

## Rocks & Minerals – Student Activity

Rocks and minerals are all around us, and especially useful in our homes.

### Rocks in my bathroom?

This felsic (silica-rich) igneous rock was explosively erupted out of a volcano in New Zealand fairly recently. I saw it floating on a lake, washed it, and brought it home to use in my bathroom.



What is the name of this rock?

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How could a rock possibly float on water?

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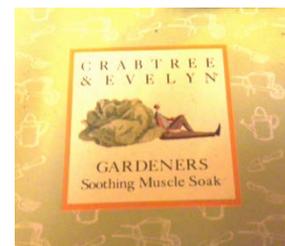
What special characteristics does this particular rock have that make it popular in bathrooms all around the world?

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### Minerals in my bathroom?

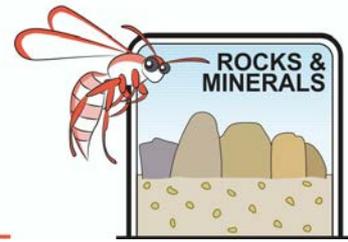
Throughout history, humans have enjoyed soaking our bodies in mineral springs and spas. At home, we can get the same effect by using bath salts that are mostly made from magnesium sulphate, commonly called 'Epsom salts'. They are formed when inland seas have dried up. Many of the magnesium sulphate deposits in southern Europe were created when the African tectonic plate swung northwards towards Europe, which closed the great Tethys Sea between them and pushed up the Alps Mountain Range.



Where might we find salt deposits on Earth today?

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### Rocks in my kitchen?

I enjoy pounding and grinding herbs and spices for my cooking. This mortar (the 'club') and pestle (the 'bowl') is made from basalt, an igneous mafic rock. It is ideal for this purpose.

What characteristics of basalt make it a good material for a mortar and pestle?

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### Minerals in my kitchen?



We eat minerals. This mineral (left) is found on most dinner tables. Could it be sugar?

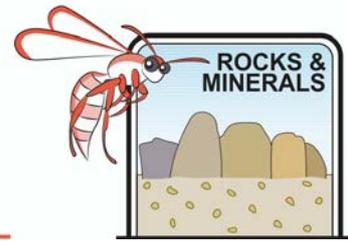
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The mineral is found in chemical sediments called evaporites. It is much prized for use in preserving food and enhancing flavours in cooking. **What is this mineral called?**

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Minerals were used to make some of the objects you use at the table (pictured below). Identify which minerals are found in which objects.





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### Rocks in my garden?

I have used both granite and limestone rocks in my garden. I used these small (9cm X 9cm X 1 cm) unpolished granite slabs for paving curved pathways through my garden.

What characteristics of granite make it a good material for paving stones in the garden?

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Polished granite shines and makes magnificent monuments and gravestones. Why did I choose unpolished granite?

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I used limestone blocks (approx. 40cm X 25cm X 10cm) to build retaining walls in my garden. I was restricted in size by what I could lift. Why did I not use granite for this retaining wall?

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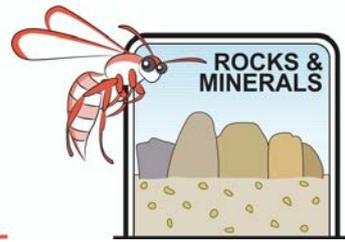
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Why did I NOT use limestone for paving stones?

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## Rocks & Minerals – Student Activity

I chose crushed mineral quartz to make a pathway in my garden.  
Why did I choose quartz and not calcite?

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Why was my dog not so happy with my choice?

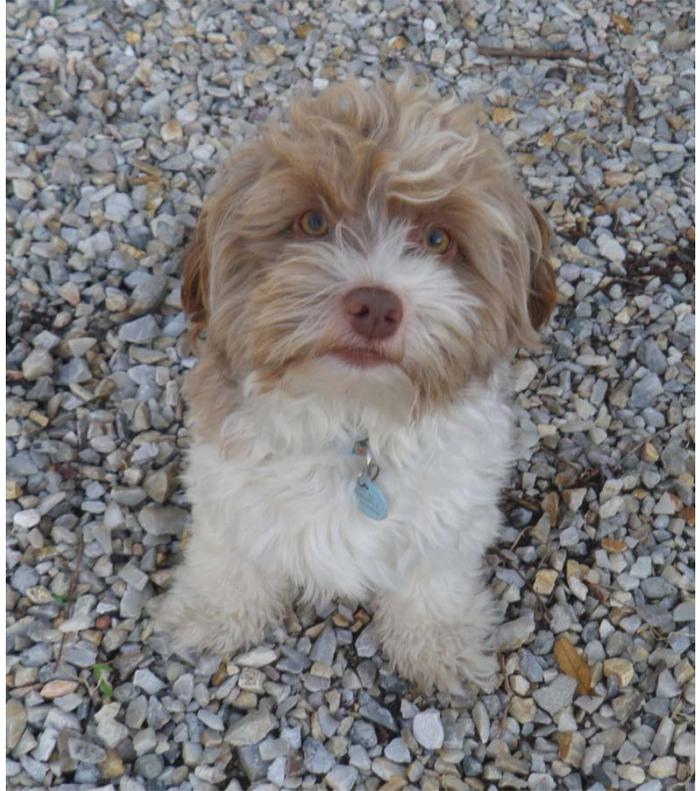
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Why did my insurance salesman tell I had made a wise choice?

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### Extra for Experts

This metamorphic rock called slate was found in the ruins of an old hut built about 1870. The thin sheet of rock is about 20cm long by 10cm wide. It has a hole drilled at one end. Can you guess what it was used for?

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