Knowledge Organiser
How can we cross the water without getting wet?

Year Group: Five	Subject: Design and Technology Structures: Frame Structures	Topic: Design, make and evaluate a structure to help transport children over water.

What will I learn?

- How to **design**, **make** and **evaluate** a structure to help transport me over water.
- What a frame structure is.
- What shapes and materials are most appropriate to use.
- How to make my structure strong.
- How to make a small-scale prototype and transfer those skills for larger scale construction.
- How to join materials together using compression, ties and tension.
- How to work methodically on each step.
- How to evaluate my design and structure against its intended purpose and how I could improve it.

Key vocabulary:

Design, make, evaluate	Modelling
Compression	strut
tension	tie
diagonal	horizontal
vertical	triangulation
Frame structure	prototype

How will I learn?

- I will work in a group to talk about and research existing frame structures, how they are made and the materials used.
- I will make annotated sketches of possible design ideas.
- I will experiment and make mock-ups using pre-made construction materials and resources such as lego, straws, magnetix as well as more open ended resources such as lolly sticks, dowelling and balsa wood.
- I will work in a group to transfer my skills to a large scale structure through problem solving and collaboration.