

**Pioneer Federation**  
**Medium term plan**  
**LKS1 Cycle 2, Term 5**  
D.T



**Subject:** D.T

**Key Concept/ Theme:** What makes a great explorer?

**Prior Learning links:** EYFS – Water KS1- Bright Lights Big City – Model Buses

**Vocabulary:** evaluate, join, buoyant, recyclable, sturdy, stable, model

**School specific areas to cover (Add in any local areas of study, trips and people)**

CP	EH	SMV	PM

Create simple designs for a product • Use pictures and words to describe what they want to do • Select from and use a range of tools and equipment to perform practical tasks • Use a range of simple tools to cut, join and combine materials and components safely • Investigate different techniques for stiffening different materials and explore methods of enabling structures to remain stable • Generate, develop, model and communicate their ideas • Choose appropriate materials, tools, techniques, equipment from a wide range • Safely measure, mark out, cut and shape materials and components using a range of tools

To know how to combine different materials

To know how to use different materials to create different textures

To know how to reuse materials to create a new structure

1.	Prior learning reconnection (year group, cycle & term): 1/2 EYFS- Water KS1 –Toys- puppet theatre KS1 Bright Lights Big City – make a model bus Recap of prior learning from last term – why is it important to recycle? pollution in our oceans <b>LO: Let's learn how to design a model boat</b> Topic link to explorers -gauge prior knowledge- do the children know of any explorers who have made discoveries by travelling across the oceans? Discuss why it is important that the ship is reliable and sturdy for long voyages. Introduce explorers like Shackleton, Ellen Macarthur and David de Rothschild whose boat was partly made from recycled bottles. Explain to the children that they will be making their own boat out of recyclable materials and testing/racing them. Remind the children that they need to consider how the boat will remain buoyant and which materials will be suitable for use with water. • Remind them to gather plastic recyclables from home- bottles, punnets, yogurt pots.
2 and 3	Reconnection: Share designs and discuss what buoyancy means. Why do they think their design will stay afloat? <b>LO: Let's learn how to make our model boat</b>

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(making)	Children to select suitable materials for their design. Encourage them to consider what properties are important and why e.g. light – fast, waterproof – will remain afloat. How will they join materials? How will those joins remain strong in water?
4 (testing)	Reconnection: Children to have opportunity to check their models and discuss with peers any potential weaknesses. LO: <b>Let's learn how to test our models</b> If possible, create a boat race scenario using outdoor water play resources or containers. Otherwise, children can test the buoyancy of their models by creating movement by swirling the water. What do they notice? Do they need to make adaptions? How can they streamline their design? Is their design waterproof?
5 (evaluating)	Reconnection: What challenges did you face? LO: <b>Let's learn how to evaluate our models</b> Activity: Explain to the children that they are going to complete their evaluations. What challenges did they experience? How did they rectify them? What might they do differently? It might be they write comments around a photograph from the testing process. <b>End points:</b> What did I have to change from my original plan? Which part do I think worked particularly well? Are there any areas I would change? What might I do differently if I were to do this project again?
<b>End of unit quiz</b>	