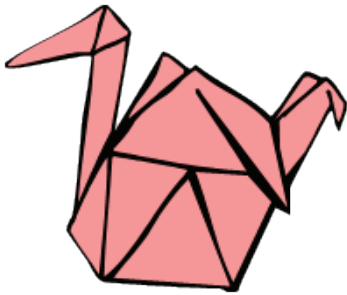


Origami

Activity 1 - The Art of Origami

Origami is an ancient Japanese art of folding paper. The word origami comes from two Japanese words: “ori”, which means to fold, and “kami”, which means paper. Origami has become increasingly popular over the past few decades and has spread to North America, Europe and other places around the world.



Special origami paper consists of different coloured squares and is fairly thin in order to make it convenient for folding. However, origami figures can be made from rectangular shaped paper as well. In addition, origami can be created with wrapping paper, old magazines, candy wrappers, wallpaper and many other types of paper. Usually origami models are made strictly by folding paper. There is no cutting or gluing involved.

Origami can be a very enjoyable activity for the whole family. As long as you’ve got a little bit of patience, origami can be easily learned and made with whatever paper you’ve got in the house. Origami offers a huge range of possibilities. You can create all kinds of paper animals such as cranes, cats, fish, frogs, dogs, etc. You can create houses, boats, decorative boxes, hats and balloons. You can also create a variety of three-dimensional geometric shapes: cubes, pyramids and many others.







Origami structures range from very simple to highly complex. The more origami you do, the better you can get at it so you can create more complicated and intricate designs. But as with everything, we need to start at the beginning with the basics. In order to learn origami, you first need to become comfortable with some basic folds, symbols and terms.

As the old Chinese proverb states: “The journey of a thousand miles begins with a single step.”

Can you believe THIS is math?

Origami

Activity 1 - The Art of Origami - *continued*

Name	Diagram
Mountain Fold	
Valley Fold	
Diagonal Fold	
Turn Over	
Fold and Unfold	
Reverse Fold	

Activity Questions:

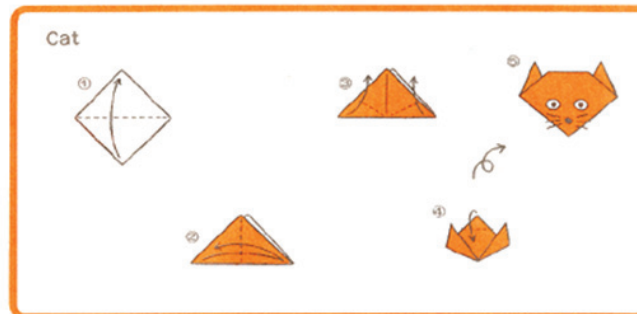
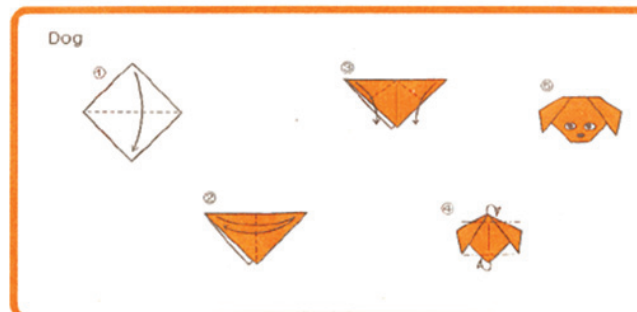
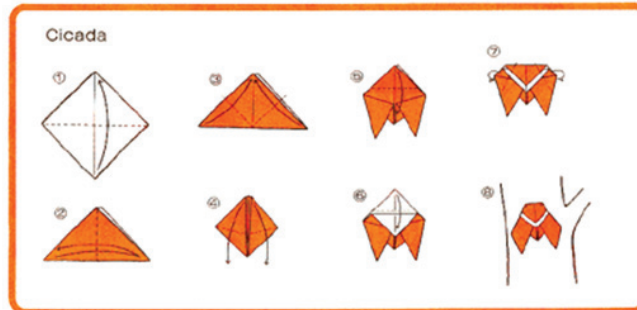
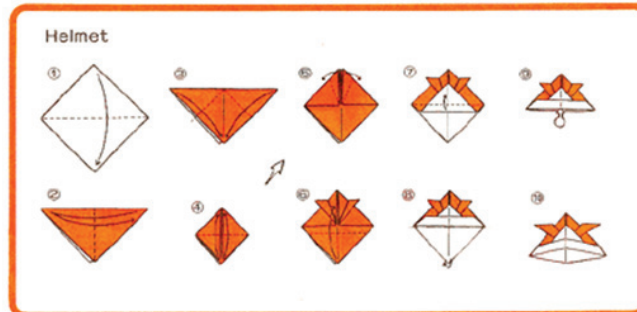
- When you apply a mountain fold to a square piece of paper, what shapes is the square divided into? How big are these shapes compared with the size of the original square? Express this as a fraction.
- Apply a valley fold to a square paper twice. What shapes do the fold lines divide the square paper into? What is the size of each of these shape compared with the size of the original square? Express this as a fraction.
- Apply the diagonal fold to a square piece of paper twice. Make sharp creases and Unfold. How many triangles can you count in total?
- When you fold a square piece of paper diagonally twice, the fold lines divide the original square into 4 equal triangles. However, you only folded the paper twice. Can you explain how 2 folds produce 4 separate triangles?

On the next page are some simple origami shapes you can try to make on your own. When folding notice the types of geometrical shapes which are created by the folds. Also, it is interesting to unfold some of the shapes after they are finished to see the geometrical patterns, created by the creases. Have Fun!

Can you believe THIS is math?

Origami

Activity 1 - The Art of Origami - *continued*



Can you believe THIS is math?