

Design Brief

Design and build the solution

engineering

Words to use

User need • Option test • Prototype model

The problem

Design a stand that holds a class tablet (or a book of the same size) upright and steady on a desk so pupils can film or follow an investigation without it tipping.

Who is it for?

Pupils in our class who need a steady device or book stand on a desk

Their one real need

What it must do, and must NOT do

Use only the flexible build kit provided • Must fit on a standard desk • Must use the base shape that won the option test • Plan only in this step; build comes next • Prefer tape for joins; glue sticks only for light paper-to-paper

Risks and limits we noticed

Our option test

Does the shape of the base change how easily a stand tips? Two quick bases, the same height, the same load and the same gentle nudge.

Change: the ONE thing we change

Measure: the ONE thing we measure

Keep the same: to make it fair

Nudges needed to tip each base shape

Base shape	Nudges until it tipped (stop at 10)

The base that won, which our stand will use



Lesson 35

My first ideas: draw and label them



Check your drawing shows

Sketch one labelled side view of the stand • Label the base, the support, and where the device sits • Tick the materials you will use from the kit list on the board • Tick the class success criteria already on the board • Show the winning base shape from the option test



What I will use

cardboard and card • lolly sticks • masking tape (default join) • glue sticks (optional, paper-to-paper only) • string • clean recycled boxes or tubs • scissors



We will know it works when...

Holds the tablet or book upright • Stays steady when the desk is lightly bumped • Device or book can go in and out easily • Built from the kit materials only

