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# PLACE VALUE: CLASSROOM IMPLEMENTATION USING THE NEW NAD MATH CORE CURRICULUM DOCUMENT

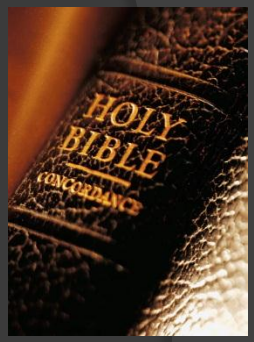
# Read the Essential Question

- Focus on the BIG IDEA.

- Choose some Bible texts or Bible stories to illustrate it.

# Apply the BIG IDEA throughout the topic of study.

- Have students make applications to Bible stories, their own lives, and to the math topic.




- Review the Essential Question and how the Big Idea relates to it.

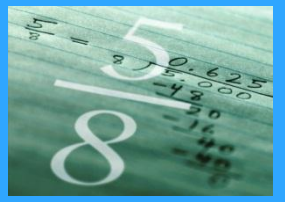
# Essential Question

**What does numerical reasoning involve and what does it demonstrate about God's world?**

**"But let everything be done in a way that is right and orderly."**
**I Corinthians 14:40 ICB**

# Big Idea

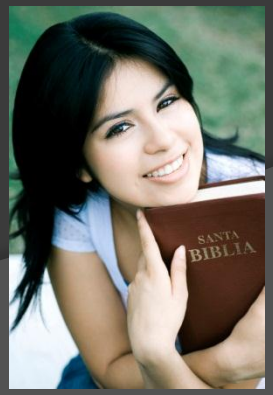
- **Numerical reasoning with whole numbers and fractions demonstrates dependability and order in God's world.**



- **Be my place of safety where I can always come. Give the command to save me. You are my rock and my strong, walled city. Psalm 71:3 ICB**

# Integrating Faith and Learning

- Find the main ideas in your Essential Questions and Big Ideas and Google them.  You can find scriptures, children's ministry ideas, object lessons, and experiments that apply these ideas and will enable the student to remember and grasp the new concepts.



# Bible Story

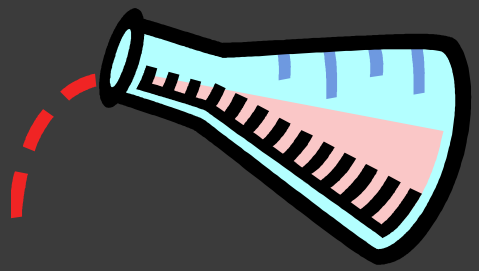
- Matthew 7:24-27

- The story of the wise man building his house upon the rock. (We can depend on God.)
- The foolish man building his house upon the sand.  (People are changeable.)

# Activity

- Dissolve 2 cups cornstarch in 1 cup of water. If the "goo" mixture won't form a ball when squeezed, add more cornstarch. The substance will immediately return to a liquid form after each time it is handled. You'll also need a fist-sized rock, a mixing bowl, and paper towels.

# Application

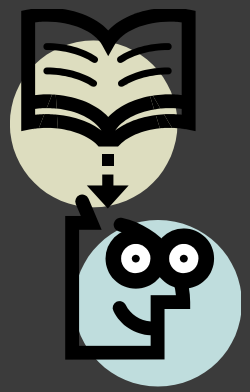


- The corn starch mixture changes from appearing to be a ball, back into a liquid form.

- The rock  reminds us that God doesn't change, and we can count on Him and His principles.

# Adventist Standards and the Common Core State Standards

- Almost all of the Adventist Standards are correlated to the Common Core State Standards.



- If you find your students are having a hard time with a concept, there are many resources that are now correlated to the Common Core State Standards online.

# A few Adventist Curriculum Differences from the Common Core

- SDA  Standards that were added include basic beginning skills in
- Time
- Calendar
- Money

- These were thought to be skills children should learn at home in the Common Core.

# Choose your grade levels - - - - - - - - - - - - - - - - - - -

## Numbers and Operations - Place Value

| Grade | Content | Skills (CCSSM alignment) |
|---|---|---|
| **Essential Question: What do numbers represent and how do they help us order and compare things in God's world?** | | Big Idea: Numbers represent an amount that helps us order and compare things in God's world. |
| **K** | Numbers | K.NO.1 Know number names and count up to 100 by ones and tens (K.CC.1,2)<br>K.NO.2 Read and write numbers 0 to 20 (K.CC.3)<br>K.NO.3 Count to tell the number of objects and be able to represent as a written numeral (K.CC.3,4,5)<br>K.NO.4 Compare number of objects between groups; compare written numerals between 1 and 10 (K.CC.6,7) |
| | Place Value | K.NO.5 Begin to organize objects up to 19 into groups of tens and ones (K.NBT.1) |
| **1** | Place Value | 1.NO.3 Understand and compare two-digit numbers organized as groups of tens and ones (1.NBT.2,3)<br>1.NO.4 Understand and mentally find ten more or ten less than a given two-digit number (1.NBT.5)<br>1.NO.5 Add and subtract multiples of ten within 100 using models or drawings (1.NBT.4,6) |
| **2** | Place Value | 2.NO.3 Understand and compare three-digit numbers organized as groups of hundreds, tens, and ones; use place value to understand addition and subtraction (2.NBT.1,4,9)<br>2.NO.4 Mentally add and subtract multiples of ten and multiples of a hundred within 1000 (2.NBT.8)<br>2.NO.5 Add and subtract within 1000 with regrouping using models or drawings (2.NBT.7) |
| **Assessments** | | Math Interviews; Checklists; Written Assessments; Student Demonstrations; Models and Drawings |
| **Essential Question: What does numerical reasoning involve and what does it demonstrate about God's world?** | | Big Idea: Numerical reasoning with whole numbers and fractions demonstrates dependability and order in God's world. |
| **3** | Place Value | 3.NO.1 Use place value understanding of up to five-digit whole numbers to round to the nearest 10, 100, and 1,000 (3.NBT.1) |
| **4** | Place Value | 4.NO.1 Use place value understanding of multi-digit whole numbers to round to any place up to millions (4.NBT.1,3)<br>4.NO.2 Read, write, compare, and understand whole numbers using standard, number name, and expanded forms (4.NBT.2) |

# Adjust to your needs – add columns such as resources and date

| Resources | Date | Grade | Content | Skills (CCSSM alignment) |
|---|---|---|---|---|
| | | | | |
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# Observe the Progression of Skills For example – Place Value

| |
|---|
| **K.NO.5 Begin to organize objects up to 19 into groups of tens and ones (K.NBT.1)** |
| **1.NO.3 Understand and compare two-digit numbers organized as groups of tens and ones (1.NBT.2,3)**<br>**1.NO.4 Understand and mentally find ten more or ten less than a given two-digit number (1.NBT.5)**<br>**1.NO.5 Add and subtract multiples of ten within 100 using models or drawings (1.NBT.4,6)** |
| **2.NO.3 Understand and compare three-digit numbers organized as groups of hundreds, tens, and ones; use place value to understand addition and subtraction (2.NBT.1,4,9)**<br>**2.NO.4 Mentally add and subtract multiples of ten and multiples of a hundred within 1000 (2.NBT.8)**<br>**2.NO.5 Add and subtract within 1000 with regrouping using models or drawings (2.NBT.7)** |

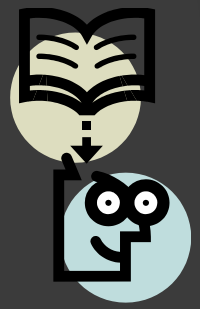
# Correlation to GO Math Series

**Numbers and Operations**

| Grade | Content | Skills (CCSSM alignment) | GO Math Lesson Correlation |
|---|---|---|---|
| 1 | Place Value | M1.NO.3 Understand and compare two-digit numbers organized as groups of tens and ones (1.NBT.2,3)<br>M1.NO.4 Understand and mentally find ten more or ten less than a given two-digit number (1.NBT.5)<br>M1.NO.5 Add and subtract multiples of ten within 100 using models or drawings (1.NBT.4,6) | Chapter 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 7.1, 7.2, 7.3, 7.4<br>Chapter 7.5<br>Chapter 8.2, 8.3, 8.4, 8.5 8.6, 8.7, 8.8, 8.9 |
| 2 | Place Value | M2.NO.3 Understand and compare three-digit numbers organized as groups of hundreds, tens, and ones;<br>use place value to understand addition and subtraction (2.NBT.1,4,9)<br>M2.NO.4 Mentally add and subtract multiples of ten and multiples of a hundred within 1000 (2.NBT.8)<br>M2.NO.5 Add and subtract within 1000 with regrouping using models or drawings (2.NBT.7) | Chapter 2.1, 2.2, 2.3, 2.4, 2.5, 2.11, 2.12, 4.4, 5.3<br>Chapter 2.9, 2.10<br>Chapter 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10 |
| 3 | Place Value | M3.NO.1 Use place value understanding of up to five-digit whole numbers to round to the nearest 10, 100, and 1,000 (3.NBT.1) | Chapter 1.2, 1.3, 1.8 |
| 4 | Place Value | M4.NO.1 Use place value understanding of multi-digit whole numbers to round to<br>any place up to millions (4.NBT.1,3)<br>M4.NO.2 Read, write, compare, and understand whole numbers using standard, number name,<br>and expanded forms (4.NBT.2) | Chapter 1.1, 1.5, 1.4<br>Chapter 1.2, 1.3 |

# For Single Grades

- Observe skills the students should have mastered upon entering your grade.
- Note the skills the students should master in your grade and choose teaching materials and resources.
- Reteach areas that were not mastered.
- Utilize concepts for enrichment opportunities from the grade above.

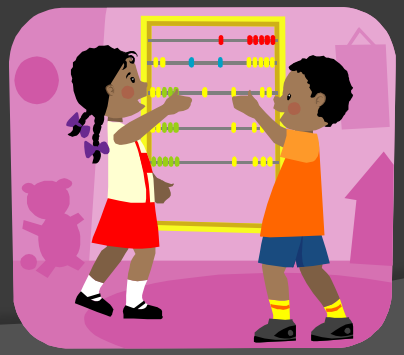


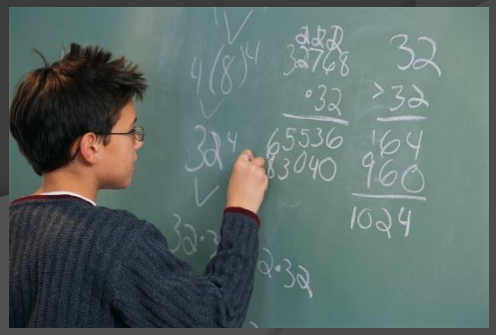
# For Multi-Grades

- When instructing lower grades, use this time to review concepts for the upper grade levels.
- Make connections, and show learning as a progression and extension of skills that have similar patterns.
- Practice until the skill has been mastered and assessed.
- Find areas that were weak and reteach.

# Find patterns and extensions

- Note what beginning concepts will be repeated at higher levels.
- Show the similarities and differences.
- Extend the concepts to advanced concepts.





# For Instance, in Place Value:

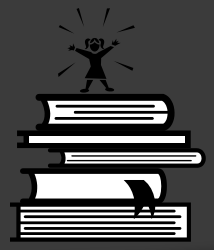
- Periods of 3 places are repeated with commas in between.
- Hundreds Tens Ones
- One Thousands
- Ten Thousands
- Hundred Thousands
- One Million
- Ten Millions
- Hundred Millions
- 321,321,321

# Utilize Resources Available

- There are video clips of teachers presenting topics at Khan Academy, YouTube or in individual Textbook Program sites.
- There are online resources with materials for students to learn the standard by using manipulatives, a worksheet, or an online activity.
- Use the Common Core correlation number to find additional resources.

# Assessments

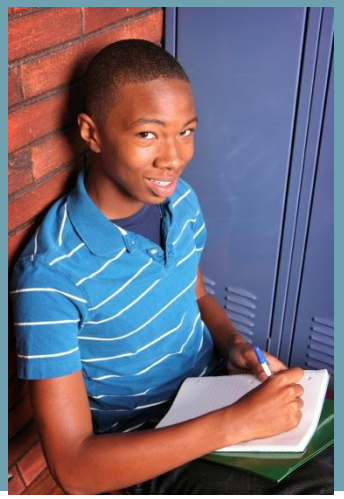
- There are many suggested assessment activities at the end of each strand.
- Determine which is the best for each topic.
- Apply appropriate assessments for each topic.
- Use assessment to provide intervention activities.



# Alternative Assessments

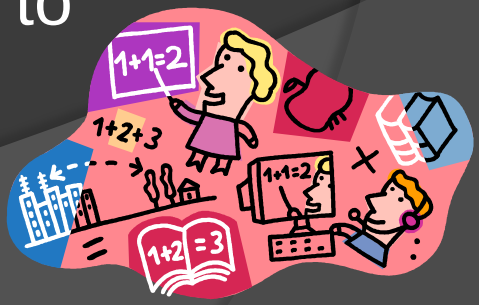

Assessments

**Journal Entries;**
**Class Discussions;**
**Written Assessments;**
**Open-ended Projects and Problems;**
**Oral Reports;**
**Virtual Models**



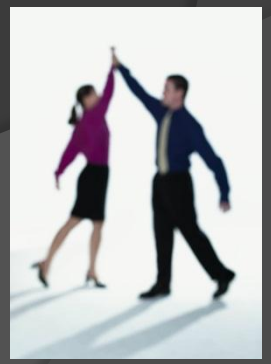
# Choose the best way to assess

- Math Talks and class discussions give informal review and allow different students to explain new concepts.
- Journal entries allow students to record vocabulary with definitions, examples, and summaries.
- Open-ended projects and virtual models enable students to make application of theoretical concepts.
- Written quizzes and tests may be used to check for mastery, accuracy, and if reteaching is needed.

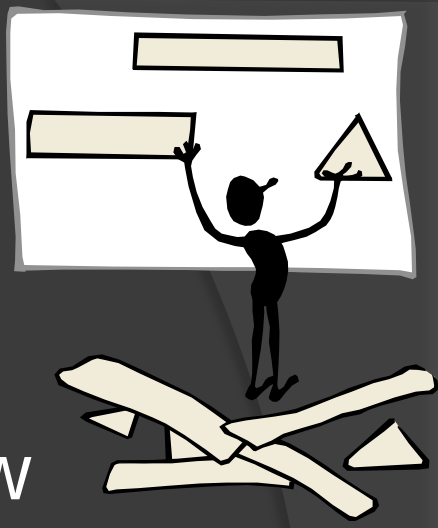


# Appreciate that now teachers can teach for mastery of topics.


- Teachers are given the opportunity to instruct in-depth resulting in mastery learning and opportunities to assess for mastery.
- Students are given the opportunity to master concepts over several days without jumping to a “new” topic the next day.
- Fewer topics are taught and mastered at each level so re-teaching time will be minimal in the subsequent years.



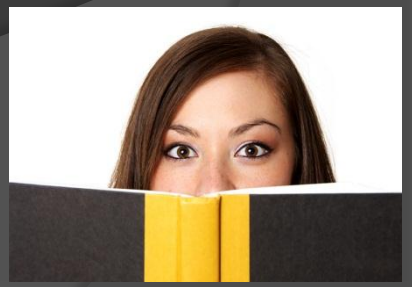
# Transitions



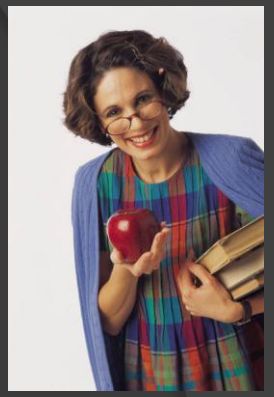
- As teachers start using the new curriculum plan, re-teaching and new instruction may be required to prepare students for the required learning at a specific grade level.
- Teachers may find some students ready to progress and others needing intervention.
- There are many online resources available to help in this transition.

# Best Practices

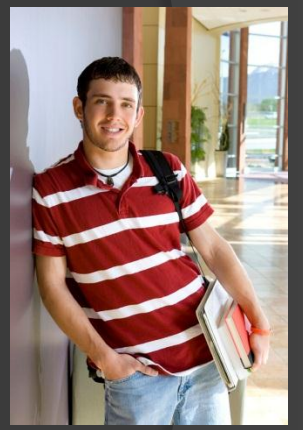
- By organizing skills using a progression of skills and topics, teachers ensure students are growing in their learning based on mastered skills.
- Teachers will find it possible and achievable to be freed from teaching from “the textbook” and expand the resources available based on students’ interests, needs, and learning styles.



# In Conclusion



- The Math Curriculum Document is flexible, teacher-friendly, and may easily be individualized for each teacher and their specific teaching levels and students' needs.



- Mastery learning is emphasized and this document enables students to learn topics in-depth.