San Diego Unified School District

Instructional Module to Enhance the Teaching of

HARCOURT

# Math

California Edition

# Grade K

# Module 1 - Modified

## *Getting Ready for Kindergarten*
## *Sorting and Classifying*

- WORK IN PROGRESS -

San Diego City Schools
Instruction and Curriculum Division
MATHEMATICS CURRICULUM MAP – KINDERGARTEN

Working Document

# MODULE 1 – SORTING AND CLASSIFYING
## Modules represent individual units of study that lead to essential learnings

**THREADS THROUGHOUT THE YEAR:**
***The threads represent ongoing learning opportunities in which students should be actively engaged throughout all units of inquiry during the school year. These should not be isolated to any one particular unit of inquiry.***
**Students will be provided opportunities to:**
- Develop understanding of numbers and the number system and use their understanding to solve problems and recognize reasonable results.
- Use mathematical reasoning to solve problems.
- Communicate their mathematical thinking by using words, numbers, symbols, graphs and charts., and translate between different representations
- Express generalizations of patterns and relationships.
- Make connections among mathematical ideas and between other disciplines.
- Develop and use strategies, skills, and concepts to solve problems.
- Use appropriate tools as vehicles to learn mathematical concepts.

***These are essential learnings that represent bigger ideas/concepts:***
- Students recognize and name figures based on global, visual/holistic charactertics of the figure. (Van Heile, level 0).
- Students recognize that objects can be sorted using one or more than one attribute.
- Students can describe/communicate how objects are the same or different.

***These are essential questions that learners ask themselves in order to achieve the essential learnings:***
- How can I classify/sort a pair or a group of objects?
- How do I know when an object doesn't belong in a group?
- How can I describe the similarities/differences of a pair or a group of objects?
- How can I sort/classify objects using one or more than one attribute at a time?
- How do I communicate to others my process for classifying and sorting?

**Resources:** Van de Walle, Chapter 9, 115-128, 132, Chapter 11, pp. 156–158, Chapter 13, pp. 201–205; *Mathematics Resource Book*, pp. 14-16

# Harcourt Math: Grade K
# Module 1

Getting Ready for Kindergarten
Days A-H
8 days
Sorting and Classifying
12 Days

| | |
|---|---|
| Getting Ready for Kindergarten<br>8 days<br>(Optional) | Getting Ready for Kindergarten<br>• Inside, Outside<br>• Top, Middle, Bottom<br>• Before, After, Between<br>• Above, Below<br>• Over, Under<br>• Rote Counting<br>• Colors<br>• Shapes |
| Module 1<br>Sorting and Classifying<br>12 days | Chapter 1<br>• Lesson 1.1 Alike<br>• Lesson 1.2 Sort by Color<br>• Lesson 1.3 Sort by Shape<br>• Lesson 1.4 Sort by Color, Shape, and Size<br>• Lesson 1.6 Use Logical Reasoning<br>• Lesson 1.7 Problem Solving<br>• Literature Connection<br>• Sorting with a Venn Diagram<br>• Assessment |

# Harcourt Math: Grade K
# Module 1

Getting Ready for Kindergarten
Days A-H
8 days
Sorting and Classifying
Days 1 – 12

In order for kindergarten students to have access to the mathematics concepts that begin on Day 1, 8 days of "Getting Ready for Kindergarten" concepts have been built into the pacing schedule. These days are labeled A – H. During these 8 days, teachers are referred to the Harcourt Kindergarten Teacher's Edition for lesson planning. These 8 days are optional. If students have a mastery of these concepts, teachers begin Day 1 of the module.

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|---|---|---|---|---|
| **Day A**<br>Getting Ready for Kindergarten, Inside, Outside<br>GR1 | **Day B**<br>Getting Ready for Kindergarten, Top, Middle, Bottom<br>GR2 | **Day C**<br>Getting Ready for Kindergarten, Before, After, Between<br>GR3 | **Day D**<br>Getting Ready for Kindergarten, Above, Below<br>GR4 | **Day E**<br>Getting Ready for Kindergarten, Over, Under<br>GR5 |
| **Day F**<br>Getting Ready for Kindergarten, Rote Counting<br>GR6 | **Day G**<br>Getting Ready for Kindergarten, Colors<br>GR 7 | **Day H**<br>Getting Ready for Kindergarten, Shapes<br>GR 8 | | |

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|---|---|---|---|---|
| **Day 1**<br>Unit 1<br>Lesson 1.1 | **Day 2**<br>Unit 1<br>Lesson 1.2 | **Day 3**<br>Unit 1<br>Lesson 1.3 | **Day 4**<br>Unit 1<br>Sort by Color, Shape, and Size | **Day 5**<br>Unit 1<br>Lesson 1.4 |
| **Day 6**<br>Unit 1<br>Lesson 1.6 | **Day 7**<br>Unit 1<br>Lesson 1.7 | **Day 8**<br>Unit 1<br>Lesson 1.7 | **Day 9**<br>Unit 1<br>Lit. Connection | **Day 10**<br>Unit 1<br>Venn Diagram |
| **Day 11**<br>Unit 1<br>Assessment | **Day 12**<br>Unit 1<br>Assessment | | | |

  

**ORDER OF UNITS – Grade K**
**2006-2007 School Year**
**TRADITIONAL CALENDAR**

| Month | Module | Number of Days |
|---|---|---|
| **September**<br>19 instructional days | Getting Ready for Kindergarten | 8 days |
| | Module 1: Sorting and Classifying | 11 days |
| **October**<br>22 instructional days | Module 1: Sorting and Classifying | 1 days |
| | Module 2: Patterns | 10 days |
| | Module 3: Matching and Counting | 11 days |
| **November**<br>16 instructional days | Module 3: Matching and Counting | 4 days |
| | Module 4: Numbers 0 to 5 | 12 days |
| **December**<br>11 instructional days | Module 4: Numbers 0 to 5 | 3 days |
| | Module 5: Numbers 6 to 10 | 8 days |
| **January**<br>21 instructional days | Module 5: Numbers 6 to 10 | 7 days |
| | Module 6: Geometry and Equal Parts | 14 days |
| **February**<br>18 instructional days | Module 7: Numbers 10 to 30 | 16 days |
| | Discretionary Day | 2 days |
| **March**<br>22 instructional days | Module 8: Money | 13 days |
| | Module 9: Measurement | 9 days |
| **April**<br>16 instructional days | Module 9: Measurement | 4 days |
| | Module 10: Time | 12 days |
| **May**<br>22 instructional days | Module 11: Exploring Addition | 15 days |
| | Module 12: Exploring Subtraction | 7 days |
| **June**<br>13 instructional days | Module 12: Exploring Subtraction | 10 days |
| | Discretionary Days | 3 days |

**ORDER OF UNITS – Grade K**
**2006-2007 School Year**
**YEAR ROUND CALENDAR**

| Month | Module | Number of Days |
|---|---|---|
| **September**<br>19 instructional days | Getting Ready for Kindergarten | 8 days |
| | Module 1: Sorting and Classifying | 11 days |
| **October**<br>22 instructional days | Module 1: Sorting and Classifying | 1 day |
| | Module 2: Patterns | 10 days |
| | Module 3: Matching and Counting | 11 days |
| **November**<br>16 instructional days | Module 3: Matching and Counting | 4 days |
| | Module 4: Numbers 0 to 5 | 12 days |
| **December**<br>11 instructional days | Module 4: Numbers 0 to 5 | 3 days |
| | Module 5: Numbers 6 to 10 | 8 days |
| **January**<br>12 instructional days | Module 5: Numbers 6 to 10 | 7 days |
| | Module 6: Geometry and Equal Parts | 5 days |
| **February**<br>18 instructional days | Module 6: Geometry and Equal Parts | 9 days |
| | Module 7: Numbers 10 to 30 | 9 days |
| **March**<br>21 instructional days | Module 7: Numbers 10 to 30 | 7 days |
| | Module 8: Money | 13 days |
| | Discretionary Day | 1 day |
| **April**<br>4 instructional days | Module 9: Measurement | 4 days |
| **May**<br>22 instructional days | Module 9: Measurement | 9 days |
| | Module 10: Time | 12 days |
| | Discretionary Day | 1 day |
| **June**<br>21 instructional days | Module 11: Exploring Addition | 15 days |
| | Module 12: Exploring Subtraction | 6 days |
| **July**<br>14 instructional days | Module 12: Exploring Subtraction | 11 days |
| | Discretionary Days | 3 days |

  

# Harcourt Math: Grade K
# Module 1

## Independent Learning Stations

**Sorting Everyday Stuff** (Harcourt TE 13B)
Objective: To sort everyday objects into groups and then re-sort them into subgroups.
Materials: A variety of different items to sort. Attribute Links, Pattern Blocks, Color Tiles, Connecting Cubes, Counting Bears, Crayons, Markers, Scrap Paper, Rocks, Keys, Leaves, Buttons, Shells, Coins, Nuts, Bolts, Washers, Marbles

- Put sets of objects into containers or baggies in groups of about 20
- Have students decide on a way to sort the objects into groups
- Students should be able to describe the attributes of the groups
- Have students sort the same objects another way

Other Suggestions (If materials are available):
**Magnet Mania** (Harcourt TE 1E)
**Block Center** (Harcourt TE 1E)
**Sorting for Art** (Harcourt TE 7B)
**Coin Colors** (Harcourt TE 13B)
**Center Sort and Cleanup** (Harcourt TE 15B)
**Float or Not Float** (Harcourt TE 17B)

### To create a working climate, you may want to consider these following procedures:

- Let students know your expectations for working with the materials
- Let the students choose where to work
- Allow the students to choose to work alone or with a partner
- Expect the students to be accountable for working hard
- Allow the students to move from place to place whenever they are ready to work with something else

**Note:**
When learning stations are introduced, they remain in place for an extended period of time and are disbanded gradually, one at a time, as new centers are introduced. Students benefit from repeated exposure to the same task.

It is not necessary for **all** students to experience **all** stations-particularly when the concepts being explored are the same at all stations. When a student visits a station multiple times, he/she does not get lost with the directions and is able to concentrate on the concept.

  

# Harcourt Math: Grade K
# Module 1

## Literature Connections

**In back of Teacher's Edition**
**Read-Aloud Anthology**
"A Lost Button" by Arnold Lobel p.AN11

"Caps for Sale" by Esphyr Slobodkina p.AN17

**In Harcourt Kit:**
A Pair of Socks by Stuart Murphy
Harcourt, 1996

The Toys by Sarah Holliday
Harcourt Math Readers

**Suggested Trade Books to Reinforce Concepts**
**(May be available at your school or local library)**
Exactly the Opposite by Tana Hoban
Greenwillow, 1990

Is it Red? Is it Yellow? Is it Blue? by Tana Hoban
Morrow, 1987

Is it Rough? Is it Smooth? Is it Shiny? by Tana Hoban
Greenwillow, 1994

How Many Snails? by Paul Giganti, Jr.
Morrow, 1994

The Button Box by Margarette S. Reid
Puffin, 1995

  

# Harcourt Math - Kindergarten
## Day 1 – Chapter 1, Lesson 1.1

| | |
|---|---|
| LESSON FOCUS | How objects are alike and not alike |
| CALIFORNIA STANDARD | **Algebra and Functions:**<br>**1.1** Identify, sort, and classify objects by attribute and identify objects that do not belong to a particular group. |
| PURPOSE OF LESSON/ESSENTIAL QUESTIONS | • *How can I classify/sort a pair or a group of objects?*<br>• *How can I describe the similarities/differences of a pair or a group of objects?*<br>• *How can I sort/classify objects using one or more than one attribute at a time?* |
| ROUTINE<br>Materials:<br>• 2" x 6" construction strips in two colors, each with a child's name | **Suggestion: (TE 1D)** Daily Routine **Sorting Children's Names**<br>Choose one way to sort the cards. |
| LAUNCH | **Socks That Are Alike (TE 5B)**<br>Read ***A Pair of Socks***. Introduce vocabulary "alike" and "not alike".<br>**Problem of the Day: (TE 5A)**<br>Class discusses 2 to 3 pairs of students.<br>Introduce attribute links and work mats. |
| EXPLORE<br><br>Materials:<br>For partners –<br>• Attribute Links<br>• Workmat 1 (TR70) | **The Task (TE 5A)**<br>Whole class works in partners with a bag of attribute links and work mats.<br>Give students exploration time with teacher observation.<br>Teacher guides/observes/takes notes/confers with students. |
| SUMMARIZE | **Revisit the Essential Questions:**<br>• *How can I classify/sort a pair or a group of objects?*<br>• *How can I describe the similarities/differences of a pair or a group of objects?*<br>• *How can I sort/classify objects using one or more than one attribute at a time?*<br>**Guiding Questions:**<br>• *How are the attribute links alike?*<br>• *How are the attribute links not alike?* |
| INDEPENDENT LEARNING STATIONS | **Introduce Learning Station-Sorting Everyday Objects**<br>See beginning of Module for list of Stations |
| HOMEWORK (Optional) | **Sock Sort Concentration**<br>Game from: *Module Games and Activities for Home* packet<br>Suggestion: Workbook Pages 3-6 |

# Harcourt Math – Kindergarten
## Day 2 – Chapter 1, Lesson 1.2

| | |
|---|---|
| LESSON FOCUS: | Sort by Color |
| CALIFORNIA STANDARD | **Algebra and Functions:**<br>**1.1** Identify, sort, and classify objects by attribute and identify objects that do not belong to a particular group. |
| PURPOSE OF LESSON/ESSENTIAL QUESTIONS | • *How can I classify/sort a pair or a group of objects?*<br>• *How can I describe the similarities/differences of a pair or a group of objects?*<br>• *How can I sort/classify objects using one or more than one attribute at a time?* |
| ROUTINE<br>Materials:<br>• Name Cards from Day 1 | **Suggestion: (TE 1D)** Daily Routine **Sorting Children's Names**<br>Choose another way to sort the cards. |
| LAUNCH | **People Sorting**<br>Call 2 students to the front of the group and sort them according to their clothing color. (For example: Say, "This will be the red group, and on this side will be the blue group.") Call another student wearing either color to the front and ask class to point to the group that the student should go. Repeat with 2-3 more students. Ask class to look at sorted groups and tell what they notice ("red" group, "blue" group, might be wearing other colors, also, might be all girls in one group, etc.). |
| EXPLORE<br><br>Materials:<br>• Attribute Links<br>• Workmat 1 (TR70) | **The Task (TE 7A)**<br>Whole class works in partners with a bag of attribute links and work mats.<br>Give students exploration time with teacher observation.<br>Teacher guides/observes/takes notes/confers with students. |
| SUMMARIZE | **Revisit the Essential Questions:**<br>• *How can I classify/sort a pair or a group of objects?*<br>• *How can I describe the similarities/differences of a pair or a group of objects?*<br>• *How can I sort/classify objects using one or more than one attribute at a time?*<br>**Guiding Questions:**<br>• *How are the attribute links in this group alike?*<br>• *How are the attribute links in the group not alike?*<br>• *How did you sort your attribute links?* |
| INDEPENDENT LEARNING STATIONS | **Sorting Everyday Objects** |
| HOMEWORK (Optional) | Suggestion: Workbook pages 7-8 |

  

# Harcourt Math - Kindergarten
## Day 3 – Chapter 1, Lesson 1.3

| | |
|---|---|
| LESSON FOCUS: | Sort by Shape |
| CALIFORNIA STANDARD | **Algebra and Functions:**<br>**1.1** Identify, sort, and classify objects by attribute and identify objects that do not belong to a particular group. |
| PURPOSE OF LESSON/ESSENTIAL QUESTIONS | • *How can I classify/sort a pair or a group of objects?*<br>• *How can I describe the similarities/differences of a pair or a group of objects?*<br>• *How can I sort/classify objects using one or more than one attribute at a time?* |
| ROUTINE<br>Materials<br>• Name Cards from Day 1 | **Suggestion: (TE 1D)** Daily Routine **Sorting Children's Names**<br>Choose another way to sort the cards. |
| LAUNCH<br><br>Materials:<br>• Attribute Links (1 of each) | **Problem of the Day (TE 9A)**<br>If volunteers sort by only one attribute (i.e. color), teacher states, "Another way to sort is by……."<br>Continue sorting until all ways to sort the shapes (size, color, shape) have been accomplished. |
| EXPLORE<br><br>Materials:<br>• Attribute Links<br>• Workmat 2 (TR 71) | **The Task (TE 9A)**<br>Whole class works in partners with a bag of attribute links and work mats.<br>Give students exploration time with teacher observation.<br>Teacher guides/observes/takes notes/confers with students. |
| SUMMARIZE | **Revisit the Essential Questions:**<br>• *How can I classify/sort a pair or a group of objects?*<br>• *How can I describe the similarities/differences of a pair or a group of objects?*<br>• *How can I sort/classify objects using one or more than one attribute at a time?*<br>**Guiding Questions:**<br>• *How are the attribute links in this group alike?*<br>• *How are the attribute links in the group not alike?*<br>• *How did you sort your attribute links?* |
| INDEPENDENT LEARNING STATIONS | **Sorting Everyday Objects** |
| HOMEWORK (Optional) | Suggestion: Workbook pages 9-10 |

  

# Harcourt Math - Kindergarten
## Day 4 – Chapter 1

| | |
|---|---|
| LESSON FOCUS | Sort by Color, Shape, or Size |
| CALIFORNIA STANDARD | **Algebra and Functions:**<br>**1.1** Identify, sort, and classify objects by attribute and identify objects that do not belong to a particular group. |
| PURPOSE OF LESSON/ESSENTIAL QUESTIONS | • *How can I classify/sort a pair or a group of objects?*<br>• *How can I describe the similarities/differences of a pair or a group of objects?*<br>• *How can I sort/classify objects using one or more than one attribute at a time?*<br>• *How do I communicate my process for classifying and sorting?* |
| ROUTINE<br>Materials<br>• Name Cards from Day 1 | **Suggestion: (TE 1D)** Daily Routine **Sorting Children's Names**<br>Choose another way to sort the cards. |
| LAUNCH<br>Materials:<br>• Attribute Links | Show variety of attribute links to students and ask, "How can these be sorted?<br>Continue sorting until all ways to sort the shapes (size, color, shape) have been accomplished. |
| EXPLORE<br>Materials:<br>• Attribute Links<br>• Workmat 2 (TR 71) | **Open Sort**<br>Give partners attribute links and workmats. Have students sort attribute links according to size, shape, or color. Whole class works on task in partners. |
| SUMMARIZE | **Revisit the Essential Questions:**<br>• *How can I classify/sort a pair or a group of objects?*<br>• *How can I describe the similarities/differences of a pair or a group of objects?*<br>• *How can I sort/classify objects using one or more than one attribute at a time?*<br>• *How do I communicate my process for classifying and sorting?*<br>Select a few students to share their work.<br>**Guiding Questions:**<br>• *How did you decide to sort your attribute links?*<br>• *How did you know that these attribute links belong in this group?* |
| INDEPENDENT LEARNING STATIONS | **Sorting Everyday Objects** |
| HOMEWORK (Optional) | Suggestion: Workbook pages 11-12 |

  

# Harcourt Math - Kindergarten
## Day 5 – Chapter 1, Lesson 1.4

| | |
|---|---|
| LESSON FOCUS: | Sort by Color, Shape, or Size |
| CALIFORNIA STANDARD | **Algebra and Functions:**<br>**1.1** Identify, sort, and classify objects by attribute and identify objects that do not belong to a particular group. |
| PURPOSE OF LESSON/ESSENTIAL QUESTIONS | • *How can I classify/sort a pair or a group of objects?*<br>• *How can I describe the similarities/differences of a pair or a group of objects?*<br>• *How can I sort/classify objects using one or more than one attribute at a time?*<br>• *How do I communicate my process for classifying and sorting?* |
| ROUTINE<br>Materials<br>• Name Cards from Day 1 | **Suggestion: (TE 1D)** Daily Routine **Sorting Children's Names**<br>Choose another way to sort the cards. |
| LAUNCH | Show variety of attribute links to students and ask, "How can these be sorted into three groups? |
| EXPLORE<br><br>Materials:<br>• For partners- Sets of Attribute Links<br>• Three-Column Sort Workmat (Attached Blackline) | **Deciding How to Sort (TE 11B)**<br>Give partners Three-Column Sort Workmat and a set of attribute links. Have one student place a different attribute link in the top of the grid. The partner sorts the links according to the one in the top of each section. The partner tells why he/she is placing the link in that group. Students then switch roles. |
| SUMMARIZE | **Revisit the Essential Questions:**<br>• *How can I classify/sort a pair or a group of objects?*<br>• *How can I describe the similarities/differences of a pair or a group of objects?*<br>• *How can I sort/classify objects using one or more than one attribute at a time?*<br>• *How do I communicate my process for classifying and sorting?*<br>Select a few students to share their work.<br>**Guiding Questions:**<br>• *How did you choose your three groups?*<br>• *How did you know that these attribute links belong in this group?* |
| INDEPENDENT LEARNING STATION | **Sorting Everyday Objects** |
| HOMEWORK (Optional) | Suggestion: Workbook pages 13-14 |

  

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