

DT

Bridges

Year 4

What I should already know

- Know the basic structure of a bridge.
- Know that bridges are made of solid, strong materials.
- Know the use and purpose of bridges.
- Key questions and metacognition strategies will continue to be used to encourage pupils to recognise the factors that influence their own performance and the different approaches they can use for their learning. These will include setting goals, formative planning, monitoring and controlling learning and assessing the results and strategies used.

Technical Knowledge and skills

- Research a range of different bridge structures.
- Design a functional model bridge that fits a design criteria based upon surveys and research findings.
- Use a range of appropriate tools, materials and techniques to create a model bridge.
- Experiment with and use different techniques to ensure their bridge is stable and strong.
- Evaluate their bridge against a set design criteria.

Sticky Knowledge

The Mersey Gateway Bridge was designed by Knight Architects.

The Mersey Gateway Bridge is a cable-stayed bridge.

There are different types of bridge designs and structures. (suspension bridge, beam bridge, box girder bridge etc)

The different techniques used to make a structure strong and stable.

Know the materials that make a bridge strong and stable.

Vocabulary

Structure	The arrangement of the parts of something complex.
Three dimensional	Having length, breadth and width.
Assemble	Fit together the separate component parts of an object.
Innovative	Featuring new methods and ideas and thinking creatively.
Aesthetic Qualities	Qualities seen by the viewer to create a certain feel or image (warm colours etc)
Accuracy	Being correct or precise.
Authentic	Of undisputed origin and not a copy.
Characteristics	A feature or quality belonging to something.
Freestanding	Not attached to or supported by another structure.
Stable	Not likely to give way or over-turn.