

Figure It Out Series – Possible Connections to Technology - Modelling

Geometry Levels 2-3

Pg 8: Box of Tricks; could be used to begin building the notion of 3 dimensional shapes.

Pg 9: Roll Over; introducing the notion of a net to produce a shape

Pg 10: Little Boxes; could be used to introduce the notion of 3D drawing and isometric dot paper.

Pg 11: Points of View; could be used to introduce viewpoints which might be useful for planning an outcome, especially when working with Hard Materials.

Geometry Level 3

Pg 5: Let's Face It; could be used to extend thinking about 3D view. Activity sheet shows a plan view, and then a 3D view.

Pg6/7: Starting Blocks; Interpreting 3D images, and using isometric paper.

Pg 8/9: Different Viewpoints; Developing drawing in 3D.

Pg 10: A Chip off the Old Block; Extending 3D drawing

Pg 11: Nutting out Nets; Developing the idea of nets to form different shapes, as well as the idea that there can be more than one way to design a shape. Uses the language of "models".

Pg 12: City Skyline; could be used to develop the concept of a model to test an idea (will my net or drawing of this building translate to 3D?)

Pg 13: Room with a View; using 1cm square dot paper, introducing the notion of scale mapping (there is a tech table in the diagram!)

Pg 17: Slice of Life; has a recipe for "cooked dough". Also uses language of modelling and investigation.

Geometry Levels 3-4

Pg 10/11: Caught in the Nets; uses the language of models and connects that with drawing a plan / net.

Pg 13: Cube Creations; extends thinking around 3D and the use of isometric paper.

Pg 14: Building Boldly; uses the language of "plan views" and how to interpret plans.

Pg 15: Blocked Plans; could be used to develop the notion of plans and perspective viewpoints.

Geometry Book One Years 7-8

Pg 10 / 11: A Different View; connecting perspective with plan drawing, and 3D shapes. Also develops non-symmetrical shaped drawing eg cup, sandwich.

Pg 12: Loads of Lamingtons; designing 3 boxes using nets and moves from design to actual construction. Could be used if you had a focus on some aspect of packaging.

Geometry Book Two Years 7-8

Pg 4: X-ray Vision; could be used to develop students ability to visualise shape. Also extends ideas of perspective and nets.

Pg 5: Winning Ways; develops the idea of "possible plans". Also has notions of using a model to get feedback.

Pg 6: Missing Anything; visualising 3D from different angles

Pg 7: Fair and Square; concept of "bird's-eye view"

Pg 10: Perfect Packaging; investigating ideas of packaging and testing different models.

Measurement Levels 2-3

Pg 1: Stretching It Out; introducing cm as a unit of measure using real objects.

Pg 8: Fitting It In; producing a model to test for size. Could also be good for links to a packaging type unit, and testing fitness for purpose.

Measurement Level 3

Pg 1: Three Chairs; good for extending ideas about m, cm, mm. Uses chairs, could be used to introduce the idea of ergonomics.

Measurement Book One Years 7-8

Pg 4: Little Links; could be used for working out the best way to get the most out of a given material.

Pg 8/9: Castle Construction; good for "instructions" and actual production.

Geometry and Measurement Years 7-8 (LINK)

Pg 6/7: Cantitowers; could be used to explore 2D drawing and making a model of the design.

Pg 8: Open and Shut; could be used to explore nets and test ideas.

Proportional Reasoning Book One Level 3-4+

Pg 11 Magnificent Models; could be used to develop thinking about scale proportion. Also notion of taking a real object and working out it's scaled down size.

Proportional Reasoning Book Two Level 3-4+

Pg 24: da Vinci's Ratio; could be used to explore concepts about the connection between the body and mathematical theory – also good for non-standard units of measure.