



A Grave Concern – Teacher Notes

The choice of rock to make gravestones is often more aesthetic and aspirational than scientific. Graveyards are great places to study relative weathering strengths of different rocks as long as they are close by and about the same age. (The names and most of the writing in these photos have been deliberately blurred in the interests of privacy).



Both these gravestones are made of rock and were placed in the graveyard at almost exactly the **same** time. They stand almost side-by-side and have been exposed to the **same** weathering conditions.

The one on the left is made of marble, a rock with the **same** chemical composition as limestone. The one on the right is made of granite. It has a completely different chemical composition, as it is mostly silica, the chemical used to make glass.

Writing on the left stone has been almost completely obliterated while on the right it is still fairly clear and sharp.

What do you think weathered both rocks? [Acid rain](#)

Why was the one on the left more affected than the one on the right? [Acid dissolves/eats away limestone and marble much faster than granite.](#)

Was this a “FAIR TEST” on the difference between weathering of limestone and marble? (Did the cow moo softly?) Explain your answer. [Yes!](#)

- Only one thing was **Changed** (the material the gravestones were made from).
- Only one thing was **measured** (weathering or the breakdown of lettering on the graves).
- Everything else **Stayed the Same**.

