Ahoy, me hearties!

Out at sea, 'tis hard to find anything more useful than a good net.

Today, we'll be makin' a different sort o' net.

In math, a net be a two-dimensional shape that can be folded into the surface of a three-dimensional solid.

Let's start with the most commonly recognized net.

What polyhedron can be made by foldin' the six squares o' this net?
A polyhedron with six square faces is called a **cube**.

We can fold this net into a cube.

A **cube** is a special type of rectangular prism in which all six faces are squares.

Aye. The net of a cube be havin’ six squares.

There be many other ways to join six squares to form the net of a cube.

Which o’ these four arrangements o’ squares can be folded to make a cube?

Print copies of these and many other nets for cutting and folding at BeastAcademy.com.
A regular tetrahedron is a pyramid with four triangular faces that are all equilateral.

Can any arrangement of six connected squares be folded into a cube?

Aye. Not every arrangement o’ six squares can’t be folded into a cube.

The green square and the orange square overlap when I try to fold it into a cube.

Neither can this one.

This one doesn’t work at all.

Aye. Not every arrangement o’ six squares can be folded into a cube.

Who can create a net for this regular tetrahedron?

Let’s look at some other nets.

Cubes are awesome!

All four can be folded into cubes.

Cool!

This straight strip of six squares can’t be folded into a cube.

Neither can this one.

The green square and the orange square overlap when I try to fold it into a cube.

Nope. This straight strip of six squares can’t be folded into a cube.

Neither can this one.

This one doesn’t work at all.

Cubes are awesome!

All four can be folded into cubes.

Cool!

Can any arrangement of six connected squares be folded into a cube?

Aye. Not every arrangement o’ six squares can’t be folded into a cube.

The green square and the orange square overlap when I try to fold it into a cube.

Neither can this one.

This one doesn’t work at all.

Aye. Not every arrangement o’ six squares can be folded into a cube.

Who can create a net for this regular tetrahedron?

Let’s look at some other nets.

Cubes are awesome!

All four can be folded into cubes.

Cool!
The four faces of a regular tetrahedron are equilateral triangles.

If we arrange them like this, we can fold the three outer triangles up...

...to meet at the apex.

Be there another way to create a net for a regular tetrahedron?

I found one arrangement that doesn’t work. The red and green faces overlap.

But, if we arrange four triangles like this...

...they fold into a tetrahedron.

Excellent foldin’.

Here be four more nets. What solids be formed by foldin’ the followin’ nets?

What solids are formed by folding these nets?