Kolbe Academy
Home School

KINDERGARTEN
MATHEMATICS
Singapore Math®

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Singapore Math® K
COURSE TITLE: Mathematics

COURSE TEXTS:
Early Bird Kindergarten Mathematics (Standards Edition), Activity Book A, 2008, Singapore Math® (T4300A)
Early Bird Kindergarten Mathematics (Standards Edition), Activity Book B, 2008, Singapore Math® (T4300C)

SUGGESTED SUPPLEMENTAL MATERIALS/TEXTS:
At the beginning of each week is list of suggested materials for each lesson. These materials are not mandatory, but will help in the demonstration and hands-on exploration of topics covered in this course. Many of these items can be found around your house. Keep your eyes open for objects that can be repurposed for these lessons. Here are some of the suggested materials that are frequently used.

- Connecting Cubes such as Unifix Cubes or Linking Cubes
- Storybooks such as: *How Long is Your Foot?*, *Goldilocks and the Three Bears*, or *The Three Little Pigs*
- Countable items such as counters, cubes, buttons, pencils, coins, etc.
- Solid Blocks (Cube, Rectangular Box Shape, Cone, Sphere, Cylinder, and Prism)
- Bendable Drinking Straws
- Craft Sticks
- Pipe cleaners or *Wikki Stix* (these can be found online or at local school supply store)
- Play dough
- Play money
- Play food
- Weighing balance (store bought or handmade)

INTERNET: The internet can be easily used as a source for supplemental material. Lyrics to various math songs or math poems/stories can be found online using a basic search for ‘kindergarten math’. At the time of publication, the following web sites were found to be useful.

- [www.softschools.com/grades/kindergarten.jsp](http://www.softschools.com/grades/kindergarten.jsp)
- [www.kidport.com/gradek/math/mathindex.htm](http://www.kidport.com/gradek/math/mathindex.htm)
- [www.kidzone.ws/math/kindergarten.htm](http://www.kidzone.ws/math/kindergarten.htm)
- [www.donnayoung.org/math](http://www.donnayoung.org/math)

COURSE DESCRIPTION:
*Early Bird Kindergarten Mathematics* (Standards Edition) is an activity-based curriculum that is aimed at building a strong foundation in mathematics for students using hands-on explorations and fun-filled lessons.

*Early Bird Kindergarten Mathematics* (Standards Edition) is aligned with both the standards of the California Board of Education and the nations newly adopted Common Core Standards for mathematics. The curriculum covers and exceeds all of the kindergarten concepts in these two standards. Your child will be fully prepared for first grade math upon the completion of this program.

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The text that correlates with this course plan, *Early Bird Kindergarten Mathematics*, introduces the material in a manner that is consistent with the development of children at this age. All concepts are first introduced using concrete examples and hands on explorations. Then, pictorial representations of these same concepts are presented. Lastly, the children are able to progress to a more advanced abstract stage, in which only numbers and symbols are used. This Concrete -> Pictorial -> Abstract model allows the child to interact with the concepts in a more meaningful way. In addition, Singapore Math® is presented in such a way that concepts build on one another. Students will need to master each skill before progressing into the more difficult topics. This approach allows students the chance to revisit topics previously discussed while expanding on the foundation that had been laid in earlier units. It is our hope that you will keep these pedagogical approaches in mind as you choose which activities you will use to teach various lessons.

**SCOPE AND SEQUENCE**

**Quarter 1 – Textbook A**
- Unit 1: Match and Sort
- Unit 2: Numbers to 5
- Unit 3: Numbers to 10
- Unit 4: Order

**Quarter 2 – Textbook A**
- Unit 5: Shapes
- Unit 6: Patterns
- Unit 7: Length and Size
- Unit 8: Weight
- Unit 9: Capacity
- Unit 10: Compare Sets

**Quarter 3 – Textbook B**
- Unit 11: Compare Numbers
- Unit 12: Numbers to 20
- Unit 13: Number Bonds
- Unit 14: Addition
- Unit 15: Subtraction

**Quarter 4 – Textbook B**
- Unit 16: Addition and Subtraction
- Unit 17: Numbers to 30
- Unit 18: Time
- Unit 19: Numbers to 100
- Unit 20: Money

**SKILLS TO BE DEVELOPED:**
- Readiness for first grade
- Write numbers from 0 to 100
- Count to 100 by ones, twos, fives, and tens
- Compare numbers 1 to 10 as greater than, less than, or equal to
- Order and place value
- Addition
- Subtraction
- Sort, compare, and find patterns with objects and shapes
- Identify and describe shapes (two-dimensional and three-dimensional)
- Measurement
- Time and Money

**COURSE PLAN METHODOLOGY:**

Kolbe Academy has worked diligently to create the best possible course plans with the home schooling family in mind. Remember, however, that our program is intended to be flexible. Per the principle of subsidiarity, these
course plans are a suggested course of study. As the teacher, you should adapt and modify these course plans to meet the individual learning needs of your child. Do not feel obligated to follow these course plans exactly.

In the course plan that follows, Early Bird Kindergarten Mathematics is represented by the abbreviation KMA for textbook A and KMB for textbook B. The Activity Guide that goes with this course will be represented by the abbreviation AGA for Activity Guide A, and AGB for Activity Guide B. These textbooks are meant to be consumable and thus written in by the student.

Several Black Line Masters have been developed for this course, which are referred to as BLMs throughout the course plan. They are numbered the same as the lesson that they correspond with. For example BLM 1.4 is used in conjunction with lesson 1.4. The BLMs are provided to insure that you have the tools necessary to effectively teach each of the lessons contained within this course. You can find all the BLMs at the following link: http://www.kolbeforum.org/Math/Kindergarten/.

At the beginning of each week is a list of the goals and objectives that are going to be covered, as well as any notes needed for that week. This section will also contain a list of all of the suggested materials needed to complete the activities included within that week’s lessons. The specific daily assignments for the student are outlined in the following lines indicated by the DAY 1, DAY 2, DAY 3, DAY 4, and DAY 5 abbreviations. Parent daily guidelines are given to the right of the student assignments. These guidelines are meant to be flexible. Feel free to combine lessons when able, or slow down where desired. A family’s schedule can and should vary as needed. The assignments included as a recommended part of this course are indicated by the symbol □, and the assignments/activities that are included for reinforcement or enrichment are indicated with the symbol ◆. Use the supplemental assignments as needed to insure your child fully grasps the concepts covered. It is important to establish a strong foundation of number sense in these early years. This foundation will lead to a better understanding of concepts in years to come.

This mathematics course contains 36 weeks broken into four 9-week quarters. Week 9 is considered a review week. Your student may not need all of Week 9 for review. You can use this time to catch up if necessary and then go over the subject matter. Instead of exams there is a skills checklist included at the end of this course plan that is broken down by quarter and units. This can be used to keep track of skills mastered as the year unfolds.

Begin every class with a prayer. This is a good way to help the child memorize new prayers. Repeat the same ones every day until they are known. Be sure to explain the meanings of each prayer. Repetition in all areas of study is most important, including prayer.

On the first day of each month (or the closest school day to the first) have the student create a calendar using the template located in the BLMs. Have the student fill in the numbers in the proper places. You can use this calendar each morning that you do school to review with your child what day/month/season/year it is. The repetition of daily calendar time is an excellent way to provide structure and reinforcement for your child.

On the first day of school introduce a container (jar, can, etc.) that will be used to keep track of how many days of school the student has attended. Each day that you do school have the student put one marble or penny in the container. At the end of each week have the student count how many marbles/pennies he has in the
container. On the 100th day of school have a little celebration. Before you get to the 100th day of school you can go to the library and find books about the 100th day of school.

Literature and music can be worked into daily work easily to enhance the lessons. Some songs or books will be suggested throughout the course plan, but the list is endless. Keep an eye out for books at the library that could be helpful in presenting various topics covered in this course.
FIRST QUARTER

Legend:

- Assignments and activities that are a recommended part of the course

- Additional supplemental assignments and/or activities that can be used as reinforcement for a skill not yet mastered or enrichment for a child that wants to go that extra step.

<table>
<thead>
<tr>
<th>WEEK 1</th>
<th>Week 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Book</strong></td>
<td><strong>Lessons Covered</strong></td>
</tr>
<tr>
<td>KMA</td>
<td>Lessons 1.1 – 1.5 Pages 1-10</td>
</tr>
<tr>
<td><strong>Suggested Materials for the week:</strong></td>
<td></td>
</tr>
<tr>
<td>1) Textbook A and Activity Guide A</td>
<td></td>
</tr>
<tr>
<td>2) BLM 1.5a, and BLM 1.5b</td>
<td></td>
</tr>
<tr>
<td>3) Scissors and glue</td>
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<tr>
<td>4) Crayons and drawing paper</td>
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<tr>
<td>5) Objects normally found around the house that are the same or similar by color, attribute, or pattern, such as toys, clothes, etc.</td>
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<tr>
<td>6) A variety of objects in different shades of the same color (Paint samples from the hardware store work well for this)</td>
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<tr>
<td>7) Matching cup and saucer sets</td>
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<tr>
<td>8) Beads and two pieces of string (shoelaces work well)</td>
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<tr>
<td><strong>Notes</strong></td>
<td></td>
</tr>
</tbody>
</table>

Student Daily Assignments

Parent Daily Guidelines

- Introduction: Start with concrete objects by playing with various toy animals. Show your child two animals that are identical and ask him if “They are exactly the same.” Then show the student two animals that are similar, but not exactly the same and have him explain why they are slightly different. (Introducing vocabulary)

- Read and follow the directions for Lesson 1.1 on page 1-2 in **KMA**. On page 2, have your child use his index finger to draw
<table>
<thead>
<tr>
<th>Lesson 1.1 Extension Activity</th>
<th>After discussing page 1, have your child draw two sea creatures and color them. When finished, ask “Are the two animals exactly the same? Why or why not?”</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGA Activity 1 Page 1</td>
<td>For further extension with lesson 1.1. Remember to first have your child use his index finger to draw the lines connecting the two animals before using a pencil to do so.</td>
</tr>
<tr>
<td><strong>DAY 2</strong></td>
<td><strong>KMA Lesson 1.2 Do pages 3-4</strong></td>
</tr>
<tr>
<td></td>
<td>• Introduction: Start with concrete objects by placing pairs of objects separately around the room that are the same or very similar. Show your child one of the objects and have them search the room for the other matching object. Repeat this task for each of the pairs that you have placed. Have the child find other objects that are the same in the room (for example two panels of curtains on either side of a window). Encourage your child to use the language “These are exactly the same.” or “These are not exactly the same because…” Vocabulary is one of the objectives of this unit.</td>
</tr>
<tr>
<td></td>
<td>• Read and follow directions for Lesson 1.2 on page 3 and 4 in KMA. Rotate the page to show the child that they are the same if he is having a difficulty seeing items in different directions.</td>
</tr>
<tr>
<td>Lesson 1.2 Extension Activity</td>
<td>Ask your child to draw and color a picture of their bedroom. Encourage them to include pairs of objects in their picture for you to have to find when they are finished.</td>
</tr>
<tr>
<td>AGA Activity 2 Pages 2-3</td>
<td>For further extension with lesson 1.2 complete activity 2 in AGA. Cut out the objects on page 93. Have your child match the objects in the picture with the cutouts.</td>
</tr>
<tr>
<td><strong>DAY 3</strong></td>
<td><strong>KMA Lesson 1.3 Do pages 5-6</strong></td>
</tr>
<tr>
<td></td>
<td>• Read and follow the directions for lesson 1.3 on page 5 in KMA. After identifying concrete objects in the room, look at the picture on page 5 with your child. Point to an object that is yellow and ask him what color it is. Next have him point to all of the yellow objects. Then discuss the color of other objects on the page.</td>
</tr>
<tr>
<td></td>
<td>• To introduce the concepts on page 6, give your child a box that contains objects of different colors. Have them match up the objects in the box by color. After successfully completing this task, turn to page 6 in KMA; read and follow the directions at the bottom of the page. Guide them to say “The car and the garage have the same color. They are both.”</td>
</tr>
<tr>
<td>Lesson 1.3 Extension Activity</td>
<td>Give your child some paint samples of various colors. Ask him to hold up the color blue. Point out that there are different shades of blue in the choices offered, but that all would have been correct. Repeat with several other colors. You can then use the paint samples to make a color chart or artistic collage to be displayed. After completing the collage, have him talk about the various colors in the art work.</td>
</tr>
<tr>
<td>DAY 4</td>
<td>AGA Activity 3 Pages 4-5</td>
</tr>
<tr>
<td>DAY 4</td>
<td>KMA Lesson 1.4 Do pages 7-8</td>
</tr>
<tr>
<td>DAY 5</td>
<td>Lesson 1.4 Extension Activity</td>
</tr>
<tr>
<td>DAY 5</td>
<td>KMA Lesson 1.5 Do pages 9-10</td>
</tr>
<tr>
<td></td>
<td>AGA Activity 4 Page 6</td>
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<tr>
<td></td>
<td>Lesson 1.5 Extension Activity</td>
</tr>
</tbody>
</table>
## COURSE PLAN

### Mathematics Grade K

#### WEEK 2

<table>
<thead>
<tr>
<th>Book</th>
<th>Lessons Covered</th>
<th>Weekly Breakdown</th>
</tr>
</thead>
</table>
| KMA   | Lessons 1.6 – Unit 1 Review Pages 11-21 | Goals: Child will be able to continue to identify objects by attribute, color, pattern, and function, as well as be able to determine objects that do not belong in a set. Lastly, child will be able to sort and classify objects by attributes.  
Notes: As weeks progress the parent guidelines will become more streamlined. It is important, however, to continue to introduce each lesson with a concrete example and tie up lessons with some level of review of concepts covered to check for mastery. The activities mentioned in this course plan are meant to be in addition to the ones presented in the textbook. The KM textbook provides ample ways to incorporate this flow from the concrete to pictorial or abstract concepts.  
Suggested Materials for the week  
1) Textbook A and Activity Guide A  
2) BLM 1.7 and BLM 1.R  
3) Scissors and Glue  
4) Crayons and Drawing paper  
5) Old magazines  
6) Objects normally found around the house to be sorted into various categories |

#### Student Daily Assignments

| DAY 1 | KMA Lesson 1.6 Do pages 11-12 | Brainstorm with the child objects that go together as an introduction. (i.e. shoes and socks.) |
|       | Lesson 1.6 Extension Activity | As an extension you can have your child make a collage with pictures of items cut out of magazines or newspapers to show objects that are used together. |

<p>| DAY 2 | KMA Lesson 1.7 Do pages 13-14 | For each object that is crossed out have your child suggest a group that the object could belong to, for example the sausage could belong to a group of foods. |
|       | Lesson 1.7 Extension Game | Using BLM 1.7, select a letter at random and give your child 30 seconds to find a name, a fruit, an animal, and an American state that starts with that letter. Repeat with other letters. This could easily be played with the |</p>
<table>
<thead>
<tr>
<th>DAY 3</th>
<th>KMA Lesson 1.8 Do pages 15-16</th>
<th>family to see which person/team was able to come up with the most correct responses in each round.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AGA Activity 5 Page 7</td>
<td>Start with concrete examples by having a number of school supplies and toys in a pile. Have your child sort the items into two categories before moving onto the textbook. If your child has a difficult time visually grouping the items on page 15, you can photocopy the page and cut the items out for him to physically move around and place into two groups.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For further extension with lesson 1.8 complete activity 5 in AGA. Cut out the sheep on page 93 and sort them into groups on page 7.</td>
</tr>
<tr>
<td>DAY 4</td>
<td>KMA Lesson 1.9 Do pages 17-18</td>
<td>Use concrete objects around the house to sort into two categories (flowers or fruit, blocks or balls, etc.) before moving onto the textbook.</td>
</tr>
<tr>
<td></td>
<td>Lesson 1.9 Extension Activity</td>
<td>Have the student interview various family and friends and use the data collected to divide the people into two groups. Make charts of the results. Try to think of as many different charts as possible (Examples could be boy/girl, Child/Adult, favorite color, prefers crunchy peanut butter or creamy, etc.)</td>
</tr>
<tr>
<td></td>
<td>KMA Unit 1 Review Do pages 19-21</td>
<td>Read and follow the directions to complete the review on pages 19-21 in KMA.</td>
</tr>
<tr>
<td></td>
<td>Unit 1 Extension Activity</td>
<td>If needed, now is a good time to go back and complete any extension activities that time did not allot for earlier in the unit.</td>
</tr>
<tr>
<td></td>
<td>Unit 1 Assessment</td>
<td>After your child completes the review on pages 19-21, assess his comprehension by having him help you fold laundry. Have your child match socks that go together and sort clothes according to which family member the items belong to. After assessing your child, mark completed tasks on the skills checklist at the end of the course plan.</td>
</tr>
</tbody>
</table>
# WEEK 3

<table>
<thead>
<tr>
<th>Book</th>
<th>Lessons Covered</th>
<th>Weekly Breakdown</th>
</tr>
</thead>
</table>
| KMA  | Unit 2 Lessons 2.1 – 2.8 Pages 22 - 37 | **Goals:** Child will be able to count up to 5, recognize numbers 1-5, arrange objects in different ways, read a picture graph, count and record objects using a picture graph, tell number of objects in a small set without counting, know that the number remains the same regardless of arrangement, and write the number 1.  
**Suggested Materials for the week:**  
1) Textbook A and Activity Guide A  
2) BLM 2.1, BLM 2.4, and BLM 2.8  
3) Scissors and glue  
4) Old magazines  
5) Crayons and drawing paper  
6) CD player and children’s songs of animals (ex: Animal Action on Tumble Tots CD)  
7) Counters such as beads, cubes, or ice cream sticks  
8) Stamping ink sets and blocks to be used as stamp (Be careful that you are using washable ink, many are not.) |

| DAY 1 | KMA Lesson 2.1  
Do pages 22-23 |  
- Play an animal song as intro such as Animal Action on Tumble Tots CD.  
- After intro, read and follow directions on page 22 in KMA. Cut out number cards from BLM 2.1 and use them to find correct number of objects between (directions on page 23 in KMA). Do page 23 in KMA. |
|       | KMA Lesson 2.2  
Do pages 24-25 |  
- Read and follow directions for 2.2 on page 24-25 in KMA. |
|       | Lesson 2.1 and 2.2 Extension Activity |  
- Take a walk with your child around the yard. Have him count objects that you two encounter. (number of stairs, trees in front yard, windows on house, etc.) |

| DAY 2 | KMA Lesson 2.3  
Do pages 26-27 |  
- Introduce child to names of fingers by opening with the nursery rhyme Where is Thumbkin? Read and follow directions on page 26 and 27 of KMA. |
|       | Lesson 2.3 Extension Activity |  
- Make a counting book with your child. Have your child write the numbers 1-5 on each page. Then cut out objects from old magazines and put 1 object on the 1 page and 2 objects on the 2 page, etc. When |
| DAY 3 | KMA Lesson 2.4  
Do pages 28-29 | Open the book about things that are different. Using BLM 2.4, cut out three tiles and talk about different ways they can be arranged. Add a fourth tile. Use the tiles to arrange the shapes on page 28 of KMA. Have your child trace or glue tiles onto page 28 in an arrangement that is different from the shape shown. Read and follow directions on page 29 in KMA using the same tiles.

Lesson 2.4 Extension Activity | Use stamping sets and blocks, stamp the blocks on paper to make patterns for the numbers 3, 4, and 5. |

| DAY 4 | KMA Lesson 2.5  
Do pages 30-31 | Read and follow directions on pages 30-31 in KMA. |

KMA Lesson 2.6  
Do pages 32-33 | Read and follow directions on pages 32-33 in KMA. |

Lesson 2.5 and 2.6 Extension Activity | Have your child make his own picture graph with a bag of toys. He can draw pictures of the toys under each column. For further extension, make the graph on the computer. |

AGA Activity 1  
Page 8 | Use the cutouts on page 95, and paste them onto page 8 in AGA to fill in the picture graph. |

| DAY 5 | KMA Lesson 2.7  
Do pages 34-35 | Read and follow directions on pages 34-35 in KMA. |

KMA Lesson 2.8  
Do pages 36-37 | Complete page 36 in KMA. Use number cards on BLM 2.8 and counters to make groups 1, 2, 3, 4, and 5. Complete page 37 in KMA. |

Lesson 2.8 Extension Activity | Using number cards on BLM 2.8, make the leaf collage explained on page 36. |