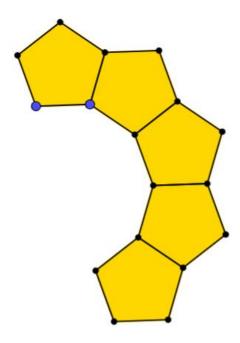
nrich

Polygon Rings

Here is a pattern made from regular pentagons:



If the pattern continued, do you think it will form a complete loop or will the pentagons overlap?

You could explore by drawing or tracing more pentagons, or by cutting some out.

Once you've had a chance to explore, here are some questions you might like to consider.

How many pentagons form a ring? How many decagons would form a ring? Why do they fit together so neatly without overlapping or leaving a gap?

What about other polygons?
Can you always make a ring?
Is there a way to predict how many polygons you need to form a ring?