

Design Brief

Structures: strong and stable

engineering

What you need: newspaper · masking tape · drinking straws · card offcuts · test weight (small bean tin or about 200 g mass) · metre stick · Investigation Journal pages (Design Brief and Prototype Eval)

Words to use

Free-standing · Stability · Prototype

The problem

Build the tallest free-standing tower that can hold a small weight on top, using only the limited materials listed.

Who is it for?

The class, testing whose design best meets the height and load criteria

Their one real need

What it must do, and must NOT do

Only the materials listed (about 6 newspaper sheets, 1 roll of masking tape, about 10 straws, a few card offcuts) · Must stand free (not taped or held to the desk) · Must hold the test weight on top for a few seconds

Risks and limits we noticed

My first ideas – draw and label them

Check your drawing shows

Sketch your tower from the side · Label the base, braces and materials · Mark where the weight will sit



Lesson 31

Our measurements, in centimetres



You may use

newspaper (about 6 sheets) • masking tape (1 roll) • drinking straws (about 10) • card offcuts (a few)



What we will use, and how many



We will know it works when...

Stands free on the desk • As tall as possible (measured in cm) • Holds the test weight without collapsing

