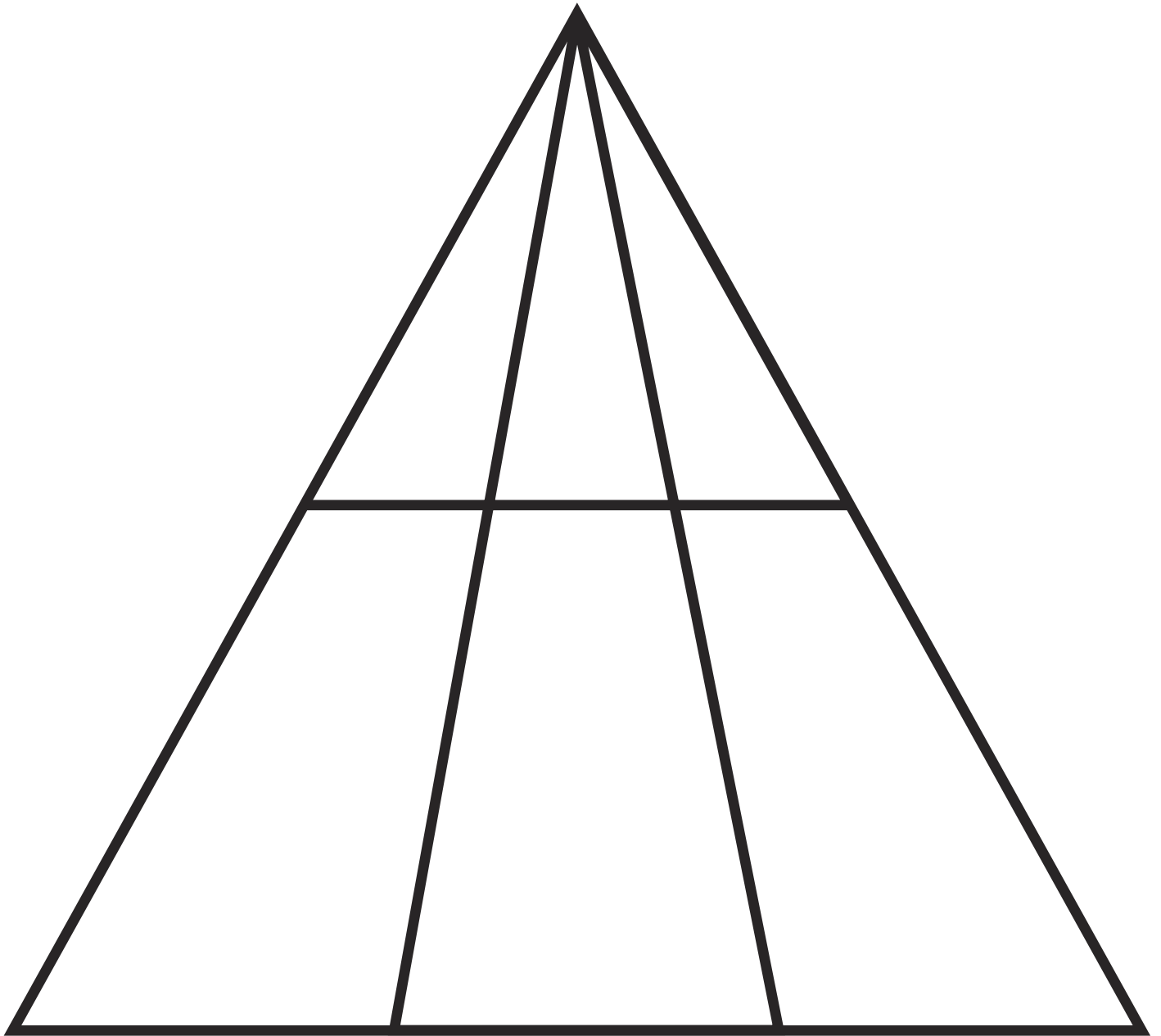


Count The Triangles



Question 1

Seychelles



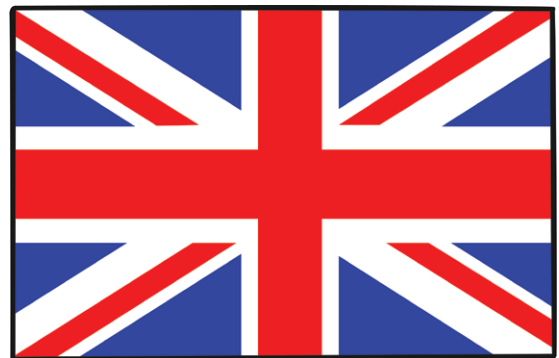
Guyana



Jamaica



Union Jack



Question 2

Use the pre-cut triangles to create a triangle alien. Use at least:

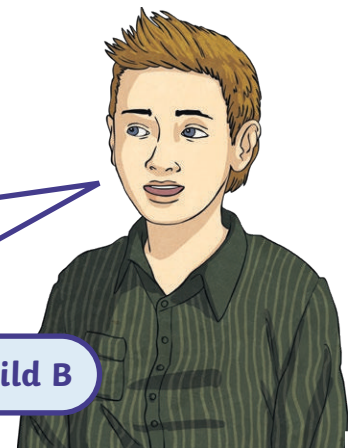
- 1 equilateral triangle
- 1 isosceles triangle
- 1 scalene triangle

Question 3



Child A

1 side of a triangle will ALWAYS be shorter than the other 2 sides.

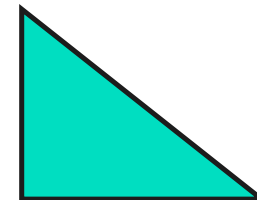
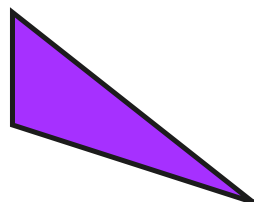
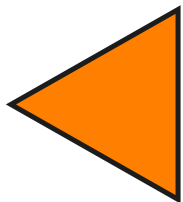
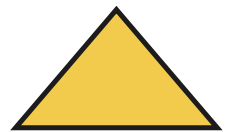
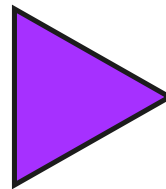
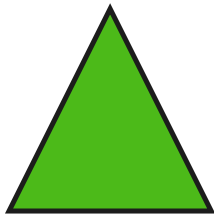
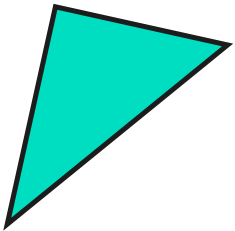
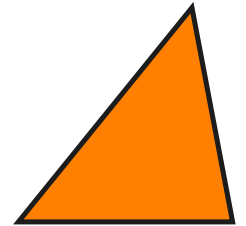
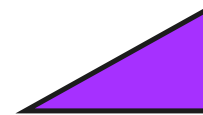
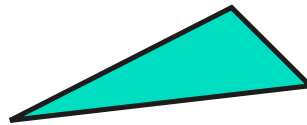
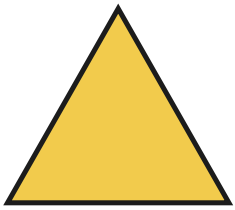


Child B

A triangle can only be equilateral if all of its sides are 6cm long.

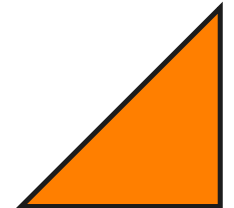
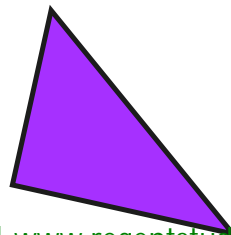
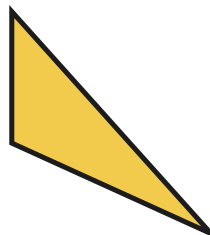
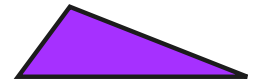
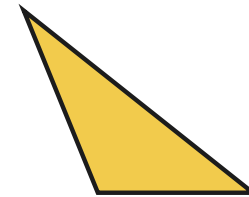
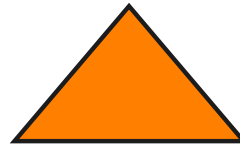
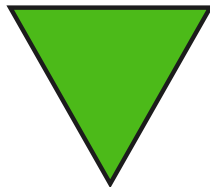
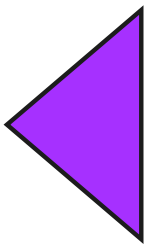
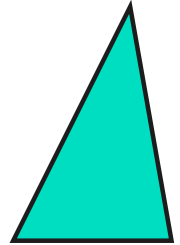
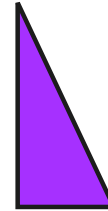
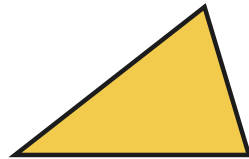
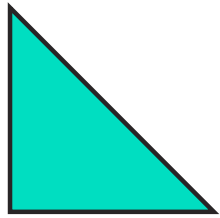
Sorting Triangles

Cut out the triangles below and sort into the correct place on the diagrams.



Sorting Triangles

Cut out the triangles below and sort into the correct place on the diagrams.



Sorting Triangles

Place the triangles in the correct section.

Scalene

Isosceles

Equilateral

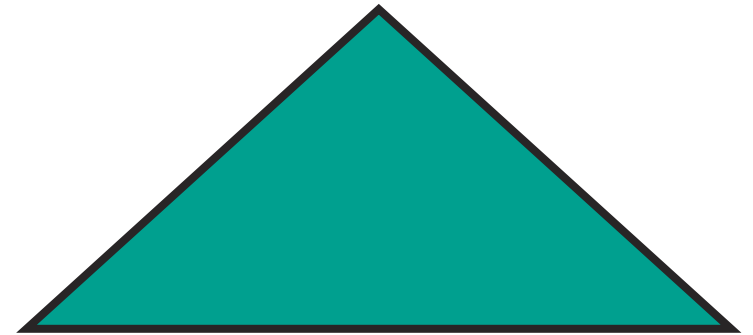
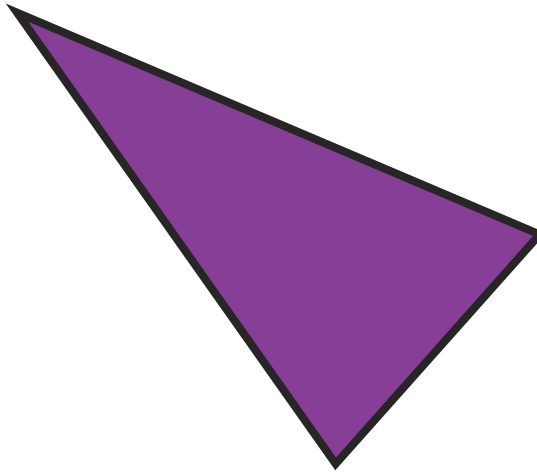
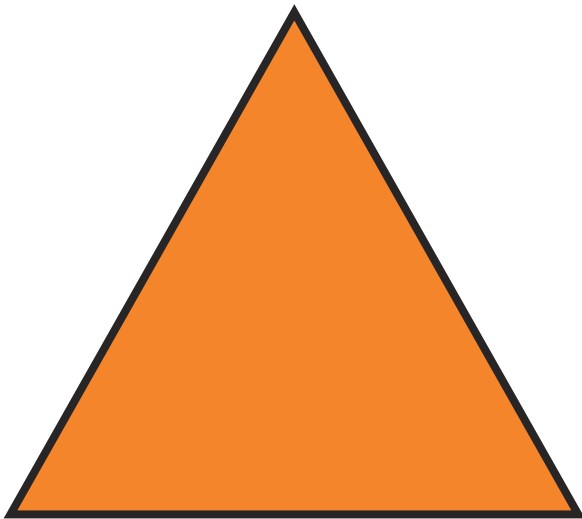
Triangle Carroll Diagram

Place the triangles in the correct section.

	isosceles	scalene
right angle		
no right angle		

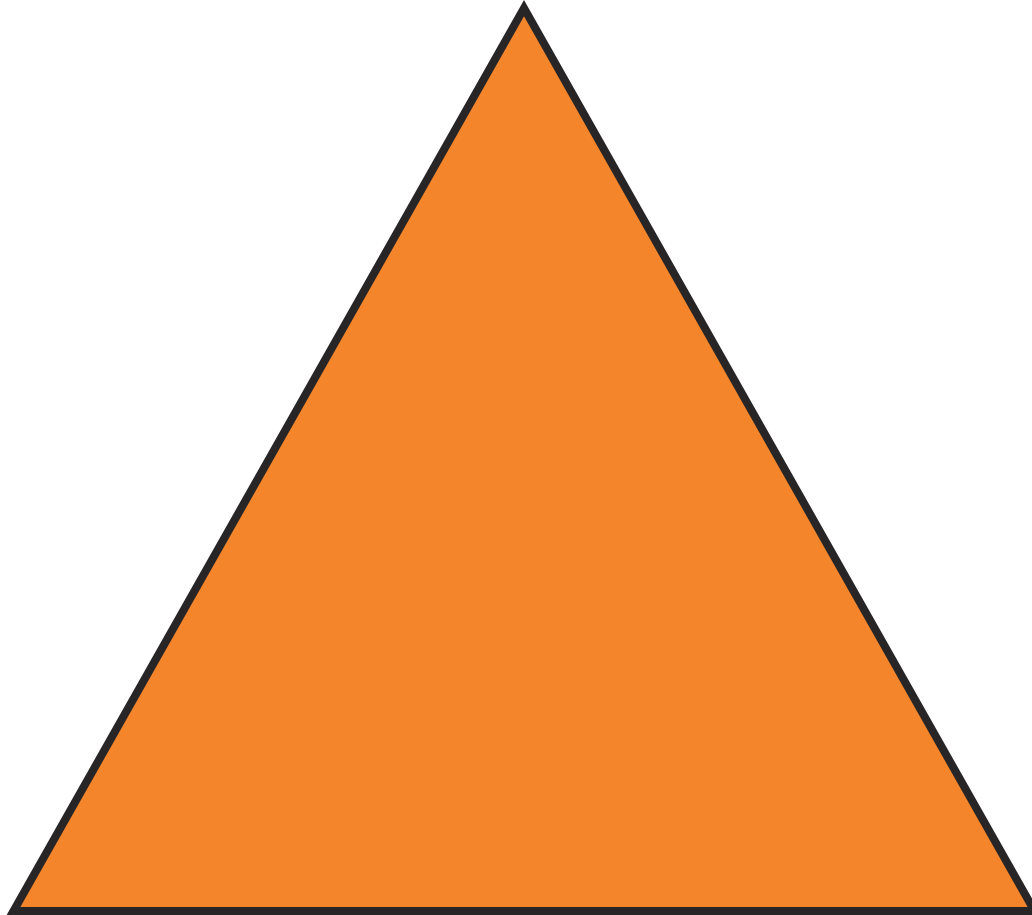
Triangle Models

Image 1



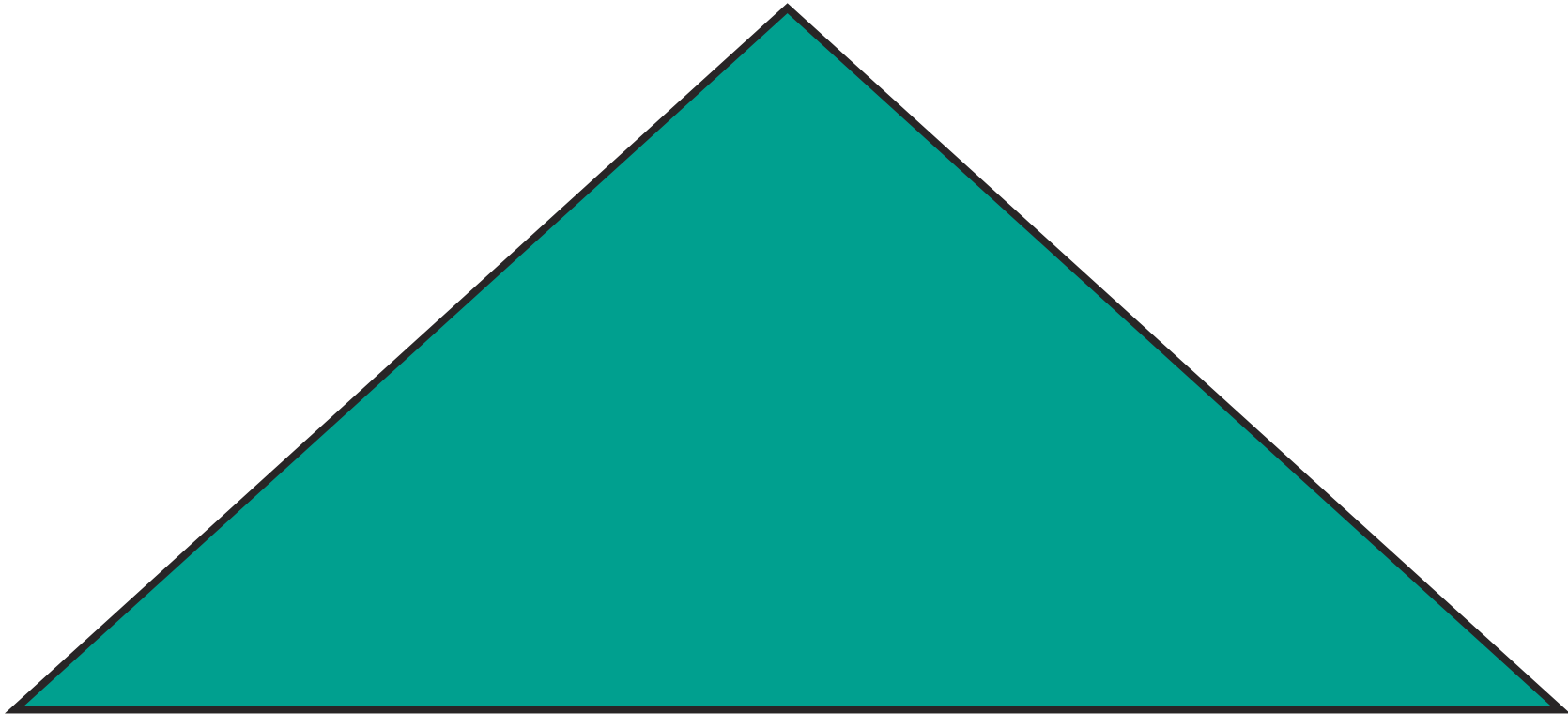
Triangle Models

Image 2



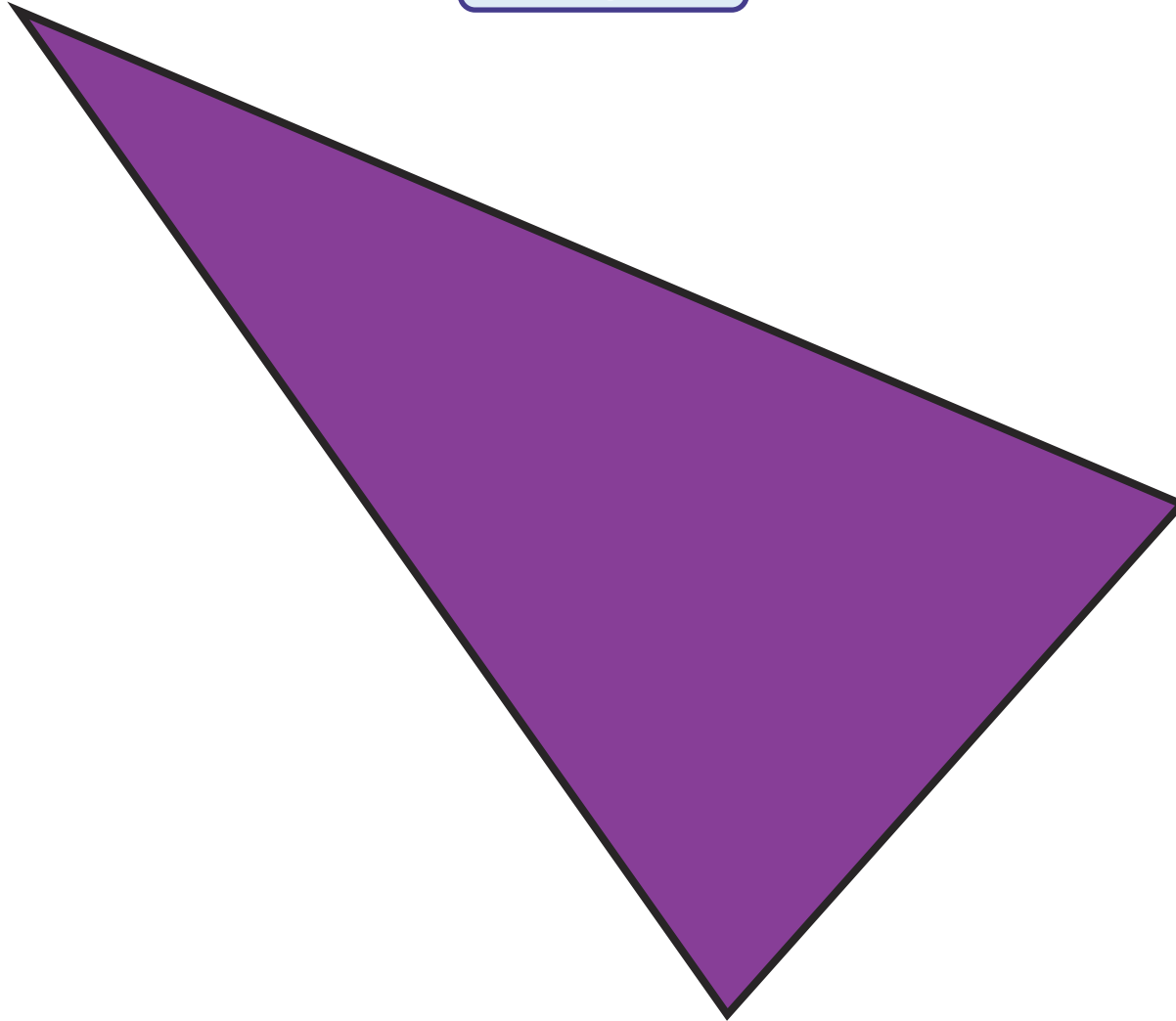
Triangle Models

Image 3



Triangle Models

Image 4



Name:

Date:

Same-Day Intervention Assessment

Child A

Child B

Child C

Child D

Child E

Classify triangles by exploring their sides and angles.

Compare triangles according to properties.

Apply skills to reason and problem-solve.

Additional Notes

■ Same-Day Intervention: Comparing and Classifying Triangles

Children will learn to compare and classify isosceles, scalene and equilateral triangles.

Pre-Intervention Check

To access this intervention, can the children...

*Tick as appropriate.

...use a ruler to accurately measure straight lines?*

...use a ruler to draw straight lines of a given length?*

Explaining the Misconception in Mathematical Understanding

Common Misconception:

Not using a ruler to accurately measure the sides of a triangle to correctly classify it.

For example, if asked to classify a triangle, a child may say it is equilateral just by sight rather than measuring each side and identifying that each is different so it is in fact scalene.

This intervention will help prepare children to explore triangles in more depth in upper key stage 2.

Summary of Intervention

Classify triangles by exploring their sides and angles.

Compare triangles according to properties.

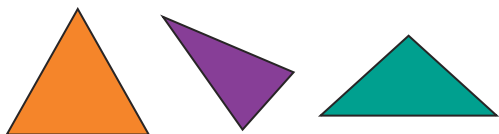
Apply skills to reason and problem-solve.

Preparation	Key Vocabulary
<ul style="list-style-type: none">• Triangle Posters• Ruler, scissors, pencil (1 per child)• Triangle Sorting Activity (A3)• Right angle measurer/paper• Triangle Carroll Diagram (A3)• Problem-Solving and Reasoning Questions• Count The Triangles Sheet	<ul style="list-style-type: none">• Triangle• Equilateral• Scalene• Isosceles• Regular• Irregular• Angles

Key Questions for Deepening Understanding

Classify triangles by exploring their sides and angles.

Display image 1 of the [Triangle Posters](#).



- What are the names of these shapes?
- Are they all the same?
- What do these triangles have in common? What is different about them?

Explain that there are three types of triangles. The first is an equilateral (or regular) triangle.

Display image 2 of the [Triangle Posters](#).

- What do you notice about this triangle?

Encourage children to use rulers when looking at the shape.

- What do you notice about the length of each side? (all equal length)
- What do you notice about the angles? (all acute angles and equal)
- What is an acute angle? (smaller than 90°)
- Why do you think this type of triangle is called an equilateral? (all sides and angles are equal)

The second type of triangle is an isosceles triangle.

Display image 3 of the [Triangle Posters](#).

- What do you notice about this triangle?
- What do you notice about the length of each side? (two sides are equal)
- What do you notice about the angles? (all acute and two are equal)

The third type of triangle is a scalene triangle.

Display image 4 of the [Triangle Posters](#).

- What do you notice about this triangle?
- What do you notice about the length of each side? (all different)
- What do you notice about the angles? (all different)

Tell children that isosceles and scalene triangles are irregular triangles because their sides and angles are not the equal.

Give each child a copy of image 1 of the [Triangle Posters](#). Children label the triangles and list their properties. This resource can then be referred to throughout the intervention.

As a group, complete the [Triangle Sorting Activity](#). Children cut out triangles and explore their properties. They then identify which type of triangle they have cut out and place it in the correct category. Discuss work as a group.

- What strategy did you use to identify which type of triangle you cut out?
- Does the size of a triangle change the type of triangle it is? Why?
- How do you know that your triangle is an equilateral/isosceles/scalene triangle?
- Do you agree or disagree with how your friend has sorted their triangle? Explain why.

Compare triangles according to properties.

Looking at the sorted triangles from the previous activity, children identify if any of the triangles that have been sorted have a right angle.

- How can we measure right angles? (right angle measurer or the corner of a piece of paper)
- How do we mark right angles on shapes? (draw two lines to make a box out of the right angle)
- Which types of triangles can have right angles in them? (isosceles and scalene)
- Why can't equilateral triangles have right angles inside them? (angles in a triangle total 180° and angles in an equilateral triangle are the same, $180 \div 3 = 60$)
- How many right angles can a triangle have? (1) Why?

As a group, use the [Triangle Carroll Diagram](#) to sort the previously cut-out triangles into the correct places. Discuss work as a group.

Key Questions for Deepening Understanding (Continued)

	isosceles	scalene
right angle		
no right angle		

What is an obtuse angle? (greater than 90°)

- **Can triangles have obtuse angles inside them?**

Children search through triangles to identify any that have obtuse angles.

- **What types of triangles can have obtuse angles?** (isosceles and scalene)
- **Why can equilateral triangles not have obtuse angles?** (because all angles need to be 60° /acute)

Apply skills to reason and problem-solve.

As a group, work through each of the **Problem-Solving and Reasoning Questions**. Children should apply what they have learnt in the intervention to answer the questions. Discuss workings and reasoning together.

Question 1: A question to show understanding of triangle classifications.

- **Can you label the triangles on the flags?**
- **How do you know that the triangle is equilateral/isosceles/scalene?**

Question 2: A question to apply understanding of triangle classifications.

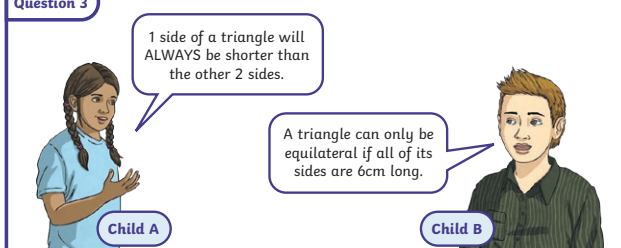
- **Can you create a triangle alien using at least one equilateral, isosceles and scalene triangle?**

Use the pre-cut triangles to create aliens.

Question 3: A question to elicit reasoning.

- **Look at the following statements. Are they true or false?**
- **How do you know? Prove it.**

Question 3

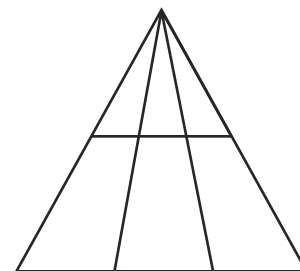


Child A: 1 side of a triangle will ALWAYS be shorter than the other 2 sides.

Child B: A triangle can only be equilateral if all of its sides are 6cm long.

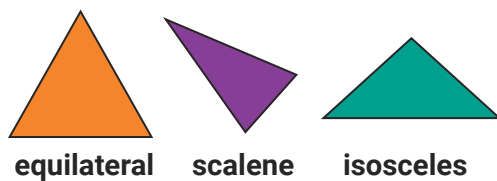
Additional Opportunities to Reinforce Learning

Give each child a **Count The Triangles Sheet**. They must count all the triangles they can see. Then, they must identify which type of triangles have been used. Discuss findings with the group.



Home Learning Slip

Today, at school, your child has been learning to classify and compare triangles. They have learnt about the three classifications of triangles (equilateral, isosceles and scalene) and understand the properties of each type. They have also learnt that some triangles can have right angles in them.



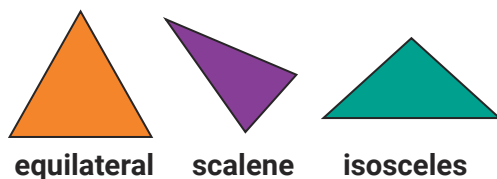
To help your child further with this learning, you could play the following game. Go triangle hunting around your house. Record the objects that you find and identify which type of triangle it is (as shown).

Object Around the House	Type of Triangle
clothes hanger	isosceles

Thank you for your support with this. Your help will really make a difference to your child.

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