# Discussion Problems
# Step 11: Nets of 3D Shapes

## National Curriculum Objectives:

**Mathematics Year 6: (6G3b) Recognise and build simple 3-D shapes, including making nets**
**Mathematics Year 6: (6G2b) Describe simple 3-D shapes**
**Mathematics Year 6: (6G2a) Compare and classify geometric shapes based on their properties and sizes**

## About this resource:

**This resource has been designed for pupils who understand the concepts within this step. It provides pupils with more opportunities to enhance their reasoning and problem solving skills through more challenging problems. Pupils can work in pairs or small groups to discuss with each other about how best to tackle the problem, as there is often more than one answer or more than one way to work through the problem.**

**There may be various answers for each problem. Where this is the case, we have provided one example answer to guide discussion.**

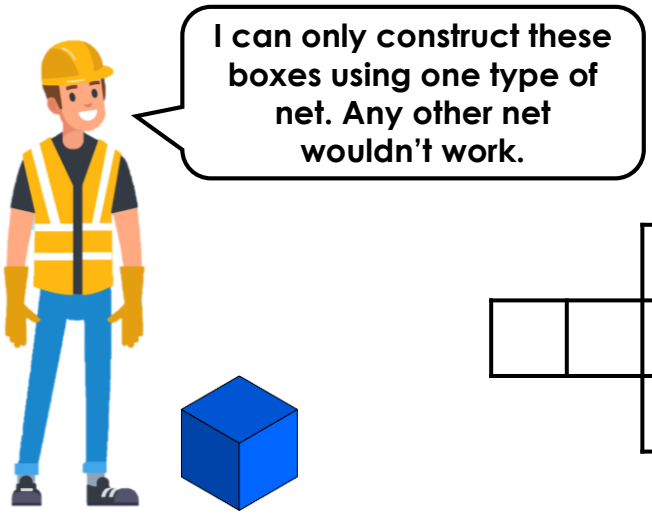
**We recommend self or peer marking using the answer page provided to promote discussion and self-correction.**

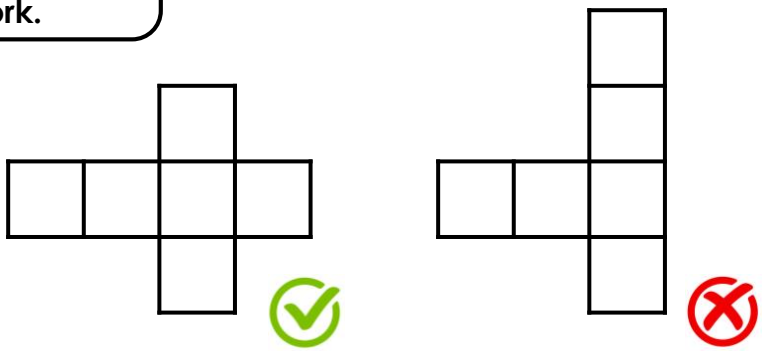
## More Year 6 Properties of Shapes resources.

## Did you like this resource? Don't forget to review it on our website.

# Nets of 3D Shapes

**1. Phil is constructing some cardboard boxes. He says,**

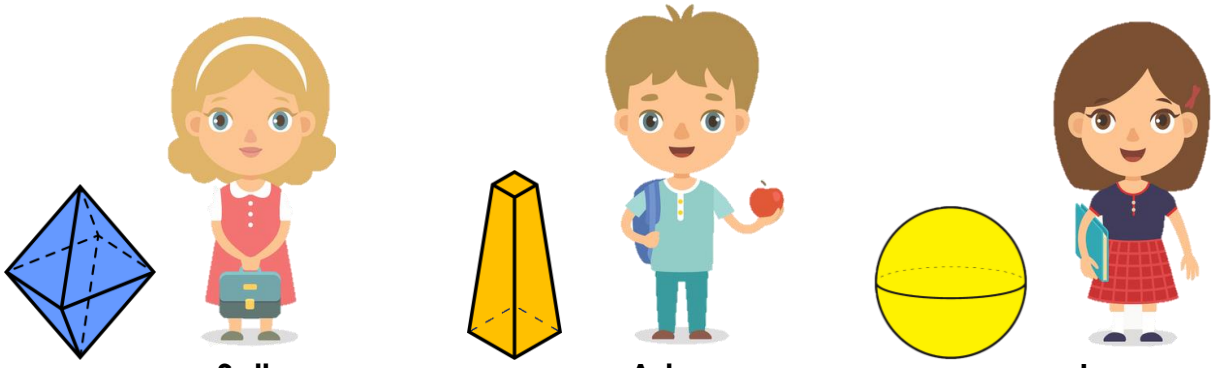


**Investigate whether Phil's statement is correct. Are there more nets that would work? Prove this by accurately drawing your own.**

DP

**2. Sally, Adam and Leanne are playing a game. They are designing their own 3D shapes and creating their own nets so that they can make them. Discuss whose shape will be the most difficult to make and why.**



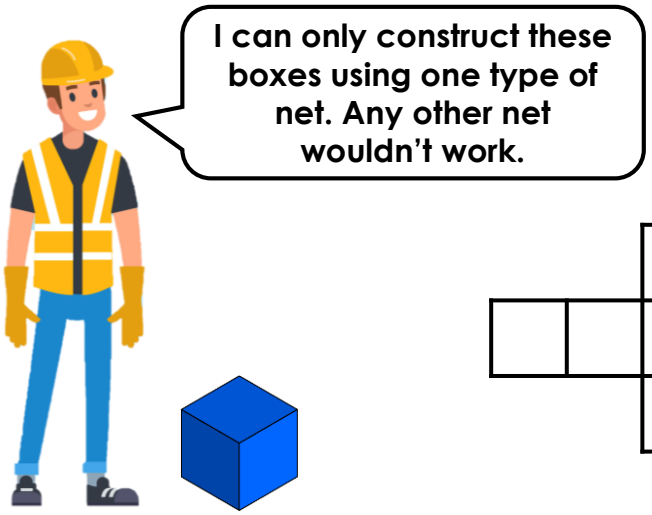
**Sally** **Adam** **Leanne**

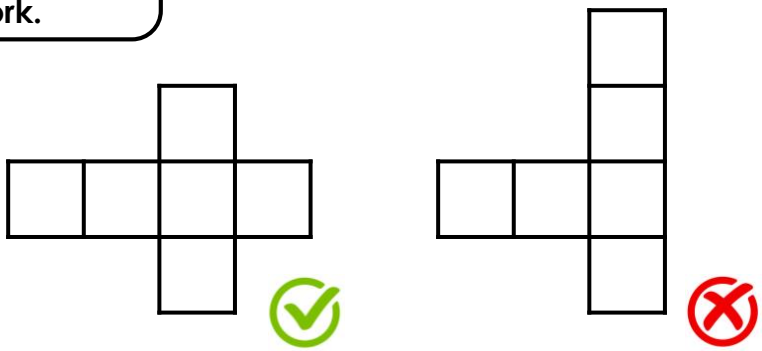
**Have a go! Create your own 3D shape and net to go with it.**

DP

# Nets of 3D Shapes

**1. Phil is constructing some cardboard boxes. He says,**

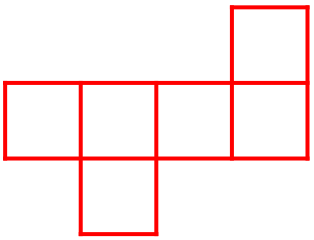


**Investigate whether Phil's statement is correct. Are there more nets that would work? Prove this by accurately drawing your own.**

**No, Phil is incorrect as there are other nets that would work.**

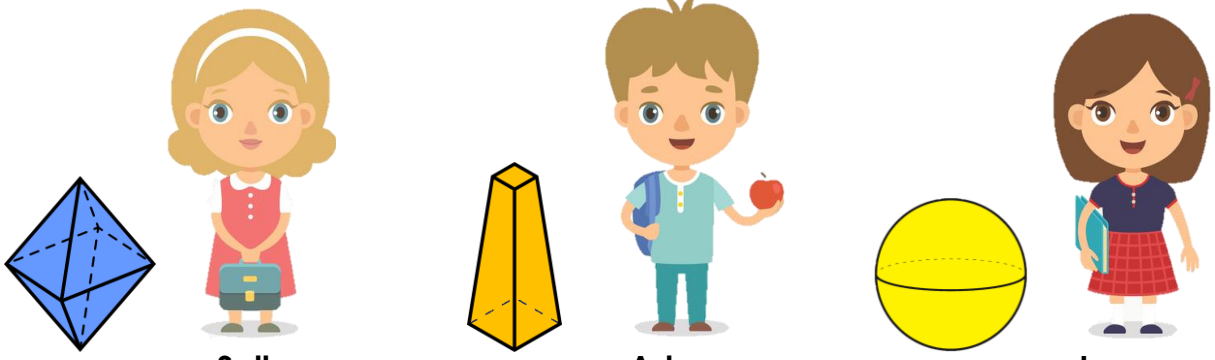
**Various nets possible including the one shown on the right:**



DP

**2. Sally, Adam and Leanne are playing a game. They are designing their own 3D shapes and creating their own nets so that they can make them. Discuss whose shape will be the most difficult to make and why.**

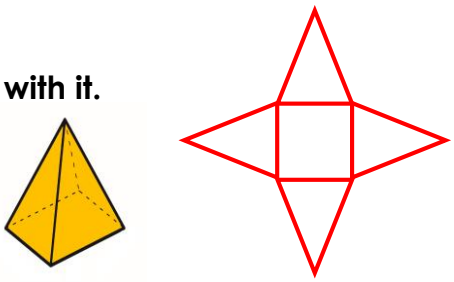
**Various answers possible including: Leanne will find her shape the most difficult to make as there are no straight lines included in her shape.**



**Sally** **Adam** **Leanne**

**Have a go! Create your own 3D shape and net to go with it.**

**Various shapes and nets possible including:**



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