**Lesson Focus:**
Introduction to grid maps

**Learning Area:**
Mathematics

**Year Level:**
3

**Implementation Date:**

**Duration: 30mins**

**Prior knowledge of learners (What do they already know?):**
Maps show us places, spaces and locations of objects or features. Locations and positions can be described with directional words including left, right, clockwise and anticlockwise.

**Curriculum Links (* provide Content Descriptors with guidance of the class teacher):**

**Lesson objective/s:**
Students will...
locate positions and objects on a map
interpret simple grid maps to describe position

<table>
<thead>
<tr>
<th>Declarative Knowledge</th>
<th>Procedural Knowledge</th>
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<tbody>
<tr>
<td><strong>A grid map represents</strong> a place within a grid of regular squares.</td>
<td><strong>Identify</strong> objects on a simple grid map.</td>
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<tr>
<td><strong>Grid maps can</strong> be used by looking down the column and across the row to find the meeting point.</td>
<td><strong>Use</strong> the columns and rows to describe positions on a simple grid map.</td>
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**Evidence of learning (checks for learning/assessment):**
- Can the students locate positions and objects on a map? [Work sample Q.1, 2, 3, 4, 5, 8, 9]
- Can the students interpret simple grid maps to describe position? [Work sample Q.6, 7, 10]

**Resources:**
- Masking taped floor grid 4 x 4
- Bag of toys
- Cards with letters A - I
- Coordinate worksheet x 25
- Cards with numbers 1 - 8

**Lesson Introduction (Introduce the topic and engage the learners)**

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<th>Time</th>
<th>What will you do</th>
<th>What the learners will do</th>
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| 3 mins | Establish expectations
Communicate and clarify behavioural expectations for lesson
- Whole body listening (eyes, ears, body)
- Hands in laps | Identify and use whole body listening |
| | Engage
Questioning
Q: Who can describe what you can see on the floor today?
A grid made up of squares | Think about what they are can see |
| | Explain
- A grid can be used like a map to help show locations / positions | Listen to an explanation of a grid map |
Link to prior knowledge
Use questioning to engage and discuss previous learning of content
Q: Who can tell me what a map is?
Maps show us places, spaces and locations of objects or features.

Identify purpose of lesson
Use questioning and facilitate discussion
Q – Why do we need to know how to use maps?
Q – When might you use a map?

Identify and explain learning goal
Explain to students the purpose of lesson
• use simple grid maps to locate and describe position

Check for understanding
Questioning
Q: Who can tell me what we are learning today?
How to use simple grid maps to locate and describe position

Lesson Body (Teaching the content through specific strategies)

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| 5 mins | Give instructions
Explain and clarify that is the teacher’s turn to speak now | Respond to the instructions |
|      | Modelled (I do)
Use teacher think aloud to explain thoughts and processes
“I have explained to you that a grid, made up of equal squares, can be used as a type of map. I’m going to show you how to use this grid to locate and describe positions just like we can on a map. I can see along the top of the grid that there are letters that label or give a name to each column that runs up and down. Along the side of the grid, I can see numbers that label or give a name to each row that runs across from left to right. If my doll here went out walking and got lost (place doll at C3), I could look up the column to see the letter naming the column, then I can look across the row that my doll is in to see the number of the row. I will describe my doll’s position by using the column name and then the row name. I can see my doll is in the position, or I could say grid reference, C3. Grid maps can be used by looking down the column and across the row to find the meeting point.” | Listen to, and watch how the teacher engages in the learning |
| 4 mins | Guided learning (We do)
Select two students to work together
Ask students to randomly draw a letter and number card
Give the students a toy
Ask students to tell and show the class how to place the toy at the given position | Participate in the learning |
**Guided**

**Questioning**
Q: What is the first thing you need to do?
*Use the letters to look across the top of the columns to identify the column labelled with the letter.*
Q: What do you need to do next?
*Look down the side to identify the row labelled with the number.*
Q: What is the last step?
*Look down the column and across the row to find the meeting point.*

**Check for understanding**

**Questioning**
Q: How do you find a position on a grid map?
*Look down the column and across the row to find the meeting point.*

**Give instructions**
Explaining coordinate worksheet (some questions ask you to find what is located on the map, some questions require you to describe the location of some items on the map)
Give three instructions:
1. Pencil and rubber
2. Name at the top
3. Independent work

**3 mins**

**Transition**
Instruct boys to move to desks quietly, then girls

**Manage resources**
Distribute small bundles of worksheets to learners and ask them to take on and pass it on

**8 mins**

**Independent learning (You do)**
Complete coordinate worksheet [Work sample]
Monitor students and provide support through questioning if needed

**Lesson Conclusion (concluding activities, review, check for learning)**

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| 4 mins | **Give instructions**
Provide a 3-minute pack up warning | Complete their activity |
| | **Give instructions**
Instruct students to glue worksheet into maths scrapbook
Leave scrapbooks open to dry
Return to the carpet when ready | Glue worksheet into maths scrapbook and sit on the carpet |
| | **Behaviour Management**
Allow some time to glue in worksheet then start countdown from 10 to prompt students to finish quickly and return to the carpet | |

Think about how to use a grid map

Explain how to find position on a grid map

Identify the activity requirements

Move to their desks

Take a worksheet and pass the rest on

Participate in how to find position on a grid map
4 mins

Check for understanding [Questioning]
Q - Hands on heads if you can tell me what a grid map is (select student)
A grid map represents a place within a grid of regular squares
Q: How do you find a position on a grid map?
Look down the column and across the row to find the meeting point

Link to future learning
- Focus tomorrow – create our own grid maps to show pathways

Give instructions
Ask students to stand quietly and walk to collect their lunches for break

Think about what a grid map is, and how to use it
Make connection with next lesson
Transition to lunchbreak

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<th>Evaluation of Teaching Practice</th>
<th>Plans for Improvement</th>
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<td>My modelled think aloud was very effective, as students then used similar language from my explanation when using their own grid maps. I had to repeat my instructions several times because some students did not know what to do. This was quite disruptive as some students were ready to get started and others had no idea where to start. I realised that I did not wait until I had everyone’s attention and because I was giving instructions while some students were not listening, those who were not listening did not know what to do.</td>
<td>I will continue to utilise the modelled think aloud strategy to show students my thought processes. I need to use the ESCM more consistently. I need to wait and scan before giving instructions and I may need to ask the students to repeat the instructions back to me to check for understanding.</td>
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<th>Were the Objectives Achieved? [Formative Assessment]</th>
<th>Learning Adjustments for Next Lesson</th>
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<td>Most students were successful in completing the work sheet independently, with minimal guidance and error. Alex, Jo, Jill, Bobby, Jane and Sue had difficulty locating positions and objects on a map, and interpreting the simple grid map to describe position – their work samples indicated limited understanding because they had many errors.</td>
<td>During the independent phase in the next lesson, work with Alex, Jo, Jill, Bobby, Jane and Sue to revisit how to find a position on a grid map. Use modified worksheet to provide further guided practice.</td>
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