PRE-K IMPLEMENTATION GUIDE

Everything you need to know to get the most out of the TouchMath Pre-K Program
Pre-K Program Implementation Guide

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The TouchMath philosophy may be stated in five easy words: REACH AND TEACH ALL LEARNERS. The educators who have developed and expanded the TouchMath Program throughout the last 40 years have worked constantly to meet this goal. Every TouchMath unit, module, and worksheet reflects their dedication.

The success TouchMath has experienced is largely due to its multisensory approach. It is unique in that it combines the use of the four major senses of seeing, saying, hearing, and touching with hands-on manipulatives and paper/pencil written activities. As students engage all of their senses, each individual within the group has the opportunity to assimilate information whether they are visual, auditory, or tactile/kinesthetic learners.

TouchMath activities are meticulously scaffolded and provide all learners with ample opportunities for success. As each skill is mastered, the next simple step is introduced. The TouchMath worksheets are clean and uncluttered with age-appropriate artwork. The variety, quantity, and quality of the activities provided make reinforcement immediately available on an as-needed basis. Testing and tracking materials provide instant feedback.

Teacher materials are straightforward and easy to use. Skills on each page are clearly defined, connected to the Common Core State Standards, and presented using specific methodology. Instructional strategies include real world connections, books to read, group and individual games, coloring, cutting-and-pasting, dot-to-dots, and a host of other inviting motivators.

The TouchMath materials in this unit may be used as a complete core program or as a supplementary approach for struggling students. The materials are effective in large group situations, in small groups, or for individual learners. Students master each concept as they see it, say it, hear it, touch it, learn it.
Overview of the TouchMath Pre-K Program.

The TouchMath Pre-K Program is designed to build the pre-K foundational skills that will lead to success in kindergarten. The Kindergarten Common Core State Standards have been used as a guide to define the skills that contribute to kindergarten achievement. For easy reference, the complete listing of the Kindergarten Standards may be found in the back of this guide. Each Module Guide lists the appropriate standard(s) as they are associated with the skills being taught. At the pre-K level, mastery of each skill is not the goal. The goal is exposure to the skills through experiential activities to build the foundation for kindergarten success.

The vocabulary within the Pre-K Program is included where appropriate in the Instructional Strategies. These vocabulary words will be used in kindergarten and it will be of benefit to the children if they are introduced in pre-K as the concepts are developed. They include:

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<tr>
<th>Readiness/Number Sense</th>
<th>Spatial Concepts</th>
<th>Number Concepts</th>
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Sequence of skills.

The Sequence of Skills is provided for an easy reference to all of the skills in the Pre-K Program. The skills are organized to mirror the order they are presented in the program. They are scaffolded from the concrete to the abstract to ensure understanding by the learners. Preparation for the Kindergarten Common Core State Standards is correlated to each skill.

The Sequence of Skills has many possible uses. You may find it is an easy way to track the skills you have taught. You could record dates to provide evidence of instruction. You might decide to use it as an overall Progress Monitoring Record for each student. You could make copies of the sheet for recording individual student performance. This information could be used for IEPs, parent conferences, and differentiated instruction.

The Sequence of Skills provides a clear overview of the readiness skills that pre-K children should experience to be prepared for success in kindergarten.

### NUMBER SENSE (Readiness)

#### Module 1

**Counting and Number Sense**

CCSS: K.CC.1, K.CC.4, K.CC.5

1. **Counting**
   - Count to 10 verbally
   - Count to 10 verbally from any number

2. **One-to-one correspondence**
   - Point to objects when counting
   - Count quantities of manipulatives
   - Count quantities of objects in pictures

3. **Numbers 2–5 using objects and shapes**
   - Use matching and counting to tell how many
   - Match number of fingers shown to objects
   - Represent number using manipulatives

4. **Compare sets of objects**
   - Identify equal and unequal sets
   - Verbally identify more, less, equal (same)
   - Make sets of objects equal

5. **Ordinal numbers first–fifth**
   - Recognize names given orally for ordinal positions
   - Verbally identify objects in each ordinal position in pictures

#### Module 2

**Comparing and Classifying**

CCSS: K.CC.5, K.CC.6, K.MD.1, K.MD.2, K.MD.3

1. **Compare two objects**
   - Long/short or tall/short
   - Large/small
   - Heavy/light
   - Over/under or above/below
   - Near/far

2. **Classify three objects/select an unlike object**
   - Tools
   - Transportation
   - Animals
   - Clothing
   - Utensils
   - Shapes

#### Module 3

**Sorting, Classifying, Graphing, and Patterning**

CCSS: K.MD.3

1. **Sort, classify, record results on simple graphs**
   - Sort up to six objects into two groups
   - Record results on a graph (vert. and horiz.)
   - Sort up to six objects into three groups
   - Record results on a graph (vert. and horiz.)

2. **Answer questions about a graph**
   - Tell which group has more or the most
   - Tell which group has less or the least
   - Tell when groups are equal
   - Order groups from smallest to largest

3. **Patterns using manipulatives and pictures**
   - Identify and add one more to AB patterns
   - Identify and add one more to AAB patterns
   - Identify and add one more to ABB patterns
   - Identify and add one more to ABB patterns using letters
SPATIAL CONCEPTS

Module 4
Identifying, Sorting, and Classifying 2-D Shapes
Circle, square, triangle, rectangle, rhombus, hexagon
1 Describe shapes by defining attributes
   • Count the number of sides
   • Count the number of corners (or points)
2 Identify shapes by name in the environment
   • Demonstrate that size is not a defining attribute
3 Sort and classify a given shape among a variety of shapes in an environment
   • Distinguish a given shape from other shapes
   • Match the size of a shape

Module 5
Identifying, Sorting, and Classifying 3-D Shapes and Coins
Sphere, cube, cone, cylinder, penny, nickel, dime, quarter
1 Describe shapes by defining attributes
   • Count the number of sides
   • Relate to 2-D figure
2 Identify shapes by name in the environment
   • Demonstrate that size is not a defining attribute
   • Sort and classify shapes
3 Use defining and non-defining attributes
   • Distinguish a given shape from other shapes
   • Match the size of a shape
4 Recognize coins
   • Identify the four coins by name
   • Identify the fronts and backs of the coins
   • Match the fronts and backs of the coins
   • Sort and classify a group of different coins

NUMBER CONCEPTS AND NUMERALS

Module 6
Representing Quantities and Numbers
CCSS: K.CC.4, K.CC.5
1 Represent quantities to 9 using manipulatives and TouchPoints
   • Associate numeral, quantity, and TouchPoints
   • Connect quantity and TouchPoint
2 Represent quantities to 9 using pictures and TouchPoints
   • Count objects in pictures
   • Associate objects in pictures to pictorial TouchPoints
3 Associate pictures, pictorial TouchPoints, and TouchPoints to 9
   • Count objects in three different representations
   • Relate the three representations
   • Demonstrate the correct Touching/Counting Pattern for TouchPoints
Examining the Pre-K box contents.

The box containing the TouchMath Pre-K Unit is designed for effortless organization, ease-of-use, and clutter-free storage. The inner box may be turned 180 degrees and slid into the outside box for easy examination and use of the materials inside. It will also easily slide straight in and out for space efficient storage.

In an upright position, the Pre-K box allows for easy access to materials while stored on a bookshelf or desktop; from a horizontal position, materials are within reach when stored in a drawer or filing cabinet.

Each module contains 25 reproducible student workmats (left), plus a complete Module Guide with Instructional Strategies and answer keys (right).

There is also one box of 108 geometric attribute manipulative shapes in the Pre-K Unit. These include six shapes in six colors and three sizes each. They are coordinated to be used with many of the worksheets in the units and also designed for individual or learning center team exploration.

Included are six readiness modules inside of the Pre-K Unit box. Each module title is printed on the module spine:

- Module 1—Counting and Number Sense
- Module 2—Comparing and Classifying
- Module 3—Sorting, Classifying, Graphing, and Patterning
- Module 4—Identifying, Sorting, and Classifying 2-D Shapes
- Module 5—Identifying, Sorting, and Classifying 3-D Shapes
- Module 6—Representing Quantities and Numbers

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- Module 5—Identifying, Sorting, and Classifying 3-D Shapes
- Module 6—Representing Quantities and Numbers

The code included on the outside of the Pre-K Unit will allow you to access TouchMath Green Editions — the online portion of the pre-K materials. These materials include the same pages available in this Pre-K Unit. They enable you to have computer fingertip access to all workmats and module guides anytime, anywhere for planning and preparation.

TouchMath TouchShapes [Included]  
Order extra sets!
Six modules. One complete program.

MODULE 1: Counting and Number Sense
This module focuses on Counting and Number Sense. It introduces the concept of one-to-one correspondence as it relates to counting from 1 to 5 and as it relates to comparing and constructing sets with 1-5 objects. Activities progress from placing objects on pictures while counting, to coloring, ringing, and making an X. The students are encouraged to find opportunities to count throughout the day. The last two pages of this module introduce the concept of ordinal numbers and positions from first to fifth. When this module is successfully completed, the students will be able to count, recognize, and compare 1 to 5 objects.

MODULE 2: Comparing and Classifying
This module focuses on Comparing and Classifying. Being able to classify and compare objects is an important starting point for young learners as they begin to develop key mathematical thinking skills. The Suggested Pre-Activities and workmats in this module deal specifically with the concepts of comparing the length and size of two objects, comparing two objects for relative position, and classifying objects by category. The students are encouraged to explore attributes that are alike and not alike in a variety of ways. When this module is successfully completed, students will be able to recognize, describe, and classify objects according to their characteristics or attributes.

MODULE 3: Sorting, Classifying, Graphing, and Patterning
This module focuses on Sorting, Classifying, Graphing, and Patterning. It extends the skills from Module 2 by introducing the concept of graphing the results of sorting and classifying in order to compare information. The Suggested Pre-Activities and first set of workmats provide simple graphing activities that give young students the opportunity to collect data and organize it in a variety of ways. The second set of workmats and Suggested Pre-Activities introduce the concept of patterns. Understanding and creating patterns helps young students begin to see order in their world. These workmats provide ample practice with AB, AAB, and ABB patterns. When this module is successfully completed, students will be able to answer simple graphing questions and recognize and reproduce simple patterns.

MODULE 4: Identifying, Sorting, and Classifying 2-D Shapes
This module focuses on Identifying, Sorting, and Classifying 2-D Shapes. The sorting and classifying activities extend the learning of Modules 2 and 3. The six featured shapes are circle, square, triangle, rectangle, rhombus, and hexagon. The Suggested Pre-Activities and workmats offer students multiple means of practice naming, describing, analyzing, constructing, and categorizing these shapes. Additionally, opportunities to find these shapes in the world around them are provided. The Pre-Activities use music, movement, arts and crafts, games, and stories to make learning about shapes engaging and fun. When this module is successfully completed, the students will be able to correctly identify, analyze, and name the six shapes. They will also be able to find representations of these shapes in their environment.

MODULE 5: Identifying, Sorting, and Classifying 3-D Shapes and Coins
This module focuses on Identifying, Sorting, and Classifying 3-D Shapes and Coins. The four featured shapes are sphere (ball), cube (box), cone, and cylinder. The Suggested Pre-Activities use music, movement, arts and crafts, and games to make learning engaging and fun. The first group of workmats offers students ample practice naming, describing, analyzing, and categorizing the shapes, plus opportunities to find them in the everyday world. The second group of workmats connects 3-D shapes to the real world by introducing pennies, nickels, dimes, and quarters as cylinders. When this module is successfully completed, students will be able to correctly identify, analyze, and name the four 3-D shapes and find representations of them in their environment. They will also recognize and name the four coins.

MODULE 6: Representing Quantities and Numbers
This module focuses on Representing Quantities and Numbers. It gives students the opportunity to apply the skills they have learned in the previous modules (one-to-one correspondence, counting and comparing objects, and recognizing numbers) to associating quantities of objects with written numbers. The Suggested Pre-Activities and workmats offer hands-on practice with multiple representations of numbers. When this module is successfully completed, students will be able to make the connection between concrete representations of numbers and the abstract representations of written numbers.
Look at the Module Guide.

The Pre-K Unit includes six modules. Each module includes a Module Guide. These six guides are the components that coordinate the lessons. The Module Guide in Module 1 contains a complete overview of the entire unit. Each of the other Module Guides provides a thumbnail of the contents for that module, identifies Instructional Strategies paired with the student workmats (including answer keys), and contains the Parent/Guardian Communication Letter(s) as well as the Progress Monitoring Record. These essential guides are organized for quick reference and easy use in a busy classroom. They contain:

- An overview that provides the module scope of content
- Preparation for the Kindergarten Common Core State Standards with a correlation for each module
- Objectives to define a focus for the skills presented
- Prerequisites that identify experiences needed prior to the lessons
- Vocabulary that emphasizes teacher language to be used in concept building
- Materials that will be necessary for the lessons
- Instructional Strategies matched with student workmats
- Tests as formative assessment tools
- Parent/Guardian Communication Letters and suggestions for parents
- A Progress Monitoring Record to track student progress and plan differentiated instruction
Support right at your fingertips.

Instructional Strategies are included in the Module Guides for each activity workmat in the module. They are designed to provide suggestions for the teacher to help facilitate the implementation of the TouchMath Program. The model for the strategies is a modified direct instruction structure that incorporates effective principles of teaching and learning. Meaningful repetition incorporates a variety of approaches to ensure multiple experiences for the learners. Incorporating math relevance in the child’s world is integral throughout the lesson presentations. As frequently as possible, the lessons are cross-curricular and use a variety of classroom settings such as circle time and center activities for practical use in a pre-K classroom. The strategies include:

- **Anticipatory Set**—activities to engage students in the lesson and show them the focus of the skills being presented
- **Suggested Pre-Activities**—concrete, hands-on activities that establish a foundation for the activities on the workmats
- **Guided Practice**—suggested implementation of the workmats, including directions, to be monitored by the teacher or in a small group with a paraprofessional or parent volunteer
- **Review and Closure**—a capsule of the learning and restatement of the skill
- **Real World Connections**—application of the skills in the learners’ world
- **Literature Connections**—sample books that are relevant to the skill taught
- **Differentiated Instruction:** Remediate, Reinforce, Challenge—activities to provide for individual student needs
- **Test Directions**—modifiable script for test administration
Build a foundation of key concepts.

The TouchMath Pre-K Unit contains 150 reproducible student workmats. They are organized by skill into six Pre-K Modules within the unit. There are 25 easy-to-use workmats in each module. Pre-K workmats are aligned with the Common Core State Standards and designed to prepare children for the skills that they will need as they begin kindergarten. All skills are transparent and organized from the concrete to the abstract—from simple to more complex. Although mastery is not expected at this level, all students will benefit from exposure to these skills.

The workmats are designed to incorporate classroom counters as well as the manipulatives provided in the TouchMath Pre-K Unit. They incorporate opportunities to discuss and build mathematical language naturally. The clean, uncluttered pages allow students space to develop tactile skills as they master new concepts. As children see, say, hear, and touch when they do math, they learn and remember.

Answer keys to all workmats may be found in the Module Guides along with the Instructional Strategies.
Literature Connections included in the Pre-K Module Guides.


Dear Parent/Guardian,

We will be using the TouchMath™ Program throughout the year. It is designed to provide step-by-step development of concepts in a real world approach. Your support is crucial to your child's success. I will send home a letter from the classroom indicating concepts taught, any manipulatives used, and ways you can reinforce learning at home. Letters are formatted to copy or print on your school's letterhead. Spanish versions are available online at TouchMath Green Editions.

In Module 1 the focus is on one-to-one correspondence in a real world approach. Your child will be learning to count and associate the names for things in order: first, second, third, fourth, fifth. Please use the vocabulary at home and encourage your child to use it.

The most important concept now is to identify particular characteristics of an object and to connect them in daily activities. Ask your child to count the spoons, forks, glasses, etc., and tell how many of each there are. Compare groups by pointing out that there are more here than there, fewer here than there, the same here as there, etc. Have your child compare two items. Count the objects in your grocery basket with your child and ask your child to sort the items by color/size/type of toy. Teach your child responsibility for putting away toys. Have them sort the items into baskets or onto shelves based on color, size, type of toy.

Activities we will be using in the classroom include using manipulatives, stuffed animals, and classifying objects—determining which belong together—by sorting manipulatives and coloring pictures to determine which object in a pair is heavy or light, large or small. Then we will progress to pictured words your child will be learning include: long/short, tall/short, large/small, heavy/ light, above/below, near/far, rough/smooth, and alike/different. Please use the vocabulary at home and encourage your child to use it.

The most important concept now is learning to count and associate counting with groups of objects. Ask your child to count the object, then write the number. Ask how many of each there are. Compare groups by pointing out that there are more here than there, fewer here than there, the same here as there, etc. Finally, we will introduce the names of objects in order: pig, and . Integrate talking about math into your daily activities. Have fun. See it! Say it! Hear it!

Parent/Guardian Tip:

Parent/Guardian Tip provides suggestions for at-home continued learning.

Parent/ Guardian Communication

Connect school to home.

This TouchMath Pre-K Unit contains seven Parent/Guardian Communication Letters. The first letter in Module 1 is an introductory letter informing parents/guardians that TouchMath will be used with students during the school year. The second letter in Module 1 is at the end of the module informing parents/guardians that their child has completed the necessary requirements to move on to the skill set in Module 2. Modules 2, 3, 4, 5, and 6 each have one letter at the end of the module to keep parents/guardians informed of their child's progress. The letters are designed to be used on school letterhead and signed by the teacher. Spanish versions are available online at TouchMath Green Editions.

All letters define the skill focus, describe activities that will be used in the classroom, identify vocabulary that will be used in the lessons and can be reinforced at home, provide a statement of proficiency, suggest ways parents/guardians can help at home, and offer a Parent/Guardian Tip with ideas for helping parents/guardians structure activities for their children.

Dear Parent/Guardian,

Your child has completed Module 1 of the TouchMath® Program, mastered the test, and your child has shown that he/she can compare two groups of objects and determine which is and different. Your child has completed Module 1 of the TouchMath™ Program, mastered the test, and your child has shown that he/she can compare two groups of objects and determine which is

Letters are formatted to copy or print on your school's letterhead.
Review. Assess. Record.

Regular assessment of specific skills is essential to ensure student success. At the pre-K level, formal assessments must be combined with ongoing classroom teacher observations. The formal assessments should measure what has been taught and occur upon completion of work on a skill. The results should be used for reteaching and remediation.

A test is included for each module in the Module Guide. It is to be used as an indication of skill proficiency. It may also be used as a tool to guide future planning by enhancing data-driven decision making and identification of needs for differentiated instruction.

A Progress Monitoring Record sheet is also included in each Module Guide in the unit. When used effectively, these monitoring records provide an ongoing snapshot of each student’s progress. The top of each sheet identifies each skill and the page on which it is taught in the module. Teachers may use any appropriate record keeping they wish (e.g., check marks, different colors for completed or needs help, letter grades, etc.). The monitoring record can be used as an individual instruction guide or be integrated into a larger data system that tracks and measures progress at the student, class, school, and district level. Information kept on these records is very helpful for parent/teacher conferences.

There is room to record individual student names, track lesson completion, and make notes on progress.
Access your Pre-K Unit from anywhere... plus a whole lot more!

This unit comes complete with a subscription to the online lesson management tool, TouchMath Green Editions. Your subscription gives you exclusive access to ALL of the printed material contained in this unit. The user-friendly interface allows you to print the student worksheets you need, when you need them—an excellent tool for lesson planning on the go. By taking advantage of your free subscription to TouchMath Green Editions, you can:

- Organize classroom clutter and plan lessons on the go based on individual student need
- Keep track of student progress with testing and recording pages, re-teach when necessary, and be prepared for parent/teacher conferences
- Create folders to plan lessons by timeframe (daily, weekly, monthly class lessons), topic, or individual student
- Save time by finding what you need, when you need it
- Reduce stress by letting TouchMath Green Editions do the heavy lifting, helping you create and manage only what is relevant for your students

To access/activate Green Editions:
2. Sign in using your touchmath.com account login information.
3. When you are logged in to your Green Editions account, you will see an area at the top of your dashboard to “Register new license.”
4. Enter the license key(s) contained on the side of your unit box and click “Activate.” Each unit license key will need to be entered and activated separately.
5. You now have access to your Green Edition materials and can begin to browse, customize, and lesson plan!
**Instructions for Use**

**TouchMath Green Editions quickstart guide.**

- Hit the tab at any time to return to this Dashboard screen.
- Access desired grade level content by using the drop-down menus.
- Add, delete, or print custom folders and lesson plans from the home page.
- See what content you have access to, view licensing, and purchase other Green programs.
- Activate new licenses.
- Maximize your Green Editions experience by viewing the instructional videos!
- Get quick access to all support materials and teacher guides.
- It’s easy to provide feedback or get technical support on your Green Edition Program(s).
- Access grade- and unit-specific module guides, progress monitoring, and parent communication letters.
- Easily search for and identify content based on topic.
- View individual activity sheets. Mouse-over for thumbnails, or double-click for detailed page view and instructional information.
- Click on title bar to expand or collapse each module or unit.
- Click and drag to add pages to custom folders. Ctrl+Click to select multiple pages at once. Use same technique to print or delete pages or folders.

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TouchShapes add to the learning fun.

Learning is expedited and recall is enhanced when students involve as many senses as possible in the learning process. The younger and less experienced the learners, the greater the need for them to be involved in experiential learning; they need to see, say, hear, and touch in order to master concepts.

The TouchMath Pre-K Unit includes a complete set of TouchMath TouchShapes designed to be used in conjunction with many of the reproducible workmats, or separately with other lessons. There are 108 transparent geometric shapes in the set. They include circles, triangles, squares, rectangles, rhombuses, and hexagons, for a total of six shapes. Each shape comes in three sizes of small, medium, and large and six colors of red, blue, yellow, green, orange, and purple. Many of the Pre-K workmats use exact pictorial representations of the shapes to allow students to place the shapes directly on the problems. The shapes are proportional in size so that smaller shapes may be used to build larger shapes. Their built-in versatility also makes them easy to use for counting, one-to-one correspondence, sorting, classifying, and patterning. They may also be used for demonstrations on an overhead projector.
Additional tools for the classroom.

Other TouchMath manipulatives not included in the unit are available in the *TouchMath Pre-K Complete Program*. These products are also available individually. They are identified as Optional TouchMath Materials in each module. Classroom posters are also offered.

An assortment of manipulatives is typically found in pre-K classrooms. These include (but are not limited to) the following examples: various counters, attribute objects, counting discs, linking cubes, sand toys, stuffed animals, blocks, puppets, etc.

Purchase these teaching aids individually or save big when you order them all as part of the *TouchMath Pre-K Complete Program*!
Make it easy on yourself!

Having the TouchMath Program in the classroom is one part of a successful overall strategy to implement quality math instruction. To ensure user fidelity and augment the effectiveness of the program, suggestions are included for classroom use.

Using the Classroom Guide will help maximize instruction time and individual learning time for each specific task. The Classroom Guide is divided into three sections, Classroom Set-Up, Program Implementation, and Suggested Program Implementation Tips. A checklist is included for easy reference.

TouchMath Classroom Setup
- Display all TouchMath classroom aids during math instruction and use them with the students.
- Provide centers utilizing the TouchMath TouchShapes, other manipulatives, and counters to reinforce learning.
- Have books identified in the Literature Connections available to be read during circle time.
- Place the progress monitoring tool in an easily accessible place.
- Store the box for the program on a shelf for later use.
- Establish small group areas for use with a paraprofessional or parent volunteer to differentiate instruction and provide individualized instruction.
- Schedule a paraprofessional to meet with students needing individual instruction.

TouchMath Program Implementation
- Incorporate the objectives in the Module Guide into your lesson plans and/or IEPs.
- Include the visual, auditory, and tactile/kinesthetic components in the Instructional Strategies in your lessons.
- Model using TouchMath materials, manipulatives, and counters during whole group instruction.
- Use the vocabulary words included for each objective in your instruction with the children.
- Note students’ adaptations of the program and share with paraprofessionals and parents.
- Assess students at the end of each module to monitor progress.
- Use time outside of math instructional time (art, snack time, transitions) to reinforce TouchMath strategies and provide meaningful repetitions.
- Incorporate the skills in the TouchMath Program throughout the day. Calendar activities during circle time are ideal opportunities.
- Send home the completed workmats to keep parents informed of the program.
- Send home the Parent/Guardian Communication Letter upon completion of each module.

TouchMath Program Implementation Tips
- **TouchPoints**: Provide explicit instruction to master the touching and counting patterns.
- **Use of the workmats**: Use only the workmats that are needed to advance the learning of the individual students.
- **Practice**: Use enough pages to provide meaningful repetition of the skill for the developmental level of the student.
- **Amount of time**: In general, structure activities within the two to two-and-a-half times the learner’s developmental age (e.g., If the student is four years old developmentally, activities will be most effective if they are eight to ten minutes.). Circle time and center activities provide opportunities for additional experiences. Since there are 150 pages of activities included, using one page per day will provide ample opportunities for experiential learning throughout the year.
- **Manipulatives**: Integrate the use of concrete materials into the workmat activities to maximize multiple learning styles and needs. The TouchShapes are designed to be used in conjunction with many of the activities. They offer abundant opportunities to sort and classify by various attributes.
- **Instructional Strategies**: Modify the Suggested Pre-Activities and directions for Guided Practice. Implement those that work for you and your learners.
Classroom guide checklist.

- All TouchMath teaching aids are used during math instruction.
- Centers have TouchMath TouchShapes and other counters.
- Books from the Literature Connections are available during circle time.
- Progress Monitoring Record is in an accessible place.
- Box for the program is stored.
- Small group areas are set up.
- Paraprofessionals or parent volunteers are scheduled.
- Objectives from the Module Guide are included in lesson plans and IEPs.
- Visual, auditory, and kinesthetic components are included in lesson plans.
- Modeling with TouchMath materials is incorporated in large group instruction.
- Vocabulary words are included in instruction.
- Students are assessed at the end of each module.
- TouchMath strategies are reinforced throughout the day.
- Completed workmats are sent home regularly.
- Parent/Guardian Communication Letters are sent home at the end of each module.
- Explicit instruction with TouchPoints is provided.
- Workmats are identified and used for meaningful repetition.
- Time is allocated based on the developmental level of the learner.
- TouchMath TouchShapes are integrated into the workmat activities.
- Instructional Strategies are modified for the learners.
The Common Core State Standards (CCSS) have been developed based on two decades of research about learning mathematics. The research included comparison of the United States to other countries. This analysis compared not only student performance, but also instructional programs. As a result, two themes have emerged as paramount in building effective programs: (1) standards must have greater focus and coherence, and (2) standards must guide the learners in understanding mathematics.

Standards for Practice as well as Standards for Content are parts of the Common Core State Standards. The emphasis in early childhood programs is to be on number and on geometry/spacial sense. Through clearly defined instruction that guides learners in the acquisition of mathematical language and concept development, higher achievement in analyzing solutions is the expected outcome.

Identification of the Standards for Mathematical Practice and Standards for Content are listed below. No pre-K Standards are available. Preparation for Kindergarten Standards is the intent of the TouchMath Pre-K Program.

### Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

### Kindergarten Common Core State Standards Content

#### Counting & Cardinality

**Know number names and the count sequence.**

- **K.CC.1.** Count to 100 by ones and by tens.
- **K.CC.2.** Count forward beginning from a given number within the known sequence (instead of having to begin at 1).
- **K.CC.3.** Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects).

**Count to tell the number of objects.**

- **K.CC.4.** Understand the relationship between numbers and quantities; connect counting to cardinality.
  - When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.

- **K.CC.5.** Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

- **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 and counting strategies.

- **K.CC.7.** Compare two numbers between 1 and 10 presented as written numerals.
Operations & Algebraic Thinking

Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

K.OA.1.—Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g. claps), acting out situations, verbal explanations, expressions, or equations.

K.OA.2.—Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

K.OA.3.—Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1).

K.OA.4.—For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.

K.OA.5. Fluently add and subtract within 5.

Number & Operations in Base Ten

Work with numbers 11–19 to gain foundations for place value.

K.NBT.1.—Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (such as 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

Measurement & Data

Describe and compare measurable attributes.

K.MD.1.—Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.

K.MD.2.—Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.

Classify objects and count the number of objects in each category.

K.MD.3.—Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

Geometry

Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).

K.G.1.—Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.

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

K.G.3.—Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”).

Analyze, compare, create, and compose shapes.

K.G.4.—Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length).

K.G.5.—Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.

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?”
TouchMath is an evidenced-based, multisensory approach to teaching all skills and concepts in elementary math curriculum. This multisensory approach is consistent with foundational educational research and has been proven effective across educational settings, various student demographics, and all different student abilities. TouchMath incorporates a See It, Say It, Hear It, and Touch It approach to learning each math skill introduced to ensure that the learner is engaged at his level of understanding and the way he best learns information.

TouchMath is the only program that uses the actual numeral as a manipulative by having TouchPoints (concrete level) and uses visual cues (pictorial/representative) throughout the program eventually removing visual cues and TouchPoints so the student can demonstrate a symbolic/abstract comprehension of the skill.

The TouchMath Program supports and connects both conceptual and procedural learning.

White Papers, Case Studies, Action Research, and Quasi-Experimental Design Studies have been conducted related to the effectiveness of the TouchMath Program. All of the research provides evidence of improved achievement for general education and special education students at all levels.

To view the studies, please visit www.TouchMath.com/Research.
Connect with TouchMath online!

Visit TouchMath.com

By visiting our Web site, www.TouchMath.com, you can quickly and easily learn more about TouchMath and our family of classroom programs. Find detailed descriptions and free sample pages of all grade-level programs, learn how and why TouchMath is effective, browse research papers and testimonials validating the program’s effectiveness, watch instructional videos, and more.

Social Media

TouchMath has also embraced social media as a way to keep you informed. There are plenty of ways to stay up to speed with the latest and greatest, and receive valuable information that will help you and your students succeed in the classroom!

- Receive special offers and exclusive discounts
- Have access to free downloadable worksheets
- Get the latest news and information on programs and products
- Have the ability to ask questions of fellow educators and TouchMath experts
- Share and receive best practices, teaching strategies, and program adaptations
- View instructional videos and testimonials
- See what your peers are saying about TouchMath