Maths in the Mansion Today

The Mansion at Tatton Park is a beautiful house that was once lived in by the Egerton family. Today we are still able to visit the house and enjoy the paintings and furniture just as people did in the past. There are also lots of maths puzzles that you can test your brain with. Even the staff who look after the house now still need to do maths in their jobs too!

Here are a few fun activities for you to try in the classroom or at home.

Activity 1: Parquet Floor

In the staircase hall, there is a parquet floor, which is a floor made up of small blocks of wood placed in a geometrical pattern. There are lots of different designs but the one at Tatton is laid in identical squares and each square is made up of rectangular blocks of wood of various sizes. In the past this is where guests would dance at a ball. Today visitors walk across this floor before they go upstairs, but how many look down at all the intricate patterns beneath their feet?

Here is a picture of the floor pattern at Tatton:

Design your own floor and see how the overall pattern emerges as you put more squares together. You could use different colours for the blocks as sometimes different coloured woods were used to add to the design.

TIP: You might find it easier to create your design using squared paper.

Activity 2: Hanging a Painting

Sometimes a painting might be sent away on loan to an exhibition somewhere else which leaves a gap on the wall. There are other paintings stored away and the Mansion Assistants have to use a tape measure to decide whether one of these paintings will fit the space before they move it. Paintings are sometimes very large and heavy! The Mansion Assistants have to plan how they will move the painting safely and without damaging it.

At home measure an object, such as, a cushion, vase, photograph or a poster. Then try and find another object that is the same size. Try guessing first and then measure it to see if you are right. Perhaps you could get an adult to help you rearrange the pictures in your bedroom.

Activity 3: How Many Windows?

Tatton Park is a symmetrical house which means that if it was divided in two both halves would be a mirror image of the other. Looking at the house from the garden side it is easy to imagine a line drawn down the middle. There are lots of windows to clean!

There are 14 windows and each one is divided into smaller panes of glass. On the ground floor 5 windows have 3 x 5 panes and 2 have 1 x 5 + 3 x 5 panes. On the first floor 7 windows have 3 x 4 panes.

How many window panes are there altogether? How many windows are there in your house and how many panes of glass?

Activity 4: Wow! Look at the Ceiling

The ceiling in the drawing room is the most elaborate one in the whole Mansion and was made to impress any visitors. It is gilded and made up of lots of plaster squares with rosettes (little roses) in different designs. To gild something means to cover it with a thin layer of gold.

There are 9 squares across and 17 down. How many are there altogether? There are several different designs for each square. Can your answer be equally divided or do you think the designer had to use some designs more than others?

Design your own bedroom ceiling. Don't forget if you are lying in bed and looking up you don't want a pattern that will make you dizzy!