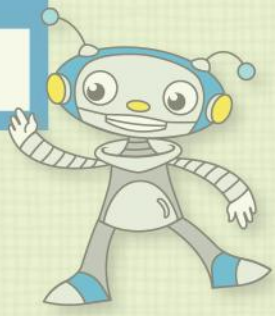
QUICKCHECK™ MATH



Grade level
Grade 3

KINESIS EDUCATION

MEASUREMENT

Compare, Describe, and Order Objects, Temperature, and Time Using Standard Units

Book title

Strand

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

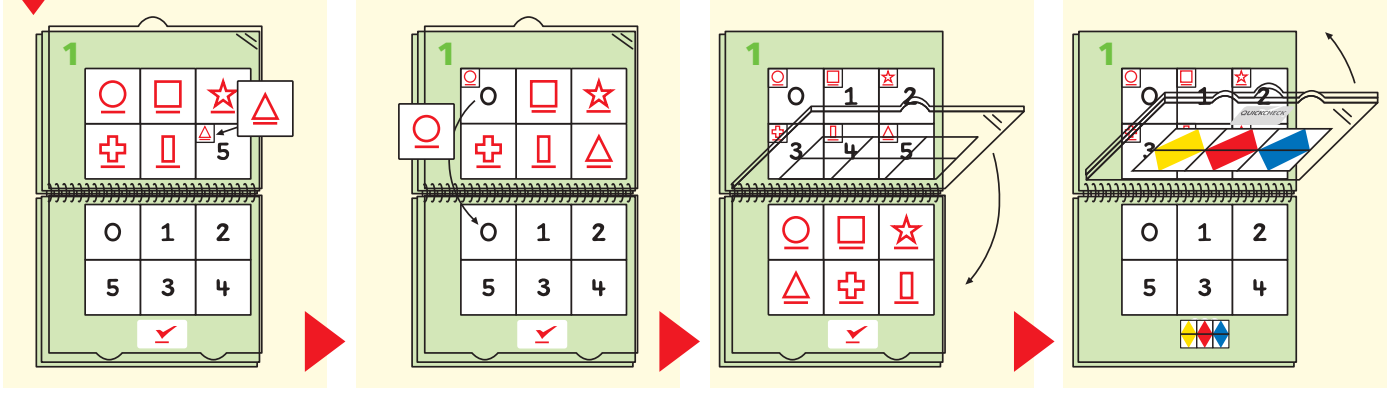
Teacher Section

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.***

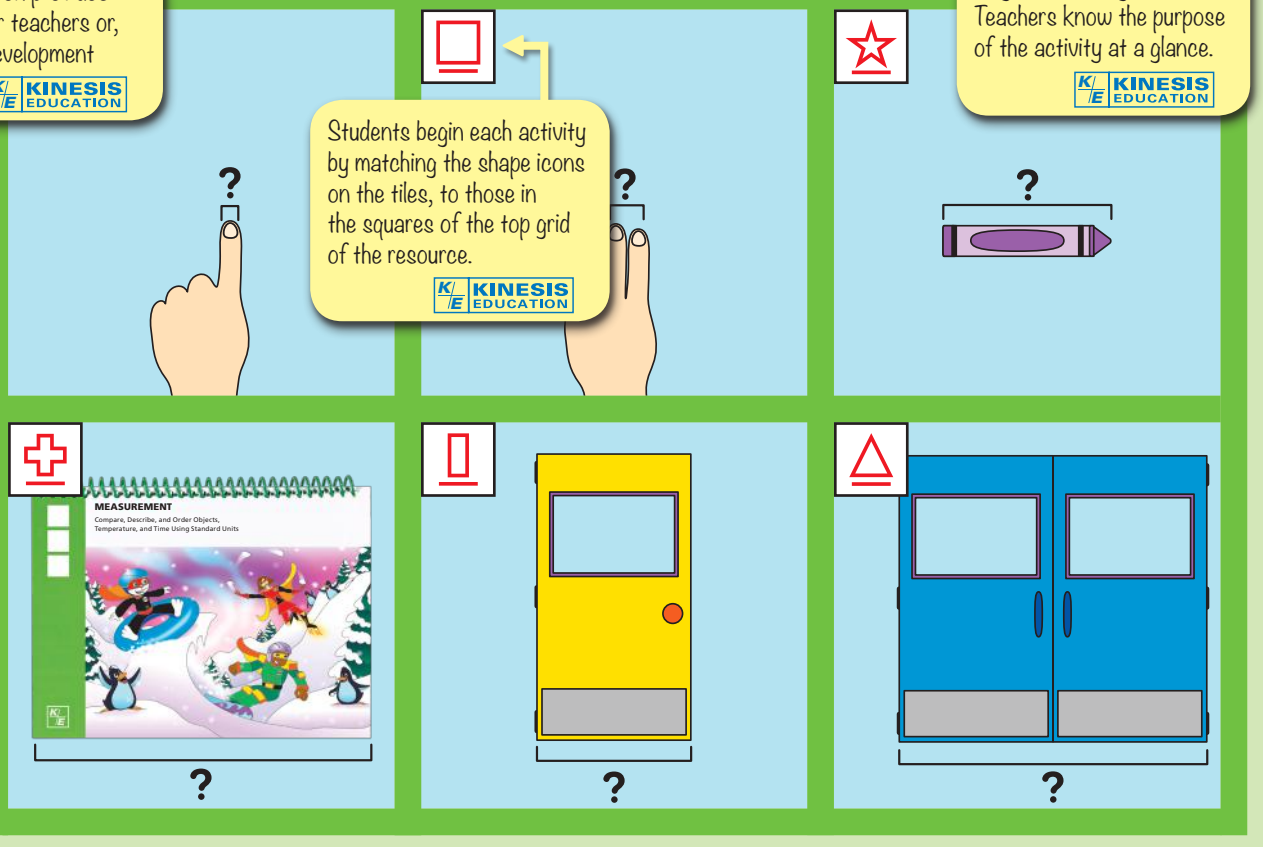
1 Relate each length to its closest estimate in standard metric units (cm, m).

■ This activity is the first of six that deal with describing, measuring, comparing, and ordering length or perimeter using standard metric units. You may want students to measure the lengths of the actual items shown below.

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

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

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



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

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.

If ■ appears below the activity title:

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

+ 23 activities

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 3 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 21

LEARNING CONNECTION ACTIVITY SUGGESTIONS:

Math Processes: Problem Solving, Selecting Tools, and Computational Strategies

Measure, describe, and compare objects by length, including perim using standardized units

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

1. Say: "Estimate the width of our classroom in metres. How do you kn to measure the width? Measure the width of the classroom. How wi record their measurement using centimetres. For example, if they m 30 cm, ask: "How could we record this measurement using only cent

2. Ask: "What else could we measure in metres? Estimate, measure, and record the measurement in metres. Now, record the same measurement in centimetres."

Examples of some other things that could be measured are the height of a table, the height of the teacher, the width of the interactive white board, or the perimeter of the four square box on the black top in the playground.

— The activity above could be adapted to use centimetres and millimetres.

— What happens when a length ends between two whole units? What do students do?

— In the questions above, help students to discover the inverse relationship between the size of a unit and the number of units required to measure it, e.g., centimetres are smaller than metres, so more centimetres than metres are required to measure a distance. You might ask: "Why does it take more centimetres than metres to measure the _____? or Does it take more millimetres than centimetres to measure the _____? Justify your answer."

TEACHER SECTION

Compare objects by mass or capacity

It is important that students have a number of opportunities to measure the mass and capacity of objects using standard metric units. Help students find benchmarks for mass and capacity in metric units.

Some ideas for benchmarks:

Mass: A small paper clip has the mass of about 1 gram. 1 lb of butter is approximately 500 grams. A pineapple and some jars of peanut butter have a mass of about 1 kilogram.

Capacity: A personal-size tetra pack of juice has the capacity of 200 millilitres. A personal-size plastic water bottle has the capacity of 500 millilitres. Some cartons of milk have a capacity of about 1 litre.

Once students have experience with the benchmark objects above, try the following.

1. Provide 1 kg jars full of peanut butter and some bricks of butter (1 lb size).

Ask: "Can you estimate the mass if you put this jar of peanut butter and this block of butter on a scale? Now, put the objects on the scale; what is the total mass?" (E.g.: 1 kg and 500 grams or 1500 grams.)

* Be aware of allergies. The 1 kg jar of peanut butter can be replaced by a 1 kg bag of white sugar or a 1 kg jar of honey or spaghetti sauce.

2. Provide an empty 200 mL tetra pack and an empty 1 L carton for the following.

Say: "Estimate how many tetra packs of liquid we would need to fill this carton. How do you know?"

Students may estimate based on their knowledge of benchmark measurements, e.g., "I know that this carton is one litre. There are 1000 millilitres in a litre. There are 200 millilitres in each tetra pack so counting by 200 s —200, 400, 600, 800, 1000— we will need about five tetra packs of liquid to fill the carton."

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The 5 mathematical strands for the Grade 3 level

K/E KINESIS EDUCATION

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