



Activity: Draw a top view and a either a side or front view of your design idea.



What is Design?

A design is a plan or specification for the construction of an object or system. The result of that plan or specification can be in the form of a prototype, product or process.

The design usually has to satisfy certain goals and constraints, may take into account aesthetic, functional, or economic considerations, and is expected to interact with a certain environment. Major examples of designs include architectural blueprints, engineering drawings, detail drawings, concept drawings as well as sketches, renderings or artist impressions.

Design Drawings

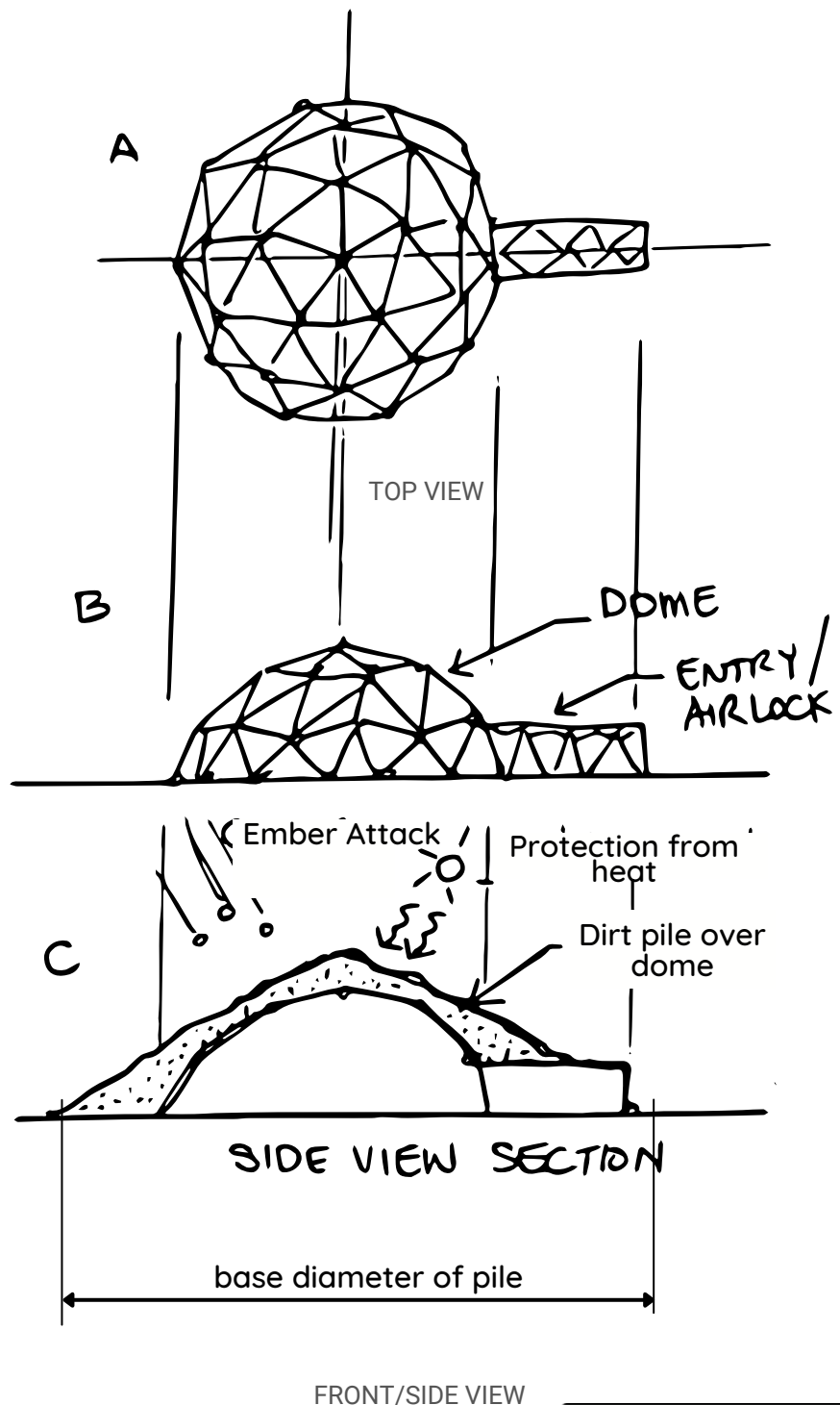
Design drawings are typically aesthetic drawings or renderings that represent possible solutions. Drawings are typically the first step in the design phase.

Design Activities

In some cases, constructing an object first, without plans may also be considered to be a design activity.

Example

Below is an example fire proof structure that could be built in a bushfire prone area as an escape dome for fire fighters. This is a typical annotated sketch that students would produce to demonstrate their design ideas.



Design Drawings



Activity: Pictorial views

Practise sketching one small part of your design as a pictorial view.



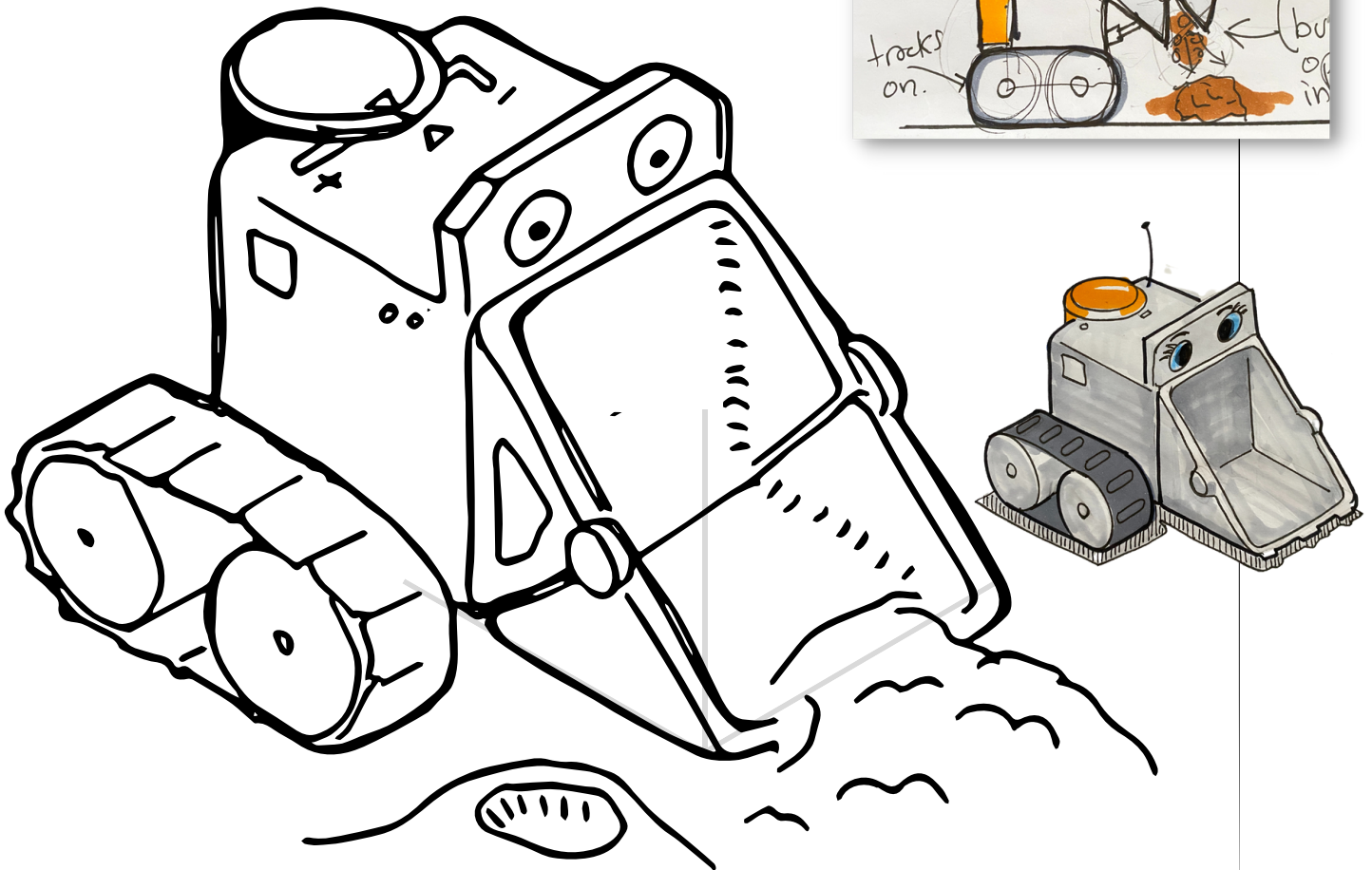
Sketching pictorial drawings at www.iteachstem.com.au



Bottle rockets drawn using a template.

Example:

Our design for a robot that can build a fire containment line near a fire front.

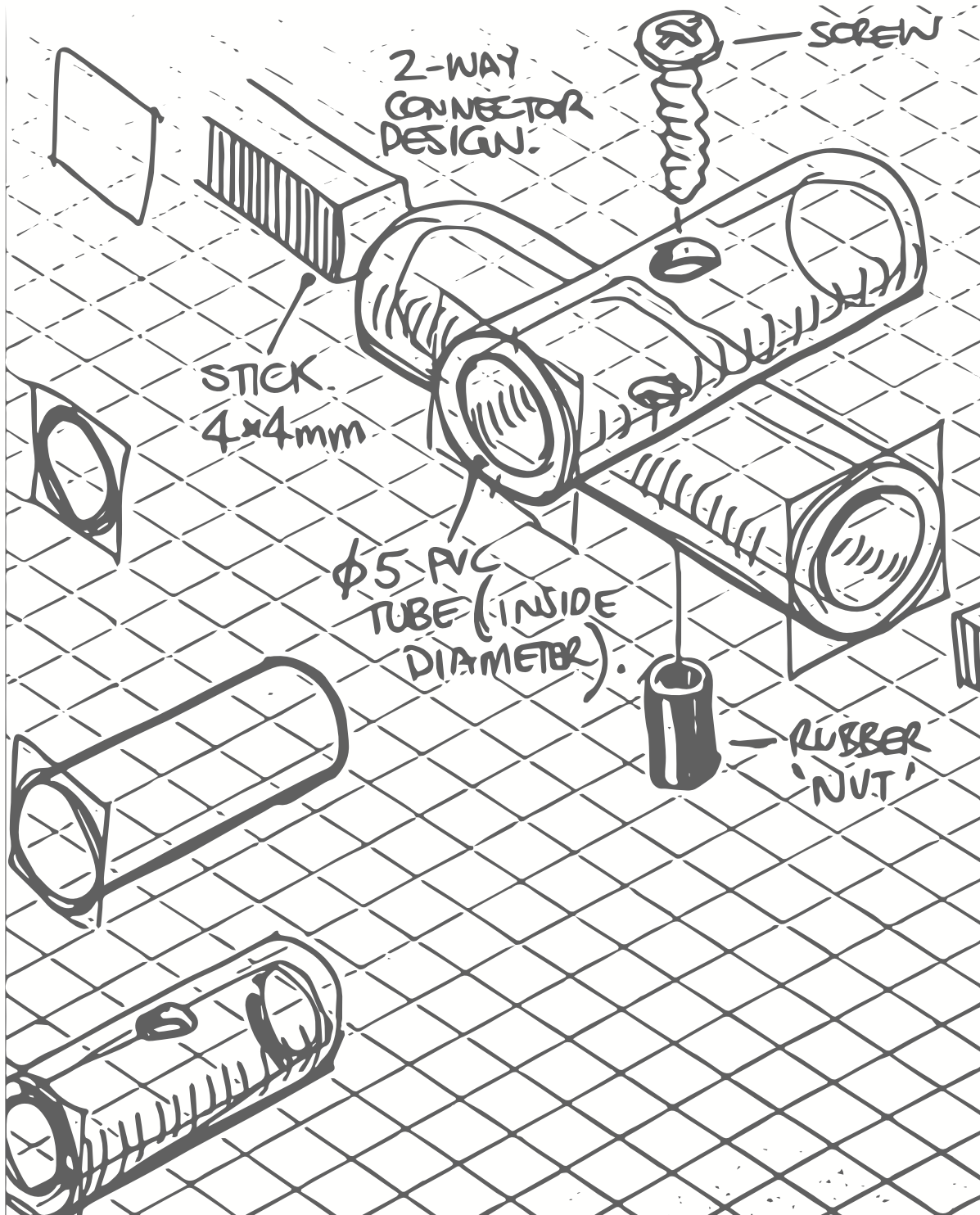


ISOMETRIC VIEW

Design Drawings



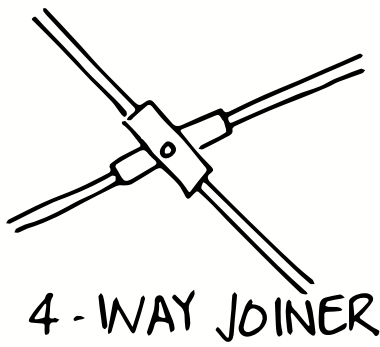
Activity: Using the isometric grid below try drawing/sketching a more detailed example of your design. Include some measurements.



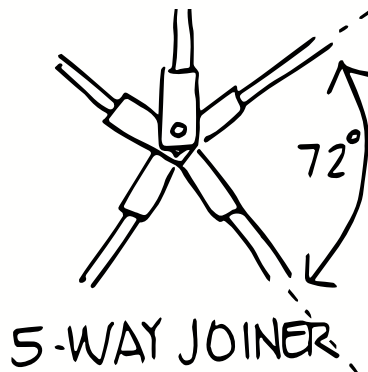
Design Drawings



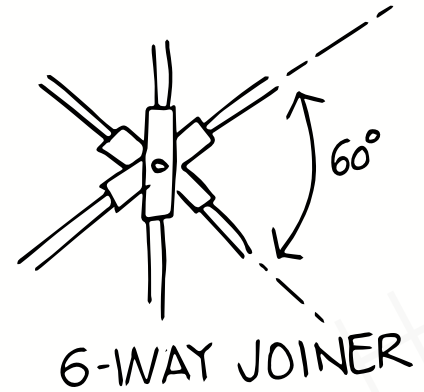
A "2V dome" means that two struts lengths are used in the dome.



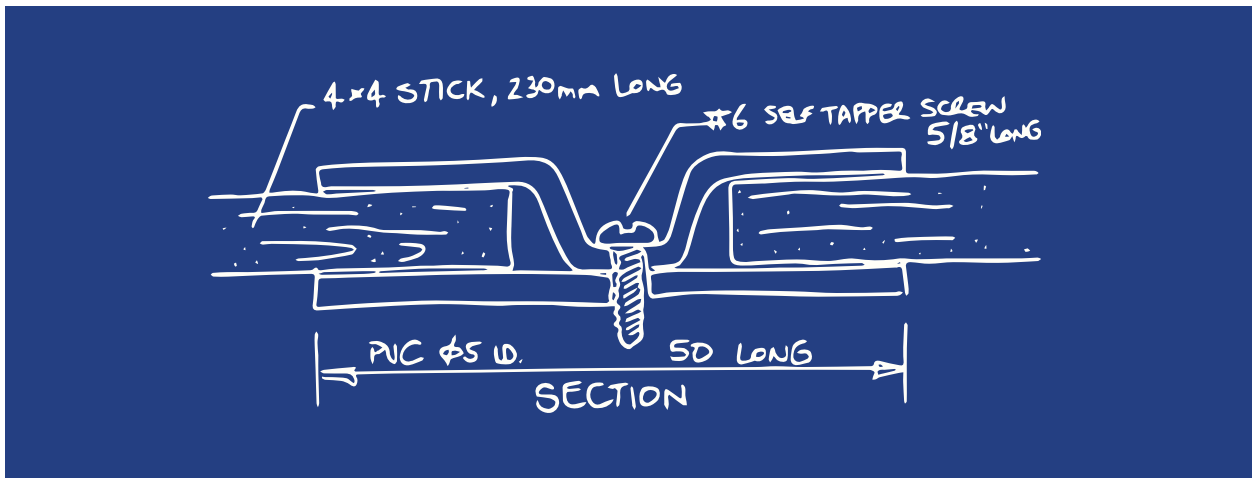
Make 10 of these



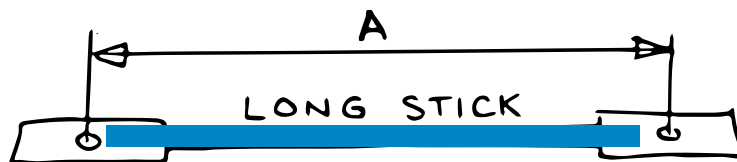
Make 6 of these



Make 10 of these



Strut B: 35 of these



Strut A: 30 of these

