

# The Animal Grid Game

Early Year and Primary  
Geometry and Spatial Sense

By JICS Lab School Teachers  
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**Curriculum Goal** (From the Ontario Ministry of Education Curriculum Document)

## Ontario Kindergarten Curriculum

Demonstrate an understanding of basic spatial relationships and movements (e.g., use above/below, near/far, in/out; use these words while retelling a story)

Student Talk: "I am sitting beside my friend." "I have moved this block on top of the tower."

## Grade 1

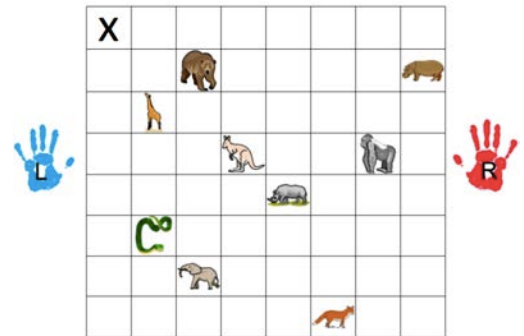
Describe the relative locations of objects or people using positional language (e.g., over, under, above, below, in front of, behind, inside, outside, beside, between, along)

## Grade 2

Describe the relative locations (e.g., beside, two steps to the right of) and the movements of objects on a map (e.g., "The path shows that he walked around the desk, down the aisle, and over to the window.")

## Grade 3

Describe movement from one location to another using a grid map (e.g., to get from the swings to the sandbox, move three squares to the right and two squares down)



## Setting

Children sitting around in a semi-circle on the carpet.

## Materials

- Animal Grid
  - One large grid
  - Small grid placed in plastic sleeve (one per child): include X on top left square within the grid
- 1 clipboard per child
- 1 marker per child and teacher
- Damp cloth/tissue/sponges to erase routes per child and teacher



## Lesson

### Part I: Introduction to grid – columns and rows

- The teacher gathers the children in a semi-circle in front of the large animal grid, and introduces the initial challenge.
- "I have made a grid up here. What do you notice about my grid? Can you see how many squares there are in a row? (Give time for children to offer ideas) Okay, let's count and check. 1, 2, 3, 4, 5, 6, 7, 8. And if there are 8 squares in this row, how many in this row? (pointing to another row). And how many in each column? Yes, this is an 8x8 grid. But what else do you notice?" (the animals, the 'left' and 'right' hands)

## Part II: Demo 1

- The teacher places an X on top left square of the grid and introduces the idea of the zookeeper making a path from the animal house (X) to an animal to bring it food.
- *“Hmmm, I think the rhinoceros is looking a little hungry. I want your help to plan a route to get from here (point to the X) to the rhinoceros. But here is the challenge - we can’t go on a diagonal, and we can’t go through a square that has another animal on it. I’m going to draw a pathway to reach the rhinoceros.”*
- With this in mind, the teacher draws the pathway and counts the squares aloud as she draws. *“1, 2, 3, 4 across.”* Then she places a dot on the square to mark her spot before the pathway turns downward. *“Now 1, 2, 3, 4 down.”* Now introduce code, *“I have a special way to write that - it’s a code. Watch this.”* The teacher draws the arrow pointing right and the numeral 4 to the right of it (→4). Teacher draws arrow down and the number beside it (↓4). *“And now we get to feed the rhinoceros and the rhinoceros was hungry.”*
- The teacher explains to the children that the front views of the sculptures are marked by the stickers. Once the children have identified their sculpture with one of the 6 drawings, they are now invited to draw the side view.



## Part III: Demo 2

- Teacher says, *“Okay, I think this time we’re going to feed the snake. Look closely at the snake. And let’s work together to find a route and make a code (another 2-step code). Help me. I have my marker ready to go. Tell me how many I have to go this way. Let’s count together. 1, 2, 3. Is this where we stop? Okay, I will make a little dot. Now which direction do I need to go? How many down?”*

## Part IV: Visualization activity

- Teacher writes a 2-step code (→7 and ↓1 to hippo) but does not draw a pathway. Invite children to visualize what animal the zookeeper is going to feed. *“Can someone think of another route to get to the kangaroo?”*

## Part V: Children’s activity with their own grids

- Teacher writes a 2-step code on the board (to reach mystery animal - kangaroo →3 and ↓3).
- *“Here’s our code. Read the code and try to imagine the route. Don’t call out.”* Give children their own grid on a clipboard and a marker and ask them to follow the code and draw the route based on that code. Invite children to tell which animal they arrived at. *“And now we get to feed the kangaroo and the kangaroo was hungry. Can someone visualize another route to the kangaroo? Please try to write the code for that.”*

## Part VI: Children make a pathway

- Wipe off board. Children now have the opportunity to create their own pathway to an animal and write the code.

## Extensions

1. Invite children to share a code with a partner or with the entire class. *“Can anyone else think of a different route to the same animal?”*
2. Give a new 3-step code to challenge children.
3. Encourage children to create multi-step instructions.
4. Include rules (e.g., not going “through” an animal).

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*This lesson was adapted from a lesson study presented by Dr. Eric Jackman Institute of Child Study in February 2014. Thanks to Carol Stephenson for piloting it in her Senior Kindergarten Classroom.*

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