

Science Knowledge Organiser

Term 6 Year 3/4 – Big Build

Key Enquiry Question: What are the best shaped structures to build a tower or bridge?



National Curriculum Objectives:

Ask relevant questions and use different types of scientific enquiries to answer them.

Set up simple practical enquiries, comparative and fair tests.

Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.

Gather, record, classify and present data in a variety of ways to help in answering questions.

Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.

Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.

Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.

Identify differences, similarities or changes related to simple scientific ideas and processes.

Use straightforward scientific evidence to answer questions or to support their findings.

Key vocabulary

Word	Meaning
structure	Something built from different parts.
tower	A structure that is much taller than it is wide.
bridge	A structure built to span a physical obstacle without blocking the way underneath.
Beam bridge	A beam bridge is a strong, horizontal structure that rests on two end supports, and carries traffic by acting as a beam.
Suspension bridge	The roadway hangs from strong wires called cables. The main cables hang between two or more towers.
Cantilever bridge	A structure at least one portion of which acts as an anchorage for sustaining another portion which extends beyond the supporting pier.
Arch	A curved symmetrical structure spanning an opening and typically supporting the weight of a bridge
triangle	Trusses combine horizontal beams and diagonal beams to form triangles.
pillar	A large round stone, metal or wooden post that is used to support a bridge

Sticky Knowledge

There are 4 different types of bridges – beam, arch, suspension and cantilever.

That arch and triangle structures are used to build bridges because they are every strong because the weight is distributed and holds their shape.

The tallest tower in the world is currently the 'Burj Khalifa'.

Beavers build their own home using materials they can collect like sticks and twigs.