

# YuMi Deadly Maths

Prep Teacher Resource:

## MG – Guess where

Prepared by the YuMi Deadly Centre  
Faculty of Education, QUT



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## **ACKNOWLEDGEMENT**

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## Prep Measurement and Geometry

### Guess where

**Learning goal** Students will describe the location of objects by indicating positions.

**Content description** Measurement and Geometry – Location and transformation

- Describe position and movement ([ACMMG010](#))

**Big idea** Geometry – location

**Resources** Maths Mat, pattern blocks

#### Reality

**Local knowledge** Name significant places in the local environment, e.g. Council, shop, library. *What is next to the shop? What places are near the shop? What is far away from the shop? Is there anything at the back/front of the library? What is beside the library?*

**Prior experience** Looking for ants nests, giving directions to find them.

**Kinaesthetic** *Put your hands **above** your head, **below** the desk, **beside** your ears, **in front** of your face, **behind** your head, **inside** your pockets, **up** in the air, **next to** your legs, **near** your feet. Put a pencil **between** your fingers. Think of something that is **far away**. Go **outside**.*

*Make yourself as **small/big** as possible. Try to fit **through** the hoop. Run **to** the tree. Walk **across** the sandpit. Jump **over** the line. Crawl **under** the log. Put the ball **here**. Who is **there**? Throw the ball **up high** in the air. Bend **down low**.*

#### Abstraction

**Body** Maths Mat: Students to be given a square to stand in; other students to stand beside, far away, near, between one student and another, inside the mat, outside the mat, next to, in front of, behind, at the back of a given student.

Adventure playground: Repeat the above activity using the playground equipment as positions. Reverse: teacher takes various positions and students describe her location/s.

Photograph students holding objects: over their head, below their knees, between their feet, in front of their chest, behind their back, above their waist, behind their legs, under their chin, beside their ear, high in the air, down by their feet, low on the floor. Print the photographs and write the location word, e.g. “over”, under each photo. Display photographs and location words all around the room.

**Hand** Students given three different toys/blocks; move one above, below, up, back, in front of, beside, between, far from, near to, next to, in front of, behind the others.

**Mind** Students shut their eyes and think: *When you came inside the room, what was below the clock? near the door? ...* Outside in the adventure playground: *What is near the slippery slide? Next to the monkey bars?* Students give location examples for the rest of the class to imagine.

**Creativity** Students draw their own pictures showing location and work in pairs to share and ask their partner questions about their drawing; e.g. *I have put a red flower near the tree. My fork is beside my plate. What is next to the cat? What is in front of the dog?* They share some stories with the teacher and other students.

#### Mathematics

**Language/symbols** above, below, up, down, back, front, beside, between, far, near, inside, outside, next to, in front, behind, through, to, across, under, over, high, low, here, there, where

## Practice

- Games:
  - Mystery object – “Where am I?”: Students locate classroom objects from location instructions given by a student; e.g. students close eyes while one student hides a toy and then gives the others clues on how to find it.
  - “Simon says”.
  - “Blind man’s buff”.
  - “Pin the tail on the donkey”.
  - Play “Mr Here” every morning. Hide the same object in a different place each morning. Students ask questions to locate its position: *Is “Mr Here” beside the teacher’s table?*
- Students describe the location of a given object; many answers may be true, e.g. *the books are in front of the toys/near the pencils.*
- Drawing: *Draw a cat next to you; draw a dog near the ball; draw your own story and tell me about it.*
- Show pictures and students describe the location of various objects.
- Students tell stories using a given/chosen location word. *Tell me something that is ...*

## Connections

Make links to time – hands of the clock (small hand close to the hour), diagrams, maps.

## Reflection

### Validation

Students use the language of position to describe the location of objects in their bedrooms, home, classroom, school.

### Application/problems

Provide applications and problems for students to apply to different contexts independently, e.g. Treasure Hunt: Follow the directions to find the treasure.

### Extension

**Flexibility.** Challenge students to find as many ways as possible to describe the position of a given object; e.g. the table is in front of the whiteboard, behind the students’ desks, near the door, next to the cupboard, and so on.

**Reversing.** Teacher gives the object and students give its position/s; teacher gives the position and students give the object/s.

**Generalising.** The word we use to tell people where to look/go is important; it tells them the direction/which way to go.

**Changing parameters.** Apply these terms to two-dimensional representations such as images and drawings. For example, from images on a sheet, give verbal directions: *Start at the top of the page and draw a line to the animal next to the tiger; now go up to ...*

## Teacher’s notes

- Use language-based consultation with students describing and explaining location; e.g. use the language from the Mathematics section.
- Students need to be taught the skill of visualising: closing their eyes and seeing pictures in their minds, making mental images; e.g. show a picture of a dog, students look at it, remove the picture, students then close their eyes and see the picture in their mind; then make a mental picture of a different dog.
- Suggestions in Local Knowledge are only a guide. It is very important that examples in Reality are taken from the local environment that have significance to the local culture and come from the students’ experience of their local environment.
- Useful websites for resources: [www.rrr.edu.au](http://www.rrr.edu.au); <https://www.qcaa.qld.edu.au/3035.html>
- Explicit teaching that **aligns with students’ understanding** is part of every section of the RAMR cycle and has particular emphasis in the Mathematics section. The RAMR cycle is not always linear but may necessitate revisiting the previous stage/s at any given point.

- Reflection on the concept may happen at any stage of the RAMR cycle to reinforce the concept being taught. Validation, Application, and the last two parts of Extension should not be undertaken until students have mastered the mathematical concept as students need the foundation in order to be able to validate, apply, generalise and change parameters.