Materials and the Earth
Lesson 5: Fossils

Science

Chemistry - Key Stage 3

Miss Willett

What have you learnt already?

1. What conditions are needed to make metamorphic rock?

2. What causes uplift of rock?

3. Which type of rock contains crystals?

Whole body fossils:

Put the stages in the right order:

creatures hard remains get covered by sediment	
hard shell or bones get replaced by minerals, turns into a rock	
layers of sediments are compressed over time - forming sedimentary rock	
rock is worn away over time, perhaps exposed above sea level - the fossil can be discovered.	
sea creature dies - sinks to the sea bed	**1**
soft parts rot away, hard shell or bones are left over	

Imprint fossils:

True or false?

Imprints can be made from footprints only

Imprints can’t give us any information about soft tissue

Imprints can be left by animals or plants

Amber fossils:

Correct the mistake!

Amber is tree bark from millions of years ago

Fossils in amber only tell us about hard tissue

Organisms can only be preserved in amber in this way

Formation of fossils

Q1) What are fossils?

Q2) Describe how whole body fossils were formed:

Formation of fossils

Q2) Describe how imprint fossils were formed

Q3) Describe how fossils in amber were formed

Fossils and evolution

SPaG check!

- Fossils of the simplest organizms are found in the oldist rox, and fossils of more complex organizms in the newist rox

- Similarities and diffrences between fossils in rox of diffrent ages allow us to see how speeshees have changed gradyully over billions of years

- This supports the theree of evolution, witch states that simple lyfe forms gradyully evolved into more complex ones.

Fossils and evolution

Use the keywords to explain how fossils can form evidence for evolution:

Gaps in the fossil record

Match up the ends of the sentences:

- Soft tissues…
- Conditions…
- Discovery…

… weren’t right, so minerals didn’t form the fossil in rock

… wasn’t possible, as the fossils might be too deep / broken in uplift

… decayed fully, so the remains were too sparse

Bringing it all together..

Look carefully at the diagram (in the video and on the worksheet) and answer the questions:

1. What type of rock is this?
2. Which is the oldest fossil?
3. What can you tell about the age of ammonite and crinoid?
4. Which organism has the longest evolutionary history?
5. Why is the fern most likely to be discovered?
6. Why might the other fossils not be discovered?

Bringing it all together..

1.

2.

3.

4.

5.

6.