PUZZLERS

Teachers can photocopy this page to use in class

▶ FOUNDATION
BISCUIT DECORATION

Andrew decorated 20 gingerbread men to take to a party. He lined them up and put icing on every second gingerbread. Then he put a cherry on every third gingerbread. Then he put two chocolate buttons on every fourth one. So there was nothing on the first gingerbread. How many other gingerbread had no decoration? Did any get all three decorations?

Adapted from http://nrich.maths.org/154

▶ YEARS 1 AND 2
STRINGY QUADS

You will need a loop of string for this activity and three other friends. Stretch the string out so that each of you is holding a corner to make a quadrilateral. Try to make one which has exactly one line of symmetry. Is it possible?

How could you convince someone else that your shape has just one line of symmetry? Can you make any other quadrilaterals with just one line of symmetry? Now try and make a quadrilateral with two, then three and then four lines of symmetry.

http://nrich.maths.org/2913

▶ YEARS 3 AND 4
PENCIL AND JAR PUZZLE

I have some pencils and some jars. If I put 4 pencils into each jar I will have one jar left over. If I put 3 pencils into each jar I will have one pencil left over.

How many pencils and how many jars?

www.mathsisfun.com/pencilsandjars.html

▶ YEARS 5 AND 6
CHICKEN CROSSSING

A man has to get a fox, a chicken, and a sack of corn across a river. He has a rowboat, and it can only carry him and one other thing. If the fox and the chicken are left together, the fox will eat the chicken. If the chicken and the corn are left together, the chicken will eat the corn.

How does the man do it?