**Coordinates and dialogue for STEM project**

**A428 Creative Game**

VR Experience –

-22257 63 8234

Blackcat Creative –

-22227 100 7067

**Dialogue –**

Luka (Receptionist) –

*Hi there, welcome to your first day interning at the Highways England design department! Go through to the office’s and find Emily, she’ll tell you what to do.*

Emily (NPC who gives first instructions) –

*Hey! Welcome to the design department. Today you’re going to use our VR experience to create and build new ideas for our schemes! Head through into the VR room, there are three unique challenges for you.*

**Blackcat Board Instructions at the site –**

*Welcome to Blackcat roundabout on the A428 road scheme! As the new design intern, we want you to add your ideas to this map. You have three unique challenges to explore. Do one challenge at a time and see what you can come up with.*

1. *What will vehicles of the future look like, and how could you design roads for them?*
2. *Motorways of the future, what technology will be needed, and how will it function?*
3. *What would you like to see along the side of motorways and roads to promote natural habitats?*

**Structure Block Instructions –**

*The block to the right is a structure block, anything built inside the lines it creates can be exported and saved on your desktop. Right click on the block to adjust the box to build inside. When you’re done, right click on the block and export your design!*

**ISSUES –**

/tp @a or it will disappear

**A428 Tutorial Mode**

Spawn -

-22143 100 7072

**First NPC (Right Click Me) –**

*Welcome to the Minecraft Education Edition Highway Code, here you will learn more about how to play Minecraft Education Edition! The first thing to know is how to move forward. You do this by pressing the W key. Use your mouse or trackpad to look around. When you’re ready, press start and try moving forwards until you get to the next set of instructions!*

**First instruction board –**

*Stop! Now you’re going to move over lanes. Use your mouse or trackpad to look in the direction you want to go, whilst pressing the W key.*

**Second instruction board –**

*Well done! Now we’re going to try moving left to right. Press the A key to go left, and the D key to go to the right. Hold down the A key to get past the first obstacle, then continue through the course.*

**Third instruction board –**

*Well done, weave your way through the rest of the course to get to our next lesson, how to jump!*

**Forth instruction board –**

*Now it’s time to learn how to jump. Approach the car up ahead, and press space bar whilst pressing the W key to leap over the blocks and get across the car! Once you get to the top, keep pressing W to continue moving and head down the other side.*

**Fifth instruction board –**

*Now for the big one, flying! Approach the blocks ahead. In order to pass over you need to double tap the space bar. That will lift you off the ground. Once you are in the air you can hold down space bar to get to the right height. Give it a go and cross the blocks!*

**Sixth instruction board –**

*Well done! Now to get back down to Earth. Double tap the space bar when in the air to return to the ground.*

**Seventh instruction board –**

*You can easily get down these blocks by continuing to press W.*

**Eighth instruction board –**

*Time to take a flying leap! Approach the edge of the cliff, double tap space bar to get into the air, then fly slowly down to the landing area below. In order to get down to the ground slowly, instead of double tapping space bar, press the Shift key on the left side of your keyboard. This will allow you to control your descent.*

**Ninth instruction board –**

*Now you’re going to fly to a set area. Look up to the left to see more orange and white cones. That’s where you’re aiming for. Hold down space bar to fly, and use your mouse to aim.*

**Tenth instruction board –**

*Well done! Try one more time. Fly higher up in the air and look ahead for your next area. Tip – to move faster hold down the ctrl key whilst pressing W.*

**Next NPC –**

*Now to try building! Click the button to get some blocks. To place a block, use your mouse to look at the place you want to build, then right click to place the block in your hand. To delete a block, look at it and left click. Try building on top of the letters here, then delete the blocks when you’re done.*

**A428 Biodiversity Game**

**World Spawn –**

**-22257 63 8199**

**Dialogue**

**Sam (receptionist)**

*Welcome to the ecology department of Highways England! You must be our new ecologist, Clare is waiting for you in the main office, have a great day.*

**Random office NPC’s – May, Lucy, Elliot**

**Clare (NPC who gives instructions)**

*Welcome! We have a challenge for you today. Use the machine ahead to visit our Caxton Gibbet site, where you will be given a task around the local habitats that live there!*

**Biodiversity Game Machine**

*To begin the challenge, select which group you are in.*

*Select Key Stage 2 or Key Stage 3*

**Key Stage 2 Game –**

**18847 203 -9338**

**Taylor (Site manager)**

*Welcome to the site. We need you to continue to build this road whilst keeping the wildlife safe. Build the quickest route without harming any wildlife. Complete the road without any damage to their habitats to complete the game!*

**Portacabin Board**

*Caxton Gibbet Environmental Site –*

*We have six habitats here that we need to keep safe whilst building the new road.*

*Bats*

*Barn Owls*

*Badgers*

*Bees*

*Foxes*

*Great Crested Newts*

*Go to each habitat to find out more about them.*

**Instruction board 1**

*The road should be 6 blocks wide, using grey wool. Have a look further along to see where they need to connect and mark a path to avoid the habitats. Start by filling in this empty section.*

**Instruction board 2**

*Connect this road to the one further ahead, whilst keeping the animal habitats safe and unchanged. Find the safest and most straight forward route to connect the roads.*

**Workbook NPC**

*Take a workbook and camera by clicking the buttons. You can take pictures of the habitats and write down the facts you learn next to them in the workbook!*

**Badger habitat**

*This is the badger habitat. Badgers are nocturnal. They prefer dry open grassland, but they are very adaptable. Some also live in woods, quarries, hedgerows, sea cliffs and moorland. A badger’s home is called a sett. Setts have a special chamber reserved as their bathroom!*

**Fox habitat**

*This is the fox habitat. Foxes are one of the most well-known wild animals in the UK, they are native to Britain. Foxes are a member of the dog family and male foxes are called Dogs, with female foxes being called Vixens. A fox’s home is called a den or an earth, and they will often take food back and hide it for later.*

**Bat habitat**

*There are 11 different species of bat around this scheme. Bats eat insects and hunt on waterways, in woods, or grassland. UK bats do not build their own roosts (homes); they use natural and man-made structures that are already available. Bats roost in attics, caves, churches, tunnels, and holes in trees.*

**Bee habitat**

*Bees are very important as they pollinate plants and crops. B-Lines have been made for bees to create a series of ‘insect pathways’ running through our countryside and towns. They link existing wildlife areas together, creating a network, like a railway, that will weave across the British landscape.*

**Barn Owl habitat**

*Barn Owls are nocturnal and have lop-sided ears (one is higher than the other) so they can pinpoint exactly where tiny sounds are coming from. Their home ranges in the winter can be up to 5,000 hectares (that’s 7,102 football pitches). But in summer when there is more food the area shrinks to about 350 hectares.*

**Rabbit habitat**

*Rabbits’ ears can turn 180 degrees, meaning they have really great hearing. Baby rabbits, like baby cats, are called kittens! Rabbits are also very social creatures and like to be around other rabbits. Root vegetables aren’t a natural part of their diet, carrots are high in sugar so they shouldn’t eat too many.*

**Instruction board 3**

*This is where the two roads need to connect.*

**Key Stage 3 Game –**

**19190 204 -8670**

**Dialogue –**

**Alex (Site Manager)**

*Welcome to the site, you’re here to study the habitats of various animals, move those habitats, and safely build the road around them. The habitats are here for you to study and figure out what is required to replicate a safe habitat. You must re-locate the current habitats and build the road around them. Start by examining the current habitats to figure out what helps them survive.*

**Portacabin**

**Workbook NPC –**

*Click the buttons to get a workbook and a camera. Take pictures of each habitat, add the picture to your workbook and write down what the habitat needs to survive and the facts you will learn about each animal!*

**Board –**

*Caxton Gibbet Environmental Site –*

*We have sex habitats here that you must safely move to a new area in order to build the new road.*

*Bats, Barn Owls, Badgers, Bees, Foxes, Great Crested Newts.*

*Each habitat requires a specific item, find out what that item is and place it into the item frame in front of the correct habitat name in here.*

**Erin (Ecologist)**

*Have a close look at each habitat. One item in there will help the animals survive. Figure out that item, then re-create the habitats at a safe distance from the proposed road. Use the lead to move the animals safely to their new habitat. Finally, connect the roads together when you are done!*

**Instruction Board 1**

*You need to connect this road to the next part once you have re-located the habitats safely.*

**Build Here NPC**

*Use this large area to build new and improved habitats for all the animals. You can make them bigger, so they have more room to explore!*

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