



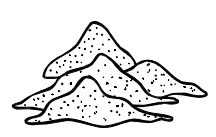
How did the sand and gravel get to Bedfordshire?

Around 120 million years ago, a warm shallow sea covered Bedfordshire and the earth looked very different to how it looks today.

Small particles of rock were gradually worn away from the land by waves of this shallow sea and by rain and rivers. These particles settled at the bottom of the sea in layers of sediment. Other layers of sediment settled over the top of the sand and over many more millions of years, after the sea levels had risen and fallen again, the land was eventually dry.

During the ice ages, huge sheets of ice moved slowly across Bedfordshire and the ice and its melt water streams carried with it pieces of rock carved out from far away places.

The pieces of stone became worn and rounded. The gravels at Willington were carried to Bedfordshire in this way.

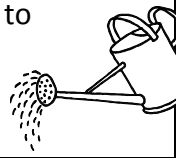


Today, sand and gravel is found underneath the layers of soil at Willington and is quarried for us to use.

Rocks are found everywhere underneath the soils covering the earth. Different types of rocks can be used for different things. Use the table below to help you work out what the sand and gravel, and other rocks are used for.

Everything in the table is jumbled up, can you use colours to help sort it out?

Use yellow for the sand, it's description and it's use. Colour the gravel information orange, clay in

rock	What the rock looks and feels like	What the rock is used for
sand	Very tiny pieces like powder, squishy and slimy when wet	Can be used for writing
gravel	Hard and flat rock, splits easily into pieces , usually grey colour	Very waterproof and used to line the bottom of ponds 
clay	Large grains, water drains through it	Used on driveways and in gardens or for building houses
chalk	Small fine grains, water drains through it	Mixing with cement to make concrete. Good for playing in
slate	Very soft , white colour, wears away easily	Often used for making roof tiles.



Suggestions for work:

- Use the internet to research different types of rocks and soils. Can you find reference to Bedfordshire's sedimentary rocks?
- Obtain samples of the different rock types listed in the table and allow the group to handle and then describe them.
- Discuss types of rocks with the group, igneous, metamorphic and sedimentary.
- Write labels and captions for samples or examples in the classroom and in the school grounds.
- Discuss the properties of the different types of rock and use descriptive writing to try and compare them.
- Consider a **field visit** to the Lafarge quarry at Willington. This must be arranged through the mineral company but they can offer site visits and guided tours on occasion. Contact details:

Mr Simon Bryant, Quarry manager
Lafarge Aggregates Ltd.
Willington Quarry
Bedford Road
Cople
Bedford
MK44 3PG

Tel: **01234-838165**