On first glance cemetery headstones appear to be made of many different materials yet when we take a closer look we find that most headstones are made from one of four basic materials or sometimes a combination of these.

1. Sandstone or limestone
2. Marble
3. Granite
4. Concrete
5. Other materials include wood and metal. Very few wooden and metal head markers remain.

This resource set is to support students who are investigating the changing fashions in use of memorial materials in our cemeteries and goes with Activity 3b of the memorialisation unit. Some of the materials used in our historic cemeteries have been used for millennia. The first two fact sheets provide about information Neolithic dolmen constructed some 4000 years ago that used both granite and limestone in tombstone structure.

There is a student recording sheet included at the end of the resource set.

Note: If there are mixed materials used in a headstone ie a marble plaque is inserted into a concrete surround then the gravestone is considered to be made of concrete for data gathering purposes.
The Legananny Dolmen, in Ireland, is a neolithic tomb, built between 4000 and 4500 years ago. Originally these stones would have had a stone and earth mound covering but most of this has been removed or has eroded away.

The stones that remain for the Legananny memorial are made of granite, an igneous rock formed by volcanic lava, which has cooled slowly. It is a very hard rock that can be polished.

If you look into granite you will see that crystals are clearly visible to the naked eye. Most granite has three minerals which can be easily distinguished. Quartz is a clear or greyish ‘glassy’ mineral. Mica is a soft black mineral which splits into thin flakes. The third mineral, feldspar, occurs in a range of colours.

Granite was still a material very much in vogue 4000 years later. There are many memorials in our historic cemeteries that are made of granite and it is still the most popular choice of stone used for burials today.

Granite has a mottled look and comes in a range of different colours, including black, white, pink (there are lighter and darker pinks) or grey.

Information from http://www.geographyinaction.co.uk/Assets/Photo_albums/Eleven/pages/Legananny%20Dolmen.html

And http://www.geographyinaction.co.uk/Geology%20files/granite.html
What are Gravestones made of?

Ancient Limestone Tombs

This is the Poulnabrone Dolmen which is also found in Northern Ireland. In 1986, one of the upright stones was replaced following a discovery that it was cracked, and excavations were undertaken at that time. Bones were found of a newborn baby, 6 juveniles, and between 16 and 22 adults that were radio-carbon dated to between 5800 to 5200 years ago.

The stones of Poulnabrone Dolmen are made of limestone. Limestone, is a sedimentary rock made up of calcite (CaCO3). Some limestones were formed by chemical deposition and others by the accumulation of billions of shells from tiny sea creatures. When they die the shells fall to the sea bed and subsequent layers compress the layers underneath onto rock. Limestones can contain variable amounts of mud or sand or other material. The texture of limestone can vary from fine to medium to course grained.

Limestones and another sedimentary rock called sandstone were used to craft headstones in our early cemeteries in New Zealand. Sedimentary rock is softer than granite and therefore more easily carved, but the rock also weathers more easily and it is these headstones in our cemeteries which have frequently lost the information carved into them.

Information from
http://www.geographyinaction.co.uk/Assets/Photo_albums/Eleven/pages/Burren3.html

And http://www.geographyinaction.co.uk/Geology%20files/Limest.html
What are Gravestones made of?

Limestone and sandstone memorials

Limestone was very commonly used as an early material for headstones. The material was easily obtainable as local Oamaru Stone, and was carved into a variety of lovely forms by local stonemasons.

Headstones from this period reflect classical styles, which were very popular. Inscriptions were generally incised or cut directly into the limestone.

Sadly many of the beautiful stones made from limestone are weathering where they are not protected. Some limestone is inclined to break away or come away in large flakes. Inscriptions are becoming hard to read or lost and decorations are slowly vanishing.
Marble memorials

Marble has been used extensively in New Zealand’s historic cemeteries. The whiteness of marble represented purity, a personality attribute highly prized by Victorians and Edwardians. As a funerary material, marble became very fashionable and the stone of choice.

Italian marble became available in great quantities with much of it pre carved into highly decorative funerary forms. Prospective customers could choose designs from an undertaker’s catalogue.

Marble can be found in all forms, from nameplates and plaques to stele and pedestals.

Because it was difficult to incise marble the inscriptions were inserted as pegged lead letters. Unfortunately as marble weathers the pegs have loosened and on many memorials the lettering is falling off and inscriptions are becoming difficult to read.
Granite has probably been one of the most popular materials used over time in New Zealand Cemeteries. It is a very hard stone, weathers well and comes in a range of different colours including pink, reddish brown, black and grey. Granite memorial forms tend to be simple compared to many of the marble forms. Granite was cut in blocks and the resulting structures are more geometric. Granite could also be polished and both polished and unpolished surfaces were made use of.

Decorative designs and inscriptions are incised into granite. On some granites – particularly on the lighter grey and pink stones – inscriptions can be very hard to read in some lighting conditions. Gold and silver leaf was often used to enhance the reading of inscriptions on stones but this does weather and needs replacing.

Most granite was and still is imported from various countries including Scotland, ..etc
Concrete has been commonly used in New Zealand’s early cemeteries largely to create the plot surrounds especially in Dunedin’s more steeply sloped plots and to form a strong foundation for cast iron fences. Nameplates tended to be a part of the plot surround and were often constructed in concrete.

Concrete became more commonly used to construct a raised wall at the head end of the plot surround to which wall plaques were often attached. This construction became more common around the time of, and after the First World War.

Concrete was often seen used in conjunction with other materials such as granite and marble can been seen in the examples.
Memorials made from wood are far harder to find in historic cemeteries today. Some wooden-head markers have survived in some Central Otago cemeteries where the weather conditions have been drier. There is one in Dunedin that has survived and this has recently been conserved by the Historic Cemeteries Conversation Trust. Wooden markers would have originally been very common and many of the plots we see today that appear to have nothing on them may once have had a wooden marker – perhaps a simple cross structure.

Wooden markers are still today used as a temporary grave marker until something more substantial can be organised as a permanent replacement.
What are Gravestones made of?

Memorials made from metal

Metal memorials are also not commonly found although you may come across one or two in a larger cemetery. There are two metal headstones in the southern cemetery that have survived and are pictured. There is also one at the northern cemetery and one at Queenstown.

What more commonly survive today are the beautiful cast iron metal fences that surround a grave.

Above: Metal head-marker Queenstown Cemetery. To the right: Two surviving metal head markers that can be found at the Southern Cemetery.

Above: Metal head marker at the Northern Cemetery
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