



Adding to 20

Stage	Strand	Strand Unit
2	Number	Sets and Operations

Learning Outcomes	Maths Concepts
<ul style="list-style-type: none"> Through appropriately playful and engaging learning experiences, children should be able to select, make use of and represent a range of addition and subtraction strategies. 	<ul style="list-style-type: none"> A number fact is a mental picture of the relationship between a number and the parts that combine to make it.

Learning Maths

This learning experience provides learners with an opportunity to explore the concept of addition by playing with numbers. This open-ended problem has many possible solutions and supports the idea that parts combine to make sets. Learners will use a variety of strategies and materials to represent and share their thinking for the problem below.

I've added two numbers together and got a total of 20.
What could the two numbers be?

Understanding and Connecting	Communicating	Reasoning	Applying and Problem Solving
<i>The learner</i>			
Calculates amounts using addition.	Shows their thinking in a variety of ways, e.g. concrete manipulatives, number sentences, visually etc. Listens to, shares and explains ideas and solutions.	Proves their solutions are correct. Uses estimation and mental strategies when calculating Evaluates and justifies decisions based on calculations and comparisons.	Finds multiple solutions to the problem. Explore the various ways that peers approached or attempted to solve the same problem.



Teaching Maths	
Fostering Productive Disposition	Encouraging Playfulness with Mathematics
Create mixed ability groups for learners to investigate possible solutions.	<p>Make concrete materials such as counters, cubes, virtual manipulatives and whiteboard available.</p> <p>Allow time for learners to explore and experiment with the mathematical ideas.</p> <p>Encourage learners to find multiple solutions</p>

Emphasising Mathematical Modeling
Encourage learners to show their thinking in a variety of ways.

Using Cognitively Challenging Tasks	Promoting Maths Talk
<p>Modify the task to appropriately stretch and deepen learner’s understanding -</p> <p>‘I’ve added three numbers together and got a total of 20. What could the three numbers be?’</p>	<p>Encourage learners to share their ideas and discuss their strategies,</p> <ul style="list-style-type: none"> • Tell me two numbers that add together to make 20 • Did anyone find it a different way? • How many solutions did you find? • Did you notice any patterns? Tell me more.

Assessing Maths
<ul style="list-style-type: none"> • Ask learners to record their favourite solution strategy in their maths journal or digital portfolio. • Can learners explain how they solved the problem and represent it using concrete materials?

Source
<p>Adapted from</p> <p>https://www.rubiconpublishing.com/wp-content/uploads/2022/04/G1_Open-Questions_2020-Ontario-Curriculum_Correlation.pdf Addition and Subtraction p9</p>