



Bridge that gap! - KS1 Challenge Sheet

What is a bridge? Why do we need them? What sorts of bridges can we find? Why are there so many different bridges? Design and build a bridge. How strong is it? How safe is it?



Educational objective

A practical project which helps the children to understand the forces involved in structures. The project may be used as an introduction to the topic, or to reinforce work already done in class.

Approach

Whole class introduction about bridges. Group activity with children working in pairs to build a bridge across a gap between desks. To test their first bridge with a weight until it deforms. To discuss why the bridge deformed and help the children suggest ideas for strengthening their bridge. To put the ideas into practice, and then to further test and improve the bridge.

Specific skills to be developed

Manipulative, designing and making skills, social and problem solving skills.

Cross-curricular links

Science, Design & Technology,
Maths

Ideas for extension activities

Project on structure and history of a local bridge. Construct bridges from different materials.

Equipment we will provide:

boxes of K'NEX

Subject skills / Desirable outcomes

Structures
Forces and motion
Designing skills
Making skills
Shape, space & measure

Life skills

Innovation skills
Problem-solving skills
Team working skills
Communication skills
A 'can-do' approach