

ENGLISH HERITAGE
EDUCATION

KS2

KS3

Darwin Learning Trail

Home of Charles Darwin
– Down House



Using this Trail

Divide your students into small groups of three and encourage them to decide who is going to be an object finder, a room/garden observer and the family investigator.

Students should look out for these symbols in the trail to divide up the questions in their groups.



For each stop on the trail there are questions for each role. Students can answer the questions independently and share their answers in their groups as they go or work through the questions together.

They can start anywhere in the house or gardens but should make sure they visit every location.

The trail sheets (pages 3–13) have space to record answers. Students can also use them to note down any new words they discover during their visit.

At the end of the trail, students can use the final questions to bring their conclusions together.

Welcome to Down House

Hello, I'm Charles Darwin. Welcome to my home! I lived and worked here for 40 years. My family and staff will show you around during your visit.

This was where I developed my theory of evolution and wrote my most famous work called *On the Origin of Species* (1859). Scientists, like me, observe the natural world and gather evidence to make conclusions.

Your job is to find evidence around Down House so that you can come to your own conclusions about my life and work.

Decide on which member of your group is going to take on each of these roles during your visit today and answer the questions in the trail as you explore.



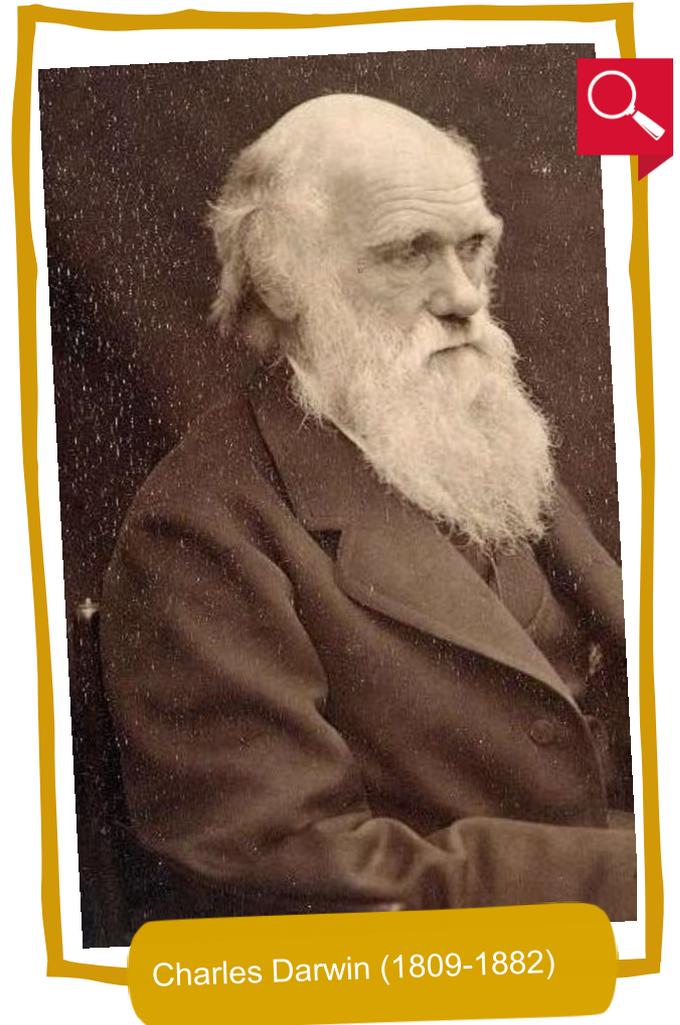
OBJECT FINDER



ROOM/GARDEN OBSERVER



FAMILY INVESTIGATOR



Charles Darwin (1809-1882)

Glossary

Here are some key words you may come across during your visit and their definitions.
Note down any other new words you come across so that you can research them after your visit.

adapt – change to meet requirements

Backgammon – an old two-player board game

chaise longue – a sofa with a back-rest at one end only

cold light – light which produces no or little heat, best for observing heat-sensitive specimens

displacement – the movement of something from its usual place

fiction – stories describing imaginary people and events

non-fiction – writing containing factual information

rancid – disgusting

species – a kind, sort or variety of plant or animal (e.g. mammal, reptile, bird)

specimen – a sample used for a test or experiment

tentacle – a sticky, hairy limb which sticks out from the body of an insect-eating plant

Wedgwood – a fine china company founded on 1 May 1759 by Josiah Wedgwood, Emma and Charles Darwin's grandfather

DOWNSTAIRS

Drawing Room



Hello, I'm Etty Darwin. In the evenings, my mother Emma played the piano in this room while my father Charles listened. Father sometimes placed pots of worms on top of the piano to see if they would move to the vibrations!

 Find Mr and Mrs Darwin's backgammon board. They played almost every evening and kept score.

By 1876, Charles had won 2795 games and Emma had won 2490 games.

Calculate how many more games Charles won than Emma:

 The wallpaper in this room was replaced after Charles said it was 'the exact colour of mud streaked with rancid oil'.

Describe the wallpaper you can see today with your group.

 There are portraits around this room showing the Darwin family and people who were important to them.

Look at the portraits and write down two items of Victorian clothing you can see.

1.

2.

DOWNSTAIRS

Old Study



Hello, I'm Leonard Darwin. When I was little, I wanted my father to leave his study and play with me during working hours. I even tried to bribe him with a sixpence! English Heritage used the photos I took of the study to restore this room.

 All around Charles Darwin's study you can see equipment he used to conduct his scientific experiments. **Write** down three objects that interest you. What do you think they were used for?

1.
2.
3.

 The study faces north, away from the sunshine. Charles liked to work in light which had little or no heat, known as 'cold light'. **Discuss** why you think he preferred these conditions for his experiments.

 When Charles got ill, he changed his office furniture to keep him comfortable and help him move around.

Look at the chair, table and stool – what do they all have in common?

.....

DOWNSTAIRS

Billiard Room



I'm Parslow, the Darwins' butler. Mr Darwin liked to play as a way to relax and whenever he wanted to play, he tugged the bell-pull in the Old Study to call me in for a game.



This used to be the dining room until Mr Darwin turned it into the billiard room in 1858.

Think of an activity that you enjoy and would like to have a room in your home for. **Share** your ideas with your group.



Find Darwin's favourite photograph of himself by Julia Margaret Cameron in this room.

Read what Darwin wrote on this copy of the photograph and **record** it here:

.....



Look at the different portraits of Charles Darwin in this room. What are the main differences you can spot between the portraits?

.....

.....

DOWNSTAIRS

Dining Room



I'm Mrs Evans, the household cook. The dining room was designed as a space for the large Darwin family to eat together and entertain guests. At 1pm every day the family stopped what they were doing to eat lunch together.

 The dinner-set on display on the table is part of the famous 'waterlily' collection by Wedgwood. This was a famous ceramics company run by Emma's family.

Think about why we can't let you touch the objects on the table. Write down two possible reasons:

1.
2.

 **Look** closely at the table settings. How many people are the Darwin's expecting for lunch today?.....

 Charles liked to eat bananas for dessert. He tried to grow tropical plants in a case in the drawing room but it was too small.

Discuss the kinds of fruits you would like to be able to grow in your home. What would you need to grow these successfully?

UPSTAIRS

Bedroom



My name is Emma Darwin and I am Charles's wife. This was our bedroom from 1858. It's a large room with excellent views over the garden. After he'd finished reading and writing letters at 3pm, I used to read to Charles while he rested on the chaise longue.

 **Find** a book called *The Jumping Frog* by Mark Twain. Charles kept a copy by his bed and read it when he had trouble sleeping.

Read some of the text. Is it fiction or non-fiction? **Discuss** how you can tell.

 **Look** out of the window at the garden. **Record** is the first thing that catches your eye:
Examine this feature more closely when you go outside.

 **Find** the dressing closet. Ety Darwin remembered dressing up in her mother's clothes as a child.

Try on some of the costumes in this room.

Sketch your favourite item of clothing in this box.



UPSTAIRS

School room



Hello, I'm William Darwin, the eldest son. This room was first used as a nursery and then as a school room when we got older. Our parents weren't like lots of Victorian parents. They encouraged us to have fun.

 **Find** the stair slide displayed on the wall. Charles had this made so that his children could slide down the stairs.
Who did Charles ask to make the stair slide?

 **William** scratched his name on the cupboard shelf when he was a teenager. **Copy** down exactly what he wrote:
.....

 **Look** out of the school room window. The Darwin children used to lean out of the window and try and touch the mulberry tree.

Sketch the mulberry tree and any other garden features the young Darwins could see from here in this box.



GARDEN

Lawn

Hello, Charles Darwin here. I did my 'lawn plot' experiment here. For three years, I let a patch of lawn grow long. I recorded all the plant species that grew. In the first year I counted 20 and by the third year only 11 had survived.



 **Find** a clear patch of lawn and measure out a rectangle about 4 feet wide and three feet long (use your own feet to help you estimate). List all of the different plants you can see on your patch.

.....

 **Walk** around the lawn and **examine** the grass. Are there any light, dark, dry or wet patches?

Record your observations here:

.....

 Etty Darwin remembered 'the lawn a burnt brown, the gardens a blaze of colour'. **List** five colours you can see in the gardens today.

.....

GARDEN

Wormstone



Hello, I'm Charles and Emma's youngest son, Horace. I built the wormstone experiment with my father. I discovered that soil was being moved by earthworms in the ground. The scientific word for this is 'displacement'. Each year the stone sank 2mm due to the worms displacing the soil.

 Worms aren't the only creatures who displace soil. **Write** the name of another animal that lives underground.

.....

 Outdoor experiments can be tricky to do because of the weather. **Name** three types of weather that could make an outdoor experiment difficult:

1.

2.

3.

 Horace learnt about science by asking lots of questions. Eventually he became a maker of scientific instruments. **Write** one question you have about something you have seen at Down House today:

.....

Glasshouse and Lab



I'm Francis Darwin. This glasshouse still houses the same kinds of specimens that my father used in his experiments. The study of plants is called 'botany'. I learnt a lot about plants during my childhood and eventually became a botanist. There was also a lab attached to the glasshouse.

 Charles Darwin was fascinated by the insect-trapping leaves of the sundew. He also observed wild cucumber to find out how climbing plants climb.

Choose a plant in the glasshouse to sketch in this box:

 Darwin built a hothouse so he could grow exotic plants. **Look** at the vents at the top of the roof. **Discuss** why you think these were added.

 **Find** the beehive in the lab room. Darwin observed bees and recorded changes in their nests to support his theory of evolution.

What shape is found in the honeycomb and how many sides does this have?
 (HINT: Use the panels in this room to answer this question when there are no bees in the hive.)

GARDEN

Sandwalk



My name's George Darwin. You've made it to the sandwalk where my father thought about his work on a daily walk. It's often called Darwin's 'thinking path'.

You've collected lots of information about my father's life at Down House and his work. Share and compare what you've found out with your classmates. You can conclude your investigation with these final questions:

a). What three words would you use to describe Down House?

1. 2. 3.

b) What is the most interesting thing you have learned today about Charles Darwin and his family?

.....
.....

c) What would you like to ask Charles Darwin about his life or his work?

.....

Answer Sheet – In the House

Drawing Room

- $2797 - 2490 = 305$ games
- Answer dependent on students' response to the wallpaper.
- Answers could include: long dress, frock coat, cravat

Old Study

- Answers dependent on students' interests. For more information, please ask a member of staff or a volunteer.
- Temperature can affect plants and interfere with the results of an experiment.
- The pieces of furniture in this room are on wheels.

Billiard Room

- Answers dependent on students' interests and hobbies.
- 'I like the photograph very much better than any other which has been taken of me.' Ch. Darwin
- The portraits in this room show Darwin as a younger and older man.

Dining Room

- The objects are very old and fragile. They were used by the Darwin family which makes them unique.
- 8 people
- Answers dependent on students' responses.

Bedroom

- Students may refer to description, fictional characters, dialogue.
- Answers dependent on students' interests.
- Answers dependent on students' preferences.

School Room

- The local carpenter.
- 'W. Darwin 1853'
- Students' sketches of the mulberry tree and other garden features.

Answer Sheet – In the Gardens

Lawn

- Students' answers dependent on observations within the lawn experiment area.

Wormstone

- Answers could include (but are not limited to) ants, moles, rabbits
- Wind, rain, frost and snow, extreme heat
- Answer dependent on students' questions.

Glasshouse and Lab

- Answers dependent on students' interests in the glasshouse.
- The vents were added to help regulate the temperature inside the glasshouse so that it didn't get too hot for the plants inside.
- Honeycomb is made up of hexagons. Hexagons have six sides.

Sandwalk

- Use this stop to consolidate students' exploration of Down House and the story of the Darwin family. This is an ideal place for them to reflect on Darwin's life and work and consider any outstanding questions they would like to investigate further.