**STEM nRICH**

**Teacher Inspiration Day**

**Teacher Sheet**

**Workshop Activity – Design Technology and Mathematics**

**AIM**

To develop planning, estimating, testing, costing, problem solving skills and an understanding of market forces. To provide group co-operation.

TIME: At Teacher’s discretion, but a deadline should be set for completion and testing.

**Method**

Students work in small groups. Students should design and build a bridge to the following specifications:

* 35cm span
* 20cm high
* 10cm roadway
* It must hold a load of 100gm at any point along the roadway.

Students should draw a plan of the bridge and estimate the cost of the materials prior to construction. The materials should be purchased from the teacher at the following rates.

(N.B. fluctuating cost of materials)

|  |  |  |
| --- | --- | --- |
|  | **Prior to building** | **During Building** |
|  | **£** | **£** |
| **Art Straw** | 200 | 250 |
| **Sheets of A4 paper** | 100 | 120 |
| **Thread** | 20 | 25 |
| **Sellotape** | Free | Free |
| **Glue** | Free | Free |

After completion of the model pupils can sell the materials back to the teacher as follows.

|  |  |
| --- | --- |
|  | £ |
| **Complete Art Straws** | 100 |
| **Whole pipe cleaners** | 25 |