

## Examine the Evidence – Student Activity

These five pebbles have been collected from beaches around the world in the last twenty years. They are about the same size and have about the same degree of roundness. I sprayed the rocks with water to help show more detail.



- Basalt pebble found on the Island of Arran in Scotland (Atlantic Ocean).
- Sandstone pebble found near Broome WA (Coral Sea)
- Granite pebble found near Albany WA (Antarctic Ocean)
- Rhyolite pebble found on South Island New Zealand (Antarctic Ocean)
- Fossil rich limestone pebble from Latvia (Baltic Sea)

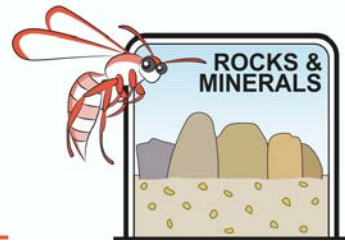
Using evidence from the photograph and your knowledge of rocks, state if each of the following five statements is true or false. Like all good scientists, provide evidence to support your decision.

1. All the pebbles are from modern beaches so the rocks must be the same age.

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2. All the pebbles have the same degree of roundness. They must have travelled about the same distance from their source rock.

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3. We can tell which rocks are igneous rocks because their minerals are harder and will be more difficult to wear away. Larger less rounded pebbles come from igneous rocks.

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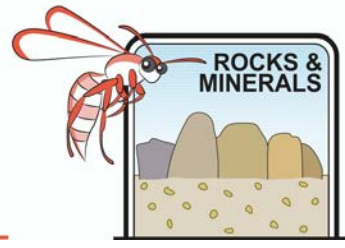
4. This pebble is similar to the others. It is a piece from an intrusive igneous rock. I found it on a beach below a conglomerate cliff. As the waves rolled in and out, you could hear the noise of the pebbles crashing against each other in the sea. Age-dating of radioactive elements in the minerals within this pebble suggest an age of 540 million years. Therefore the conglomerate cliffs were laid down about 540 million years ago?

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5. The coin was placed in the photographs to indicate the price of the pebbles

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6. Looking at rocks on a beach allows you to make a good guess (hypothesis) on what type of rock they are and what their history may have been.

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