

Tracks

Purpose

To strengthen students' understanding of counting forwards and backwards by tens and ones, on and off the decade.

To introduce students to a conceptual understanding of the jump strategy.

Outcomes

NS2.2 Uses mental and written strategies for addition and subtraction involving two-, three- and four-digit numbers

MA1- 5NA, MA2-5NA

Framework reference

To move students to PV Level 2 and beyond

Materials

Learning object: 1-100 chart

https://detwww.det.nsw.edu.au/curr_support/beststart/movies/number_grid.swf

Teaching points

After this lesson has been taught, *Tracks* can be used as a *Short, focused, frequent activity*.









This lesson could be differentiated by allowing students to access the 1-100 chart throughout the lesson.



Suggested *Short, focussed, frequent* activity

	Outline	Questions
Introduction	<p>Display page one of the notebook, showing the 1-100 chart. Have a student change the colour of the square for 24.</p> <p>Select a student to change the colour of the square for 34.</p> <p>Display the hidden tab on page one of the notebook to show how adding ten can be represented by a downward arrow, ↓.</p> <p>Use the notebook screen shade tool to hide the 1-100 chart. Ask the students to identify the result of moving with a downward arrow when starting from different numbers on the 1-100 chart.</p> <p>Reveal the 1-100 chart. Drag an arrow from the arrow clone, click on it and use the</p>	<p><i>What number is ten more than 24? How did you work this out?</i></p> <p><i>Where is the number that is ten more than 24 placed, with respect to 24?</i></p>



	Outline	Questions
	<p>green rotate button to orientate it as follows, .</p> <p>Repeat this process for the left arrow, , and the right arrow, .</p> <p>Have the students use the 1-100 chart to identify the result of moving with each one of these arrows when starting from 24.</p> <p>Hide the 1-100 chart and ask the students to identify the result of moving with the up, left and right arrows when starting from different numbers on the 1-100 chart.</p>	<p><i>What do you think an upward pointing arrow represents?</i></p>
Concept development	<p> Display page two of the notebook. Organise the students into pairs and have them determine the missing number. Have students explain how they arrived at their answer.</p> <p>Repeat with different arrow orientations.</p> <p>Display page three of the notebook. Select a student to record on the first row a starting number and three arrows. Have pairs of students determine the answer.</p> <p>Repeat these steps with the other rows on page three of the notebook.</p> <p>Display page four of the notebook. Ask the students what, , means. Have the students identify what would be the result of moving with this arrow when starting from different numbers on the 1-100 chart.</p> <p>Repeat this for each of the following arrows, ,  and .</p> <p>Display page five of the notebook. Select a student to set a task on the first row, involving five horizontal, vertical or diagonal arrows. Organise the students into pairs and</p>	<p><i>What is the correct answer? How did you work that out? How could this sequence be recorded as a number sentence?</i></p>



	Outline	Questions
	<p>provide them with sufficient time to discuss and solve each task, without referring to the 1-100 chart. After the students have had enough time to do this, discuss the task and identify the result.</p> <p>Repeat these steps with the other rows on page five of the notebook.</p> <p>Provide each student with a copy of either the three-arrow or the five-arrow BLM. Have the students set problems for their peers to solve. Organise the students into pairs to exchange and solve problems.</p>	<p><i>What is the correct answer?</i> <i>How did you work that out?</i> <i>How could this sequence be recorded as a number sentence?</i></p>
Strengthening the concept	<p>Display page six of the notebook.</p> <p>Have pairs of students discuss this and identify possible answers. Have a pair of students share its answer and record it as a number sentence. Have other pairs of students do the same. Discuss the different solutions with the class and compare the number sentences.</p>	<p><i>What three arrows could be used to go from 65 to 48 on the 1-100 chart?</i></p>

