 minutes get them to go to the large computer at the end of the offices and wait there. They are not to click on the computer, or teleport to the scheme, until the next part.

Part 2 –

Get the students to click on the large computer. They can click the A428 button to begin.

They will then be teleported to the virtual road scheme. Here they should interact with the first NPC who will give them more instructions. They now have two options that they can do in any order. The first task is to get a camera and workbook from a near by NPC, and document all the animals and habitats they find. The other task is to safely build a road without harming any of the habitats along the way.

Part 3 –

The students can then present their road designs to the class and talk about how they avoided the animals habitats and why that is important. They can discuss the animals that live there, and the facts they found out about them, as well as the job roles involved in the scheme.

Revision #3

Created 3 September 2021 12:52:09 by joe

Updated 5 September 2021 10:43:29 by Megan