

Section 4

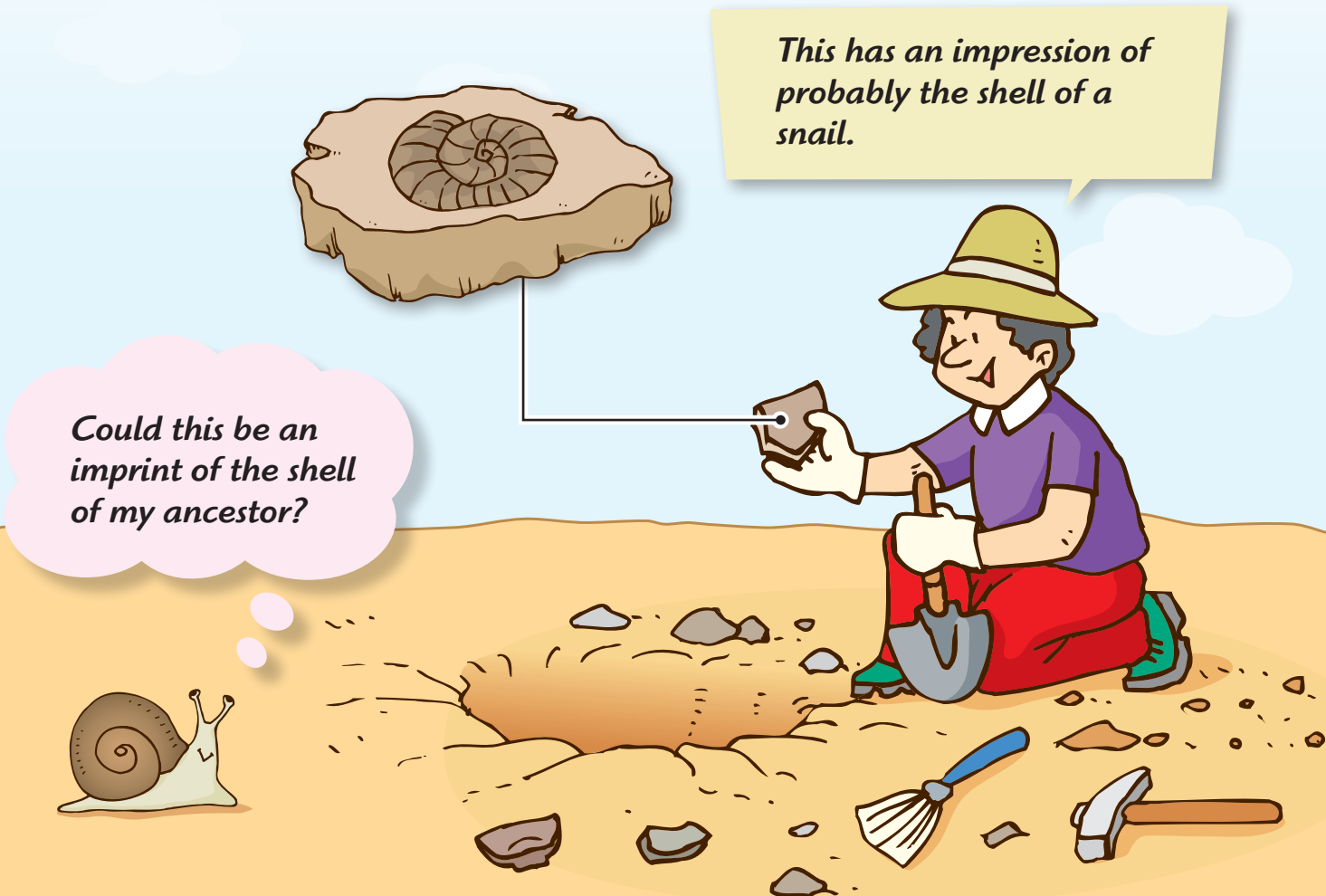
Understanding Earth and Space Systems

EXPLORATION 2

How are fossils formed?

Learn about trace fossils.

Dinosaurs were fascinating and mysterious creatures. Thanks to fossils, we know a lot more about them than we otherwise would. Fossils exist in many forms. Some of them contain the remains of organic matter, such as bones of ancient animals and leaves of ancient plants. It is by studying fossils that we are able to find out what the lives of animals and plants were like long ago.



Section 4

Understanding Earth and Space Systems

EXPLORATION 2

How are fossils formed?

In this experiment, you will make trace fossils and learn about how finding them in nature helps us learn more about Earth.

Level of Difficulty:

moderate

Time Needed:

2 days

Hypothesis:

Circle the word to show your hypothesis.

Trace fossils of objects or animals

can / cannot help us learn about or identify them.

Choose small items that have details and textures, such as coins, keys, and seashells.

Materials:

- flour
- salt
- water
- 3 small items

Steps:

1. Mix one cup of flour, half cup of salt, and half cup of water in a bowl to make dough.
2. Divide the dough into small balls. Then flatten them.
3. Make the impression of each item by pressing it hard onto each piece of dough.
4. Remove each small item gently to keep the detailed impression on the dough.
5. Leave the dough to dry and harden overnight to become trace fossils.
6. Ask a friend to examine the fossils and have him or her guess what items left the impressions.



How are fossils formed?

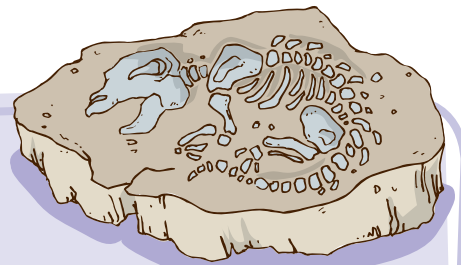
Conclusion:

Circle the correct words after conducting the experiment.

The impressions that the objects left behind on the trace fossils

helped / did not help my friend learn about or identify the items.

My hypothesis was **correct / incorrect** .



Explanation:

In this experiment, you experienced the formation of trace fossils. Trace fossils do not contain the body parts of plants or animals; instead they show us traces of the activity of organisms from long ago. By creating the impressions of the items on the dough, you gave your friend a hint of what the items could be.



There are different types of trace fossils, such as those containing the impressions of footprints, bones, and plants. Trace fossils are useful and important because they can provide information about where and how ancient plants lived, what ancient animals did, and what they ate.

Section 4

Understanding Earth and Space Systems

EXPLORATION 2

How are fossils formed?

See the formation of the trace fossil of a leaf. Then put the descriptions in order from 1 to 4.

☐

A leaf fell on a muddy riverbank.

☐

Sediments filled the space left by the leaf to make a mould.

☐

The leaf is buried in more mud and sand.

☐

The leaf decomposed as the surrounding mud hardened.

It can take thousands of years for a trace fossil to form.

