

Evidence Hunter: Teacher's copy (10 to 15-min activity)

Goal: Pupils link evolutionary milestones to the scientific evidence that supports them, learning how fossils, living species, and DNA are used.

Preparation: Print out several copies of page 2: one per pupil/pair/team

1. Work out which evidence fits each event — pupils write letters A–I. Model one example together first ("Let's do one as a class"), then pupils do the rest.

Check & discuss – Whole-class check together. Then ask:

- Which matches were the **trickiest**? Which were easy?
- What **kinds of evidence** are used: Fossils, DNA, or other things?
- What **new features** appear at each step (e.g., eggs, milk)?
- Why is the evidence convincing (each pupil/pair talks through 1 example)

2. If time allows, discuss: **Darwin**, who collected clues in the Galápagos: finches, tortoises, and more. Ask: *If Darwin were playing Evidence Hunter, which evidence would he spot first? Think about what evidence was and wasn't available in Darwin's time – e.g., he could find fossils and observe living species, but DNA hadn't been discovered yet.*

H	Many people today have 1-2% Neanderthal DNA – based on Neanderthal fossils	A. Oldest signs of life
C	Fossil skeletons with limb bones and joints showing the transition from fins to legs.	B. Swallowed microbe became a power station
I	Stone tools and cave paintings dated to the time of early humans.	C. First fishy floppy steps in the shallows
G	Fossilised wrist bones with joints for twisting – ideal for swinging, climbing, and tool handling.	D. Fully land-living animals
D	Fossilised land eggs, stronger leg bones, and joints shaped for walking.	E. Early mammals made milk
B	Mitochondria have their own DNA – evidence they were once separate living things.	F. Colour vision returned
F	DNA: Mammals mostly show a lost colour gene; Old World primates show a duplicated colour gene	G. Early apes were king of the swingers
A	Chemical traces and tiny fossilised shapes in ancient rocks	H. Different human species interbred
E	All living mammals make milk, and fossil baby jaws show tiny teeth for suckling, not chewing.	I. Early humans made tools and art

Want to take it further?

Try the Timeline Challenge. This zooms out to the **full 4.5 billion years of Earth's history**, then zooms in on the last 300 million years, so pupils can see which milestones are close together and which are far apart. It works brilliantly as a follow-up — pupils often **change their minds** about which events are "close" once they see the real distances.

The Timeline Challenge is also free to download tinyurl.com/linebehindyou