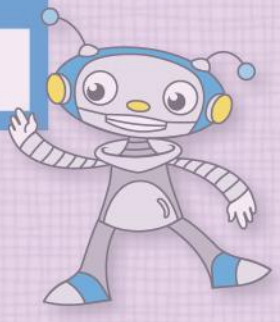
QUICKCHECK™ MATH



DATA MANAGEMENT AND PROBABILITY

Read and Describe Data Presented in Graphs and Pictographs

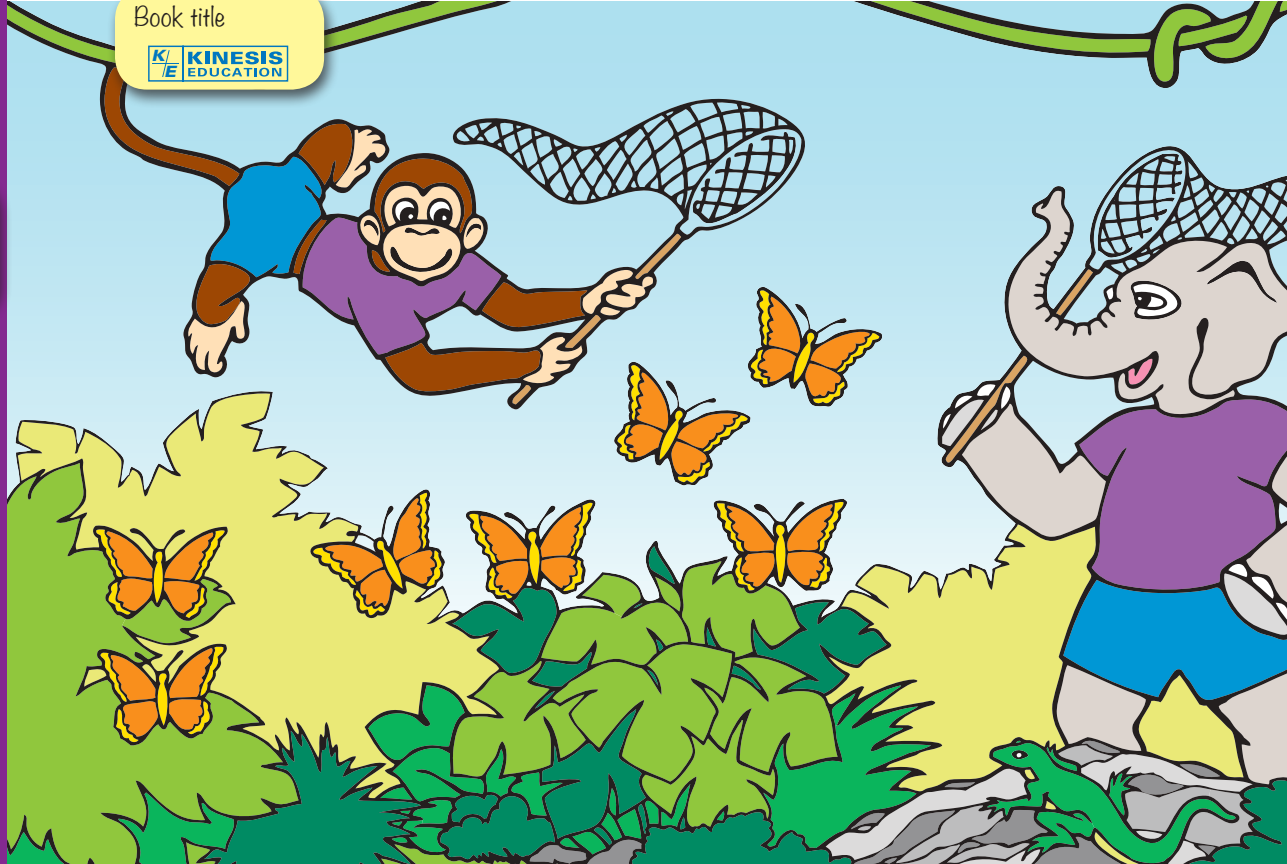
Strand

KINESIS EDUCATION

QUICKCHECK™ MATH

Book title

KINESIS EDUCATION



Grade level
Grade 1

KINESIS EDUCATION

K/E

READ AND DESCRIBE DATA PRESENTED IN GRAPHS AND PICTOGRAPHS

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

Student Activities

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

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

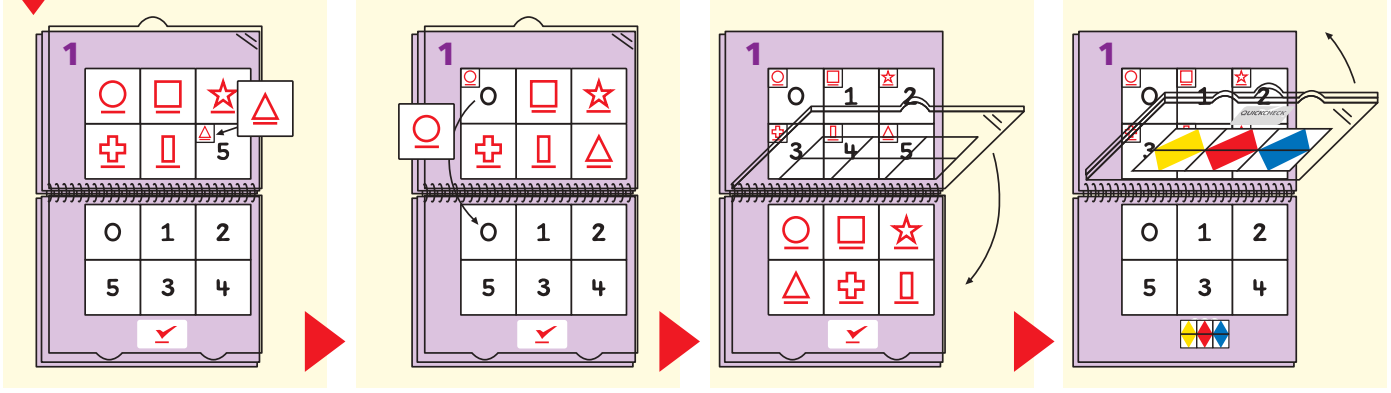
Teacher Section

How to use KINESIS EDUCATION

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

GETTING READY TO USE QUICKCHECK

You need a Student Resource and a case with six tiles



- Open the Student Resource to Activity **1**.
- **Put the empty tile case over the Student Resource.**
- 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.

- **Watch students using *QUICKCHECK Math* on our website at www.ebbp.ca. Click on *QUICKCHECK Math in Motion.***

1 Match each group of objects to its sorting colour.

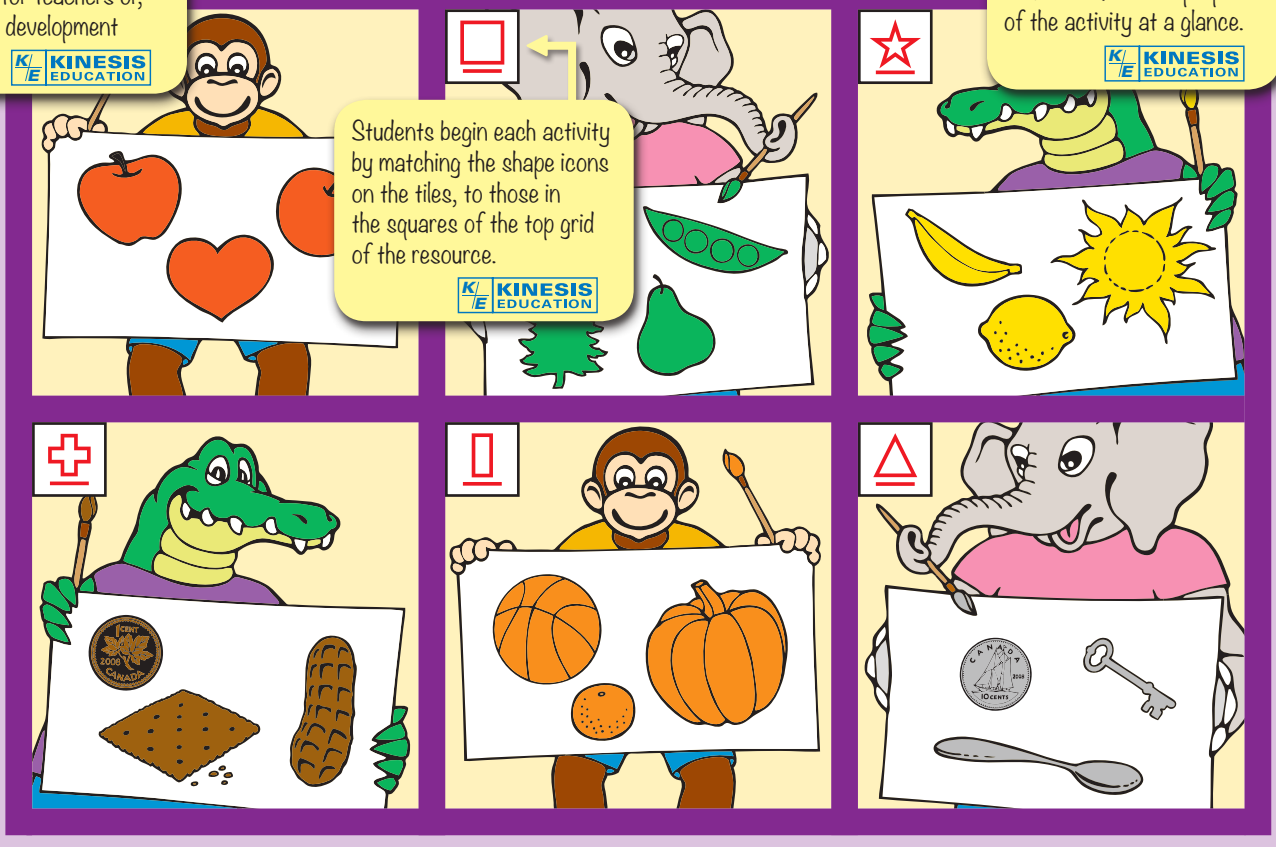
■ This activity is the first of four that show that data can be organized into categories by sorting according to one attribute.

The activity extension provides new information for teachers or, ideas for further development of the activity.

KINESIS EDUCATION

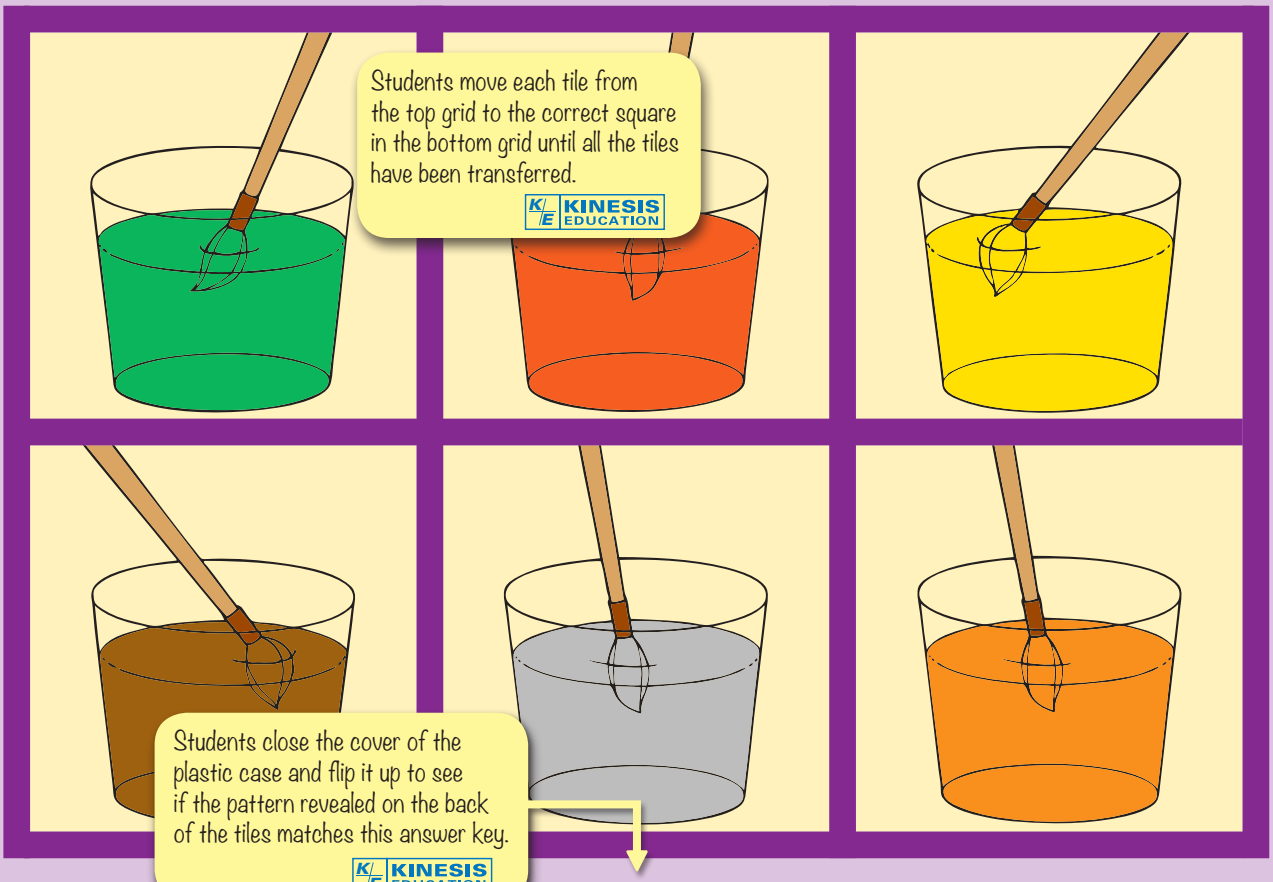
The activity title states the targeted learning outcome: Teachers know the purpose of the activity at a glance.

KINESIS EDUCATION



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

KINESIS EDUCATION

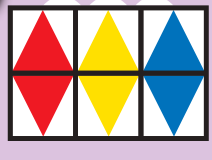


Students move each tile from the top grid to the correct square in the bottom grid until all the tiles have been transferred.

KINESIS EDUCATION

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.

KINESIS EDUCATION



If ■ appears below the activity title:

Educators will then find new information or ideas for further development of the activity.

+ 23 activities

KINESIS EDUCATION

How to Use QUICKCHECK Math

1. Use QUICKCHECK Math with your students whenever you would normally use a worksheet or workbook.

— Use it at any point in your math lesson:

Before/getting started
During/working on it
After/practice and consolidation.

— You can use QUICKCHECK Math as a small group or guided activity, in pairs to promote discussion, or as an independent activity in a Math Centre.

2. Use QUICKCHECK Math as an a

The Student Activities found on
cover list learning outcomes that will help target specific concepts for **diagnostic** or **formative** assessment purposes.

This Student Resource is used in conjunction with the QUICKCHECK Math Grade 1 Ongoing Assessment Teacher Resource.

Additional proposals for the teacher

KINESIS EDUCATION

Activity Extension:

If ■ appears below the activity title:

Educators will then find new information or ideas for further development of the activity.

Tips for Success

Review "Getting Ready to Use QUICKCHECK" on the first page of this book.

The CHECKMARK ✓ at the bottom of the plastic tile case shows students how to orient the case as they place it on the book on top of each activity.

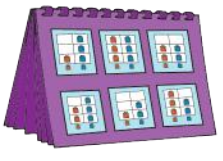
To teach your students how to use QUICKCHECK Math, try a three-step approach.

1. **Match**: Place all the tiles in the top grid by matching icons.
2. **Think and Play**: Lift each tile to reveal the image beneath and then transfer the tile to the corresponding image in the lower grid.
3. **Check**: Close the case cover. Flip the case up and check that the tile pattern matches the answer key.

When information appears below the title of an activity, use it to guide instruction and discussion, or to provide a hands-on extension of the activity.

Fold the Student Resource in half or stand it up and use the visual information as the stimulus for activities you create on your own.

See Activity 11



LEARNING CONNECTION ACTIVITY SUGGESTIONS

Mathematical Process Expectations: Representing, Reasoning and Proving, Connecting

These learning connection activity 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.

KINESIS EDUCATION

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 glove 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 bean bags 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 thanpencils."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.

Canada

We acknowledge the financial support of the government of Canada, for our publishing activities.

Credits page

AUTHOR KELLY DIXON *PRODUCT DEVELOPMENT* KELLY DIXON, PAUL KNOX, MARYLYNNE MESCHINO
CASE & TILES AND BOOKS — CONCEPT AND DESIGN BERTHELAC *EDITOR* MARYLYNNE MESCHINO
TEACHER REVIEWERS JOANNE BLACKBURN, OTTAWA CATHOLIC DISTRICT SCHOOL BOARD; SUZANNE FOX, THAMES VALLEY DISTRICT SCHOOL BOARD
COVER DESIGN AND ILLUSTRATIONS MIKE LAJEUNESSE *BOOK LAYOUT* SAMIA HERRERA,
PROOFREADER CAROLYN SOUAID *EDITORIAL ASSISTANT AND PRODUCTION MANAGER* FRANCINE PLANTE
COMPUTER GRAPHICS JOSIANE DUQUETTE, FRANCISCA MARTINEZ GALVEZ, VALÉRIE TARDIF *PRINTING* SPRINTMÉDIA, JANUARY 2021
EXECUTIVE PUBLISHER PAUL BEULLAC/LES ÉDITIONS JULES CHÂTELAIN

www.ebbp.ca

Legal Deposit — Library and Archives Canada, 2009 Bibliothèque et Archives nationales du Québec, 2009
ISBN 978-2-7615-0290-0

The 5 mathematical strands for the Grade 1 level

KINESIS EDUCATION

QUICKCHECK MATH

NUMBER SENSE AND NUMERATION

Solve Problems Involving the Addition and Subtraction of Single-Digit Whole Numbers

MEASUREMENT

Compare, Describe, and Order Time and Objects Using Measurable Attributes

GEOMETRY AND SPATIAL SENSE

Compose and Decompose Shapes and Figures

PATTERNING AND ALGEBRA

Identify, Describe and Extend Repeating Patterns

DATA MANAGEMENT AND PROBABILITY

Read and Describe Data Presented in Graphs and Pictographs

ORDER THE COMPLETE GRADE 1 PACKAGE
ISBN 978-2-7615-0285-6
Product No. 400 1137

ISBN 978-2-7615-0290-0

KINESIS EDUCATION
www.ebbp.ca

Grade level
Grade 1
KINESIS EDUCATION

404 0275
Printed in Canada