

Grade 1 Student Resource Contents

Resource Title:

The title of the resource relates to an Overall Expectation of the Math Curriculum.

Activity List:

The learning outcome for each activity is listed here. This makes it easier for teachers to target specific concepts for teaching, diagnostic or formative assessment purposes.

READ AND DESCRIBE DATA PRESENTED IN GRAPHS AND PICTOGRAPHS	
Student Activities	
<p>Data can be organized into categories by sorting objects using one attribute</p> <ul style="list-style-type: none"> Match each group of objects to its sorting colour.....1 Match each colour to its group of objects.....2 Match each group of objects to its sorting shape.....3 Match each shape to its corresponding set of objects.....4 <p>The same group of objects can be sorted in different ways</p> <ul style="list-style-type: none"> Sort each group of objects by colour.....5 Sort each group of objects by shape.....6 Connect each picture to its representation by colour.....7 Connect each numeral to its set of shapes sorted by number of straight sides.....8 Relate each set to its representation on a sorting mat.....9 Relate each tower to its decomposition by colour.....10 Compare each tower to the pictograph of its decomposition by colour.....11 	<p>Data can be organized and represented in pictographs and graphs</p> <ul style="list-style-type: none"> Relate each composition to its pictograph representation.....12 Relate each composition to its representation on a graph.....13 Compare each pictograph to its corresponding graph.....14 Relate each group of insects to its pictograph representation.....15 Relate each group of insects to its representation on a graph.....16 Connect each picture to its pictograph.....17 <p>Read and interpret data in pictographs and graphs</p> <ul style="list-style-type: none"> Connect each double five frame representation to its group of objects.....18 Compare each graph to its representation using numerals.....19 Using colour, compare each pictograph to its representation using numerals.....20 Connect each pictograph to its group of sea creatures.....21 Connect each graph to its group of sea creatures.....22 Using colour, compare each graph to its group of objects.....23 Compare each graph to the representation of the difference shown.....24
Teacher Section	
<p>How to Use QUICKCHECK Math and Tips for Success.....25</p>	<p>Learning Connection Activity Suggestions</p> <ul style="list-style-type: none"> Mathematical Process Expectations: Representing, Reasoning and Proving, Connecting.....26
<p>GETTING READY TO USE QUICKCHECK You need a book and a case with six tiles.</p> <ul style="list-style-type: none"> Open the book to Activity 1. Put the empty tile case over the book. The CHECKMARK will cover the answer key. There are six squares in the top section. Place each tile on the square that has the same icon. Lift each tile to reveal the image underneath. Transfer each tile to its corresponding image below. Close the cover of the tile case. Flip the tile case up. The answer key will appear. The tile pattern should match the answer key. 	

Big Ideas:

Groups of activities are organized around key Math concepts as they relate to the expectation noted in the title.

Teacher Section:

Teachers will find helpful tips and Learning Connections Activity Suggestions at the back of each resource.

Grade 1 Student Resource Activity Page

Activity Title:
States the targeted learning outcome:
Teachers know the purpose of the activity at a glance.

Activity Extension:
Provides new information for teachers or, ideas for further development of the activity.

1 Match each group of objects to its sorting colour.

■ This activity is the first of four that show that data can be organized into categories by sorting according to one attribute.

1. Match:
Students begin each activity by matching the shape icons on the tiles, to those in the squares of the top grid of the resource.

2. Think & Play:
Students move each tile from the top grid to the correct square in the bottom grid until all the tiles have been transferred.

3. Check:
Students close the cover of the plastic case and flip it up to see if the pattern revealed on the back of the tiles matches this answer key.

Grade 1 Teacher Section

Learning Connection Activity Suggestions:

These suggestions are organized around the same key math concepts addressed in the 24 activities. They relate to some of the Mathematical Process Expectations used in the Math Curriculum.

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TEACHER SECTION



LEARNING CONNECTION ACTIVITY SUGGESTIONS

Mathematical Process Expectations: Representing, Reasoning and Proving, Connecting

■ Data can be organized into categories by sorting objects using one attribute

Look at sorting objects from your class. Use the contents of the class recycling bin. Remove any sharp or unsafe items first. Then, using gloves, have small groups take turns sorting the contents using one attribute: colour, shape, size, texture. Or tell students to sort plastic from non-plastic recyclables. Which group has more? How do you know? Connect the results to your recycling habits as a class. What conclusions can you make? As a class would you like to change your behaviour? Set a goal. Sort the bin again in a month? Are you meeting your class goal?

■ The same group of objects can be sorted in different ways

Divide the class into three groups. Ask each group to choose a sorting rule and physically sort themselves. For fun, give them a time limit. When done, have them choose a different sorting rule to sort their group. For example, sort themselves by birthday month. Once each group has finished, have it present to the class. Can the class guess the sorting rules?

Challenge: Can a group create a sorting rule that uses two attributes?

■ Data can be organized and represented in pictographs and graphs

Generate a question: Working in small groups/pairs have students think of something they would like to learn about their classmates. It could be their favourite flavour of ice cream; their favourite sport; their favourite animal.

Make a chart: Have students select three or four options of favorites for their classmates to choose from and list them on the top of a chart mounted on a clipboard. Give each group a separate time to canvas their classmates' opinions and record them on their chart.



TEACHER SECTION

Make a concrete pictograph or graph: Using a grid prepared by the teacher on a white/blackboard, Bristol board or chart paper, have each group organize their survey information. Groups can use sticky notes, construction paper, marker/chalk-shading, magnets or pictures to represent the number of responses for each choice. Have students put an appropriate title on their graph/pictograph.

Communicate results: Using their graphs, have each group present its findings and conclusions to the class. Using number sentences and/or visual representations each group must give reasons for their interpretations.

■ Read and interpret data in pictographs and graphs

Ask a question: As a class, brainstorm questions you'd like answered that relate to your shared class experience: How much rain have we had this month? Do we need any new school supplies for the classroom? What gym equipment do we have? Choose one. Sort the data and record appropriate quantities of each set of data.

Make a concrete representation: Using Bristol board or construction paper already prepared with a grid, have small groups make a concrete graph using connecting cubes — a different colour connecting cube tower for each group of data. Or try using a shower liner and hockey tape to make a large foldable grid. Students may use beanbags as representations on the grid.

Describe data represented using comparative language: What conclusions can you make from the data on the graph/pictograph? Have students use comparative language to describe the differences between the quantities represented; e.g. "There were more bean bags than hoops but more hoops than hockey sticks." Have students then quantify the difference; e.g. "We have ten more markers than pencils." Students or groups of students then prove their statements in a concrete way using the connecting cubes/bean bags or other concrete manipulatives.

Challenge: In partners use number sentences to show the difference between two categories.