

Concretions are round rocks. These rocks are thousands of years old. At the heart of the rock lies a **secret**, one which has been hidden since the concretion was made.

Each concretion begins its life as a small object such as a shell or a leaf that sits at the bottom of the ocean. Over many years these small objects are **covered** in thin layers of other materials like limestone and sand. Each layer builds on the last, making a round shape. When earthquakes happen some of the concretions are **thrust** upwards from the sea floor, forming part of the land that we live on today.

Some of our local concretions have **scratches** and **shapes** carved into them. These were put there by Māori. Some believe that tribes would use the concretions as marker posts. Travelers would know where they were headed by reading the markings, just like on a modern map.

Questions (look in the text for highlight clues!)

- 1) What is the **'secret'** that lies at the heart of a concretion?
- 2) Where are the concretions formed?
- 3) What are two common types of **covering** that help make up a concretion?
- 4) How do some believe that the **scratches and shapes** ended up on the local concretions ?
 - a) Earthquakes
 - b) Māori tribes
 - c) Early settlers
- 5) How did the concretions get to where they are today?
- 6) Can you think of a different reason that may explain the markings on the concretions? Explain.

Adapting to new environments

Produced by Paul Tucker@Orewa College (2022)

New Words (look in the text for highlight clues!)

What do you think the word **thrust** means in the story? Read the sentence. Does it mean:

- a) The concretions are pushed suddenly.
- b) The concretions float upwards.
- c) The concretions roll upwards making them round.

Joining Words (Conjunctions)

For each sentence find the joining word that makes two sentences one.

- 1) The concretions were smooth and they were round.
- 2) The round concretion was broken so he looked inside.
- 3) The concretions marked halfway, but it was still light so they kept walking.