

## Art is Science!



*Suggested Age: 5-7*

*Time: 15 minutes*

There are many ways available to enlarge pictures that we like. Computers are able to digitally enlarge pictures for us. This is one way that we can get many different sizes of pictures from our cameras. Another way to make pictures bigger is to do so by hand.

### **In this activity we will:**

- Create your own graph paper and then use this graph paper to make an enlargement of one of your favorite pictures or drawings.

### **Materials**

- Graph paper with  $\frac{1}{4}$  inch spacing
- Plain white computer paper
- Pencils
- Colored pencils or crayons
- Scissors
- Ruler
- Pictures (if you don't want to draw your own)

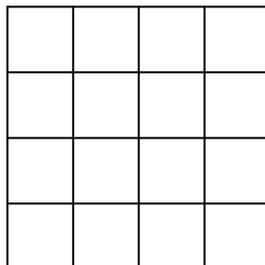
### **Safety**

Be careful not to cut yourself when using the scissors. They can be very sharp.

### **Preparation**

To prepare for this activity, you will need to make your own graph paper:

1. On one sheet of paper, you will need to make graph paper with spacing of  $\frac{1}{2}$  inch. To do this, use your ruler to measure every  $\frac{1}{2}$  inch along each side and make a mark. Connect the marks that are directly across from each other to make a grid. See below.



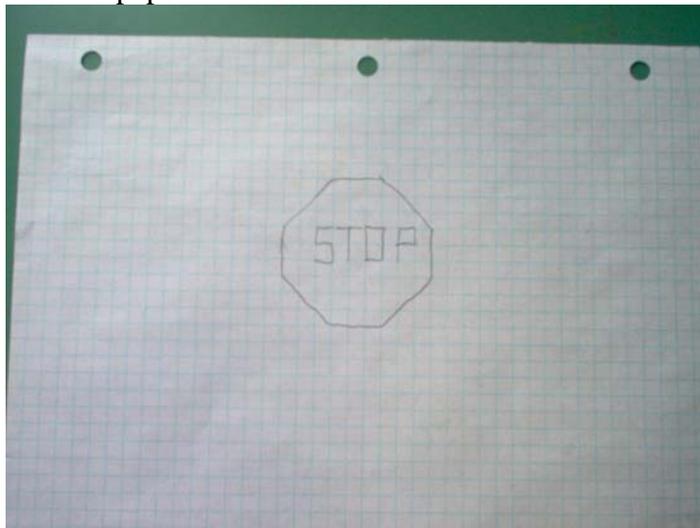
## Pre-Activity

Discuss with the children how they think pictures are magnified. Why do they start to look funny when blown up too large, which is especially true of digital images? Can we see more detail if the pictures are larger? Why or why not?

## Activity

Sometimes, you want a picture that you drew or took to be blown up to a really big size so that you can see it better or use it on a poster. There are many methods that are used to do this and here we will look at just one of those ways.

- Transfer the drawing onto the sheet with the smaller grid on it. If you prefer to draw your own, go ahead. You can also put the picture underneath of the paper and trace it onto the paper.



- Once you have finished drawing your picture, color it in so there is more detail.
- Starting one block at a time, draw the picture over again onto the paper with the larger grid. Be sure to draw exactly what is in square on the smaller sheet into the bigger squares. (See below)



- Color the larger picture in so that it matches the smaller (and possibly the original).
- Discuss the similarities and any differences that you see between the two pictures. Do they look the same, just different sizes? If not, what's different? Does the larger picture look like it needs more detail? If so, why do you think so?

### **Extension Activity**

1. Have the students cut out each square of their pictures and glue them in the correct order onto a piece of construction paper, leaving a very small space in between the squares. This will create a beautiful mosaic.

### **References**

<http://ancienthistory.about.com/od/mosaic/>