Eco Earth

Game narrators:

				
Habitat	**British Countryside**	**Arctic Tundra**	**Rainforest**	**Ocean**
Name	Olivia	Malcolm	Susan	Rocky
Animal	Tawny Owl	Moose	Emerald Tree Boa	Rock Hopper Penguin

Fonts & Colour Pallets:

Logo	
Font	Phosphate
Colour	106a35

In-Game Font
Lucida Grande, Regular, Strong

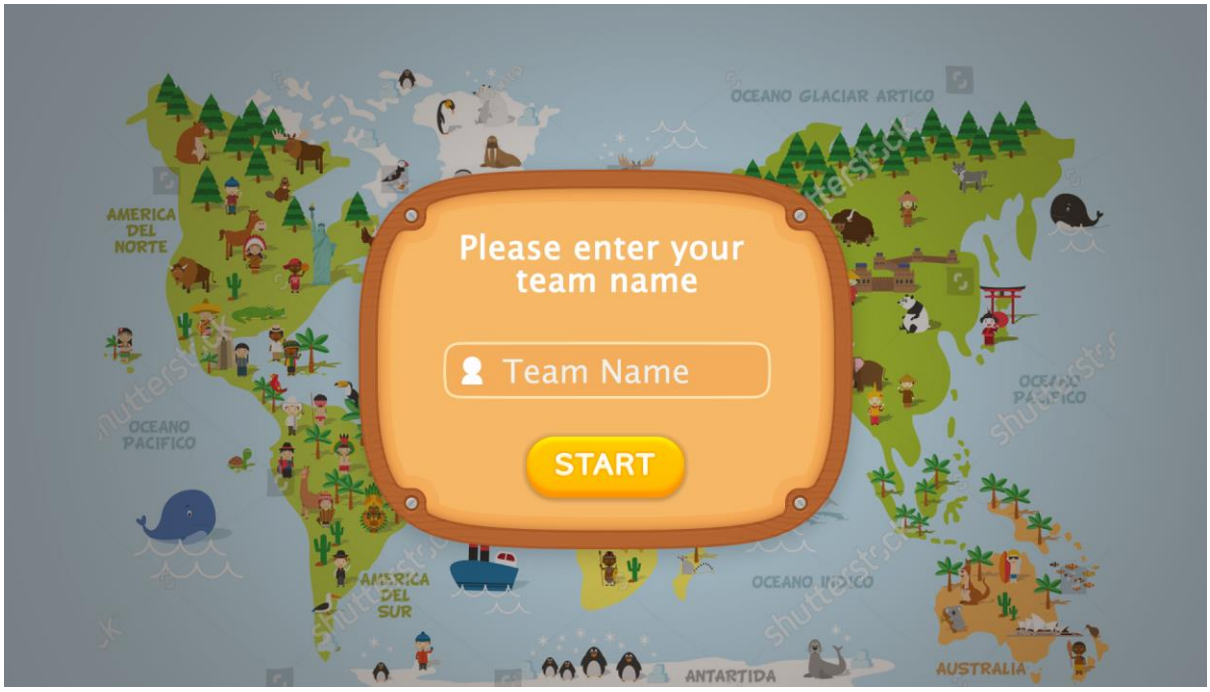
Welcome Screen	
Map green land	a7c833
Map rainforest green land	5f7710
Map sea	c0efff
Map ice	ffffff
Greenhouse gas meter green	a7c833
Greenhouse gas meter amber	f3bd2a
Greenhouse gas meter red	ff0000
Narator speech text black	000000

Game End Window	
Text box outer green	106a36
Text box inner green	6dbd44
Text box font black	000000
Text box app name green	106a36

Arctic Tundra	
Padlock blue	70c5f4
Outer chain circle blue	70c5f4
Inner chain circle white	ffffff
Arrow button blue	8dd7f8
Arrow button shadow blue	59c6f6
Arrow on arrow button white	ffffff
Rainforest	
Padlock green	0ca734
Outer chain circle green	0ca734
Inner chain circle white	ffffff
Arrow button green	11e046
Arrow button shadow green	0ca734
Arrow on arrow button white	ffffff

Countryside	
Padlock green	4ad10e
Outer chain circle green	4ad10e
Inner chain circle white	ffffff
Arrow button green	6ef533
Arrow button shadow green	4ad10e
Arrow on arrow button white	ffffff
Ocean	
Padlock blue	0896d1
Outer chain circle blue	0896d1
Inner chain circle white	ffffff
Arrow button blue	6ef533
Arrow button shadow blue	25b8f5
Arrow on arrow button white	ffffff

Log in Window



Self-explanatory log in window for players to register a team name and start.

World View

The world view opens up with a full preview of the world. Here we see:

- The four habitats named and highlighted geographically for additional education
    I. Both the habitat title box and the map location are clickable
- The team name, as entered on the previous log in window
- A fixed starting score of 10,000 points
- An empty pledge meter (only filled slightly to highlight the responsibility of the bar)

- An empty greenhouse gas meter (only filled slightly to highlight the responsibility of the bar)

Habitat View

In this example we'll walk through the habitat view of the Arctic Tundra. All habitats follow the same view using their personalised colour schemes, and copy.

Fixed assets on all habitat screens:

- Team name
- Real-time score
- Pledge meter
- Greenhouse gas meter
- Habitat title box

Habitat View Introduction

Each habitat will open with a short introductory text to link the product to the habitat, this is displayed in a pop-up box with an 'x' to close the box once the text has been read. The background for each habitat is a zoomed in view of the habitat location from the World View. The intro text for each habitat is below;

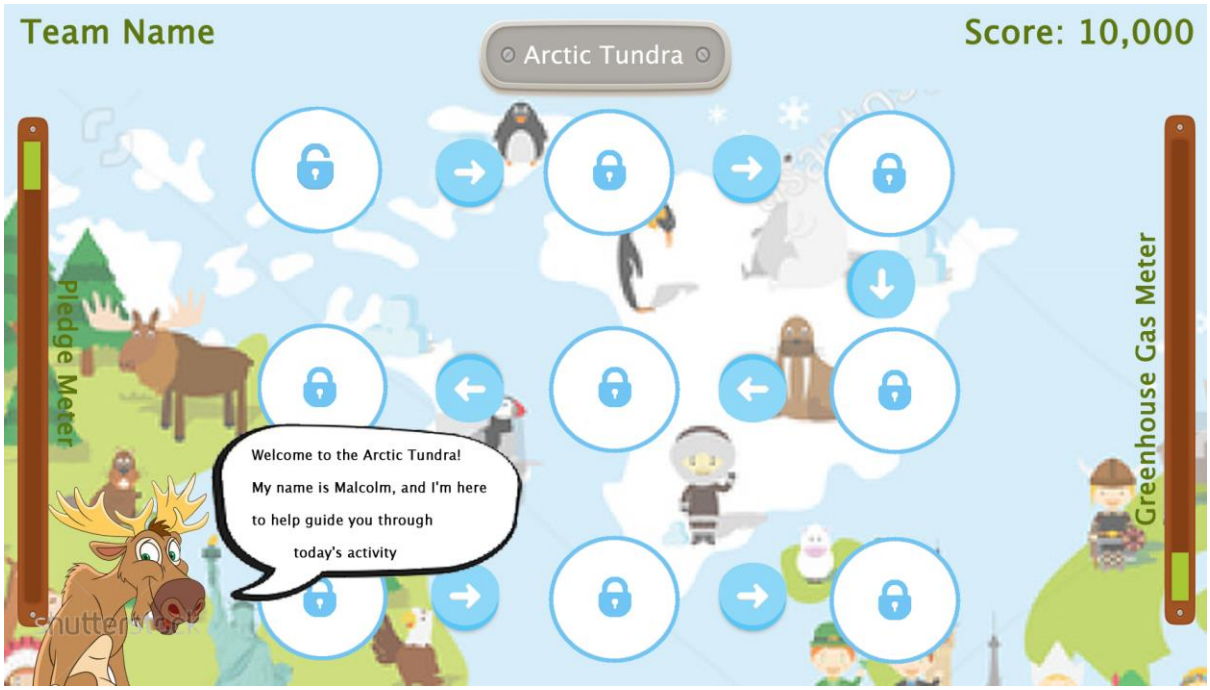
Arctic: The Arctic is mined for natural gas. One of the uses for this natural gas is to generate electricity, which is wasted if electronics are left on standby. The Arctic is estimated to hold the world's largest remaining untapped gas reserves.

Rainforest: The rainforest is mined for the raw materials that make mobile phones. This involves the cutting down of trees to build the mines and to improve road networks. This destroys habitats. On top of this, when trees are cut down, the carbon they store is released into the atmosphere.

Countryside: 2.1 million cattle are used for beef production annually in the UK. In 2015, overall UK agriculture released an estimate of 49.1 million tonnes of greenhouse gas into the atmosphere.

Ocean: Oil is mined from the ocean floor. One of the uses for this oil is the production of plastic bottles. London alone drinks 2 million plastic bottles of water daily (and that's just water!)

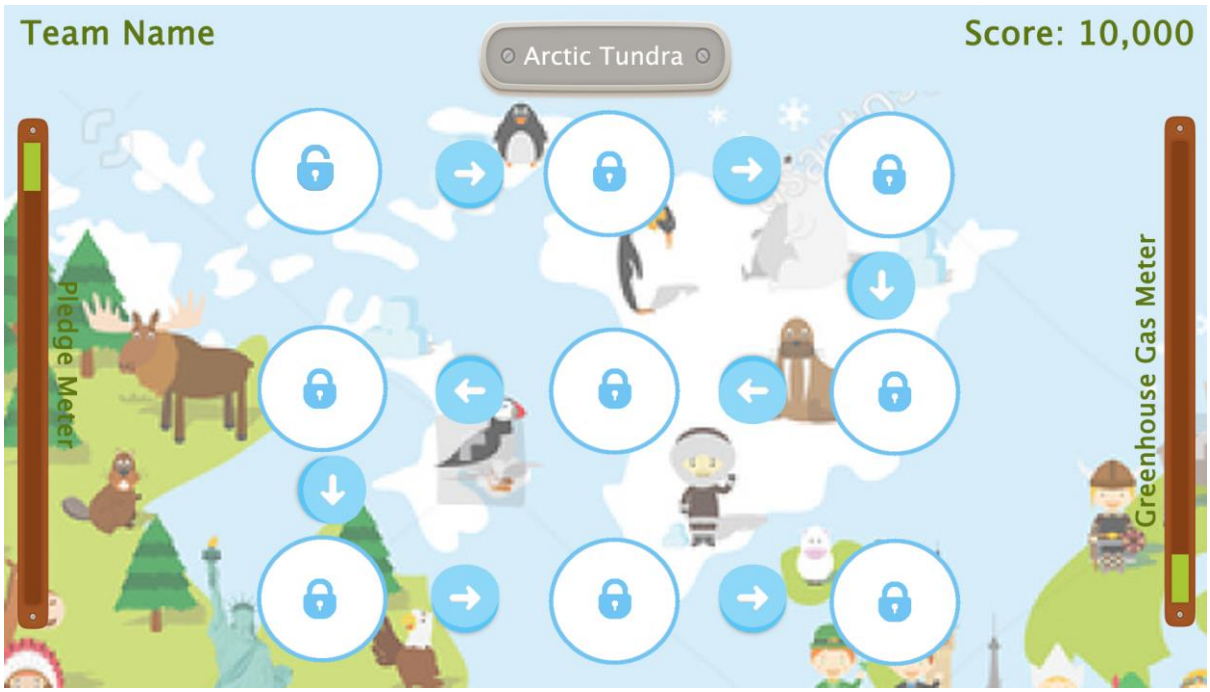
Habitat View Chain



Narrator open game speech:

*"Welcome to [INSERT HABITAT]! My name is [LOCAL CHARACTER] and I'm here to help guide you through today's activity. *Throughout your journey you'll be asked some questions based on the habitat you're viewing. Every incorrect answer will reduce your score by 500 points. The aim of the game is to keep your team score as close to 10,000 points as possible by answering the questions correctly. Make sure you're paying attention as some questions may relate to what you're reading!* Let's begin. Click on the unlocked padlock to start your journey, and learn about the greenhouse gas footprint of [INSERT PRODUCT]."*

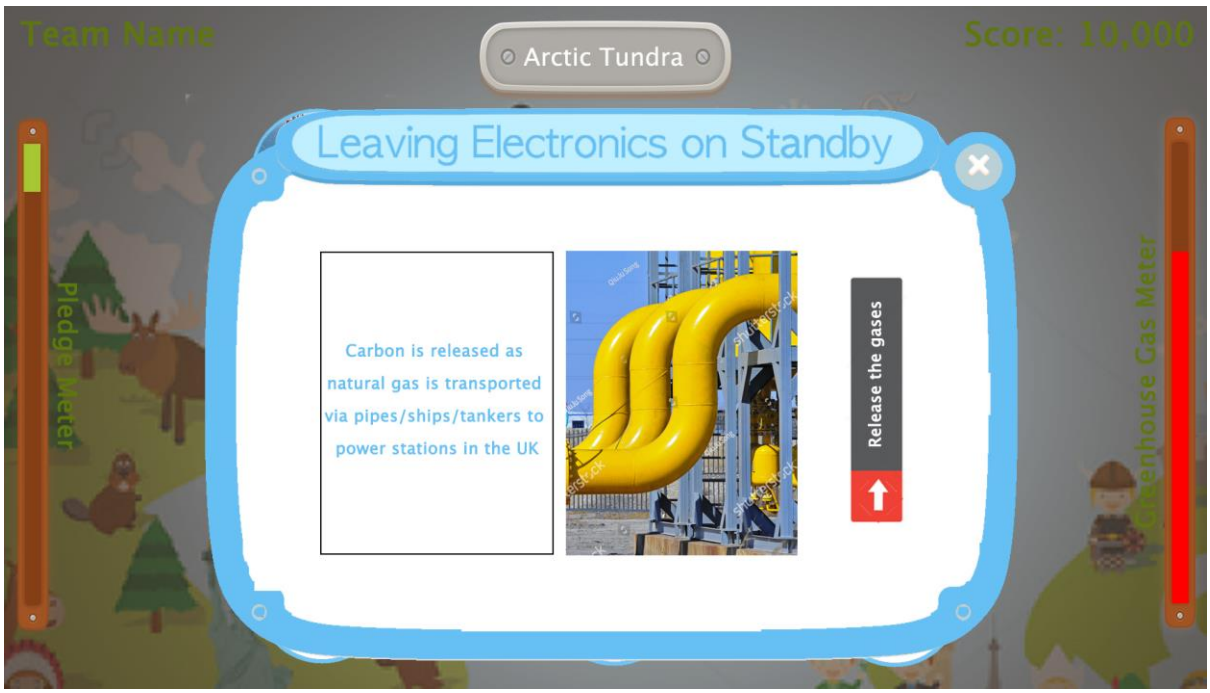
_ text only displayed in the first habitat chosen i.e. only displayed once*



After the players have read and closed the introductory text pop-up box, the habitat narrator and the chain appears. The unlocked padlock displays on every next step so that it's clear which stage should be clicked on, but the habitat narrator provides some explanatory text just in case!

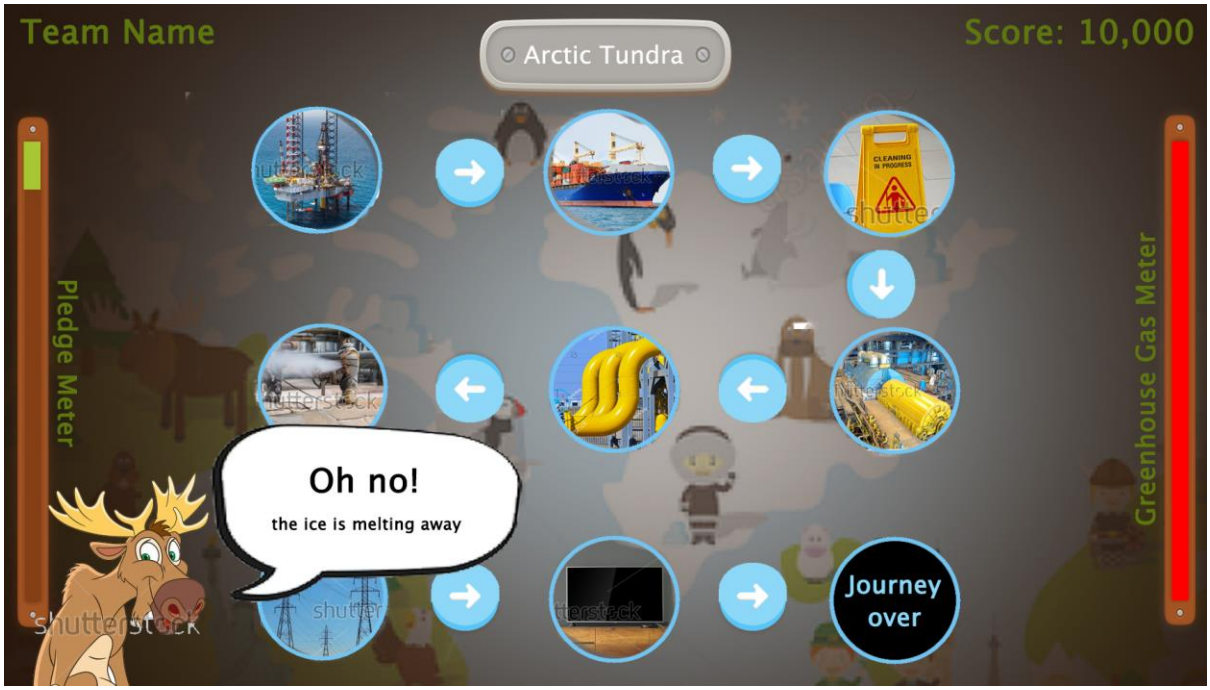
If a locked padlock is clicked, the narrator will appear again to guide players to the unlocked tile:

"Uh oh, looks like that window is locked. Click on the window with the open padlock"



Upon clicking on each unlocked stage, a pop-up box appears with the detail of that stage of the chain, a representative image and a slider to 'release the gases'. Players will be required to move the slider upwards (represented by the arrow direction) to release the gases into the atmosphere before they can close the pop-up box and move on. With each action of releasing the gases;

1. The greenhouse gas meter rises (each percentage rise is representative of how many stages there are in the chain, once all stages of the chain are complete, the meter will display full)
2. The greenhouse gas meter changes from green, to amber, to red as it fills
3. The background gets darker (increasing background shadow)
4. The animal narrator returns with speech that highlights the effect the rising gas is having on the habitat



Narrators speech, highlighting the risks per habitat are below.

Arctic:

- *“Permafrost is the frozen layer of soil in the ground of my home in the tundra, it usually stays frozen in winter and summer but now it's melting and all the drinking water is soaking into the soil. I’m so thirsty!"*
- *"Oh no, the ice is melting away. I’m so worried, some scientists believe that at this rate the Arctic could be ice-free by 2030, or even earlier. Where will I live?"*

Rainforest:

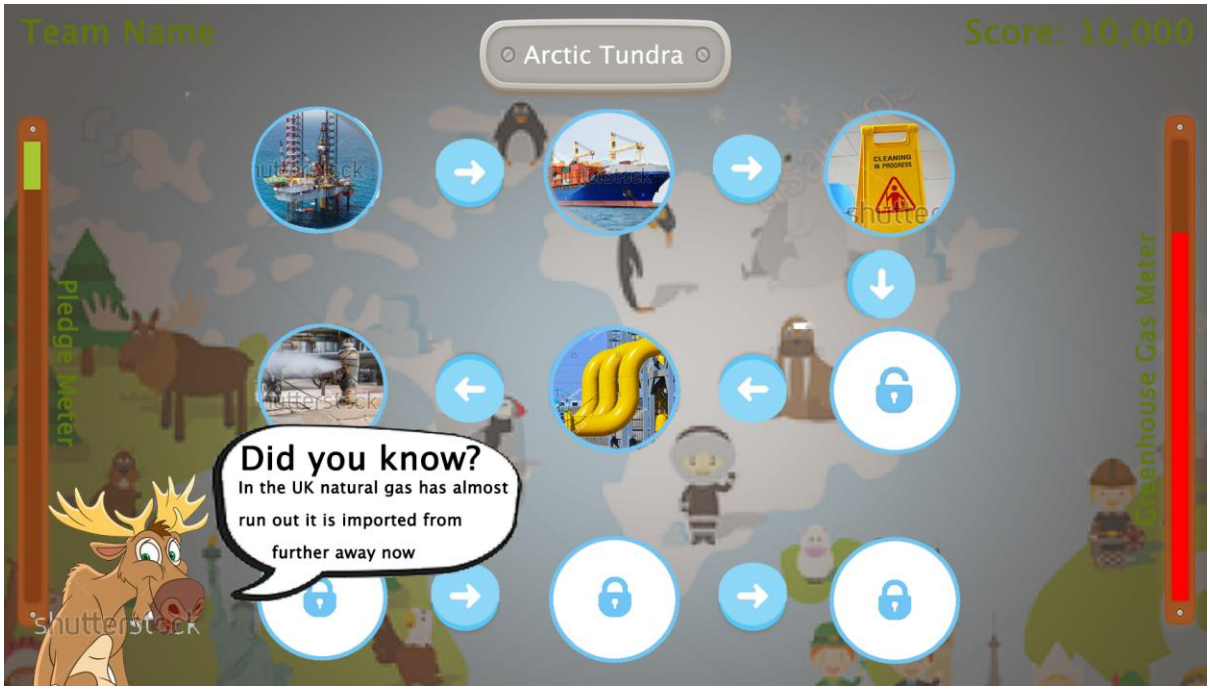
- *"It's feeling really hot here now"*
- *"I haven't seen any rain here in days"*
- *"Oh no, the trees are catching fire! All the carbon stored in the trees is being released into the atmosphere as they burn, it’s making it worse!"*

Countryside:

- *"It's rained so much that floods are forming"*
- *"Our summers are getting far too hot; lots of people are getting sick"*
- *"Oh no, the sea level has risen and our coasts are flooding. If the same level of greenhouse gases is emitted this century, sea levels could rise by up to 1.9m. Just a 1m rise in sea level would see most of Bangladesh, Vietnam, Norway and the Maldives underwater. This has got to stop!"*

Ocean:

- *"All my friends are leaving for cooler waters, even the fish are leaving, what will I eat?"*
- *"All the coral is losing its pretty colours, because it’s stressed and releasing its food, the algae. This is turning the coral white, making it more susceptible for disease and death"*
- *"The water is too acidic because of a chemical reaction from absorbing more carbon. The ocean is less saturated with calcium carbonate, and without it my friends the crabs, clams and mussels are struggling to produce and maintain their shells"*



The narrator will also appear at various stages throughout the game to provide 'Did you know?' facts. These are linked to various stages within the chain. A full list of chain stages, along with relevant facts can be seen below per habitat.

	Chain	Fact
Habitat Chain View - Beef/Countryside		
1	Carbon is released as trees and plants are cut down to make space for cows and to grow their feed	
2	Carbon is released from pesticides that are put on cow feed to stop them being damaged by pests	Carbon is also released when electricity is generated to produce pesticides
3	Carbon and nitrous oxide are released from fertilisers that are used to help cow feed grow	Nitrous oxide is 300 times more harmful to the environment than carbon
4	Carbon is released when electricity pumps water from underground rivers, reservoirs, streams and canals to provide water for the cows to drink and to grow their feed in the fields	
5	Carbon is released when farm vehicles and machinery are used on the farm and fields	
6	Methane is released when grazing cows pass wind	Methane is 23 times more harmful to the environment than carbon
7	Carbon is released when animals are transported to the slaughter house	
8	Carbon is released as electricity powers fridges, lights, computers, water and many more resources in the slaughter house	
9	Carbon is released from the production of the materials used to package the beef	
10	Carbon is released when beef is transported to the shops and restaurants it is sold in.	Sometimes beef is flown over from a different countries around the world
11	Carbon is released as electricity powers fridges, lights, computers, heating, water and many more resources in the shops and restaurants	

12	Carbon is released as customers travel to the shops and restaurants	
13	Methane is released as beef and packaging decomposes in landfill	
Habitat Chain View - Plastic Bottle/Ocean		
1	Carbon is released as drilling rigs are constructed, installed and run	
2	Carbon is released as oil is transported via pipes/ships to treatment plants	
3	Carbon is released as electricity is required to clean the oil	
4	Carbon is released as oil is transported via pipes/ships/rail/tankers to manufacturers	
5	Carbon is released when electricity is generated to form the oil into plastic bottles and lids	
6	Carbon is released as empty bottles are transported to a bottling plant	
7	Carbon is released when machinery fills bottles with drink	
8	Carbon is released when bottles are packaged	
9	Carbon is released as plastic bottles are transported to shops and restaurants	
10	Carbon is released as electricity powers fridges, lights, computers, heating, water and many more resources in the shops and restaurants	
11	Carbon is released as customers travel to the shops and restaurants	
12	Methane is released as plastic bottle decomposes in landfill	Methane is 23 times more harmful to the environment than carbon
Habitat Chain View - Electronics Left on Standby/Arctic Tundra		
1	Carbon is released when natural gas drilling rigs are constructed, installed and run	
2	Carbon is released as natural gas is transported via pipes/ships/tankers to treatment plants	
3	Carbon is released as electricity is required to clean and dry the natural gas	
4	Carbon is released when natural gas is odorised so people can smell it and be alerted to a gas leak	
5	Carbon is released as natural gas is transported via pipes/ships/tankers to power stations in the UK	In the UK natural gas has almost run out it is imported from further away now
6	Carbon is released when natural gas is burned in power stations to drive turbines, which then produces electricity	
7	Carbon is released as electricity is needed for pylons/power lines to carry electricity	10% of electricity wasted along metal pylons
8	15kg of carbon wasted per year by leaving TVs on standby	9-16% of the electricity consumed in homes is used to power appliances when they are in this standby mode
Habitat Chain View - Mobile Phone/Rainforest		
1	Carbon is released as oil drilling rigs and mines are constructed, installed and run to extract raw materials which mostly come from rainforests	Mining takes place in, and destroys rainforests
2	Carbon is released as raw materials are transported to factories in China, Taiwan, Japan or Korea	

3	Carbon is released when electricity is generated to construct raw materials into usable phone parts	
4	Carbon is released when mobile phones are packaged	
5	Carbon is released as constructed mobile phones are transported to the phone shop	
6	Carbon is released as electricity powers lights, computers, heating, water and many more resources in the phone shop	
7	Carbon is released as customers travel to the phone shop	
8	Carbon is released when electricity is used every time the phone is charged	
9	Carbon is released as raw materials continue to be drilled/mined if phone is not recycled	80% of the carbon footprint of a phone happened before it's turned on for the first time

Q&A and Games

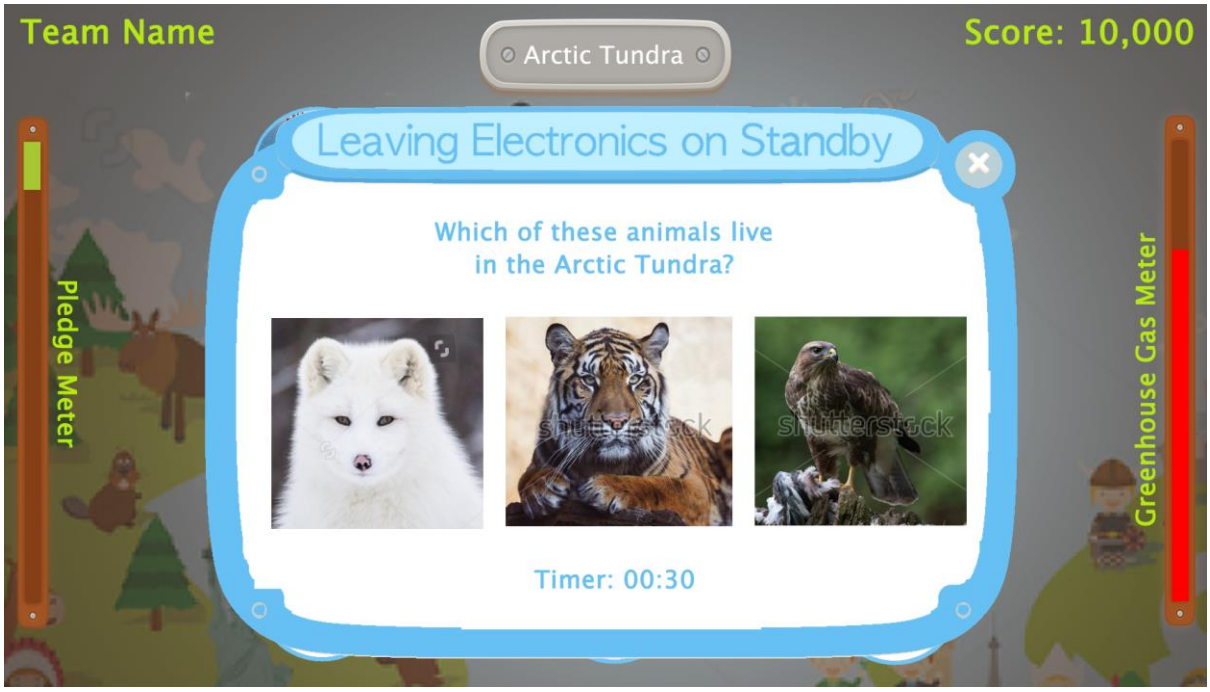
After each stage of the chain pop-up box has been closed, players will be taken into a 'mini game' of either a Q&A to test the knowledge and understanding of what they've learnt or an animal card game.

Scoring

Players all start with 10,000 points. Scores cannot increase, and the aim of the games is to maintain the score closest to 10,000 as possible with correct answers. Every incorrect answer will reduce the score by 500 points.

[Nice to have, if time: reduction of score as a multiplier of how much time is remaining]

Animal Card Game Window

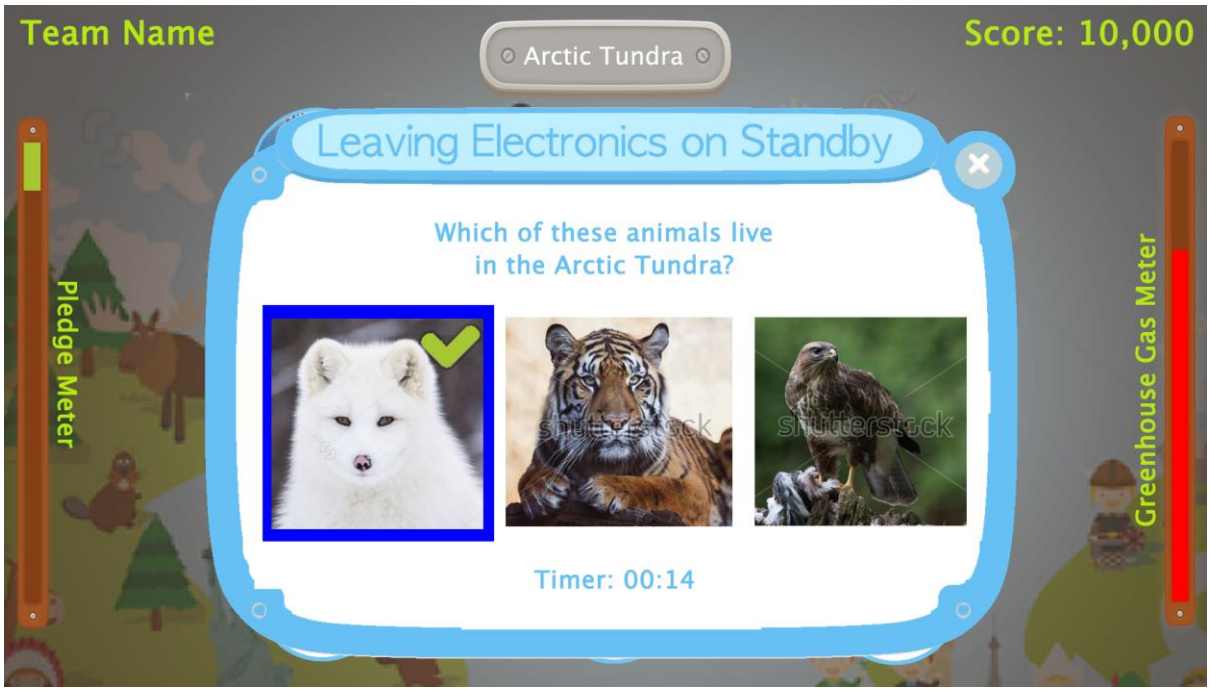


The animal card game will display four times randomly (rounds) during each chain, with growing complexity. Players will have 30 seconds on a timer to correctly select the animal(s) that live in the habitat they're playing in. Each round will change as below;

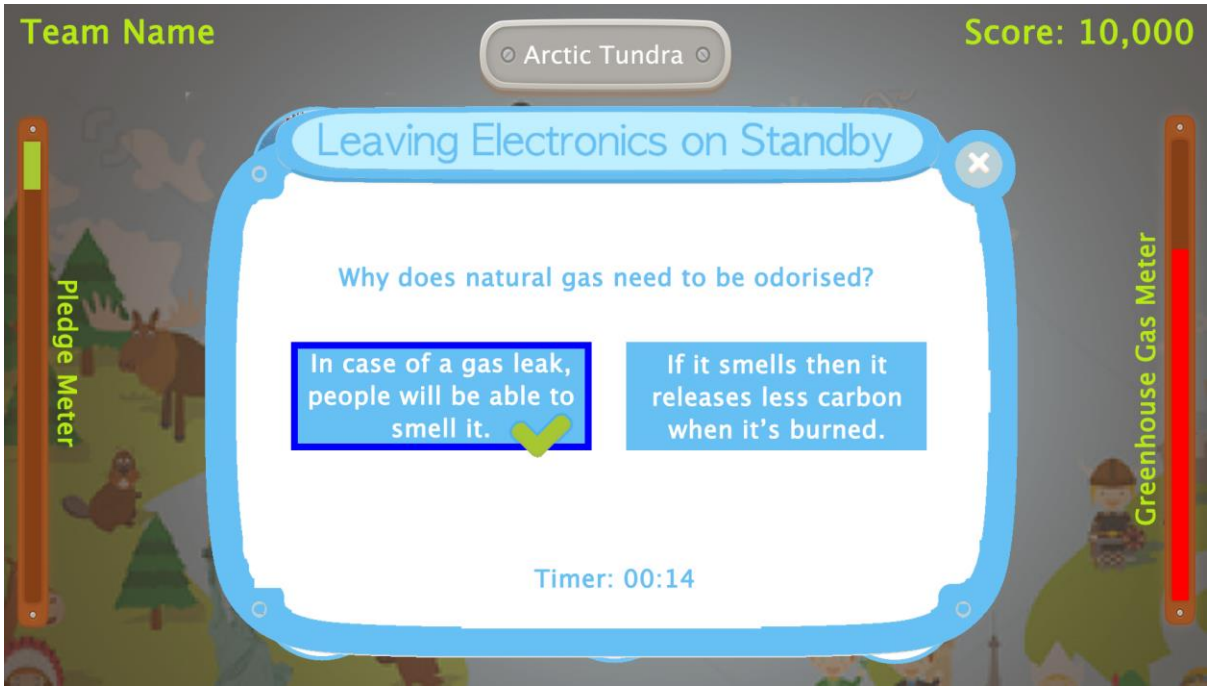
- Round One: Find ONE animal out of THREE that lives in the habitat

- Round Two: Find TWO animals out of SIX that lives in the habitat
- Round Three: Find THREE animals out of NINE that lives in the habitat
- Round Four: Find FOUR animals out of TWELVE that lives in the habitat

A box will display to highlight the player's selection and an automatic validation will take place to display if the answer is correct or not. Incorrect answers will display a red cross in the top right hand corner, and correct answers will display a green tick.



Q&A Window



Four questions will be asked during each chain to test the knowledge and understanding of what has just been learnt. Questions will only display after the relevant part of the chain has been displayed, but could be displayed in any random place i.e. they may not display directly after the relating chain stage.

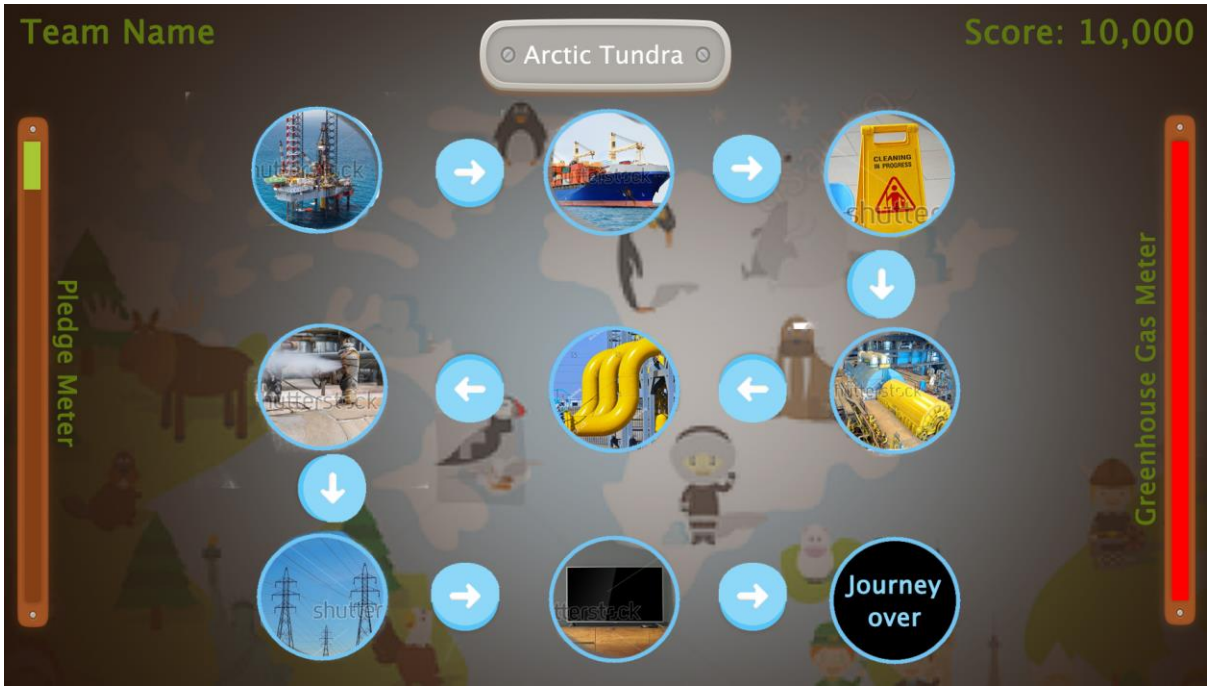
Questions and answers, along with the stage in the chain they relate to can be seen below per habitat:

	Chain	Question & Answers
Habitat Chain View - Beef/Countryside		
1	Carbon is released as trees and plants are cut down to make space for cows and to grow their feed	
2	Carbon is released from pesticides that are put on cow feed to stop them being damaged by pests	
3	Carbon and nitrous oxide are released from fertilisers that are used to help cow feed grow	What gases are released from using fertilisers? CORRECT: Carbon and nitrous oxide INCORRECT: Carbon, nitrous oxide and methane
4	Carbon is released when electricity pumps water from underground rivers, reservoirs, streams and canals to provide water for the cows to drink and to grow their feed in the fields	Which of the below are examples of where water is pumped from to provide water for the cows and their growing feed? CORRECT: Underground rivers, reservoirs, streams and canals INCORRECT: Sinks, baths and lakes
5	Carbon is released when farm vehicles and machinery are used on the farm and fields	
6	Methane is released when grazing cows pass wind	What gas is released when grazing cows pass wind? CORRECT: Methane INCORRECT: Carbon
7	Carbon is released when animals are transported to the slaughter house	

8	Carbon is released as electricity powers fridges, lights, computers, water and many more resources in the slaughter house	What is needed to power the fridges, lights and computers inside the slaughter house? CORRECT: Electricity INCORRECT: Carbon
9	Carbon is released from the production of the materials used to package the beef	
10	Carbon is released when beef is transported to the shops and restaurants it is sold in.	
11	Carbon is released as electricity powers fridges, lights, computers, heating, water and many more resources in the shops and restaurants	
12	Carbon is released as customers travel to the shops and restaurants	
13	Methane is released as beef and packaging decomposes in landfill	
Habitat Chain View - Plastic Bottle/Ocean		
1	Carbon is released as drilling rigs are constructed, installed and run	
2	Carbon is released as oil is transported via pipes/ships to treatment plants	Name two modes of transport to get oil to the treatment plants from the oil rigs? CORRECT: Pipes and ships INCORRECT: Aeroplanes and cars
3	Carbon is released as electricity is required to clean the oil	
4	Carbon is released as oil is transported via pipes/ships/rail/tankers to manufacturers	
5	Carbon is released when electricity is generated to form the oil into plastic bottles and lids	
6	Carbon is released as empty bottles are transported to a bottling plant	Where do the empty bottles get transported to? CORRECT: A bottling plant INCORRECT: Shops and restaurants
7	Carbon is released when machinery fills bottles with drink	What gas is released when machinery fills each bottle with drink? CORRECT: Carbon INCORRECT: Nitrous oxide
8	Carbon is released when bottles are packaged	
9	Carbon is released as plastic bottles are transported to shops and restaurants	
10	Carbon is released as electricity powers fridges, lights, computers, heating, water and many more resources in the shops and restaurants	
11	Carbon is released as customers travel to the shops and restaurants	
12	Methane is released as plastic bottle decomposes in landfill	What gas is released when plastic bottles decompose in landfills? CORRECT: Methane INCORRECT: Carbon
Habitat Chain View - Electronics Left on Standby/Arctic Tundra		
1	Carbon is released when natural gas drilling rigs are constructed, installed and run	
2	Carbon is released as natural gas is transported via pipes/ships/tankers to treatment plants	

3	Carbon is released as electricity is required to clean and dry the natural gas	What's the missing word? "Carbon is released as _____ is required to clean and dry the natural gas" CORRECT: Electricity INCORRECT: Carbon
4	Carbon is released when natural gas is odorised so people can smell it and be alerted to a gas leak	Why does natural gas need to be odorised? CORRECT: In case of a gas leak, people need to be able to smell it INCORRECT: Less carbon is released if the gas smells
5	Carbon is released as natural gas is transported via pipes/ships/tankers to power stations in the UK	Where does the natural gas get transported to? CORRECT: Power stations INCORRECT: Schools and colleges
6	Carbon is released when natural gas is burned in power stations to drive turbines, which then produces electricity	
7	Carbon is released as electricity is needed for pylons/power lines to carry electricity	
8	15kg of carbon wasted per year by leaving TVs on standby	How much carbon is wasted per year by leaving TVs on standby? CORRECT: 15kg INCORRECT: 2kg
Habitat Chain View - Mobile Phone/Rainforest		
1	Carbon is released as oil drilling rigs and mines are constructed, installed and run to extract raw materials which mostly come from rainforests	Where do most of the raw materials to build mobile phones come from? CORRECT: Rainforests INCORRECT: Oceans
2	Carbon is released as raw materials are transported to factories in China, Taiwan, Japan or Korea	Where are mobile phone raw materials transported to? CORRECT: China, Taiwan, Japan or Korea INCORRECT: China, USA, Japan or England
3	Carbon is released when electricity is generated to construct raw materials into usable phone parts	
4	Carbon is released when mobile phones are packaged	
5	Carbon is released as constructed mobile phones are transported to the phone shop	What's the missing word? "_____ is released as constructed mobile phones are transported to the phone shop" CORRECT: Carbon INCORRECT: Electricity
6	Carbon is released as electricity powers lights, computers, heating, water and many more resources in the phone shop	
7	Carbon is released as customers travel to the phone shop	
8	Carbon is released when electricity is used every time the phone is charged	True or false. Carbon is released every time a mobile phone is charged. CORRECT: True INCORRECT: False
9	Carbon is released as raw materials continue to be drilled/mined if phone is not recycled	

Chain Complete: Journey Over Window



The final stage of every game is a black circle with a 'Journey over' message. Nothing is clickable on this screen for 3 seconds.

After 3 seconds, the animal narrator appears asking for the players to help save their home.
"All those greenhouse gases are destroying the [INSERT HABITAT NAME]. Please can you help save my home?"

An image is displayed of the habitat and the effect all the greenhouse gases have had on it.

Arctic: Polar bear on melted ice
Rainforest: Aftermath of a forest fire
Ocean: Bleached coral

Countryside: Floods in the UK

If player's select 'no' (they cannot help) they will return to the World View, unless all habitats are completed then they'll be taken to the game end window.

If player's select 'yes' (they can help) they'll be presented with a pledge window.

Pledge Window

Players are presented with the choice of three pledges per habitat, and requested to select one.

Pledges

Arctic:

1. I will switch electronics off of standby when I am not using them
2. I will switch light switches off when I am not using them
3. I will unplug my mobile phone charger from the wall

Rainforest:

1. I will reconsider upgrading my phone every year/two years if it still works okay
2. I will take care of my phone to make it last as long as possible
3. I will recycle my phone instead of throwing it in landfill

Ocean:

1. I will use a reusable bottle instead of buying single use plastic bottles
2. I will recycle any plastic bottles I use
3. If I want water when eating out, I will ask for tap water instead of getting it in a plastic bottle

Countryside:

1. I will try to skip eating beef (and better yet, meat!) for one day a week (you could follow @meatfreemonday)
2. If I have access to a special food waste bin, I will throw beef (and any other food waste) in it
3. When ordering food, I will pick an alternative meat (or better yet, a vegetarian option) instead of beef

Once the pledge is chosen, players will see their chosen pledge and the animal narrator will thank them for making a promise to save their home. Once player's close the pledge box using the 'X', they will return to the World View, or if all habitats have been visited they'll see the game end window.

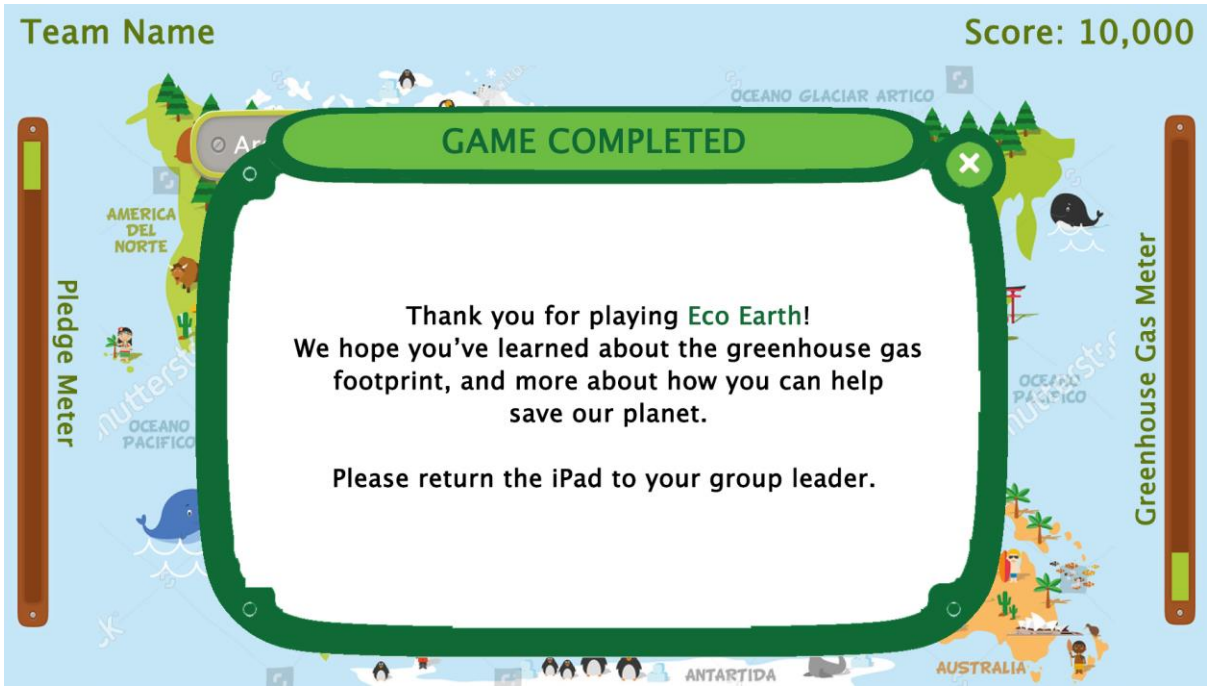
"Thank you for making a promise to help save my home!"

Game End Window

After each habitat is completed, they will be inaccessible to re-play (locked) and a green bar will appear around the tile to indicate it is completed. On completion of all habitats;

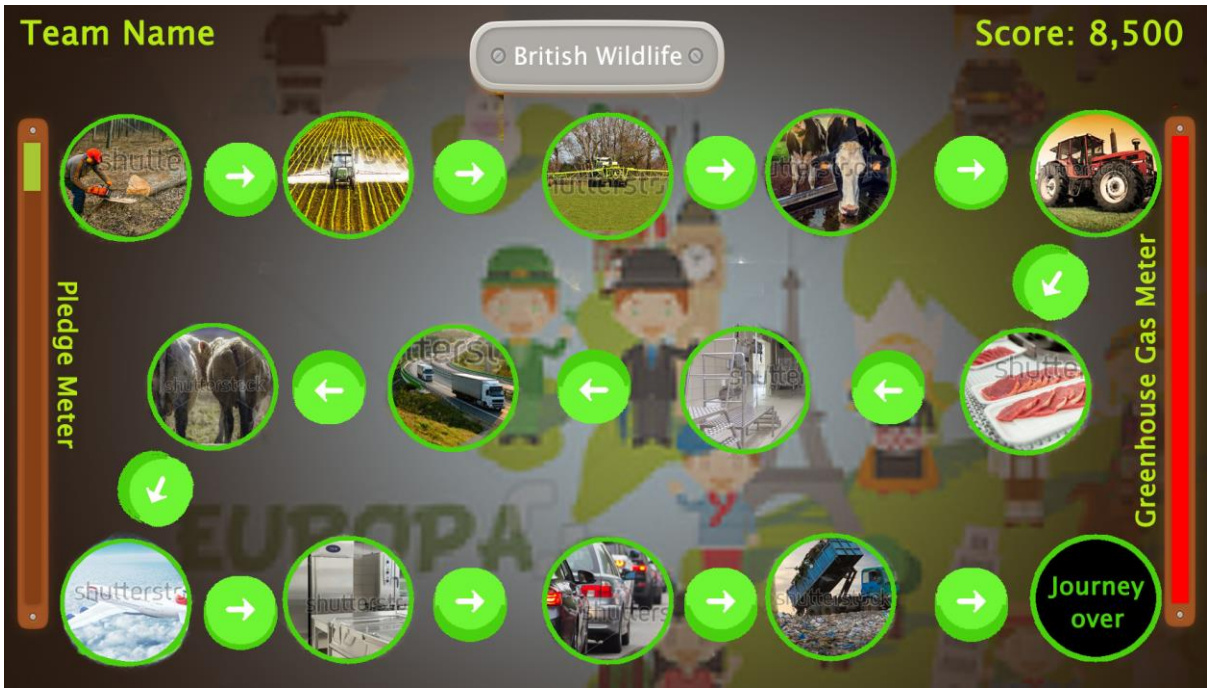
- All tiles will display with the green bar
- The greenhouse gas meter will be depleted (dependant on pledge entries)
- The pledge meter will display full (dependant on pledge entries)

After 2 seconds the game will display the below ‘Game Completed’ window.

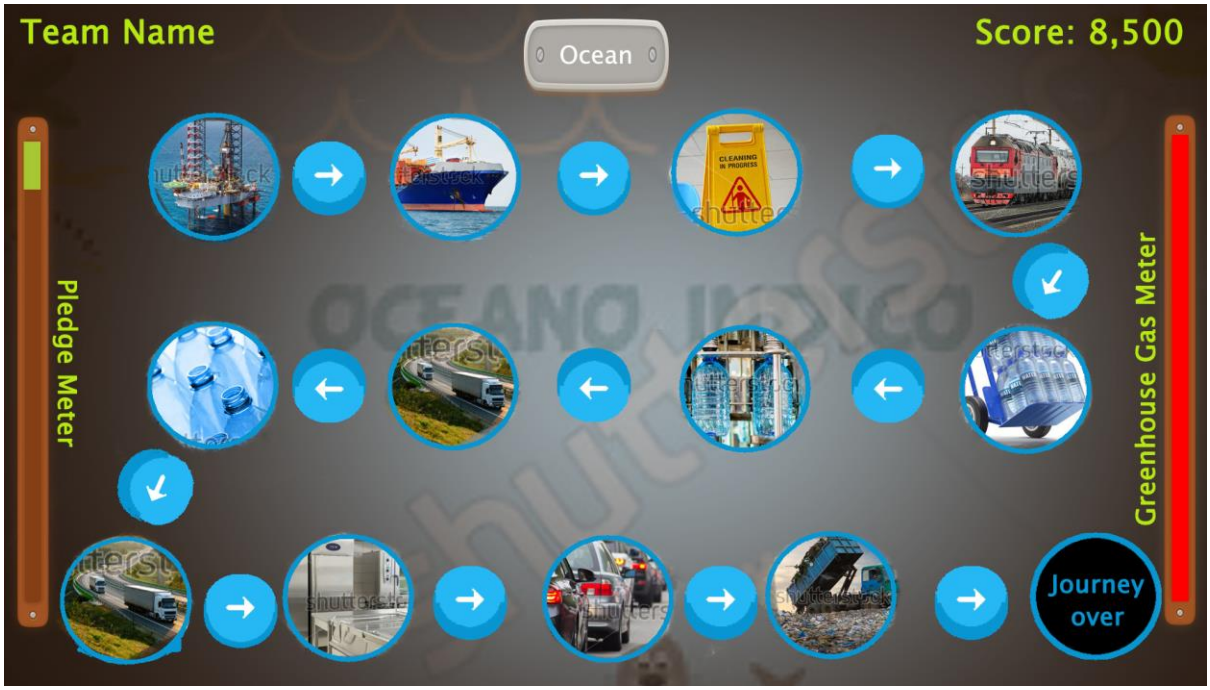


Habitat View – Completed Chains

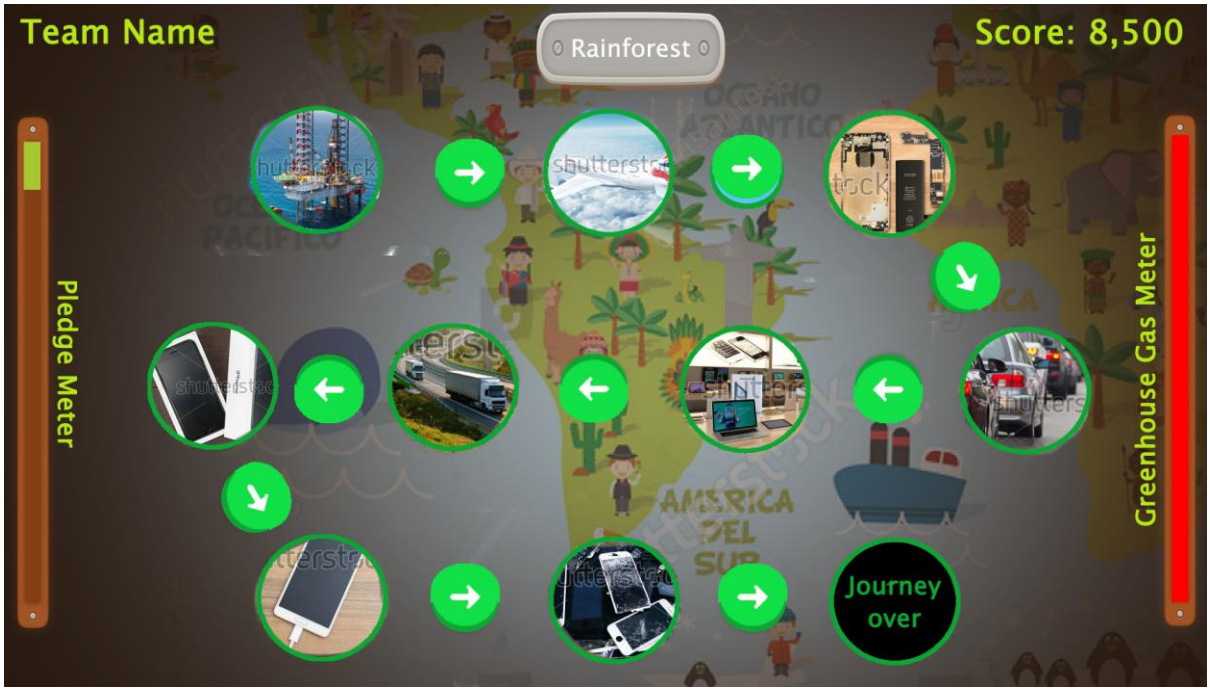
<u>Countryside</u>



Ocean



Rainforest



In-game Flowchart