

# Rolls-Royce Science Prize

## **Darwin's Footsteps** For pupils aged 7-11

### **Teachers' game play notes**



Developed with the help of St Stephen and All Martyrs' Primary School  
and the Association for Science Education

# Following in Darwin's Footsteps

This interactive teaching resource allows pupils to follow Darwin's voyage of discovery around the world. As pupils progress they play games and learn scientific facts based on Darwin's discoveries. The interactive is suitable for use on whiteboards or individual computers.

If being used by a group, getting different pupils to complete the game in each country and to read the text can ensure all pupils are involved.

## Game play scene by scene

### Scene 1: Bolton Museum

The game starts in Bolton Museum where pupils can choose a character to take along. Both characters are named after two of Darwin's ten children.

The voyage then starts from Plymouth docks, where Darwin set sail in the HMS Beagle in 1831.

### Scene 2: Brazilian rainforest

In April 1832, Darwin returned to the Beagle after exploring Brazil with a collection of insects and plants that he found fascinating.

Pupils click on the seeds then the mounds of earth to plant them. They then click on the watering can and the mounds to add water and make them grow.

### Results:

- Pineapple and banana grow well
- Raspberry and pear do not

This can be used to stimulate discussions about adaptations and what plants need to survive.

### Darwin Fact 1

Answer: Sloth

# Following in Darwin's Footsteps

## Scene 3: Peruvian mountains

In February 1835 Darwin was caught in a massive earthquake in Peru. He visited the island of Quiriquina and while exploring around the island he found areas of land that had risen a few feet due to the earthquake.

Here pupils must save llamas from an earthquake by dragging them into the pen on the left of the screen.

Once completed fossils are revealed where part of the mountain has fallen away.

This can be used to discuss movement of the Earth's crust, formation of rocks and evidence for Darwin's theories.

## Scene 4: Galapagos Islands - Chatham Islands

Darwin landed here on 18th September 1835. Darwin examined the huge tortoises here, and collected ten plants. Eighteen tortoises were caught and taken on board the ship as food.

Pupils are now asked to turn over and match the pictures of finches.

The adaptations of different finches were vital to Darwin when he put together his theory of evolution. The adaptations of finches could be compared to birds pupils recognise from the garden and how they help them to survive.

## Scene 5: Galapagos Islands - James Island

8th October 1835, Darwin brought aboard quite a lot of plants, animals, rocks, and insects he found on the island.

Here pupils must rescue tortoises from the pirate by putting them in their mother's burrow.

This can be used to discuss why tortoises were able to grow so big - the lack of predators on the island.

# Following in Darwin's Footsteps

## Scene 6: Australia

Darwin started on a 130 mile inland trip. Along the way he came across lots of wildlife and was amazed by the creatures he saw including the odd-looking platypus. Because the animals were so strange he thought there must have been a separate creation just for these odd creatures.

Pupils feed different food to a Venus Fly Trap to see what it eats.

This can lead to discussions about the nutrients plants need in addition to sunlight to make food and the role of fertilisers.

## Scene 7: South Africa

In June 1836, Darwin met Sir John Herschel who was in charge of the Royal Observatory in Cape Town. Herschel was very interested in natural history and they discussed the origin of mankind, and how new species come into being.

Pupils find the animals hiding in the dark by moving the torch beam around the screen. This can lead to a discussion on senses and adaptations that nocturnal animals have and why they stay hidden in the daytime.

## Answers:

- **Monkey** - in the tree
- **Penguin** - in the centre of the screen, towards the beach
- **Mongoose** - appears from behind the tree on the bottom left

## Scene 7b: Voyage home

Pupils take a photograph of a shark.

## Scene 8: The team arrive home at Bolton Museum

Pupils can see and print the facts they have discovered and pictures they have taken.

# Darwin's scientific wordsearch

Name: ..... Date: .....

S	I	C	U	H	K	V	D	H	R	S	Z	A	I	O
Y	Z	L	E	H	H	L	K	R	N	U	A	H	F	J
S	E	E	D	C	Z	C	Q	Y	C	O	P	T	B	B
S	U	O	N	O	S	I	O	P	S	R	B	I	R	E
R	V	I	L	T	P	A	D	A	C	O	H	I	J	L
P	F	L	A	M	M	A	M	R	I	V	R	R	S	P
B	P	O	K	A	I	P	J	S	E	I	A	X	L	P
I	I	L	F	T	A	Q	U	G	N	N	I	G	O	A
V	N	N	A	V	L	P	X	T	T	R	N	D	T	E
C	T	V	O	T	E	B	L	F	I	A	F	Y	H	N
N	L	M	E	I	Y	A	N	B	S	C	O	R	U	I
A	I	L	I	R	T	P	R	Y	T	C	R	O	P	P
F	T	W	O	A	T	U	U	T	G	R	E	E	X	O
O	O	A	R	M	M	E	L	S	H	W	S	H	F	L
S	M	F	T	A	T	A	B	O	P	Q	T	T	L	I
S	X	U	F	I	D	V	L	R	V	O	U	O	Z	J
I	C	A	K	S	B	Y	U	L	A	E	I	A	H	V
L	I	E	Y	X	F	A	Z	N	X	T	Z	T	K	S
C	S	U	G	W	H	P	H	W	E	L	E	F	A	E
E	S	I	O	T	R	O	T	K	G	V	A	U	C	C

**ADAPT**

**CARNIVOROUS**

**DARWIN**

**EARTHQUAKE**

**EVOLUTION**

**FINCH**

**FOSSIL**

**HABITAT**

**INVERTEBRATE**

**LLAMA**

**MAMMAL**

**PINEAPPLE**

**PLATYPUS**

**POISONOUS**

**RAINFOREST**

**SCIENTIST**

**SEED**

**SLOTH**

**THEORY**

**TORTOISE**

# Darwin's scientific wordsearch

## Solutions

Name: ..... Date: .....

S	I	C	U	H	K	V	D	H	R	S	Z	A	I	O
Y	Z	L	E	H	H	L	K	R	N	U	A	H	F	J
S	E	E	D	C	Z	C	Q	Y	C	O	P	T	B	B
S	U	O	N	O	S	I	O	P	S	R	B	I	R	E
R	V	I	L	T	P	A	D	A	C	O	H	I	J	L
P	F	L	A	M	M	A	M	R	I	V	R	R	S	P
B	P	O	K	A	I	P	J	S	E	I	A	X	L	P
I	I	L	F	T	A	Q	U	G	N	N	I	G	O	A
V	N	N	A	V	L	P	X	T	T	R	N	D	T	E
C	T	V	O	T	E	B	L	F	I	A	F	Y	H	N
N	L	M	E	I	Y	A	N	B	S	C	O	R	U	I
A	I	L	I	R	T	P	R	Y	T	C	R	O	P	P
F	T	W	O	A	T	U	U	T	G	R	E	E	X	O
O	O	A	R	M	M	E	L	S	H	W	S	H	F	L
S	M	F	T	A	T	A	B	O	P	Q	T	T	L	I
S	X	U	F	I	D	V	L	R	V	O	U	O	Z	J
I	C	A	K	S	B	Y	U	L	A	E	I	A	H	V
L	I	E	Y	X	F	A	Z	N	X	T	Z	T	K	S
C	S	U	G	W	H	P	H	W	E	L	E	F	A	E
E	S	I	O	T	R	O	T	K	G	V	A	U	C	C

**ADAPT**

**CARNIVOROUS**

**DARWIN**

**EARTHQUAKE**

**EVOLUTION**

**FINCH**

**FOSSIL**

**HABITAT**

**INVERTEBRATE**

**LLAMA**

**MAMMAL**

**PINEAPPLE**

**PLATYPUS**

**POISONOUS**

**RAINFOREST**

**SCIENTIST**

**SEED**

**SLOTH**

**THEORY**

**TORTOISE**

# Darwin's Glossary

Can you find the meaning of these words?

<b>Word</b>	<b>Meaning</b>
<b>ADAPT</b>	
<b>CARNIVOROUS</b>	
<b>EVOLUTION</b>	
<b>HABITAT</b>	
<b>INVERTEBRATE</b>	
<b>MAMMAL</b>	
<b>POISONOUS</b>	
<b>SCIENTIST</b>	
<b>THEORY</b>	

These notes have been compiled for Rolls-Royce plc with the help of St Stephen and All Martyrs' Primary School, Bolton and the Association for Science Education.

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Further information about St Stephen and All Martyrs' Primary School's prize winning entry is available on-line at:

**[www.rolls-royce.com/scienceprize](http://www.rolls-royce.com/scienceprize)**

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Helpline for teachers:  
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