

New York City Department of Education

Scope and Sequence Sample— Grade 1

2012-13 School Year

Overview

This document was created after closely examining the Common Core Learning Standards (CCLS) and the previous New York State Standards and updated after examining NYS' recently released [scope and sequence supports](#) and testing program [guidance](#). It provides a high-level CCLS-aligned scope and sequence for Mathematics that also takes into account the differences in and transition from the New York State Standards. The scope and sequence is aligned to the Common Core and demonstrates a focus on the major work of the grade¹, which the [State has indicated](#) will be the focus of next year's 3-8 State exams. This scope and sequence represents one way that a school may choose to organize and teach the full range of the standards and incorporate the State's [pre and post-test standards](#) guidance. This document contains the following components:

- **Year-long Overview:** A one-page view of the year that shows the:
 - **Unit Summary:** The number of suggested units across the year and the amount of instructional time spent on each unit.
 - **Concepts that Should be Omitted:** Concepts that are no longer taught at this grade-level according to the CCLS.
 - **Bridge Guidance:** Concepts that would have been taught in earlier grades, according to the Common Core, but were not part of the New York State Standards. They should be considered and woven into units during transition years since the concepts were not previously addressed/addressed fully in the New York State Standards. We ask that you consider the needs of your students when deciding if it is necessary to teach these concepts. Please note: Bridge concepts are intended for instructional consideration when crafting a coherent sequence of instruction during the transitional years only and are not a part of SED's draft Test Program Guidance.
- **High-level Unit Overviews:** Overviews of each unit that include the:
 - **Unit Description:** A narrative description of the concepts the unit is intended to cover and the amount of instructional time suggested.
 - **Standards:** The group of related standards that should be taught within the unit.

How to Use:

To use this document, teacher teams could:

- Review the year-long and unit overviews to assess whether the scope and sequence makes sense for their school.
- Review the resources available by standard in each high-level unit overview.
- Use the high-level unit overviews and resources available to teach a sequence of instruction that fully addresses the standards represented.

¹ For a listing of content emphases by cluster, refer to <http://engageny.org/resource/math-content-emphases>. For additional guidance—including key advances by grade, opportunities for in-depth focus, connections between content and practice standards, etc.—refer to http://www.parcconline.org/sites/parcc/files/PARCCMCFMathematics_August%202012rev2_FINAL.pdf.

With questions or feedback on this document, please email commoncorefellows@schools.nyc.gov.

Scope and Sequence Sample: School Year 2012-13 – Grade 1

This document was created after closely examining the Common Core Learning Standards (CCLS) and the previous New York State Standards and updated after examining NYS' recently released [scope and sequence supports](#) and testing program [guidance](#). It provides a high-level CCLS-aligned scope and sequence for Mathematics that also takes into account the differences in and transition from the New York State Standards. The scope and sequence is aligned to the Common Core and demonstrates a focus on the major work of the grade¹, which the [State has indicated](#) will be the focus of next year's 3-8 State exams. This scope and sequence represents one way that a school may choose to organize and teach the full range of the standards and incorporate the State's [pre and post-test standards](#) guidance.

Grade 1 Year-Long Overview:

This table shows an overview of all units that should be taught across the year and the recommended instructional time for each unit ¹.

Grade 1: Suggested Distribution of Units in Instructional Days	Time	# of weeks
Unit 1: Addition, Subtraction of Numbers to 10 and Fluency	26%	9 weeks
Unit 2: Place Value, Comparison, Addition and Subtraction of Numbers to 20	20%	7 weeks
Unit 3: Ordering and Expressing Length Measurements as Numbers	7%	3 weeks
Unit 4: Place Value, Comparison, Addition and Subtraction of Numbers to 40	20%	7 weeks
Unit 5: Identify, Compose, and Partition Shapes	7%	3 weeks
Unit 6: Place Value, Comparison, Addition and Subtraction of Numbers to 100	20%	7 weeks

Concepts that should be Omitted:

- Explore standard units.
- Use combinations of coins to make money amounts up to 25 cents.
- Display data in simple picto- and bar graphs.
- Use Venn diagrams.
- Identify symmetry (students now develop the background for initial understanding in grades 1 & 2; mastery now in grades 4)
- Skip Counting by 10's, by 5's and by 2's. (Now in grades K for 10's and Grade 2)
- Ordinal terms; First to twentieth. (New ceiling of "tenth" in Grade K)
- Determine and discuss patterns in arithmetic.

Bridge Concepts

- Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group.
- Name, analyze, compare, sort, and build shapes.

¹ Unit overviews and suggested instructional time are based on *Common Core Curriculum Maps in Mathematics A Story of Units Pre-K- 5* developed by Common Core, Inc.

Scope and Sequence Sample: School Year 2012-13 – Grade 1

This document was created after closely examining the Common Core Learning Standards (CCLS) and the previous New York State Standards and updated after examining NYS' recently released [scope and sequence supports](#) and testing program [guidance](#). It provides a high-level CCLS-aligned scope and sequence for Mathematics that also takes into account the differences in and transition from the New York State Standards. The scope and sequence is aligned to the Common Core and demonstrates a focus on the major work of the grade¹, which the [State has indicated](#) will be the focus of next year's 3-8 State exams. This scope and sequence represents one way that a school may choose to organize and teach the full range of the standards and incorporate the State's [pre and post-test standards](#) guidance.

Unit 1: Addition, Subtraction of Numbers to 10 and Fluency – (9 Weeks)

DESCRIPTION: Students will begin to explore addition and subtraction within 10. Fluency with addition/subtraction facts, a major gateway to later grades, also begins right away with the intention of energetically practicing the entire year. The Mathematical Practices should be evident throughout instruction and connected to the content addressed in this unit. Students should engage in mathematical tasks that provide an opportunity to connect content and practices.

Standards

The standards listed below are **not** intentionally sequenced and should **not** simply be taught consecutively. Strong units weave these standards together in a thoughtful and coherent way. Schools and teacher teams can use this document to compare their current curriculum to and choose high leverage moments to enhance instruction.

Represent and solve problems involving addition and subtraction.

1.OA.1: Use addition & subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart & comparing, with unknowns in all positions, e.g., by using objects, drawings & equations with a symbol for the unknown number to represent the problem.

1.OA.2: Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20 e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

Understand and apply properties of operations and the relationship between addition and subtraction.

1.OA.3: Apply properties of operations as strategies to add & subtract. *Examples: If $8 + 3 = 11$ is known, the $3 + 8 = 11$ is also known.* (Commutative property of addition.) *To add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$.*² (Associative property of addition.)

1.OA.4: Understand subtraction as an unknown-addend problem. For example subtract $10 - 8$ by finding the number that makes 10 when added to 8.

Add and subtract within 20.

1.OA.5: Relate counting to addition & subtraction (e.g., by counting on 2 to add 2).

1.OA.6: Add & subtract within 20, demonstrating fluency for addition & subtraction within 10. Use strategies such as counting on: *making ten* (e.g. $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$): *decomposing a number leading to a ten* (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$): *using the relationship between addition & subtraction* (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); *creating equivalent but easier or known sums* (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 = 12 + 1 = 13$).³

Work with addition and subtraction equations.

1.OA.7: Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? $6 = 6$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, $4 + 1 = 5 + 2$.

1.OA.8: Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = ?$, $6 + 6 = ?$.

Measure lengths indirectly and by iterating length units.

1.MD.2: Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. *Limit contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.*

Bridge Guidance: Concepts that would have been taught in earlier grades, according to the Common Core, but were not part of the New York State Standards. They should be considered and woven into units during transition years since the concepts were not previously addressed/addressed fully in the New York State Standards. We ask that you consider the needs of your students when deciding if it is necessary to teach these concepts. Please note: Bridge concepts are intended for instructional consideration when crafting a coherent sequence of instruction during the transitional years only and are not a part of SED's draft Test Program Guidance.

Standards

Scope and Sequence Sample: School Year 2012-13 – Grade 1

This document was created after closely examining the Common Core Learning Standards (CCLS) and the previous New York State Standards and updated after examining NYS' recently released [scope and sequence supports](#) and testing program [guidance](#). It provides a high-level CCLS-aligned scope and sequence for Mathematics that also takes into account the differences in and transition from the New York State Standards. The scope and sequence is aligned to the Common Core and demonstrates a focus on the major work of the grade¹, which the [State has indicated](#) will be the focus of next year's 3-8 State exams. This scope and sequence represents one way that a school may choose to organize and teach the full range of the standards and incorporate the State's [pre and post-test standards](#) guidance.

K.CC.6 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching & counting strategies.

DRAFT

Scope and Sequence Sample: School Year 2012-13 – Grade 1

This document was created after closely examining the Common Core Learning Standards (CCLS) and the previous New York State Standards and updated after examining NYS' recently released [scope and sequence supports](#) and testing program [guidance](#). It provides a high-level CCLS-aligned scope and sequence for Mathematics that also takes into account the differences in and transition from the New York State Standards. The scope and sequence is aligned to the Common Core and demonstrates a focus on the major work of the grade¹, which the [State has indicated](#) will be the focus of next year's 3-8 State exams. This scope and sequence represents one way that a school may choose to organize and teach the full range of the standards and incorporate the State's [pre and post-test standards](#) guidance.

Unit 2: Place Value, Comparison, Addition and Subtraction of Numbers to 20 - (7 Weeks)

DESCRIPTION: Students will begin to work slowly by “adding and subtracting across a 10”. This strategy of the “completion of a unit” empowers students in later grades to understand the “renaming” of the addition algorithm, to add 298 and 37 (i.e., $298 + 2 + 35$), and add 4 ft. 8 in. and 5 in. The Mathematical Practices should be evident throughout instruction and connected to the content addressed in this unit. Students should engage in mathematical tasks that provide an opportunity to connect content and practices.

Standards

The standards listed below are **not** intentionally sequenced and should **not** simply be taught consecutively. Strong units weave these standards together in a thoughtful and coherent way. Schools and teacher teams can use this document to compare their current curriculum to and choose high leverage moments to enhance instruction.

Represent and solve problems involving addition and subtraction.

1.OA.1: Use addition & subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart & comparing, with unknowns in all positions, e.g., by using objects, drawings & equations with a symbol for the unknown number to represent the problem.

1.OA.2: Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20 e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

Understand and apply properties of operations and the relationship between addition and subtraction.

1.OA.3: Apply properties of operations as strategies to add & subtract. *Examples: If $8 + 3 = 11$ is known, the $3 + 8 = 11$ is also known.* (Commutative property of addition.) *To add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$.*⁴ (Associative property of addition.)

1.OA.4: Understand subtraction as an unknown-addend problem. For example subtract $10 - 8$ by finding the number that makes 10 when added to 8.

Add and Subtract within 20.

1.OA.5: Relate counting to addition & subtraction (e.g., by counting on 2 to add 2).

1.OA.6: Add & subtract within 20, demonstrating fluency for addition & subtraction within 10. Use strategies such as counting on: *making ten* (e.g. $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$): *decomposing a number leading to a ten* (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$):-using the relationship between addition & subtraction-(e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$)-& creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 = 12$ and $12 + 1 = 13$).

Work with addition and subtraction equations.

1.OA.7: Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? $6 = 6$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, $4 + 1 = 5 + 2$.

1.OA.8: Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = ?$, $6 + 6 = ?$.

Understand place value.

1.NBT.2: Understand that the two digits of a two-digit number represent amounts of tens & ones. Understand the following as special cases:

- 10 can be thought of as a bundle of ten ones – called a ten.
- The numbers from 11 to 19 are composed of a ten & one, two, three, four, five, six, seven, eight or nine ones.

1.NBT.3: Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$ and $<$.

Scope and Sequence Sample: School Year 2012-13 – Grade 1

This document was created after closely examining the Common Core Learning Standards (CCLS) and the previous New York State Standards and updated after examining NYS' recently released [scope and sequence supports](#) and testing program [guidance](#). It provides a high-level CCLS-aligned scope and sequence for Mathematics that also takes into account the differences in and transition from the New York State Standards. The scope and sequence is aligned to the Common Core and demonstrates a focus on the major work of the grade¹, which the [State has indicated](#) will be the focus of next year's 3-8 State exams. This scope and sequence represents one way that a school may choose to organize and teach the full range of the standards and incorporate the State's [pre and post-test standards](#) guidance.

Unit 3: Ordering and Expressing Length Measurements as Numbers - (3 Weeks)

DESCRIPTION: Students will learn to express length measurement as numbers which will provide a few weeks to practice and internalize “making a 10” during daily fluency activities. Introducing measurement early also has the added bonus of opening up the variety and types of word problems that can be asked throughout the year. The Mathematical Practices should be evident throughout instruction and connected to the content addressed in this unit. Students should engage in mathematical tasks that provide an opportunity to connect content and practices.

Standards

The standards listed below are **not** intentionally sequenced and should **not** simply be taught consecutively. Strong units weave these standards together in a thoughtful and coherent way. Schools and teacher teams can use this document to compare their current curriculum to and choose high leverage moments to enhance instruction.

Measure length indirectly and by iterating length units.

1.MD.1: Order three objects by length: compare the lengths of two objects indirectly by using a third object.

1.MD.2: Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end: understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.

Represent and interpret data.

1.MD. 4: Organize, represent & interpret data with up to three categories: ask & answer questions about the total number.

Scope and Sequence Sample: School Year 2012-13 – Grade 1

This document was created after closely examining the Common Core Learning Standards (CCLS) and the previous New York State Standards and updated after examining NYS' recently released [scope and sequence supports](#) and testing program [guidance](#). It provides a high-level CCLS-aligned scope and sequence for Mathematics that also takes into account the differences in and transition from the New York State Standards. The scope and sequence is aligned to the Common Core and demonstrates a focus on the major work of the grade¹, which the [State has indicated](#) will be the focus of next year's 3-8 State exams. This scope and sequence represents one way that a school may choose to organize and teach the full range of the standards and incorporate the State's [pre and post-test standards](#) guidance.

Unit 4: Place Value, Comparison, Addition and Subtraction of Numbers to 40 – (7 Weeks)

DESCRIPTION: Students will learn that the focus of adding and subtracting within 40 is on establishing “1 ten” as a new unit. Before students loosely grouped 10 objects to make 10. Now they transition to thinking of that 10 as a single unit (using 10 linker cubes stuck together, for example). Students will begin to see problems like $23+6$ that they can mentally push the “2 tens” in 23 over to the side and concentrate on the familiar addition problem $3+6$. The Mathematical Practices should be evident throughout instruction and connected to the content addressed in this unit. Students should engage in mathematical tasks that provide an opportunity to connect content and practices.

Standards

The standards listed below are **not** intentionally sequenced and should **not** simply be taught consecutively. Strong units weave these standards together in a thoughtful and coherent way. Schools and teacher teams can use this document to compare their current curriculum to and choose high leverage moments to enhance instruction.

Extend the counting sequence.

1.NBT.1: Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

Understand place value.

1.NBT.2: Understand that the two digits of a two-digit number represent amounts of tens & ones. Understand the following as special cases:

- c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight or nine tens (and 0 ones).

1.NBT.3: Compare two two-digit numbers based on meanings of the tens & ones digits, recording the results of comparisons with the symbols $>$, $=$, & $<$.⁵

Use place value understanding and properties of operations to add and subtract.

1.NBT.4: Add within 100, including adding a two digit number & a one digit number, & adding a two-digit number & a multiple of 10, using concrete models or drawings & strategies based on place value, properties of operations, &/or the relationship between addition & subtraction: relate the strategy to a written method & explain the reasoning used. Understand that in adding two digit numbers, one adds tens & tens, ones & ones: & sometimes it is necessary to compose a ten.⁶

1.NBT.5: Given a two digit number 100 or less, mentally find 10 more or 10 less than the number, without having to count: explain the reasoning used.

1.NBT.6: Subtract multiples of 10 in the range 10-100 from multiples of 10 in the range 10-100 (positive or zero differences) using concrete models or drawings & strategies based on place value, properties of operations, &/or the relationship between addition & subtraction: relate the strategy to a written method & explain the reasoning used.⁷

Scope and Sequence Sample: School Year 2012-13 – Grade 1

This document was created after closely examining the Common Core Learning Standards (CCLS) and the previous New York State Standards and updated after examining NYS' recently released [scope and sequence supports](#) and testing program [guidance](#). It provides a high-level CCLS-aligned scope and sequence for Mathematics that also takes into account the differences in and transition from the New York State Standards. The scope and sequence is aligned to the Common Core and demonstrates a focus on the major work of the grade¹, which the [State has indicated](#) will be the focus of next year's 3-8 State exams. This scope and sequence represents one way that a school may choose to organize and teach the full range of the standards and incorporate the State's [pre and post-test standards](#) guidance.

Unit 5: Identify, Compose, and Partition Shapes – (3 Weeks)

DESCRIPTION: Placed in between the two heavy-duty number units is a unit on geometry. The geometry unit puts necessary internalized time between the “within 40” unit and the “within 100” unit. It also gives students who may be more spatially oriented a chance to build confidence before heading back into arithmetic. The Mathematical Practices should be evident throughout instruction and connected to the content addressed in this unit. Students should engage in mathematical tasks that provide an opportunity to connect content and practices.

Standards

The standards listed below are **not** intentionally sequenced and should **not** simply be taught consecutively. Strong units weave these standards together in a thoughtful and coherent way. Schools and teacher teams can use this document to compare their current curriculum to and choose high leverage moments to enhance instruction.

Tell and write time and money.

1.MD.3: Tell & write time in hours & half-hours using analog & digital clocks.

Reason with shapes and their attributes.

1.G.1: Distinguish between defining & non-defining attributes (e.g., triangles are closed & three-sided) versus non-defining attributes (e.g., color, orientation, overall size): build & draw shapes to possess defining attributes.

1.G.2: Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, & quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, & right circular cylinders) to create a composite shape, & compose new shapes from the composite shape.

1.G.3: Partition circles & rectangles into two & four equal shares, describe the shares using the words halves, fourths, & quarters, & use the phrases half of, fourth of, & quarter of. Describe the whole as two of or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.

*Recognize and identify coins, their names, and their value.

Bridge Guidance: Concepts that would have been taught in earlier grades, according to the Common Core, but were not part of the New York State Standards. They should be considered and woven into units during transition years since the concepts were not previously addressed/addressed fully in the New York State Standards. We ask that you consider the needs of your students when deciding if it is necessary to teach these concepts. Please note: Bridge concepts are intended for instructional consideration when crafting a coherent sequence of instruction during the transitional years only and are not a part of SED's draft Test Program Guidance.

Standards

K.G.2 Correctly name shapes regardless of their orientations or overall size.

K.G.4 Analyze & compare two & three dimensional shapes, in different sizes & orientations, using informal language to describe their similarities, differences, parts (e.g., having sides of equal length).

K.G.6 Compose simple shapes to form larger shapes. For example, “Can you join these two triangles with full sides touching to make a rectangle?”

Scope and Sequence Sample: School Year 2012-13 – Grade 1

This document was created after closely examining the Common Core Learning Standards (CCLS) and the previous New York State Standards and updated after examining NYS' recently released [scope and sequence supports](#) and testing program [guidance](#). It provides a high-level CCLS-aligned scope and sequence for Mathematics that also takes into account the differences in and transition from the New York State Standards. The scope and sequence is aligned to the Common Core and demonstrates a focus on the major work of the grade¹, which the [State has indicated](#) will be the focus of next year's 3-8 State exams. This scope and sequence represents one way that a school may choose to organize and teach the full range of the standards and incorporate the State's [pre and post-test standards](#) guidance.

Unit 6: Place Value, Comparison, Addition and Subtraction of Numbers to 100 - (7 Weeks)

DESCRIPTION: Students will focus on “adding and subtracting within 100” which is different than the “within 10” and within 40” units. The new level of complexity is to also introduce the addition and subtraction algorithms using simple examples and familiar units of 10 made out of linker cubes. The Mathematical Practices should be evident throughout instruction and connected to the content addressed in this unit. Students should engage in mathematical tasks that provide an opportunity to connect content and practices.

Standards

The standards listed below are **not** intentionally sequenced and should **not** simply be taught consecutively. Strong units weave these standards together in a thoughtful and coherent way. Schools and teacher teams can use this document to compare their current curriculum to and choose high leverage moments to enhance instruction.

Extend the counting sequence.

1.NBT.1: Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

Understand place value.

1.NBT.2: Understand that the two digits of a two-digit number represent amounts of tens & ones. Understand the following as special cases:

- c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight or nine tens (and 0 ones).

1.NBT.3: Compare two two-digit numbers based on meanings of the tens & ones digits, recording the results of comparisons with the symbols $>$, $=$, & $<$.⁸

Use place value understanding and properties of operations to add and subtract.

1.NBT.4: Add within 100, including adding a two digit number & a one digit number, & adding a two-digit number & a multiple of 10, using concrete models or drawings & strategies based on place value, properties of operations, &/or the relationship between addition & subtraction: relate the strategy to a written method & explain the reasoning used. Understand that in adding two digit numbers, one adds tens & tens, ones & ones: & sometimes it is necessary to compose a ten.

1.NBT.5: Given a two digit number 100 or less, mentally find 10 more or 10 less than the number, without having to count: explain the reasoning used.

1.NBT.6: Subtract multiples of 10 in the range 10-100 from multiples of 10 in the range 10-100 (positive or zero differences) using concrete models or drawings & strategies based on place value, properties of operations, &/or the relationship between addition & subtraction: relate the strategy to a written method & explain the reasoning used.⁹

Tell and write time and money

1.MD.3: Tell & write time in hours & half-hours using analog & digital clocks.