

Grade level Kindergarten

> KINĒSIS EDUCATION

KINDERGARTEN



ONGOING ASSESSMENT TEACHER RESOURCE



Kelly Dixon

Assessment questions

or tasks are provided for all 5 strands

KINESIS

Number Sense and Numeration
 Measurement
 Geometry and Spatial Sense
 Patterning
 Data Management and Probability



ONGOING ASSESSMENT TEACHER RESOURCE

QUICKCHECK MATH ASSESSMENT TEACHER AND STUDENT RESOURCES

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Author	Kelly Dixon
Piloting development	Kelly Dixon
	Paul Knox
Case, tiles, and books — concept and design	Berthelac
Editor of the Student Resources	Marylynne Meschino
Teacher reviewers of the Student Resources	Joanne Blackburn
	Ottawa Catholic District School Board
	Jenine Calder,
	Durham Catholic District School Board
	Suzanne Fox
	Thames Valley District School Board
Cover design	Mike Lajeunesse
Illustrations	Jean-Sébastien Lajeunesse
Book layout	Berthelac
	Josiane Duquette
	Samia Herrera
Data processing and computer graphics	Josiane Duquette
	Samia Herrera
	Mathieu Ly
	Valérie Tardif
Proofreader	Jillian Swan
Production supervisor	Francine Plante
Production assistant	Josiane Duquette



Executive publisher

Paul Beullac Jules Châtelain Publishing



www.ebbp.ca © 2012 Kinesis education inc. Legal Deposit — Library and Archives Canada, 2012 + Bibliothèque et Archives nationales du Québec, 2012 ISBN 978-2-7615-0463-8 As teachers, we want each of our students to **get** what we are teaching. Often, our hope is to have students **get there** as quickly and as best as they can. Although the goal of achieving curriculum expectations is common for all students, the starting points and routes in reaching this goal differ widely. In our work to enable students to achieve the common goal, it is important to be explicit in our assessment and instruction.

How do we do this? We need to assess our students at the beginning and throughout the learning cycle so we can provide them with ongoing, specific feedback and guidance for growth. Some of the most effective ways to do this with young children are in individual or small group assessment contexts, and through observations and teacher-student conferences.

This QUICKCHECK Math Ongoing Assessment Teacher Resource provides both diagnostic and ongoing assessment activities for all five strands of the mathematics curriculum. It offers guidance and structure in an easy-to-use format for student-teacher assessment conferences, either with individuals or small groups of students. This Assessment Resource provides a variety of opportunities for students to demonstrate their learning. Every assessment activity uses open questions and tasks that allow for a range of student responses and that reveal student strategies and thinking. *What to Look For* sections help make connections between assessment observations and curriculum expectations. These connections are particularly useful when providing students and parents with specific feedback on growth and on next steps.

The format of the QUICKCHECK Math Ongoing Assessment Teacher Resource is open and flexible. There is no need to do all the assessment activities in each strand section. We have provided a number of choices for activities that assess similar concepts and skills; it is entirely your decision as to which activities you choose to use to assess your students. You decide how often you need to assess your students and whether or not you will assess them individually or in small groups. *Student Observation Sheets* for each activity are offered as an option for recording your assessment observations. These reproducible sheets are found at the end of each section when required.

We are indebted to the teachers of the Toronto District School Board who piloted these Assessment Resources and whose feedback was essential to the development of their final forms.

Kelly Dixon

Author's word



QUICKCHECK MATH ONGOING ASSESSMENT TEACHER RESOURCE

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GATHER THE FOLLOWING FOR YOUR ASSESSMENT

Assessment Teacher Resource

Choose an assessment activity from any of the math strand sections contained



Gather the following before you begin your assessment:

- I. Assessment Teacher Resource
- 2. Select the activity in the Student Resource
- **3.** Manipulatives and *Templates
- 4. Ongoing Student Observation Sheets

*Reproducible templates provided

Instructional Student Resources Packages

Select the activity in the Student Resource that corresponds to the assessment activity you chose from the Ongoing Assessment Teacher Resource.



+ Manipulatives and Templates

Gather the recommended manipulatives and templates* suggested in the assessment activity.





* Templates can be found at the end of a strand section where required. See pages 43, 44, 45, 46, 47, 48, 81, 110, 159, 160, 161, 162, and 163.

+ Ongoing Student Observation Sheets

Use your own method for recording your observations or photocopy the corresponding Student Observation Sheet found at the end of each strand section.

am	e:		Date:
3	Connect each set of insects to its corresponding group.	Student Knows	Next Steps for Learning
	Accessed Face The set of the set		
	Kalarity and all production the associated half and the second		
th	er Questions I Have About the Student's	Learning	
ere low	are some examples of questions you can ask students / do you know? Show me/tell me."	to probe for their mathematical thinking an	nd understanding:
Nha	at is the same and what is different about	and?"	
Do y	rou think that?"		
Nha	at if?"		



QUICKCHECK MATH ONGOING ASSESSMENT TEACHER RESOURCE IN THREE EASY STEP: Ongoing Assessment

- How to use the Ongoing Assessment Teacher Resource
- 1. Assessment activities are organized by strand and are designed to be used with individual or small groups of students. The **Check Point assessment activities** in this book have been designed for diagnostic assessment purposes **during** a cycle of learning. See the Grade 1 Diagnostic Assessment Teacher Resource for assessment activities that are appropriate for use **prior to** a cycle of learning.
- 2. Use any of the assessment activities depending on your purpose and the needs of your students. The What to Look For section helps you discover what your students know and what they need to learn and The What to Look For section focuses on student thinking and strategies. If you need a system for recording your assessment observations, copy the Student Observation Sheet that corresponds to the assessment activity you have selected. Student Observation Sheets for each activity can be found at the end of each strand section.
- **3.** Prior to using an **assessment activity**, gather the suggested manipulatives and have students complete the corresponding activity in their *QUICKCHECK Math Student Resource*.

The responses that you observe from students through these assessment activities will help you:

- Gather useful information for **reporting and interviewing purposes**
- Pinpoint specific areas for future **math instruction**.



ONGOING ASSESSMENT NUMBER SENSE AND NUMERATION







Relate each set to its corresponding set.



Question/Task		What To Look For		
Question/Task: Open questions and ta for a range of appropr responses and help re- strategies and thinking *Choose which tasks and questions suit you the best. There is no n them all.	asks allow riate student eveal student ng. ur purposes need to do KE EDUCATION Repeat the numbers.	ting cubes of the same colour, popsicle raws. me four cubes." our cubes further apart. many cubes now? Did you need to count above task and questions with other	 Some strategies students may us Counting each cube one by o that the last number counted of objects in the set (cardinal Visually identifying that there cubes without counting (subitizing). Students may count the cubes again or they may recognize that the number of cubes hasn't changed, even though the arrangement has changed (number conservation). 	
2. ()))))))))))))))))))	 2. Using red connecting cubes, put a pile of six in front of students. (Popsicle sticks and straws can be used here as well). Ask: "How many connecting cubes?" Say: "Make a group of blue connecting cubes that has the same number." Repeat the above task using other numbers. 		 Students count objects one by of they understand that the last nu the number of objects in the set Students may count out six cube the red cubes and align their blu one-to-one (one-to-one correspondent) 	ne, demonstrating that imber counted indicates (cardinality). s, or they may line up le cubes to red cubes ondence).



Compare each composition of 5 to its corresponding decomposition.



Materials Needed

Have two-colour counters, a tin can, connecting cubes, and a five frame available for the following assessment tasks. Note: Two-colour counters can be made using quarters. Put a red circle sticker on one side and a yellow circle sticker on the other side.

Lists the manipulatives and templates needed for the particular assessment activity.





23

Question/T	ask	What To Look For		
Question/Task: Open questions and tasks allow for a range of appropriate student responses and help reveal student strategies and thinking. *Choose which tasks and questions suit your purposes the best. There is no need to do them all.	nts only look at the top grid of their source. t do you notice about all of the five ents 10 two-colour counters and a tin can. t five counters and put them in the tin can." we are going to shake the tin and dump counters. How many will fall out?"	 "They are all full; they all have f different ways; different numbe counters make five." Students count five counters one by one, or take an amount and count on from there, e.g., they take two and then count "three, four, five." Students use their own words to say that they counters 		
out an the counters. How many win fail out?		Students use their own words to say that they counted five counters and put them into the can. They recognize that shaking or dumping the counters out won't change the number of counters (number conservation).		
Say: "Dump out all the counters. What do you notice? How many red; how many yellow; how many altogether?"		E.g.: "Some are red and some are yellow; there is more of one colour than the other; there are still five counters."		
Say: "Use yellow and red connecting cubes to make five in the same way. Can you make five with the two colours in a different way? Show me."		Students use one-to-one corresp correctly by subitizing to compo- way as the counters. Do they con a different way?	oondence, or select se five in the same mpose five in	



STUDENT OBSERVATION SHEETS

NUMBER SENSE AND NUMERATION

KINDERGARTEN ONGOING STUDENT OBSERVATION SHEET NUMBER SENSE AND NUMERATION



Nam		sessment Activity			Date:		_
6	Relate each set to its con	rrelation	Stu	ident Knows	Next 9	Steps for Learning	
	Asessment Focus This activity provides the opportunity for demonstrate that they understand numb Students are also asked to accurately cour han 10 and to identify and compare sets same number of objects. Do students use the counting objects one-to-one, subitizing, q objects for one-to-one correspondence to equal quantities? Materials Needed Have 10 connecting cubes in each of red, or 10 popside sticks and 10 straws available the following assessment tasks.	and blue ble for		Prior to the assessment list the appropriate knowledge, skills and strategies to look for during the assessment. For guidance with identifying these, use the Assessment Focus and What to Look For sections from the specific assessment activity you choose. Your curriculum documents are excellent sources as well. Check the appropriate boxes as you observe and listen to student responses during the assessment.		Prior to the assessment list the same knowledge, skills and strategies here as you listed in the Student Knows column. Check the appropriate boxes as you observe and listen to student responses during the assessment.	31
Oth	er Questions I Ha	ave About the Student's L	earning				
Here	are some examples of	questions you can ask students to	probe for the	ir mathematical thinking and understandi	ng:		
Hov	v do you know	? Show me/tell me."	and	۲ ۳			
"Do	you think that?"		anu	f			
"Wh	at if?"						
			Your assessme questions abou them here. You provided here h for mathematic	ent observations may bring up further ut your student's learning. If so, record may find some of the open questions helpful as you probe further bal thinking and understanding.			

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KINDERGARTEN ONGOING STUDENT OBSERVATION SHEET NUMBER SENSE AND NUMERATION



Name:	Assessment Activity		Date:
15 Compare each compositi		Student Knows	Next Steps for Learning
Check Point #4 The Check Point activities in this is been designed for assessment purpor a cycle of learning Materials Needed Have two-colour counter, a tin and a five frame available for th tasks. Note: Two-colour counter quarters. Put ared drive sticker a yellow circle sticker on the oth	Aumer Sense and Au assessment book have diagnostic best during car, connecting cubes, to following assessment son one side and ter side:	 Prior to the assessment list the appropriate knowledge, skills and strategies to look for during the assessment. For guidance with identifying these, use the Assessment Focus and What to Look For sections from the specific assessment activity you choose. Your curriculum documents are excellent sources as well. Check the appropriate boxes as you observe and listen to student responses during the assessment. 	 Prior to the assessment list the same knowledge, skills and strategies here as you listed in the Student Knows column. Check the appropriate boxes as you observe and listen to student responses during the assessment.
Other Questions	I Have About the Student's Lea es of questions you can ask students to p	arning robe for their mathematical thinking and understanding	n:
"How do you know	? Show me/tell me."		g.
"What is the same and	what is different about	_ and?"	
"Do you think that?"	,		
"What if?"	y q ti p fi	Your assessment observations may bring up further uestions about your student's learning. If so, record hem here. You may find some of the open questions rovided here helpful as you probe further or mathematical thinking and understanding.	

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Additional page to enter your notes

ONGOING ASSESSMENT GEOMETRY AND SPATIAL SENSE







Match each triangle to its equivalent.



Question/Task			What To Look For			
Question/Task: Open questions and tasks allow for a range of appropriate student responses and help reveal student strategies and thinking. *Choose which tasks and questions suit your purposes the best. There is no need to do them all.		 alastic, make an equilateral triangle on for students. about this shape." h the top vertex so that the triangle board is no longer an equilateral triangle. e about this shape. How is this shape before?" 		Do students relate the triangle amiliar to them? E.g.: "The sha Do students describe the triang properties? E.g.: "The shape ha hape has three lines/sides/poi riangle." Do students justify their answer he geometric properties of a tri hat the shape is still a triangle b or "thinner/taller," or they may f students do not see any simila equilateral triangle again and ha number of sides or vertices. The and repeat counting the sides or	What to Look For: Defines a range of appropriate responses and strategies to help you make connections between your observations and curriculum expectations. by describing some of fangle? They may say out that it is "stretched" use another description. rity, make the ave students count the n stretch the triangle r vertices.	
	2. Have stude Student Res Say: "Show triangle?"	nts look at only the bottom grid of their source. me a triangle. How do you know that it is a	Students may identify a triangle by their own me image of what a triangle is, by comparing it to a object in the environment that they identify as a triangle shape, or by counting sides or vertices.		by their own mental omparing it to a real hey identify as a des or vertices.	
	Say: "Find a a triangle?'	another triangle. How do you know that it is ,	■ D	o students count the number of make the comparison?	of sides or vertices	
	Say: "Use tl	ne straws to make a triangle."		Do students use three straws to Do they close their shape?	make a triangle?	



Relate each set of shapes to its corresponding traditional shape.



Question/Task		What To Look For			
Question/Tas Open questions for a range of a responses and strategies and *Choose which and questions s the best. There them all.	sk: and tasks allow appropriate student help reveal student thinking. tasks suit your purposes is no need to do	nts only look at the top grid of their Student lace the triangle and rectangle attribute ont of students as well. Point to the seal ctangles that are not squares. : shape is the seal juggling? Show me/tell me. J know?"	 Students may select the rectance they may say "door shapes," or "rectangle." Students reason in one of the formal students reason in one of the formal students reason in one of the formal students rectangles to "They relate the rectangles to "They all look like doors. Some are upped over out they are all still door-shaped." They describe the rectangles by their geometric properties, e.g., "I know because I counted and the all have four lines/four sides/four corners." 		
	2. Cut out the them and a rectangle a and a trian sorting ma Say: "Sort t them here. How do yo	e shapes from the Shape Template and place a sorting mat in front of students. Put a ttribute block on one side of the sorting mat gle attribute block on the other side of the t. The shapes. Find all the triangles and put Find all the rectangles and put them here. u know you are right?"	 Do students sort all the shapes? the shapes according to the follor They count the number of side E.g.: "These all have three line these have four." They relate the groups of shapes 	If so, students may sort owing criteria. des and vertices. es/sides/corners and pes to familiar objects.	



STUDENT OBSERVATION SHEETS

GEOMETRY AND SPATIAL SENSE

KINDERGARTEN ONGOING STUDENT OBSERVATION SHEET GEOMETRY AND SPATIAL SENSE



Name:	Assessment Activity			Date:	
10 Match each triangle to it Assessment Focus This activity gives students the o different representations of trian how different types of triangles	Correlation	ometry and Spatial Sense	dent Knows Prior to the assessment list the appropriate knowledge, skills	Next S	Prior to the assessment list the same knowledge, skills
properties such as number of sid strategies are students using to j task? Do students identify the s properties or by association with of familiar objects and shapes? Materials Needed Have a geoboard, elastics, and s available for the following asses:	tes and vertices). What perform the assessment hapes by their geometric in their mental images traws of different sizes sment tasks.		and strategies to look for during the assessment. For guidance with identifying these, use the Assessment Focus and What to Look For sections from the specific assessment activity you choose. Your curriculum documents are excellent sources as well. Check the appropriate boxes as you observe and listen to student responses during the assessment.		and strategies here as you listed in the Student Knows column. Check the appropriate boxes as you observe and listen to student responses during the assessment.
Other Questions	I Have About the Student	t's Learning			
Here are some example "How do vou know	es of questions you can ask studer 	nts to probe for their	r mathematical thinking and understandin	ig:	
"What is the same and	what is different about	and	?"		
"Do you think that?"					
"What if?"					
		Your assessmer questions about them here. You r provided here he for mathematica	nt observations may bring up further t your student's learning. If so, record may find some of the open questions elpful as you probe further al thinking and understanding.		

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KINDERGARTEN ONGOING STUDENT OBSERVATION SHEET GEOMETRY AND SPATIAL SENSE



Name:	ssessment Activity		Date:
15 Relate each set of shapes	orrelation K KINESIS	Student Knows	Next Steps for Learning
Check Point #2 The Check Point ass activities in this book been designed for diag assessment purposes a cycle of learning. Materials Needed Have a rectangle and a triangle attribut cut-outs of different representations of from the Shape Template, and a sorting for the following assessment tasks. The Template can be found at the end of the on page 110.	<section-header><section-header></section-header></section-header>	 Prior to the assessment list the appropriate knowledge, skills and strategies to look for during the assessment. For guidance with identifying these, use the Assessment Focus and What to Look For sections from the specific assessment activity you choose. Your curriculum documents are excellent sources as well. Check the appropriate boxes as you observe and listen to student responses during the assessment. 	 Prior to the assessment list the same knowledge, skills and strategies here as you listed in the Student Knows column. Check the appropriate boxes as you observe and listen to student responses during the assessment.
Other Questions I H	ave About the Student's Learni	ing	
Here are some examples o	f questions you can ask students to probe	for their mathematical thinking and understanding:	
"How do you know	? Show me/tell me."		
"What is the same and wh	nat is different about and	d?"	
"Do you think that?"			
"What IT?"	Your as questio them he provide for mat	assessment observations may bring up further ons about your student's learning. If so, record here. You may find some of the open questions ed here helpful as you probe further athematical thinking and understanding.	

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Additional page to enter your notes **attribute blocks.** Tools that help students learn. A set of attribute blocks usually includes five shapes (rectangle, square, circle, triangle, hexagon); each shape comes in three colours, two sizes, and two thicknesses.

capacity. The maximum quantity a container can hold.

cardinality. The last number counted in a set of objects, denoting the total number of objects in the set.

conservation. The property of number or shape by which its basic nature remains the same regardless of a change in physical position, orientation, or attributes (e.g., colour, size). E.g.: A group of four counters is four whether the four counters are arranged close together or farther apart.

connecting cubes. Small plastic manipulative blocks that can attach to each other.

counting on. An addition/counting strategy where students start with a known number and the a certain quantity more from that number.

Glossary of all words found in italics in this Ongoing Assessment Teacher Resource

five frame. A 1 x 5 array. Students place counters, stickers, or dots to show quantities to five.

geoboard. A square board with a grid of pegs (often a 10 x 10 or 11 x 11 grid). Students use elastics to connect the pegs and make shapes.

graph. A drawing that shows data.

 bar graph. A graph that uses bars, either horizontal or vertical, to represent the frequency of an event or occurrence.

— **pictograph.** A graph that uses pictures and symbols to represent each item in a data set.

hundreds chart. A 10 x 10 chart. Each square in the chart contains a whole number in order from 1 to 100.

mass. A physical attribute of objects that can be measured in grams or kilograms. The amount of matter of an object or body.

non-standard units. Objects used as measurement units. Some examples are paper clips, cubes, straws, yogurt containers.

number composition. The joining of two numbers to make a third greater number. E.g.: Ten can be composed of a group of four and a group of six or a group of nine and a group of one.

number cube. A small plastic or wooden cube. Typically, each cube face shows a different numeral or number of dots from one to six.

number decomposition. The separation of a number into smaller parts. E.g.: Ten can be decomposed into a group of four and a group of six or a group of nine and a group of one.

number line. A line that represents a set of numbers.

order irrelevance. The fact that objects in a set can be counted by starting with any object in the set and the total number will be the same.

one-to-one correspondence. The association of one object to only one number, symbol, or picture.

pattern blocks. Plastic or wooden manipulative sets that include the following: green equilateral triangles; orange squares, tan rhombuses and larger blue rhombuses, red trapezoids, and yellow hexagons.

polygon. A closed shape of three or more straight sides.

properties. Qualities of objects that can be determined by the five senses: touch, taste, seeing, hearing, and smelling.

rectangle. A closed shape with four right-angle vertices and four straight sides. Opposite sides are equal.

subitizing. The ability to visually recognize a number of objects without counting.

square. A rectangle with four equal sides and four right angles.

ten frame. A 2 x 5 array. Students place counters, stickers, or dots to show quantities to ten.

triangle. A closed shape with three straight sides and three vertices.

vertex. The corner or endpoint where two lines meet.







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