For those children aspiring to gain an ‘Honours Degree’, we have extra challenges to be completed at home (or in Study Club). Here is an example:

 *This is a practical challenge. To complete this you will need these characteristics:*

Young Engineers

 **Honours Challenge**

|  |  |  |  |
| --- | --- | --- | --- |
| **INITIATIVE** | **INDEPENDENCE** | **PERSEVERENCE** | **CREATIVITY** |

*Finding new ways to solve problems. Having good ideas – often ideas that no-one else has…*

*Working things out for yourself. Not depending too much on anyone else.*

*Over-coming problems. Not giving-up even when you feel like it.*

*Solving problems using brain-power!*

**What you have to do:**

You are going to build a bridge using rolled- up newspapers.

* This bridge has got to span at least 1 metre and hold a bag of sugar (2 pounds). You can use as many paper cylinders (‘struts’) as you like.
* The bridge must look ‘symmetrical’ (balanced) and be ‘aesthetically pleasing’ ( it must look ‘good’ not untidy).

**How do I prove I have made this?**

At the top, you will see that one really important quality in this task is ‘initiative’.

After completing this task you must take a photograph of your bridge holding the bag of sugar ( you can’t ‘support’ the bag of sugar with your hand etc). You must then e-mail the photograph to:

parish@sthelens.org.uk

In the subject box (in the e-mail) you need to type your name, and the following information:

**A.N.Other, Young Engineers’ Bridge, FAO Mr.Thomas**

**Good luck!**

**Top Tip:**

In nature, triangles help to build strong structures. Humans have used

this idea to help build towers and bridges.

In your bridge design, it could be really useful to use this ‘triangle-technology’

to strengthen your structure.