

**Story:** The Gruffalo  
**Author:** Julia Donaldson  
**Illustrator:** Axel Scheffler

**Teacher:** [Davinder Mankoo](#)  
**Setting of the class / school:** A mixed Years 4/5/6 class in a special needs school in Cambridge (UK)  
**Age group:** 9-11 year olds  
**Number of children in the class:** 11

**Learning intention:** To consolidate understanding of simple grid co-ordinates  
**Key mathematical vocabularies:** grid co-ordinates, directional and positional language (including simple programming directions e.g. left, right, up, down and counting forwards and backwards)  
**Resources needed:** masking tape, chalk, toys from the story, Beebot, post-it notes

### Synopsis by the publisher:

The story of a mouse's walk through the woods unfolds in two phases; in both, the mouse uses clever tricks to evade danger. On his way, the mouse encounters several dangerous animals (a fox, an owl, and a snake). Each of these animals, clearly intending to eat the mouse, invites him back to their home for a meal.

### Starter / Teaching input (25 minutes):

As a class, we read the story *The Gruffalo*. As the story is about the mouse who travels through the woods and encounters various other animals along the way, children recreated this story through role playing where children were asked to act out each character using the classroom as the woods from the story. I gave the children instructions whilst narrating the story to move around the tables, chairs, cloths, Lego blocks and so on, to denote the various settings from the story, such as the rock, the stream and so on. The instructions involved using directional and positional language, for example, "The mouse needs to turn two steps forward, and place the nut below the table".

To help children move from concrete to more abstract thinking, I used simple grids (e.g. 3x3 squares) formed out of masking tape on the floor in the classroom. As I have often taught using the grids in other stories for maths learning, we were able to, during this lesson, remind ourselves of how to read the simple horizontal and vertical (X,Y) axis on the grid with Post-it notes on which they wrote their co-ordinates (a number on the Y axis and a letter on the X axis) (see Figure 1). I asked children questions like, "Where is the mouse on this grid?", "What is the co-ordinate of the mouse?" and "What direction will the Beebot move to reach the mouse?". (Concerning the latter, we have used the Beebot, a small programmable floor robot, for other curriculum learning, so the children were familiar as to how to operate it.) Children who are less confident in maths had the option to use grids without any horizontal or vertical (X,Y) reference. These children would position animal toys from the story in a square in their grid and, instead of reading the XY co-ordinates, they would count how many squares up or across where the toy was placed and used positional and directional language and counting instead.) During this introduction, children used their counting skills, positional and directional language and co-ordinate reading skills to tell me where the toys from *The Gruffalo* were placed on the grid.

### Main activity (25 minutes):

In order to further develop the children's knowledge of co-ordinates and positional and directional language, we took our lesson outside the classroom, because *The Gruffalo* story takes place outdoors. Outside, in the school's Yoga Garden, children who were more confident in maths were asked to draw a numbered square grid of their choice onto the floor and write their co-ordinates on the X and Y axis. Figure 2 shows an example of a more confident child who demonstrated their understanding of writing and reading co-ordinates using laminated images of characters from the story, and their ability to operate the Beebot independently. Other children who were less confident in drawing a simple 2x2 grid were supported by an adult and used positional language with the Beebot to denote the position of the image from the story rather than using co-ordinates. Children, for example, counted how many squares across or above the toy animal was placed and if it was, for example, *next to* or *on the left or right of* another toy animal from the story. To consolidate the skill of reading co-ordinates, I asked the children to get into pairs and use the animal toys from the story to take turns to ask questions to each other. I heard a child asking their peer "Can you read where the snake is?" (see Figure 3), for example.



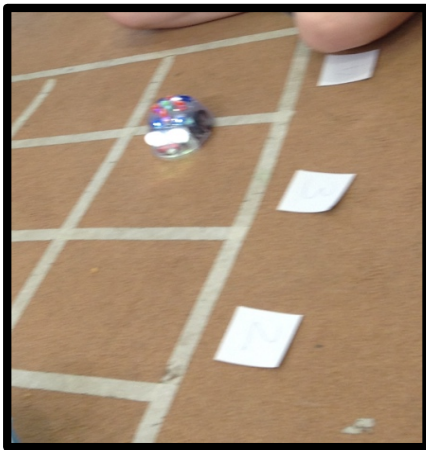
**Plenary (10 minutes):**

To consolidate children's learning, I asked the children to tell me the co-ordinates of a toy animal being placed on larger grids (e.g. 10x10). In order to apply this newly acquired skill to everyday life, I showed the children a grid map of Cambridge city (where the school is located), and, in mixed ability groups, they were able to locate significant places and buildings in the city using co-ordinates.

**Reflection:**

Overall, the children really enjoyed this lesson. *The Gruffalo* story gave children a meaningful opportunity to ask questions about co-ordinates, and locate where an object was placed on the grid. The lesson went beyond teaching simple positional and directional language to teaching co-ordinates (as well as programming technology using the Beebot). This illustrates that if you look deeply at a story picture book, you will find many excellent opportunities to enrich children's maths learning experiences, and can help children make meaningful connections between different maths topics too!

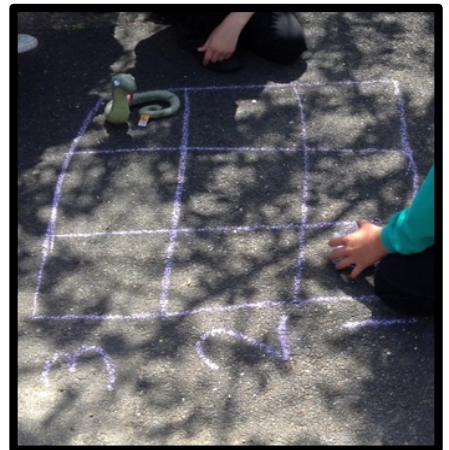
**Figures:**



**Figure 1:** Inside the classroom: recapping reading the co-ordinate grid with masking tape. Operating the Beebot and Post-it notes for children to write their letters and numbers for their grids.



**Figure 2:** Outside on the school's ground: using laminated images of the characters from the story to help reinforce children's understanding of co-ordinates and practise their ability to operate the Beebot



**Figure 3:** Paired work: using animal toys from the story and consolidating understanding of co-ordinates with questions and answers