



Little Boxes: What is the most suitable way to package four small boxes?

From Allmond, S., Wells, J., & Makar, K. (2010). *Thinking through mathematics: Engaging students with inquiry-based learning. Book 2, Ages 8-10*. Education Services Australia.

Possible alignment of inquiry with Australian Curriculum: Mathematics:

Content Descriptors	Proficiencies (wording will vary according to year level)
<p>Yr 5: ACMMG111</p> <p>The inquiry as written best fits the Year 6 content descriptions, however, it has been run very successfully with Year 5 students in the past. The knowledge they will gain is above the intended curriculum at this age but they will require little more than additional support for nets. Having students deconstruct rectangular prisms into their nets is usually sufficient. Having students deconstruct the SAME rectangular prism into multiple different nets and contrasting the nets develops deep appreciations for alternate net designs for the same prism.</p>	<p>Understanding</p> <ul style="list-style-type: none"> Making connections between 3D objects and their nets and with other 2D representations <p>Fluency</p> <ul style="list-style-type: none"> Constructing simple prisms from their nets Drawing representations and views of shapes made by combining multiple prisms <p>Problem Solving</p> <ul style="list-style-type: none"> Solving problems involving length Explaining the shape and relative position of each face of a solid to determine the net of the solid
<p>Yr 6: ACMMG140</p>	<p>Reasoning</p> <ul style="list-style-type: none"> Explaining, demonstrating and /or representing (for example, colour coded sketches linked to a model) the final net design to provide evidence of validity of net Justifying net design as being the ‘best’ design – for example, practical, economic in terms of materials Justifying arrangement of boxes as being ‘best’ – for example, placement on shelves, advertising opportunities, economy of materials needed for net.
<p>Yr 7: ACMMG161</p> <p>Include the additional step of drawing representations of the arrangements of boxes from multiple angles to meet ACMMG161.</p>	