Debugged JNR

Algorithms!

An algorithm is just a set of instructions for you (or a computer!) to follow, to help solve a problem.

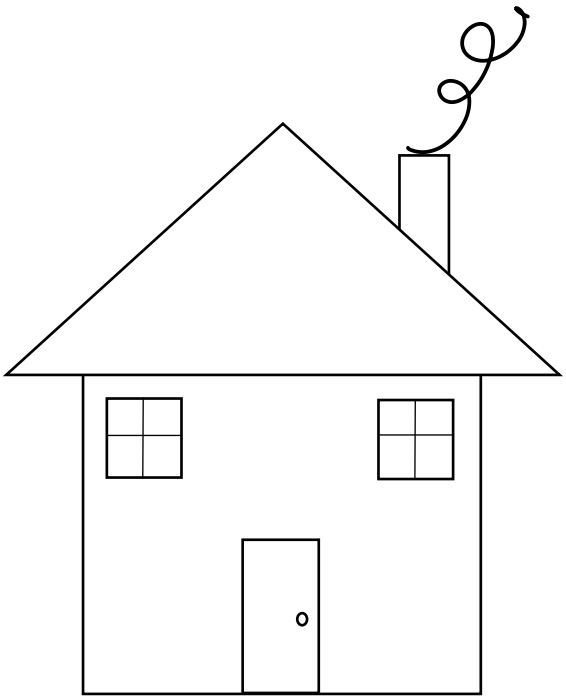
Below is an algorithm (set of steps) for you to follow to make a picture. You will need a pencil, ruler and paper, or you could use a paint program on your computer. Follow the algorithm as best you can (it may not be easy!) and see what you end up with.

When finished, compare your drawing with the picture on the next page (**don't** look yet though!).

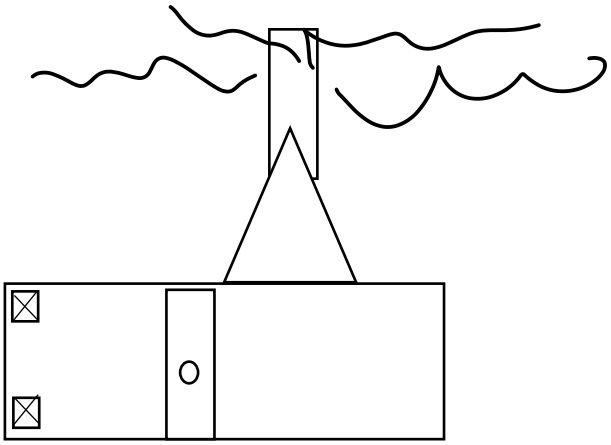
1. Draw a rectangle in the middle of the paper.
2. Draw two smaller squares in the corners of this rectangle.
3. Draw crosses in these squares
4. Draw a triangle on top of the rectangle.
5. Draw part of a rectangle on top of this triangle.
6. Draw some squiggles coming from this rectangle.
7. Draw a tall rectangle at the bottom of the first rectangle.
8. Draw a small circle inside the last rectangle you drew.

What do you think you have drawn…..? Look on the next page for the answer!

The algorithm was *supposed* to draw the house below, but it is very likely that your drawing does not look like this!



For example, you could just as easily have drawn the below picture by following the algorithm, it still follows all the steps correctly (check and see!)



You see, it is important to take care when writing an algorithm. You must use **very clear instructions**, or the drawing – or your computer program – will go wrong.

Further tasks:

1. Can you improve the algorithm so that when it is followed you get a better-looking house?
2. Can you come up with your own picture made of simple shapes, and write an algorithm to draw it? Test it out on someone else to see if the steps are clear enough!