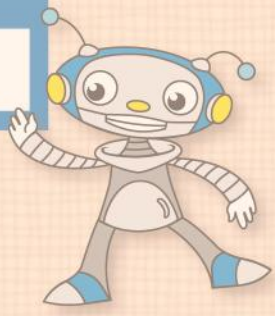
QUICKCHECK™ MATH



Grade level
Grade 2

KINESIS EDUCATION

NUMBER SENSE AND NUMERATION

Solve Addition and Subtraction Problems of One and Two-Digit Whole Numbers and Explore Multiplication and Division

QUICKCHECK™ MATH

Strand

KINESIS EDUCATION

Book title

KINESIS EDUCATION

SOLVE ADDITION AND SUBTRACTION PROBLEMS OF ONE AND TWO-DIGIT WHOLE NUMBERS AND EXPLORE MULTIPLICATION AND DIVISION

Student Activities

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

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

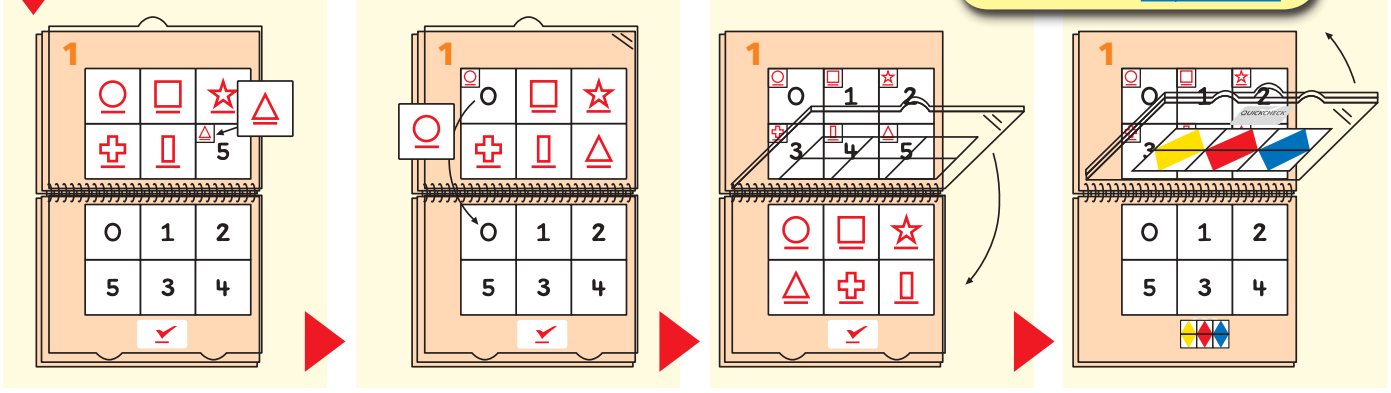
Teacher Section

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 Compare each number on a ten frame to its representation on a number line.

■ This activity is the first of nine that deal with solving addition and subtraction problems to 18 using mental strategies. The concept of ten as an anchor number is introduced here.

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

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

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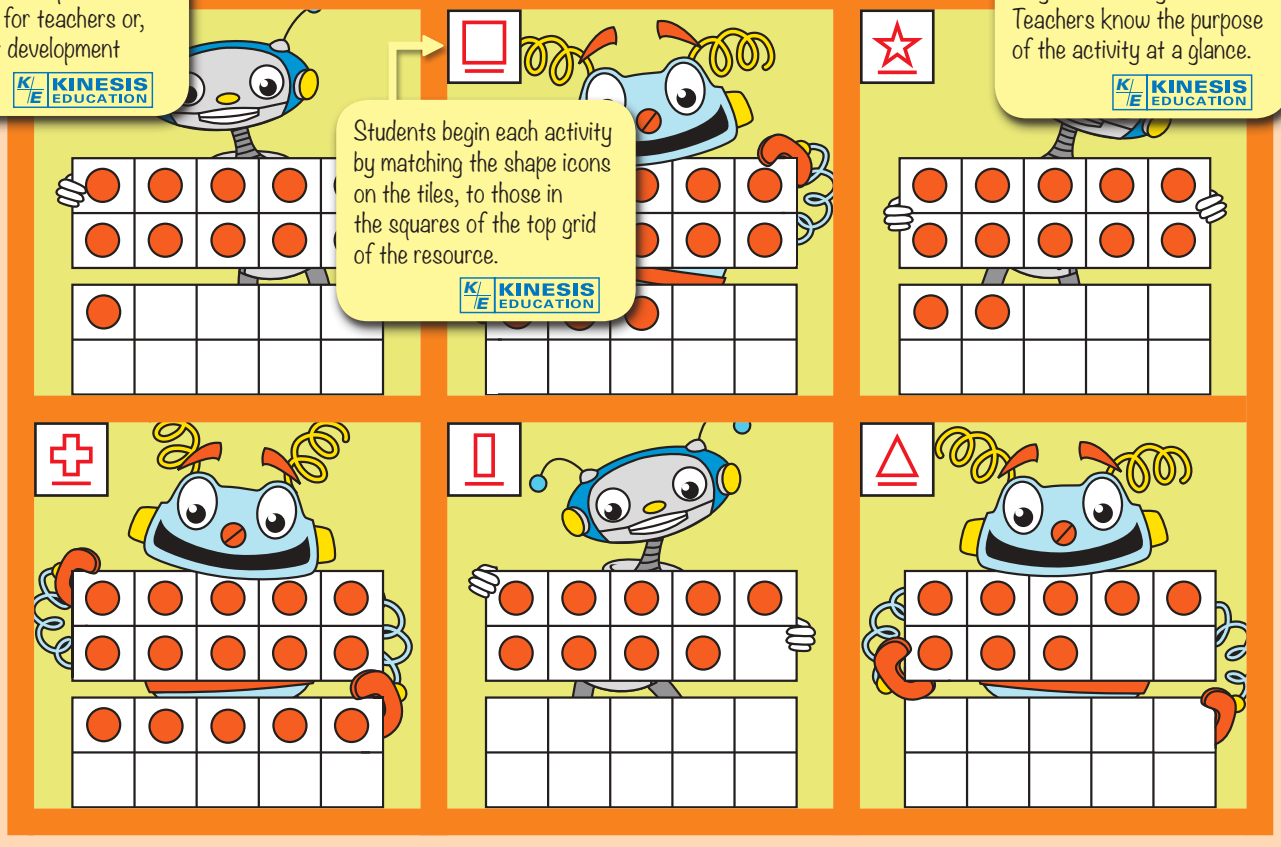

Students begin each activity by matching the shape icons on the tiles, to those in the squares of the top grid of the resource.

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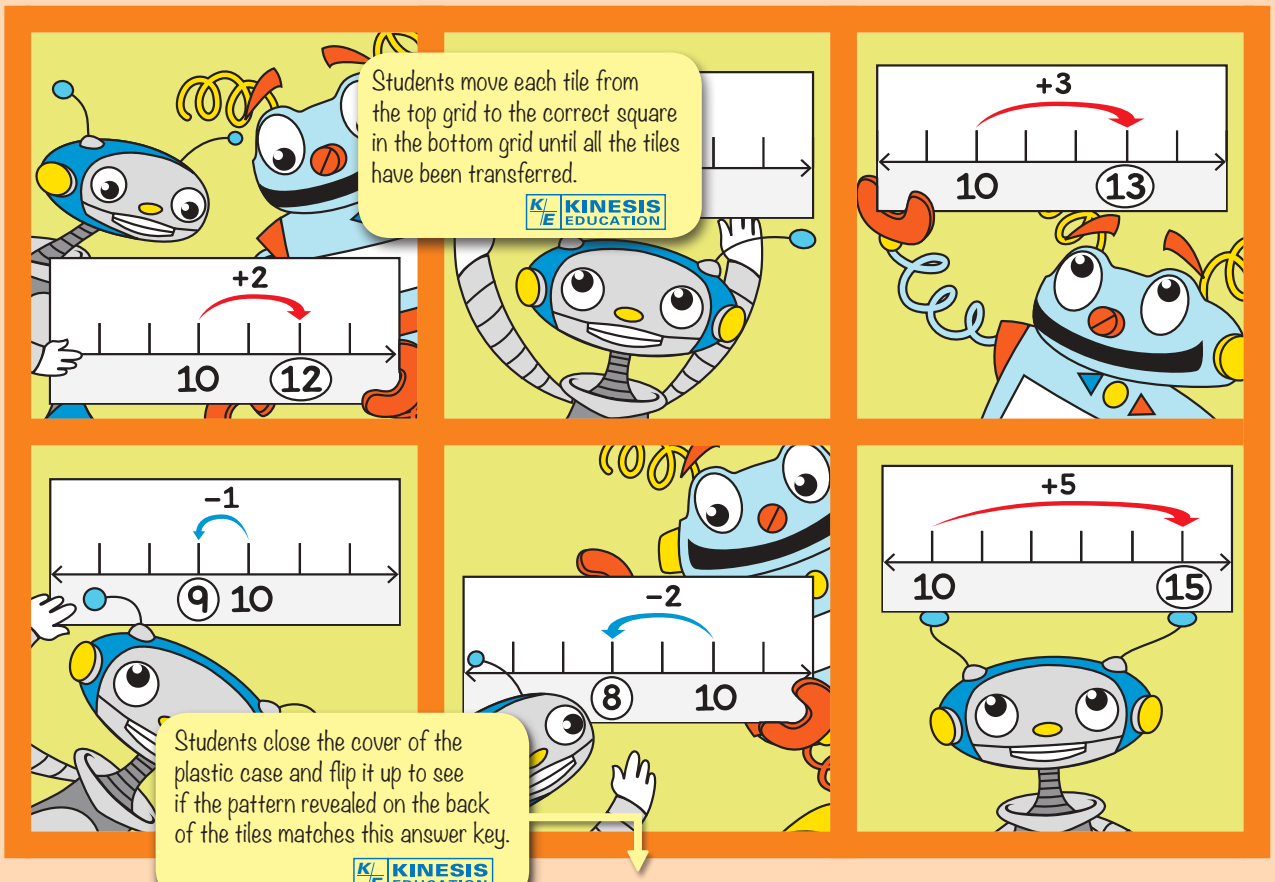

Students move each tile from the top grid to the correct square in the bottom grid until all the tiles have been transferred.

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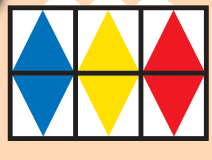
Students close the cover of the plastic case and flip it up to see if the pattern revealed on the back of the tiles matches this answer key.

KINESIS EDUCATION



If ■ appears below the activity title:

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

+ 23 activities

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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 2 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: Problem Solving, Selecting Tools and Computational Strategies and Representing

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.

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Solving addition and subtraction problems to 18 using mental strategies

Have students print their own doubles number fact flash cards on index cards with facts from 1 + 1 to 9 + 9 on one side and the answers on the other. Partners test one another on their quick recall. Set a timer; how many facts can they get right in one minute?

children test each other, they can play the +1/–1 card at the same time. "Does your partner know doubles +1/–1 facts?"

Addition and subtraction problems: part-part-whole and compare problems

I have 12 blocks and you have 17 blocks. How many more do you have? How many less do I have? Represent/show your answers as both addition and subtraction sentences.

There are 18 blocks and Jack has 9; how many does Jill have? Represent/show your answer in two ways using connecting cubes, a part-part-whole mat, an open number line or as a number sentence.

TEACHER SECTION

Addition and subtraction with and without borrowing and regrouping

I have 47 cents and you have 57 cents. How many more do you have? How many fewer do I have? Show your answer in two ways using an open number line.

I have 100 cents and you have 75 cents; how many more cents do I have? How many fewer do you have? Show/represent your answer in two ways using an open number line.

Using base ten blocks, have students do the following problem strings on a "tens" and "ones" mat:

44 + 10, 44 + 12, 44 + 22, 44 + 32; 58 + 10, 58 + 13, 58 + 23, 58 + 33; 32 – 2, 32 – 12, 32 – 22; 77 – 8, 77 – 18, 77 – 28

Have students show/represent the standard or student-generated algorithms used to find their answers using whatever method they would like. Have students work in threes or in pairs with these problem strings to help build awareness and confidence in a variety of ways to solve the same problem.

Challenge

Using the same quantities that groups of students used in their first demonstration, have them act out a fair share problem. E.g. Share 60 cents "fairly" between the six people in your group.

Combining and sharing equal groups: multiplication and division

For this activity, you will need to gather a large number of nickels, dimes, quarters, connecting cubes and base 10 rods. Put students in small groups of 4-6. Each group decides which unit they will use to demonstrate the combining of equal groups: nickels, dimes, quarters, connecting cubes or base 10 rods. Let students choose the amount they will combine, remembering that each group member must have the same amount. Have each group present their combination to the class. After each presentation, have all students record the correct addition and multiplication number sentences on a piece of paper.

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The 5 mathematical strands for the Grade 2 level

KINESIS EDUCATION

QUICKCHECK MATH

NUMBER SENSE AND NUMERATION

Solve Addition and Subtraction Problems of One and Two-Digit Whole Numbers and Explore Multiplication and Division

MEASUREMENT

Compare, Describe and Order Objects and Time Using Measurable Attributes

GEOMETRY AND SPATIAL SENSE

Compose and Decompose Shapes and Figures

PATTERNING AND ALGEBRA

Identify, Describe and Extend Repeating, Growing and Shrinking Patterns

DATA MANAGEMENT AND PROBABILITY

Read and Describe Data Presented in Tally Charts, Pictographs, Line Plots and Bar Graphs

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