Set 2 - Symmetry bugs

- Make this symmetry bug.
- Make it longer by adding squares and rectangles.
- Change the shape of the legs but keep the bug symmetrical.
- Add two more legs.
- Build a different symmetry bug with these pieces.

More Ideas

- Make a symmetry bug of your own.
- Make a symmetry bug with an octagon for the head.

- Make a symmetry bug with a long body made from hexagons.
- Make a symmetry bug with two heads.
- Make a symmetry bug using only right-angled triangles like those on the right.
Set 2 - Stars

- Use the shapes in each loop to make a star.

- Make a star with six of each triangle below.

- Here is part of a 12 pointed star. It has a hexagon in the centre.

More Ideas

- Make some 3D stars like this one.

- Make a star with an octagon in the centre.
Here is a Polydron rocket.

Use the net below to make the base of the rocket.

Make your rocket taller with a prism of rectangles.

Complete your rocket with a pyramid on the top.

More Ideas

Use the net on the right as a base for a new rocket.

Make your rocket longer with squares and rectangles.

Try adding some fins along the side of your rocket.

Use different triangles to produce your own base.
Spidrons are Polydron spiders.

- Make this spidron with three legs.

- Here is a foot for a spidron. Make one of these for each leg.

- Make a four legged spidron using these pieces. Some of it has been done for you.

- Make a five legged spidron with a pentagon in the centre.

  - Try to make each leg the same.

More Ideas

- The leg of this spidron has two feet. Use it to make a five legged spidron with ten feet.

- Make a spidron with an octagon in the centre.
Set 2 - Triangle puzzles

- Use the pieces in each box to make a large triangle.

More Ideas

- Take 16 right-angled triangles and make a larger right-angled triangle.
There are eleven different nets for a cube. Here is one of them. Make it and check.

Find out which six of these ten shapes are nets of a cube.

Two of the shapes above are the same. Can you find out which two?

There are four more nets of a cube to find. Make each one and check that it is different from all of those above.

More Ideas

Five squares can be used as the net for an open topped box. Find all the nets.

Can you prove that you have them all?
Here is a pyramid. It has a square base.

Make one like this and then make another one that is taller.

Make one with a pentagon for the base.

Here is the net for an unusual pyramid.

Find another pyramid with a rectangle for the base.

More Ideas

Make a pyramid with these four triangles.

A pyramid made from four triangles is called a tetrahedron.

Make a different tetrahedron with four of these triangles.

Make a tetrahedron with two different sorts of triangle.
A simple drum is made in the shape of a prism. Here is one with a hexagon for a base.

Make a prism drum with a pentagon for the base.

Prisms have a belt of squares or rectangles, but drums can also have a belt of triangles.

Here is a star made from a pentagon and triangles. Make two of these in different colours.

Join each star together to make a drum like this one.

Make a drum with a square at each end and a belt of triangles.

More Ideas

Make a large drum with octagons and a belt of triangles.

Here is a picture of one that needs to be completed.

Make a drum with an equilateral triangle at each end and a belt of triangles. What do you notice about it?

Make an unusual drum with two hexagons at each end.
Set 2 - Logical Solids

Use each set of clues to make a solid

Make a cube.

- Use only three colours.
- One blue square touches all three red squares.
- Another blue square touches only two red squares.
- A yellow square touches only one blue square.

This solid has five pieces.

- There is one square, which is clipped to all the other pieces.
- The isosceles triangles are red and green.
- The edges of red shapes do not touch red shapes.
- Only red, green and blue shapes are used.

Make at least two different solids with this set of clues.

- There are four pieces, all triangles.
- There is only one red isosceles triangle.
- The blue and yellow triangles are the same shape.
- The other shape is green.
Each activity shows you two different views of the same solid. Use the clues to make each one.

- This cube is made from four red squares.
- This cube is made from two red squares, two green squares, one blue square and one yellow square.
- This octahedron is made from eight triangles.
- Two of them are blue, two are yellow, two are red and two are green.
- This solid is called a cuboctahedron. It has three red squares, three green squares, four yellow triangles and four blue triangles.