 **Threshold Concepts and Subject Progression**

**Technology**

**Year: 5 Unit Name: Structures – Sledge Challenge**

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| **What do I need to know from previous learning?** |
| Knowledge from Primary school Technology Lessons |
| **What do I need to learn? What do I need to remember?** |
| * Identify the difference between a natural and man-made structure Idenitify the difference between a shell and frame structure * The names and descriptions of different forces * How to strengthen a structure (your sledge) against forces * How to write a cutting list and use it to plan the making of your sledge * How to work well as a team under strict time and material constraints * How to safely use workshop tools and processes |
| **How can I extend this learning?** |
| Identifying where and how forces will act against your sledge  Additional member depth information drawn on final design  Extended reading – cantilevers, columns, arched and suspension bridges  Using Pythagorus to identify diagonal dimension sizes  Measuring strength to weight ratio of sledges in the competition (Michigan.gov)  Investigating alternative materials for the job |