ALIGNING TO THE NEW COMPETENCIES

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About Rex K to 12 Pointers on Curriculum Changes

Dear Partners in Education,

Greetings of peace!

Once again, the Philippine educational landscape is experiencing great changes in the K to 12 curriculum. Hence, we at Rex Book Store present to you the **Rex K to 12 Pointers** – an exclusive annual additional teacher's resource material designed to guide teachers by giving useful suggestions on how to best address specific academic concerns using both Rex teaching and learning materials. Particularly for this issue, the focus is on how teachers can better understand curriculum crosswalks as they impact teaching and learning. Also, this new volume of the Rex K to 12 Pointers for School Year 2014–2015 focuses on how to respond to the K to 12 curriculum version transitions per subject and grade level.

Since the implementation of the K to 12 curriculum in 2011, the DepEd has released several versions of it through its official memoranda, necessitating changes in scope and sequence, and competencies per subject per grade level with each latest release. This regular updating has had more impact on some subjects more than others. For instance, the most notable changes are in the Social Studies subject in which Grade 3 now covers appreciation of one's own region, and Grades 7 to 10 now cover new topics per level. These latest developments in the curriculum pose a challenge to educators, as they must ensure strict compliance in their implementation of the K to 12 program, from the administrative down to the classroom level.

In response, Rex Book Store shares your need to address the curriculum transitions, and we are committed to provide the necessary support to adopters of Rex titles. As your trusted partner, Rex has endeavored to come up with this new edition of the Rex K to 12 Pointers, covering the K to 12 curriculum transitions per subject as they relate to Rex titles. To ensure that Rex teaching and learning materials comply with the latest K to 12 curriculum standards and competencies, the Rex K to 12 Pointers features a curriculum crosswalk. In this crosswalk, our academic specialists have identified the additional lessons and exercises required to maximize the achievement of student learning outcomes per standard in the curriculum. In addition, the output of this crosswalk has been presented through a visual tabulation of what the curriculum transitions are, and how these transitions are addressed by the teaching and learning materials provided by Rex. Thus, this edition of the Rex K to 12 Pointers serves as a guide for you, while the additional lessons may be accessed in the Rex Interactive website via www.rexinteractive.com.

We hope that through the full compliance to the latest K to 12 curriculum that this new resource material offers, you would gain the confidence and peace of mind that you need in becoming effective educators. We are one with you in aspiring toward a successful implementation of the K to 12 basic education program for the benefit of our students. May our concerted efforts be the light to others as well as the mirror that reflects it.

Sincerely,

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Publisher's Note

Leaders should recognize that one of their prime obligations is to help members of their organizations feel confident and capable as they become motivated (Doll, 2009). Indeed, as principals, subject area coordinators, or classroom teachers, you are leaders in your own schools or classrooms. Part of your responsibilities as leaders is to provide assistance to your members. With the recent changes occurring in the K to 12 curriculum, leaders such as yourselves should support your members as they transition from one curriculum version to another.

The tasks of tracking changes in the curriculum, defining new competencies, and making new lessons to implement the new competencies are grueling for any teacher. But these are necessary tasks to ensure that learners won't be shortchanged by the changes happening, rather, that they reap the fulfillment of the objectives of those changes.

As your trusted partner, Rex Book Store understands the efforts and resources needed to track and implement the changes in the curriculum. Hence, it has endeavored to give you the **Rex Pointers** – a learning supplement that traces the different changes in the curriculum through a curriculum crosswalk, develops new lessons to accomplish the intentions of the competencies, and journeys with the teachers as they execute the new lessons in their classrooms. The curriculum crosswalk found in the Rex Pointers gives the teachers a view of the spiral movement of the curriculum by comparing old standards and competencies to the new ones. It identifies if there are gaps in the curriculum that should be filled to help students attain the intended learning outcomes. The Rex Pointers also contains ready-made lesson plans to address the new learning competencies, saving time for teachers in preparing their instruction. These lesson plans include combined competencies to show the integration of the topics. Finally, the Rex Pointers journeys with the teachers as they execute the new whole curriculum by providing a range of appropriate techniques and strategies.

Rex Book Store hopes that the Rex Pointers will guide teachers toward the direction of becoming true leaders of K to 12 in their schools and their classrooms. With the preparation and assistance that this material offers, teachers are assured that with Rex, *"You are booked for success."*

Don Timothy Buhain
Chief Operating Officer, Rex Book Store, Inc.

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A Primer on Curriculum Crosswalks

The Philippine K to 12 curriculum has undergone various improvements since its implementation last 2011. The improvements can either be in terms of substitution, alteration, variation, restructuring, or value orientation change (Doll, 2001). And as in all changes or improvements, their success depended on how these have been planned, communicated, and accepted. The latest of the improvements were the December 2012 and December 2013 versions released by the DepEd.

In order for schools and teachers to plan and implement these recent improvements in the curriculum, there are processes needed to track them. The simplest but most useful way of tracking them is through a curriculum crosswalk or content map. The purposes of a curriculum crosswalk are (1) to gain information about the curriculum changes; (2) to ensure spiral progression; (3) to provide provision in analyzing gaps in student learning and to fill in these gaps; and (4) to find and integrate natural curriculum connections with the nature of the discipline (Jacobs, 2009).

Defining a Curriculum Crosswalk

The elements in the curriculum that have undergone major changes are the content standards, performance standards, and learning competencies. In order to track these changes and plan actions to comply with them, a curriculum crosswalk is necessary. A curriculum crosswalk refers to a process used to cross-reference or to align the learning outcomes of the courses in a pathway (Bitters and Wigner, 2009).

Why perform a curriculum crosswalk?

A curriculum crosswalk allows for gaps to be found between current standards or learning competencies and expected knowledge and skills required by the discipline. These gaps and deficiencies can then be used to develop new competencies, additional lessons, new courses, and/or new opportunities for students to gain the necessary knowledge and skills.

When should a curriculum crosswalk be done?

Ideally, a curriculum crosswalk should be done before making a course syllabus or the subject's scope and sequence. This allows for changes of curriculum or course development to be incorporated in the instruction or instructional materials being developed.

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Steps in Performing a Curriculum Crosswalk

Step 1:

Identify who will be involved in the curriculum review.

- ❑ The proponents determine the procedures used in completing the curriculum review.
- ❑ Documentation and update of the curriculum review are done by the proponents.

Step 2:

Assemble all relevant standards and benchmarks.

- ❑ Content Standards
- ❑ Performance Standards
- ❑ Learning Competencies

Example:

GRADE 1

Domain	Learning Competencies	Quarter/ Week	LC Listening Comprehension

Listening Comprehension	• Identify connections between text listened to and personal experience DELETED
	• Make predictions about stories based on the cover or title, pictures, and details in the text DELETED
	• Use an understanding of characters, incidents and settings to make predictions MOVED TO GRADE 2 3RD QUARTER
	• Identify story to elements (characters, setting, plot, ending) in the text listened to
	• Validate ideas made after listening to a story MOVED TO GRADE 2 2ND QUARTER
	• Activate prior knowledge based on new knowledge formed MOVED TO GRADE 2 1ST QUARTER
	• Listen carefully to texts read aloud DELETED
	• Ask and answer simple questions (who, what, where, when, why, and how) about text listened to DELETED
	• Identify connections between text listened to and personal experience
	• Ask and respond to questions about informational texts listened to (environment, health, how-to's, etc.) DELETED
	• Derive meaning from repetitive language structure
	• Retell and/or reenact events from a story DELETED
	• Talk about texts identifying major points and key themes DELETED
	• Participate/engage in a read-along of texts (e.g., poems, repetitive texts) DELETED
		3rd Quarter 1–10 and 4th Quarter 1–5	EN1OL-IIIa-j- 1.1
			1. Listen to short stories/poems and note important details pertaining to
			  a. character
			  b. setting
			  c. events
			2. Give the correct sequence of three events NEW
			3. Infer the character feelings and traits NEW
			4. Identify cause and/or effect of events NEW
			5. Identify the speaker in the story or poem NEW
			6. Predict possible ending of a story read
			7. Relate story events to one's experience
			8. Discuss, illustrate, and dramatize specific events NEW
			9. Identify the problem and solution NEW
			10. Retell a story listened to

December 2012 version **December 2013 version**

Notice that the competencies were compared line by line. This not only helps track what happened to a particular competency, but also gives an idea of the changes that happened. In the example above, some of the competencies were either retained, deleted, moved, revised, or added.

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Step 3:

Analyze and crosswalk the standards and competencies.

Note deficiencies and gaps in the curriculum. This part of the curriculum crosswalk can ensure that the learning competencies are in spiral progression. Also, at this vantage, the teacher can see the gaps that the curriculum may have.

Example:

April 2013	Remarks	December 2013
1st Quarter: Living Things and Their Environment		
Content Standards: Demonstrate understanding of photosynthesis and respiration as life energy processes DELETED	In this instance, the content standards were revised to give emphasis on content. The new learning standards discuss both content as well as the process of photosynthesis, whereas the old standards just focused on the process of photosynthesis and respiration. The new content standards necessitates that there is a discussion on the plant part that procures photosynthesis and why this part provides that mechanism.	**Content Standards:** Demonstrate understanding of the structure and function of plant parts and organelles involved in photosynthesis NEW

Step 4:

Align the standards to the curriculum.

- ❑ After a comprehensive synopsis of standards and expectations has been developed, it must be compared to the goals and objectives of the subject area, subject scope and sequence, and the total curriculum.
- ❑ The most effective approach is to look at the curriculum in total and across all subject areas (vertical and horizontal alignments).
- ❑ This step should be able to accomplish integration, eliminate duplication, and optimize use of student time.

Step 5:

Redesign the curriculum to correct the deficiencies.

- ❑ Design new courses or revise current courses.
- ❑ Design teaching enhancements to support the standards.
- ❑ Both content as well as teaching and learning strategies can be modified to address the deficiencies.

Step 6:

Design assessments that verify attainment of standards.

❑ Verification of student success is essential if the curriculum is to produce student mastery of required skills.

❑ The assessment methods and tools must be developed in direct reference to the standards.

In looking at the crosswalk, the teacher can identify which are the target competencies that need to be developed. Thus, the teacher can now create an assessment to accomplish these targeted competencies. It is easier to view this using the curriculum crosswalk.

One limitation is in identifying the assessment tools to be used. This limitation is addressed by the curriculum map that can be developed when using the crosswalk.

Step 7:

Develop an implementation plan.

❑ Include items such as deadlines and timelines, resources, staff/professional development, barriers, and benefits.

❑ Professional development must be provided to assist teachers in dealing with the changes.

❑ Realistic timelines for implementation must be included.

Step 8:

Evaluate the results.

❑ The implementation plan should include collection of suitable data to document the effects of the reform on student performance.

❑ The concept of continuous improvement should be adopted with the recognition that reform is an ongoing and never-ending effort.

In this Rex Pointers, steps 1 to 5 have already been provided for the teacher. Thus, teachers no longer have to do the grueling process of identifying changes and developing new lesson plans to apply these changes.

Advantages of Doing a Curriculum Crosswalk

The advantages of doing a curriculum crosswalk are the following:

1. A crosswalk is a simple and clear way to communicate the connections between curriculums. It is useful for explaining the changes in standards and competencies.

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2. It is a good review tool. It can point to gaps in the standards and generate ideas/discussion on how to fill in those gaps. It is useful for writing and revising standards.

3. It supports an argument for face validity. The crosswalk can point to the extent to which a competency can cover the concept it purports to measure. This can also show the relevance of the assessment produced.

Limitations of a Crosswalk:

However, a crosswalk should <u>not</u> be used to:

1. Link standards and assessments. It is not good for calibrating standards to test content. It can only describe the content. As a result, teachers would need to conduct a more sophisticated analysis on the test items.

2. Write standards to match test content.

3. Support an argument to establish validity. At most, a crosswalk can show connections (i.e., face validity), but it lacks the analysis necessary for a validity study.

Despite the limitations, the advantages of doing a curriculum crosswalk are still immense. The output can help in developing additional lessons that teachers can use for new and revised competencies.

References:

1. Doll, Robert C. (2009). *Curriculum Improvement Decision Making and Process*. New York, USA: Allyn and Bacon.

2. Jacobs, H. and Johnson, A. (2009). *Curriculum Mapping Planner*. Virginia, USA: ASCD.

3. Ornstein, Behar-Horenstein et al. (2003). *Contemporary Issues in Curriculum, 3rd Edition*. Boston, USA: Pearson.

4. http://cte.dpi.wi.gov/files/cte/pdf/curriccrosswalk.pdf

5. www.adultedcontentstandards.ed.gov/.../Using%20Crosswalks%20for%2...

6. http://www.deped.gov.ph/ (Department of Education 2013 Curriculum Guides)

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Appreciation of the New Mathematics Curriculum Guides – Elementary
Tracking Changes in the December 2012 to December 2013 Versions

Curriculum is dynamic and changing. Last December of 2013, the Department of Education released through their official website the Curriculum Guide (CG) for G1–G10 Mathematics. In this curriculum guide version, new competencies (not present in the December 2012 CG version) were added, some were deleted from the December 2012 version, and others were revised through the inclusion of new topics, skills, and contexts.

Content and performance standards are not exempted from these curriculum reforms. Let us take a look at the example below.

December 2012 Content Standards for Statistics and Probability	December 2013 Content Standards for Statistics and Probability
The learner demonstrates an understanding of key concepts of pictographs, outcomes, and chances in games.	The learner demonstrates understanding of pictographs without scales and outcomes of an event using the terms "likely" and "unlikely to happen."

December 2012 Performance Standard for Statistics and Probability	December 2013 Performance Standards for Statistics and Probability
The learner is able to collect, organize, represent, interpret and analyze data, and make conjectures.	The learner is able to create and interpret simple representations of data (tables and pictographs without scales) and describe outcomes of familiar events using the terms likely and unlikely to happen.

Figure 1: *Sample Comparison of Content and Performance Standards*

Notice that learning competencies were presented by quarter. In addition, content standards and performance standards were revised through the inclusion of new subjects, skills, and contexts.

The table below summarizes the changes in the content and performance standards for Grade 1 Statistics and Probability based on Figure 1.

Deleted Content Standards from December 2012 Curriculum Guide Version	New Content Standards in December 2013 Curriculum Guide Version
• The learner demonstrates understanding of chances in games.	• The learner demonstrates understanding of pictographs without scales. • The learner demonstrates understanding of outcomes of an event using terms likely and unlikely to happen.

Deleted Performance Standards from December 2012 Curriculum Guide Version	New Performance Standards in December 2013 Curriculum Guide Version
• The learner is able to collect data and make conjectures. • The learner is able to organize data and make conjectures. • The learner is able to represent data and make conjectures. • The learner is able to analyze data and make conjectures.	• The learner is able to create representations of data (tables and pictographs without scales). • The learner is able to describe outcomes of familiar events using the terms likely and unlikely to happen.

Since standards were changed, learning competencies were changed as well. Look at Figure 2 below.

December 2012	December 2013
Collects and organizes data using tallies and tables DELETED	Collects data on one variable through simple interview NEW
Represents data using pictographs without using scale DELETED	Sorts, classifies, and organizes data in tabular form and presents this into a pictograph without scales NEW
Reads and interprets pictographs DELETED	Infers and interprets data presented in a pictograph without scales NEW
Identifies cause and effect relationships DELETED	Solves routine and non-routine problems using data presented in pictograph without scales NEW
Predicts and records outcome of experiments and chance games DELETED	Tells whether an event is likely or unlikely to happen NEW
	Describes events in real-life situations using the phrases "likely" or "unlikely to happen" NEW

Figure 2: *Sample Mapping of Learning Competencies from December 2012 Version to December 2013 Version*

From the mapping shown above, new competencies were included in the December 2013 Curriculum Guide for Grade 7 Statistics and Probability. These competencies are as follows:

CODE: M1SP-IVg-1.1
- Collects data on one variable through simple interview

CODE: M1SP-IVg-2.1
- Sorts data in tabular form and presents this into a pictograph without scales
- Classifies data in tabular form and presents this into a pictograph without scales
- Organizes data in tabular form and presents this into a pictograph without scales

CODE: M1SP-IVh-3.1
- Infers from data presented in a pictograph without scales
- Interprets data presented in a pictograph without scales

CODE: M1SP-IVh-4.1
- Solves routine problems using data presented in pictograph without scales
- Solves non-routine problems using data presented in pictograph without scales

CODE: M1SP-IVi-7.1
- Tells whether an event is likely or unlikely to happen

CODE: M1SP-IVj-8.1
- Describes events in real-life situations using the phrases "likely" or "unlikely to happen"

Curriculum changes are not limited to inclusion of new standards and learning competencies. Some competencies were deleted from December 2012 CG version. Examples are as follows:

- Collects and organizes data using tallies and tables
- Represents data using pictographs without using scale
- Reads and interprets pictographs
- Identifies cause-and-effect relationships
- Predicts and records outcome of experiments and chance games

See Appendix 1 for the list of new and deleted standards and learning competencies noted from the Grade 1 Mathematics December 2013 and the December 2012 CG versions.

As a summary, the release of December 2013 Curriculum Guide for Mathematics brought changes both in the standards and competencies and the challenge remains the same, for the teachers and other stakeholders to help in the realization of the twin goals of Mathematics Curriculum and, in general, the vision of DepEd's K to 12 Education Program.

For additional information on the changes in Mathematics Curriculum, log on to *www.rexinteractive.com.*

List of New and Deleted Standards and Learning Competencies
Mathematics Grade 1
(December 2013 vs December 2012 Curriculum Guides)

CONTENT STANDARDS

Number and Number Sense

- The learner demonstrates understanding of whole numbers. (NEW)

- The learner demonstrates understanding of ordinal numbers up to 10th. (NEW)

- The learner demonstrates understanding of money up to PhP100. (NEW)

- The learner demonstrates understanding of fraction $\frac{1}{2}$. (RETAINED)

- The learner demonstrates understanding of fraction $\frac{1}{4}$. (RETAINED)

- The learner demonstrates understanding of addition of whole numbers up to 100 including money. (NEW)

- The learner demonstrates understanding of subtraction of whole numbers up to 100 including money. (NEW)

Deleted from December 2012

- The learner demonstrates understanding of the key concepts of numbers.

Measurement

- The learner demonstrates understanding of time. (RETAINED FROM DECEMBER 2012 CG)

- The learner demonstrates understanding of non-standard units of length. (NEW)

- The learner demonstrates understanding of non-standard units of mass. (NEW)

- The learner demonstrates understanding of non-standard units of capacity. (NEW)

Deleted from December 2012

- The learner demonstrates understanding of the concepts of length, weight, and capacity.

Patterns and Algebra

- The learner demonstrates understanding of continuous patterns. (NEW)

- The learner demonstrates understanding of repeating patterns. (NEW)

- The learner demonstrates understanding of mathematical sentences. (RETAINED FROM DECEMBER 2012 CG)

Geometry

- The learner demonstrates understanding of the 2-dimensional figures. (RETAINED FROM DECEMBER 2012 CG)

- The learner demonstrates understanding of the 3-dimensional figures. (RETAINED FROM DECEMBER 2012 CG)

Statistics and Probability

- The learner demonstrates understanding of pictographs without scales. (NEW)

- The learner demonstrates understanding of outcomes of an event using terms likely and unlikely to happen. (NEW)

Deleted from December 2012

- The learner demonstrates understanding of chances in games.

PERFORMANCE STANDARDS

Number and Number Sense

- The learner is able to recognize whole numbers up to 100 in various forms and contexts. (NEW)

- The learner is able to represent whole numbers up to 100 forms and contexts. (NEW)

- The learner is able to order whole numbers up to 100 forms and contexts. (NEW)

- The learner is able to recognize money up to PhP100 in various forms and contexts. (NEW)

- The learner is able to represent money up to PhP100 in various forms and contexts. (NEW)

- The learner is able to order money up to PhP100 in various forms and contexts. (NEW)

- The learner is able to apply addition of whole numbers up to 100 including money in mathematical problems. (NEW)

- The learner is able to apply subtraction of whole numbers up to 100 including money in mathematical problems. (NEW)

- The learner is able to apply addition of whole numbers up to 100 including money in real-life situations. (NEW)

- The learner is able to apply subtraction of whole numbers up to 100 including money in real-life situations. (NEW)

- The learner is able to recognize fractions $\frac{1}{2}$ and $\frac{1}{4}$ in various forms and contexts. (NEW)

- The learner is able to represent fractions $\frac{1}{2}$ and $\frac{1}{4}$ in various forms and contexts. (RETAINED FROM DECEMBER 2012 CG)

- The learner is able to order fractions $\frac{1}{2}$ and $\frac{1}{4}$ in various forms and contexts. (NEW)

Deleted from December 2012

- The learner is able to explore the concepts of numbers and compare these in various contexts.

- The learner is able to visualize the concepts of halves and fourths using whole objects and sets.

- The learner is able to model the concepts of halves and fourths using whole objects and sets.

Measurement

- The learner is able to apply knowledge of time in mathematical problems. (NEW)

- The learner is able to apply knowledge of time in real-life situations. (NEW)

- The learner is able to apply knowledge of non-standard measures of length in mathematical problems. (NEW)

- The learner is able to apply knowledge of non-standard measures of length in real-life situations. (NEW)

- The learner is able to apply knowledge of non-standard measures of mass in mathematical problems. (NEW)

- The learner is able to apply knowledge of non-standard measures of mass in real-life situations. (NEW)

- The learner is able to construct 3-dimensional objects. (NEW)

- The learner is able to apply knowledge of non-standard measures of capacity in mathematical problems. (NEW)

- The learner is able to apply knowledge of non-standard measures of capacity in real-life situations. (NEW)

Deleted from December 2012

- The learner is able to measure non-standard units in measuring length.
- The learner is able to measure non-standard units in measuring weight.
- The learner is able to measure non-standard units in measuring capacity.
- The learner is able to use non-standard units in measuring length.
- The learner is able to use non-standard units in measuring weight.
- The learner is able to use non-standard units in measuring capacity.

Patterns and Algebra

- The learner is able to apply knowledge of continuous patterns in various situations. (NEW)
- The learner is able to apply knowledge of repeating patterns in various situations. (NEW)
- The learner is able to apply knowledge of number sentences in various situations. (NEW)

Deleted from December 2012

- The learner is able to create patterns using numbers, colors, shapes, etc.

Geometry

- The learner is able to describe 2-dimensional objects. (NEW)
- The learner is able to compare 2-dimensional objects. (NEW)
- The learner is able to construct 2-dimensional objects. (NEW)

- The learner is able to describe 3-dimensional objects. (NEW)
- The learner is able to compare 3-dimensional objects. (NEW)
- The learner is able to construct 3-dimensional objects. (NEW)

Deleted from December 2012

- The learner is able to model 2-dimensional objects.
- The learner is able to model 3-dimensional objects.

- The learner is able to model 3-dimensional objects.
- The learner is able to model 3-dimensional objects.

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Statistics and Probability

- The learner is able to create representations of data (tables and pictographs without scales). (NEW)

- The learner is able to describe outcomes of familiar events using the terms "likely" and "unlikely to happen." (NEW)

Deleted from December 2012

- The learner is able to collect data and make conjectures.

- The learner is able to organize data and make conjectures.

- The learner is able to represent data and make conjectures.

- The learner is able to analyze data and make conjectures.

LEARNING COMPETENCIES

I.   Number and Number Sense

New Competencies in the December 2013 Curriculum Guide

CODE: M1NS-Ia-1.1

- Visualize numbers from 0 to 100 using variety of materials

- Represent numbers from 0 to 100 using variety of materials

CODE: M1NS-Id-6

- Visualize two sets using the expressions "less than," "more than," and "as many as"

- Represent two sets using the expressions "less than," "more than," and "as many as"

CODE: M1NS-Ie-7

- Visualize sets from least to greatest and vice versa

- Represent sets from least to greatest and vice versa

CODE: M1NS-Ie-8.1

- Visualize by 2s through 100

- Visualize by 5s through 100

- Visualize by 10s through 100

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CODE: M1NS-Ig-10.1

- Visualize the place value of a digit in one-digit numbers
- Give the place value of a digit in one-digit numbers
- Visualize the place value of a digit in two-digit numbers
- Give the place value of a digit in two-digit numbers

CODE: M1NS-Ih-12.1

- Visualize numbers up to 100 using relational symbols
- Represent numbers up to 100 using relational symbols

CODE: M1NS-Ih-12.1

- Visualize numbers up to 100 in increasing and decreasing order
- Represent numbers up to 100 in increasing and decreasing order

CODE: M1NS-IIa-26.1

- Visualize addition of two one-digit numbers with sums up to 18 using order property of addition
- Visualize addition of two one-digit numbers with sums up to 18 using zero property of addition

CODE: M1NS-IIa-28.1a

- Add two one-digit numbers using appropriate mental techniques, e.g. adding doubles and/or near doubles

CODE: M1NS-IIb-26.2

- Visualize addition of three one-digit numbers using the grouping property of addition

CODE: M1NS-IIb-27.1

- Visualize addition of two to three one-digit numbers horizontally and vertically

CODE: M1NS-IIb-27.1

- Visualize addition of numbers with sum through 99 without regrouping
- Visualize addition of numbers with sum through 99 with regrouping

CODE: M1NS-IIe-29.1

- Visualize routine problems involving addition of whole numbers including money with sums up to 99 using appropriate problem solving strategies
- Visualize non-routine problems involving addition of whole numbers including money with sums up to 99 using appropriate problem solving strategies

CODE: M1NS-IIe-30.1

- Create situations involving addition of whole numbers including money

CODE: M1NS-IIg-32.1

- Visualize subtraction of one-digit numbers with minuends through 18 (basic facts)
- Represent subtraction of one-digit numbers with minuends through 18 (basic facts)

CODE: M1NS-IIg-32.2

- Visualize subtraction of one- to two-digit numbers with minuends up to 99 without regrouping
- Represent subtraction of one- to two-digit numbers with minuends up to 99 without regrouping

CODE: M1NS-IIh-32.4

- Visualize subtraction of one- to two-digit numbers with minuends up to 99 with regrouping
- Represent subtraction of one- to two-digit numbers with minuends up to 99 with regrouping

CODE: M1NS-IIe-30.1

- Create situations involving subtraction of whole numbers including money

CODE: M1NS-IIIa-37

- Count groups of equal quantity using concrete objects up to 50 and write an equivalent expression, e.g. 10 grouped by 5s

CODE: M1NS-IIIa-48

- Visualize objects into groups of equal quantity using concrete objects up to 50
- Represent objects into groups of equal quantity using concrete objects up to 50
- Separate objects into groups of equal quantity using concrete objects up to 50

CODE: M1NS-IIIc-73

- Visualize a whole into halves and fourths
- Represent a whole into halves and fourths

CODE: M1NS-IIIc-74.1

- Visualize the elements of a set into two groups of equal quantities to show halves
- Represent the elements of a set into two groups of equal quantities to show halves

CODE: M1NS-IIId-74.2

- Visualize the elements of a set into four groups of equal quantities to show fourth
- Represent the elements of a set into four groups of equal quantities to show fourth

CODE: M1NS-IIIc-74.1

- Visualize the whole region or set given its $\frac{1}{2}$ and/or $\frac{1}{4}$

Deleted Competencies from the December 2012 Curriculum Guide

- Recognize cardinal numbers from 0 to 100
- Tell the number of objects in a given set by ones and tens
- Analyze one-step word problems involving numbers including money with sums up to 99 using appropriate problem-solving strategies
- Analyze one-step word problems involving subtraction of whole numbers including money with sums up to 99 using appropriate problem-solving strategies

II. Geometry

Competencies from December 2012 version were retained.

III. Patterns and Algebra

New Competencies in the December 2013 Curriculum Guide

CODE: M1AL-IIIg-1

- Determine the missing term/s in a given continuous pattern using one attribute (letters/numbers/events)

CODE: M1AL-IIIg-2

- Determine the missing term/s in a given repeating pattern using one attribute (letters, numbers, colors, figures, sizes, etc.)

CODE: M1AL-IIIj-10

- Visualize the missing number in an addition or subtraction sentence using a variety of ways

Deleted Competencies from the December 2012 Curriculum Guide

- Identify and explain simple repeating pattern
- Make pattern of shapes, colors, and numbers
- Find the complete, pattern of one or two of the following attributes: shape, size, color, number, and orientation
- Determine the next term (figure/number) in a given sequence and give reason

IV. Measurement

New Competencies in the December 2013 Curriculum Guide

CODE: M1ME-IVa-2

- Determine the day or the month using a calendar

CODE: M1ME-IVb-3

- Tell time by hour using analog clock
- Tell time by half-hour using analog clock
- Tell time by quarter-hour using analog clock
- Write time by hour using analog clock
- Write time by half-hour using analog clock
- Write time by quarter-hour using analog clock

CODE: M1ME-IVb-4

- Solve problems involving time (days in a week, months in a year, hour, half-hour, and quarter-hour)

Deleted Competencies from the December 2012 Curriculum Guide

- Names the number of days in a week and months in a year in the right order

V.   Statistics and Probability

New Competencies in the December 2013 Curriculum Guide

CODE: M1SP-IVg-1.1

*   Collect data on one variable through simple interview

CODE: M1SP-IVg-2.1

*   Sort data in tabular form and present this into a pictograph without scales
*   Classify data in tabular form and present this into a pictograph without scales
*   Organize data in tabular form and present this into a pictograph without scales

CODE: M1SP-IVh-3.1

*   Infer from data presented in a pictograph without scales
*   Interpret data presented in a pictograph without scales

CODE: M1SP-IVh-4.1

*   Solve routine problems using data presented in pictograph without scales
*   Solve non-routine problems using data presented in pictograph without scales

CODE: M1SP-IVi-7.1

*   Tell whether an event is likely or unlikely to happen

CODE: M1SP-IVj-8.1

*   Describe events in real-life situations using the phrases "likely" or "unlikely to happen"

Deleted Competencies from the December 2012 Curriculum Guide

*   Collect and organize data using tallies and tables
*   Represent data using pictographs without using scale
*   Read and interpret pictographs
*   Identify cause – and effect – relationships
*   Predict and record outcome of experiments and chance games

Sample Supplemental Lesson

Probability of an Event

Introduction:

1. Assess pupils' prior knowledge on the likelihood of the occurrence of an event by using quick check.

2. Ask them to share their answers to a partner.

Statement	Likely or Unlikely to Happen
1. The sun will rise at the east.	
2. We will experience flood during summer breaks.	
3. The plants will live when watered every day.	
4. Planting trees will prevent flooding.	

Body:

1. Introduce to class the phrases "likely to happen" and "unlikely to happen."

2. Using pictures of different events, show to class events that are "likely to happen" and "unlikely to happen."

3. Extend the discussion using simulation activity.

   a. Show to class 4 red marbles and 1 blue marble. Place them inside a box.

   b. Call a volunteer to pick one marble without looking at the marbles inside the box.

   c. Ask the pupil to predict the color of the marble picked by their classmate.

   d. Repeat the activity and tally the result on the board.

   e. Then build the mathematical idea of events that are likely to happen and unlikely to happen.

Knowledge:
Events that are likely and unlikely to happen

Learning Competencies:

M1SP-IVi-7
• Tell whether an event is likely or unlikely to happen

M1SP-IVj-8.1
• Describe events in real-life situations using the phrases "likely" or "unlikely to happen"

Key Understanding:
Probability is the likelihood of the occurrence of an event.

Key Question:
How do we express chances of events happening using mathematics?

Differentiated Activities

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4. Form pairs. Give each pair an envelope with 4 red chips and 7 green chips. Ask them to perform the activity and predict which event is likely to happen getting a red chip or a green chip.

5. For skill building, ask the pupils to accomplish the activity sheet.

6. For enrichment, let the pupils choose one task from the following:

    a. Draw a basket with apples and oranges in a way that if a friend will pick a fruit from the basket, the event that is likely to happen is picking an orange.

    b. Using white and black chips, ask the pupils to set up a counter where the event of picking a white chip is likely to happen.

Conclusion:

To facilitate the summary of the lesson, ask the pupils to complete the following sentences:

•   I learned…
•   I need help on…