**Folio - Lifting Structure Design Challenge**

**Part A: The Development of an Engineered Solution**

**1.0**

Important Design Criteria:

* The structure must be able to lift a weight of 1kg to a height of 800mm in 60 seconds, at no closer than 400mm to the base.

Critical Design Factors:

* The structures:
  + Height
  + Width
  + Weight-bearing properties

Design Constraints:

* Any “lifting structure” can be used as a starting point for designs.
* 5mm2 timber will be provided for the build, and no other materials can be used.
* Hot glue can be used, but only to fuse joints.
* A LEGO Technics Kit will serve as a powered winch to demonstrate workability.
* A point system will be awarded for the overall weight of the lifting structure.

**2.0**