RightStart™ Mathematics

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LEVEL A LESSONS

Second Edition

Activities for Learning, Inc.

A special thank you to Kathleen Cotter Clayton for all her work on the preparation of this manual.

Note: Rather than use the designations, Kindergarten, First Grade, etc., to indicate a grade, levels are used. Level A is kindergarten, Level B is first grade, and so forth.

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Lesson 1: Subitizing 1 to 3

OBJECTIVES:

1. To learn the term *left*
2. To learn finger sets and tally marks for quantities 1 to 3
3. To recognize quantities 1 to 3 without counting

MATERIALS:

1. Music for "Yellow is the Sun" (Appendix p. 1, available via QR code, or online at RightStartMath.com)
2. *Yellow is the Sun* book
3. Colored 1" × 1" tiles
4. Tally sticks (craft sticks)

ACTIVITIES FOR TEACHING:

Left hand. Ask the child to raise her *left* hand. Ask her to point to her left foot, left eye, and other left body parts.

The Yellow is the Sun song and book. Teach the following song with motions. Use only the left hand for numbers 1 to 5.

Yellow is the Sun

Yellow is the sun.
This is only one. (Raise one finger.)

Why is the sky so blue?
Let me show you two. (Raise two fingers.)

Salty is the sea.
One more and it's three. (Raise three fingers.)

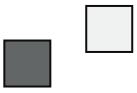
Hear the thunder roar.
Here's the mighty four. (Raise four fingers.)

Ducks will swim and dive.
My whole hand makes five. (Raise five fingers.)

Read the book *Yellow is the Sun* to the child.

Quantity of 2. Show two fingers with your left hand and ask the child to show two with her left hand. Place 2 tiles in front of the child. Ask her how many she sees. [2]

Two fingers.



Two tiles.

Place the tally sticks within reach of the child. Tell her to take 2 tally sticks (without counting). Next ask her to lay them out as shown. Also clap 2 times and ask her how many claps she heard. [2]

Two tally sticks.

EXPLANATIONS:

Overview Videos are available to guide and support you. Each weekly video will summarize four lessons. Use this QR code or go to RightStartMath.com/resources/teaching-support.

To learn which is their left hand, some children benefit by wearing a bracelet on their left hand.

Subitizing (SOO bih tighz ing) is perceiving at a glance the number of items without counting. Five-month-old babies can subitize up to three objects and many 12-month-old babies up to four objects. It is easier for children (and adults) to subitize quantities than to count them.

Subitizing allows the child simultaneously to see the whole and the individual items. In counting the child focus on one item at a time. To foster their natural subitizing skills, children should be discouraged from counting small collections.

The left hand is used for numbers less than five to correlate with reading from left to right. It does not matter which fingers of the left hand are used.

For demonstrating fingers 1–5, use your left hand if you are sitting next to a child and your right hand if you are facing the child.

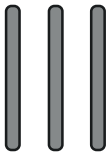
The use of fingers to show a quantity gives the child a tactile feel and a visual image of quantity. Most parents teach their children to show their ages with fingers. We will continue this pattern to 10.

Research shows children who can represent quantities with their fingers score better in upper elementary math.

ACTIVITIES FOR TEACHING CONTINUED:

Quantity of 3. Ask the child to show 3 fingers. If she is not sure, show her, but do not count. Ask her to show 3 with the tally sticks.

Three.



Three.

Place 3 tiles in front of the child. Ask: How many do you see? [3]

Three tiles.

Rearrange the tiles and ask: Now how many tiles do you see? [3]

Quantity of 1. Place one tile where the child can see it. Ask: How many? [1] Have her show it with her fingers and with the tally sticks.

Finding given quantities. Ask the child to look around the room and name one of something. [for example, one table]

Repeat for finding two and three objects. [three chairs]

Disagreeing. Place 3 tiles to one side of the child and 2 tiles on the other side. Ask the child if she agrees there are 3 tiles on both sides. [no]

After a short discussion about the number of tiles, add one more tile to the side with 2, and ask her if she agrees now that they both have 3. [yes]

Changing quantities. Start with 3 tiles; ask the child to show the number with her fingers. Now ask her to watch. Remove a tile and ask her to say the new number. [2]

Repeat adding or removing tiles, but do not exceed 3.

In conclusion. Ask the child to show on her fingers: 2, 3, and 1.

EXPLANATIONS CONTINUED:

It is very important that the child feels comfortable disagreeing with you during math time. The primary role of the teacher is to foster thinking in the child, not merely give information.

For this lesson there is no worksheet. Worksheets are used only when needed in the course of the lesson or when independent work will benefit the child.

Lesson 2: Subitizing 4 and Patterning

OBJECTIVES:

1. To learn finger sets and tally marks for 4
2. To recognize quantities 1 to 4 without counting
3. To recognize and continue a simple pattern

MATERIALS:

1. Music for "Yellow is the Sun"
2. *Yellow is the Sun* book
3. Finger cards, cut apart (Appendix p. 2)*
4. Tally sticks
5. Tiles

ACTIVITIES FOR TEACHING:

Warm-up. Continue teaching the song, "Yellow is the Sun."

Yellow is the Sun

Yellow is the sun.
This is only one. (Raise one finger.)

Why is the sky so blue?
Let me show you two. (Raise two fingers.)

Salty is the sea.
One more and it's three. (Raise three fingers.)

Hear the thunder roar.
Here's the mighty four. (Raise four fingers.)

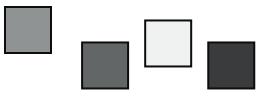
Ducks will swim and dive.
My whole hand makes five. (Raise five fingers.)

Read the book *Yellow is the Sun* to the child.

Quantities 1 to 3. Show the finger card* with 2 fingers for one to two seconds and ask the child to show the quantity with his fingers on his left hand and to build it with tally sticks. Repeat with finger cards 1 and 3. Also, clap 2 times. Ask: How many claps did you hear? [2] Repeat with 3.

Subitizing 4. Show 4 with your fingers and ask the child to show 4 with his left hand. Then show 4 tiles and say: This is 4. See the figures below.

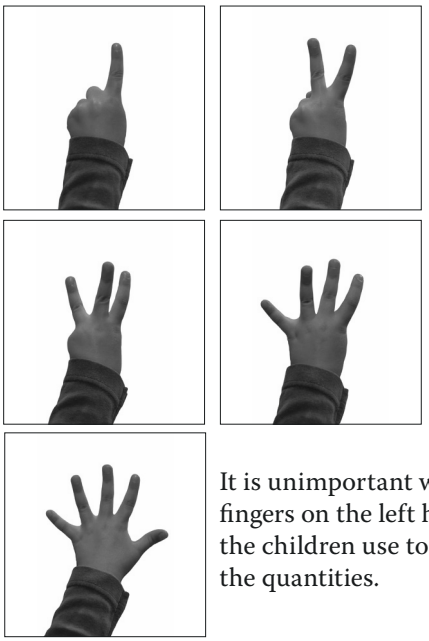
Four.



Four tiles.

Rearrange the 4 tiles and ask how many he sees. Remove 1 tile and ask: How many? [3] Replace it and again ask: How many? [4] Now clap 4 times and ask: How many claps did you hear? [4]

EXPLANATIONS:



It is unimportant which fingers on the left hand the children use to show the quantities.

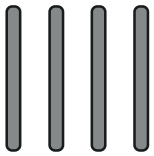
*The finger cards are found on page 2 in the Appendix at the end of this Lesson book. They are also included in the Appendix packet.

In future lessons, the dot, bead, and tally cards will be needed. They are also found in the Appendix pages 6, 7, and 19 and in the Appendix packet.

If you are making copies from the Appendix pages, use one color for the sets of finger cards, another color for the dot cards, a third color for the bead pattern cards, and a fourth color for the tally stick cards. You will need two of each of the four card sets.

ACTIVITIES FOR TEACHING CONTINUED:

Changing quantities. Tell him to make 4 with 4 tally sticks. Then ask him to remove 2 sticks and say how many? [2] Ask him to add 1 and say how many? [3] Repeat with one more.



Four.

Introducing patterning. Take a group of tally sticks and lay one out horizontally. Place another next to the first vertically, the third one horizontally and the fourth one vertically. Give the child a tally stick and ask: What do you think comes next? Tell him we will call this the "do-re" (doe-ray) pattern. Tell the child to continue to lay out the pattern.

Continuing the pattern with tally sticks.

Next take out the tiles and lay out a red tile followed by a blue tile and then another red tile. Ask the child which color would come next in the do-re pattern? [blue] Ask him to continue the pattern.

Continuing the do-re (AB) pattern.

Encourage him to make the same pattern with different colors.

In conclusion. Ask the child to say how many fingers he sees while you do the following: Raise 4 fingers, then put 1 down and back up several times. [4, 3, 4, 3, . . .] Ask: Do you hear a do-re pattern? [yes]

EXPLANATIONS CONTINUED:

Our brains are wired to look for patterns.

Patterns are often named using letters of the alphabet. The letters are used sequentially, naming each different element of the pattern. For example, a strictly alternating pattern is AB. To avoid using the letters of the alphabet for beginning readers, we will use musical scale names to designate pattern names. The names are do (doe), re (ray), mi (me), fa (fah).

You might want to teach him the “Do Re Mi” song from the “Sound of Music.”

Conclusions may be a summary of the day’s lesson or an expansion of the lesson to challenge higher level thinking.

Lesson 3: Sorting

OBJECTIVES:

1. To practice subitizing quantities 1 to 4
2. To recognize and continue a harder pattern
3. To determine likenesses through sorting

MATERIALS:

1. Music for "Yellow is the Sun"
2. *Yellow is the Sun* book
3. Finger cards
4. Tally sticks
5. Tiles
6. **Various containers of objects for sorting***

ACTIVITIES FOR TEACHING:

Warm-up. Continue teaching the song, "Yellow is the Sun."

Yellow is the Sun

Yellow is the sun.
This is only one. (Raise one finger.)

Why is the sky so blue?
Let me show you two. (Raise two fingers.)

Salty is the sea.
One more and it's three. (Raise three fingers.)

Hear the thunder roar.
Here's the mighty four. (Raise four fingers.)

Ducks will swim and dive.
My whole hand makes five. (Raise five fingers.)

Read the book *Yellow is the Sun* to the child.

Show 3 fingers and ask: How many? [3] Repeat for 4, 2, and 1. Then show the 3 finger card for two seconds and ask the child to show the quantity with her fingers on her left hand and build it with tally sticks. Repeat with the other finger cards.

Patterns. Start a pattern by alternating two colors (different colors from the previous day). Tell the child to take two handfuls of tiles and continue the pattern as long as she can.

The do-re (AB) pattern.

Next show her the following do-re-re pattern. Ask her to copy it and to continue it until she runs out of tiles.

The do-re-re (ABB) pattern.

EXPLANATIONS:

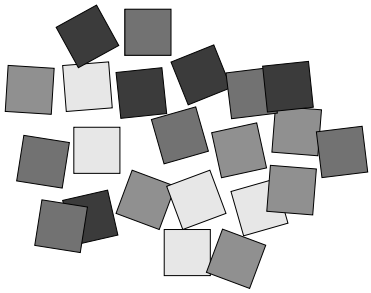
*An item listed in boldface is not part of the RightStart™ materials.

You might want to sing the songs while getting the math materials out. This helps the child mentally prepare for math.

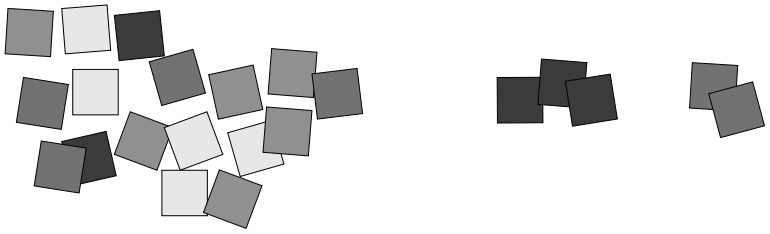
ACTIVITIES FOR TEACHING CONTINUED:

Sorting tiles. Demonstrate sorting with a collection of tiles. First pick up a tile and set it to the side. Next pick up another tile from the collection. If it is the same color as the tile set aside, add it to that pile; if it is a different color, start a new pile.

Continue with a few more tiles before encouraging the child to take over.

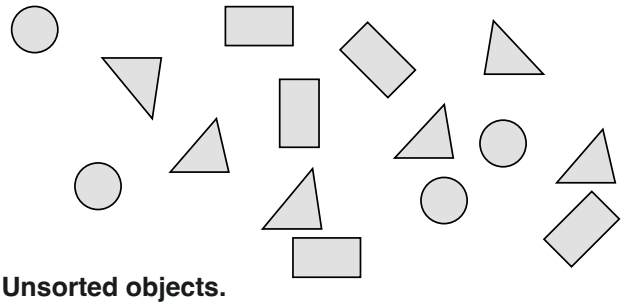


Unsorted tiles.

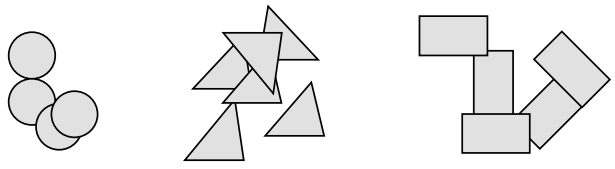


Sorting tiles.

Sorting other objects. When objects are already sorted, demonstrate removing the objects from their containers and combining them. After sorting, ask the child to return them to their original containers.



Unsorted objects.



Sorted objects.

In conclusion. Ask the child to show 3 on her fingers. Then ask her to show 4.

EXPLANATIONS CONTINUED:

Young children should sort only two colors to start.

Sorting objects could be colored tiles, as well as crayons, beads, geometric figures, seeds, beans, washers, bolts, pictures of flowers, and pictures of birds. Items can be sorted by color, size, or other attributes.

Alternately, where a container has several different types of objects, (for example, different colored tiles) the child may sort them into different piles and then return all to the original container.

Sorting is an activity with many applications. For example, in science, items can be sorted whether alive or inanimate; in geography, by continent; in music, by composer or period; in everyday life, clean or dirty.

Lesson 4: Subitizing 5

OBJECTIVES:

1. To subitize 5
2. To identify without counting 1 to 5 objects
3. To practice sorting

MATERIALS:

1. Finger cards
2. Tiles
3. Tally sticks
4. Multiplication cards (after sorting, use the 2s envelope)*

ACTIVITIES FOR TEACHING:

Warm-up. Continue teaching the song, "Yellow is the Sun."

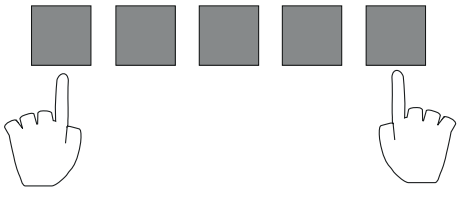
Show quantities 1 to 4 with your fingers, the finger cards, and the tiles and ask the child to name how many. Also, say quantities between 1 and 4 and ask the child to show with his fingers.

Subitizing 5. Show your hand with all 5 fingers raised and tell the child it is 5. Tell him to show 5. Ask: What is special about 5 on your hand? [whole hand]

Five

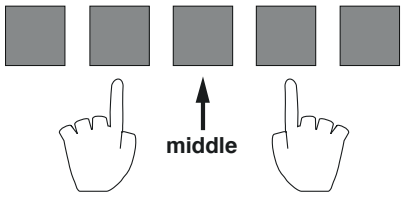
Ask the child to lay out 4 tiles and then add 1 more. Ask: How much is it now? [5]

Seeing 5 as having a middle. Ask him to show 5 with his fingers. With the 5 tiles in a row, explain, five has something else special about it: It has a middle. Demonstrate how to find a middle. With a row of 5 tiles, point to the first tile with your left hand and last tile with your right hand. Then simultaneously point to the second and fourth tiles. See the figures below.



Finding the middle of 5.

Step 1.



Step 2.

EXPLANATIONS:

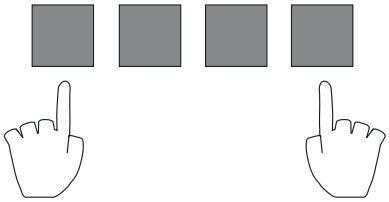
*Included with the multiplication cards are 10 envelopes, each printed with the multiples of a number from 1–10. Insert into each envelope 10 multiplication cards matching the numbers listed on the front of the envelope.

A new deck of multiplication cards is collated to make this task easy: the first 10 cards go into the 1s envelope; the next 10 cards go into the 2s envelope; and so forth.

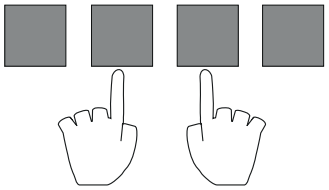
ACTIVITIES FOR TEACHING CONTINUED:

Ask: Do your fingers have a middle when they show 5? [yes]

Comparing 5 to 4. Remove 1 tile and ask: Do you think 4 has a middle? Repeat the same procedure. See the figures below. Then ask: Do your fingers have a middle when they show 4? [no]

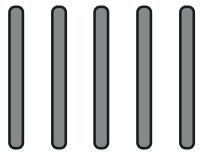


Does 4 have a middle?

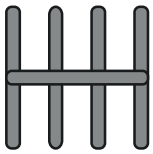


No middle.

Five with tally sticks. Ask the child to lay out 5 tally sticks. Tell him to watch while we do something to make 5 special. Demonstrate picking up the last tally stick and laying it across the other four as shown.



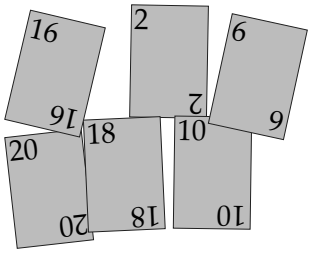
Five tally sticks.

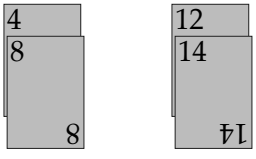


The special way of showing five.

Practice. Show fingers 1–5 and ask the child to name the amount. Show 1–5 tiles in various configurations; ask him to show the quantity with his fingers and to say the number. Say a number 1–5; ask him to show his fingers and construct it with tally sticks.

Sorting by number of digits. Find the multiplication card envelope with the multiples of two (2, 4, 6, 8, 10, 12, 14, 16, 18, 20). Lay out the cards so they are not in order. Ask him to sort the cards into two piles, cards with one digit and cards with two digits. See the figure below.





Sorting the multiplication cards into two piles.

In conclusion. Ask the child to show 5 on his fingers. Then ask him to show 4.

EXPLANATIONS CONTINUED:

Be sure the fifth stick covers the other four sticks. For children the horizontal position is easier than the diagonal position. Also the stick when placed diagonally is too short.

Anna learned how to make 5 with the tally sticks by placing the fifth stick over the other four. That evening at the dinner table, Anna held up four fingers with her left hand and placed her right index finger across the four fingers and proclaimed to everybody, "This is 5"!

Lesson 5: More Patterning

OBJECTIVES:

1. To review finger sets and tally marks for quantities 1 to 5
2. To continue a simple pattern
3. To learn the terms *up* and *down*

MATERIALS:

1. *Yellow is the Sun* book
2. Finger cards
3. Tally sticks
4. Tiles

ACTIVITIES FOR TEACHING:

Warm-up. Continue reading the book and teaching the song, "Yellow is the Sun."

Yellow is the Sun

Yellow is the sun.
This is only one. (Raise one finger.)

Why is the sky so blue?
Let me show you two. (Raise two fingers.)

Salty is the sea.
One more and it's three. (Raise three fingers.)

Hear the thunder roar.
Here's the mighty four. (Raise four fingers.)

Ducks will swim and dive.
My whole hand makes five. (Raise five fingers.)

Read the book *Yellow is the Sun* to the child.

Show the number three finger card for 2 seconds and ask the child to show the number with her fingers on her left hand. Build it with tally sticks, then show it with tiles. Repeat with other numbers 1 to 5.

Ask her to show 5 with her fingers. Ask: What is special about 5 on your hand? [whole hand, it has a middle]

More patterns. Take a handful of tiles. Demonstrate making the do-re-re (ABB) pattern as shown below. Ask the child to make the same pattern until she runs out of tiles.

The do-re-re pattern.

Next show her the following do-re-mi (ABC) pattern. Ask her to copy it and to continue it until she runs out of tiles.

The do-re-mi pattern.

EXPLANATIONS:

Overview Video QR code for Lessons 5 through 8 or go to RightStartMath.com/resources/teaching-support.

You might want to sing the songs while preparing the math materials. This helps the child mentally prepare for math.

ACTIVITIES FOR TEACHING CONTINUED:

Up and down. With the child standing, say the following nursery rhyme emphasizing *up* and *down*.

Hickory Dickory Dock

Hickory dickory dock,
The mouse ran up the clock. (Raise both arms in the air.)
The clock struck one. (Raise one finger on the left hand.)
The mouse ran down. (Put arms down.)
Hickory dickory dock.

Hickory dickory dock,
The mouse ran up the clock. (Raise both arms in the air.)
The clock struck two. (Raise two fingers on the left hand.)
And down he flew. (Put arms down.)
Hickory dickory dock.

Hickory dickory dock,
The mouse ran up the clock. (Raise both arms in the air.)
The clock struck three. (Raise three fingers on the left hand.)
And he did flee. (Put arms down.)
Hickory dickory dock.

Hickory dickory dock,
The mouse ran up the clock. (Raise both arms in the air.)
The clock struck four. (Raise four fingers on the left hand.)
He hit the floor. (Put arms down.)
Hickory dickory dock.

Hickory dickory dock,
The mouse ran up the clock. (Raise both arms in the air.)
The clock struck five. (Raise five fingers on the left hand.)
The mouse took a dive. (Put arms down.)
Hickory dickory dock.

Hickory Dickory Dock can be found at Storybook Land in Aberdeen, South Dakota.

In conclusion. Show quantities 1–5 on your hand briefly and ask the child to tell you how many she sees.

EXPLANATIONS CONTINUED:

To be sure the child understands the words *up* and *down,* say this nursery rhyme together emphasizing the words up and down. The child could also show on her upraised left hand the number as it is spoken.

Lesson 6: Subitizing 6

OBJECTIVES:

1. To learn the term *right*
2. To subitize 6 as 5 and 1

MATERIALS:

1. Tiles
2. Tally sticks

ACTIVITIES FOR TEACHING:

Warm-up. Tell the child today we are going to sing the "Yellow is the Sun" song all the way to ten.

Yellow is the Sun

Yellow is the sun.
This is only one. (Raise one finger.)

Why is the sky so blue?
Let me show you two. (Raise two fingers.)

Salty is the sea.
One more and it's three. (Raise three fingers.)

Hear the thunder roar.
Here's the mighty four. (Raise four fingers.)

Ducks will swim and dive.
My whole hand makes five. (Raise five fingers.)

Yellow is the sun.
Six is five and one. (5 fingers on left hand; 1 on right.)

Why is the sky so blue?
Seven is five and two. (5 fingers on left hand; 2 on right.)

Salty is the sea.
Eight is five and three. (5 fingers on left hand; 3 on right.)

Hear the thunder roar.
Nine is five and four. (5 fingers on left hand; 4 on right.)

Ducks will swim and dive.
Ten is five and five. (5 fingers on left hand; 5 on right.)

Show 1 to 5 tiles in various configurations and ask him to show fingers and to say the number. Say a number and ask him to show the equivalent tally sticks.

Left and right. Tell the child to show his left hand. Ask him to show his left hand, knee, foot, and so forth.

Ask the child to raise his *right* hand. Tell him to point to his right foot, right eye, and other right body parts.

EXPLANATIONS:

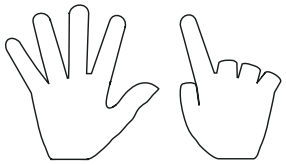
Seeing quantities between 6 and 9 as 5 plus 1 to 4 makes them visualizable, or imaginable. For example, try to visualize 8 apples without grouping them. Impossible.

Now think of 5 of the apples as red and 3 as green–very possible. Grouping by 5s also prepares the child to think of ten as a unit.

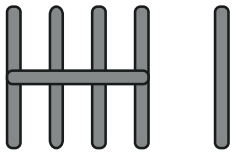
ACTIVITIES FOR TEACHING CONTINUED:

Quantity 5. Ask her to show 5 with her fingers. Ask: What is special about 5 on your hand? [whole hand, it has a middle]

Quantity 6. Tell the child that to show the next number, 6, he will need to also use his right hand. Demonstrate showing 5 on the left hand and 1 on the right hand. See the left figure below.



Six.



Six.

Now ask the child to make 6 with the tally sticks. If necessary, remind him to make the special 5 with the fifth tally stick horizontal over the vertical four. See the right figure above.

Grouping 6 tiles. Lay out 5 identical tiles and ask: How many do you see? [5] Ask: What would we have if we added 1 more? [6] Add a tile of a different color as shown below and ask the child how much it is. Ask him to make another 6, using two colors.

Six.

Claps. Clap once and ask the child: How many did you hear? [1] Next clap twice in quick succession and ask: How many did you hear? [2] Repeat for 3 and 4.

Tell the child to clap his hands as you say a number from 1 to 4. The clapping should be done quickly without counting.

Now you clap in random order and ask the child to show what he heard with his fingers or tally sticks.

In conclusion. Ask the child to show his left hand, then his right hand. Ask the child to show 6 on his fingers.

EXPLANATIONS CONTINUED:

As this point, 6 must be shown as 5 on the left hand and 1 on the right, not for example, as 3 on each hand.

Lesson 7: Matching

OBJECTIVES:

1. To review finger sets and tally marks for quantities 1 to 6
2. To continue a simple pattern
3. To match objects or cards

MATERIALS:

1. *Yellow is the Sun* book
2. Tiles
3. Tally sticks
4. Finger cards
5. *Math Card Games* book,* N4

ACTIVITIES FOR TEACHING:

Warm-up. Continue reading the book and singing the song, "Yellow is the Sun."

Yellow is the Sun

Yellow is the sun.
This is only one. (Raise one finger.)

Why is the sky so blue?
Let me show you two. (Raise two fingers.)

Salty is the sea.
One more and it's three. (Raise three fingers.)

Hear the thunder roar.
Here's the mighty four. (Raise four fingers.)

Ducks will swim and dive.
My whole hand makes five. (Raise five fingers.)

Yellow is the sun.
Six is five and one. (5 fingers on left hand; 1 on right.)

Why is the sky so blue?
Seven is five and two. (5 fingers on left hand; 2 on right.)

Salty is the sea.
Eight is five and three. (5 fingers on left hand; 3 on right.)

Hear the thunder roar.
Nine is five and four. (5 fingers on left hand; 4 on right.)

Ducks will swim and dive.
Ten is five and five. (5 fingers on left hand; 5 on right.)

Read the book *Yellow is the Sun* to the child.

Say a number and ask the child to show with her fingers. Show 1 to 6 with your fingers and ask her to show with tiles or tally sticks. Have the child say the number.

EXPLANATIONS:

*The Fifth Edition of the *Math Card Games* book is needed for this manual.

The book is arranged in chapters as follows:

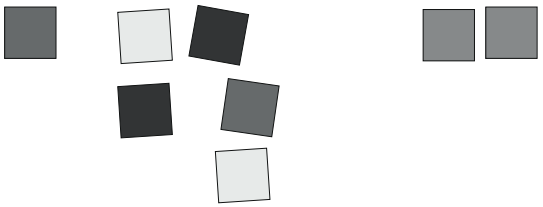
1. Number Sense (N)
2. Addition (A)
3. Clocks (C)
4. Multiplication (P)
5. Money (M)
6. Subtraction (S)
7. Division (D)
8. Fractions (F)

The games are numbered sequentially within each chapter. For example, A2 is the second game in the Addition chapter and N4 is the fourth game in the previous chapter, Number Sense.

ACTIVITIES FOR TEACHING CONTINUED:

Oral patterns. Demonstrate to the child by saying 1,2,1,2,1, and now ask what comes next in this pattern. [2] Ask what comes next in this pattern: red, white, blue, red, white, blue, red. [white, blue]

Matching. Explain that matching is looking for two items that belong together. Demonstrate matching by setting out 8 tiles, two of each color. Then pick up one color, find its match, and set them aside. Pick up another color and find its match, and so on.



Matching a collection of items.

Matching finger cards. Lay out two sets of finger cards face up in no particular order. Ask the child to find the matches. After she finds a match, ask the child to hop the same number of times the card says. For example, if the card shows 3 fingers, the child hops 3 times. Continue until all the cards are matched.

Finger Card Memory game. Play the Finger Card Memory game found in the *Math Card Games* book, N4.

In conclusion. Hold up 4 fingers and ask: Can you match my fingers by showing the same number with your fingers? Repeat for other numbers.

EXPLANATIONS CONTINUED:

Matching as a life skill can encourage children to look beyond the immediately obvious and to integrate other concepts. Some examples of matching include: a fruit with its seed, pairs of shoes or socks, lower case letters to capital letters, and sports with equipment. It will be used frequently throughout the year for practicing mathematics concepts.

When matching, identical or similar items can be pairs of interesting objects such as colored tiles, beads, seeds, beans, washers, bolts, pictures of flowers, birds, or animals, and cards with numerals.

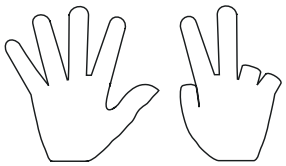
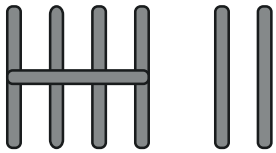
Lesson 8: Subitizing 7 and the Cotter Abacus

OBJECTIVES:

1. To subitize 7
2. To learn the terms *above* and *below*
3. To learn the terms *top* and *bottom*
4. To enter 1 to 5 beads on the Cotter Abacus without counting

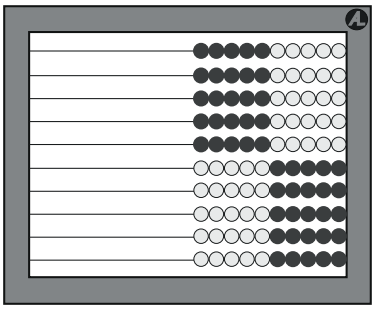
MATERIALS:

1. *Yellow is the Sun* book
2. Finger cards
3. Tally sticks
4. Tiles
5. Cotter Abacus

ACTIVITIES FOR TEACHING:	EXPLANATIONS:
Warm-up. Continue reading the book and singing the song, "Yellow is the Sun."	
Show the finger cards 1 to 6 at random for 2 seconds and ask the child to show them on his fingers. Also have him show the number with tally sticks and say the numbers.	
Quantity 7. Show 7 to the child with your fingers. Ask him to show it on his fingers. Also ask him to build it with the tally sticks. Now, ask him to make a 7 with the tiles, using two colors as shown below.	It might help to say "sev-en" as you point to the "two" part of 7.
 Seven.  Seven.  Seven.	As this point, 7 must be shown as 5 on the left hand and 2 on the right, not, for example, as 4 on one hand and 3 on the other.
Above and below. To help the child understand the words *above* and *below*, ask the child is your nose above or below your mouth. Ask: Is your chin above or below your eyes? Repeat with different parts of the face using the words above or below.	The terms *above*, *below*, *top,* and *bottom* are part of the spatial terms a child needs to know.
Now have the child show you something under the table or desk. Ask him to name something above his head.	
Top and bottom. Point out examples of *top* and *bottom*, such as "Where is the *top* of the window" and "Where is the *bottom* of the window." Repeat for the top and bottom of a page in a book.	
Cotter Abacus. Show the child the Cotter Abacus. Help him learn to handle it with respect, as due any tool. You might give him a few minutes to make patterns and designs.	

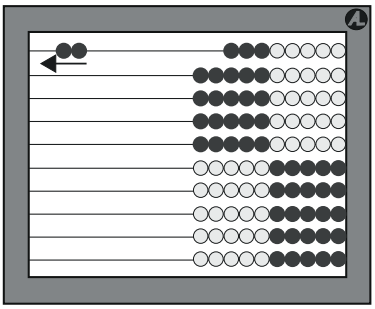
ACTIVITIES FOR TEACHING CONTINUED:

Entering quantities. Show him how to place the abacus with the circle logo at the top. This means the circle will be on the right and the wires horizontal. Demonstrate clearing the abacus by lifting the left edge so the beads fall toward the side with the circle. See the figure below.

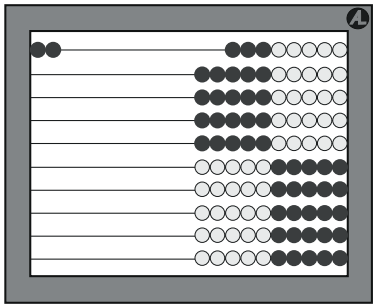


Abacus cleared.

Ask the child to clear the abacus. Ask him to show 2 with his fingers. Ask him to enter 2 on the top wire. See the figures below.

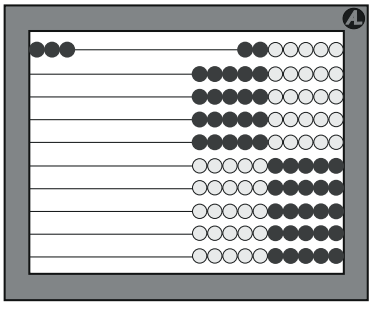


Entering 2 as a unit.

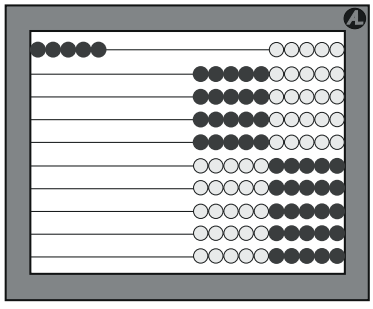


Two.

Ask him to clear the abacus. Then ask him to show 3 with fingers and enter 3 on the abacus. Repeat for 5 and ask how he could tell it was 5. [a whole hand, all the dark colored beads on a wire] Lastly, ask him to show 4 and enter 4.



Three.



Five.

In conclusion. Show 5 on your fingers and ask: How much is this? [5] Repeat for 7.

EXPLANATIONS CONTINUED:

To enter a quantity on the Cotter Abacus, move the beads from right to left. This allows the eyes to travel from left to right as in reading.

Quantities are entered on the abacus as a group; they are not counted. If a child counts when entering a quantity, simply say: Okay, now can you enter (3) without counting.

Lesson 9: Subitizing 8 and Ordinal Counting

OBJECTIVES:

1. To subitize 8
2. To use comparison words correctly
3. To introduce ordinal counting

MATERIALS:

1. *Yellow is the Sun* book
2. Tally sticks and Tiles
3. Cotter Abacus
4. Strips for sorting, cut apart (Appendix p. 3)
5. **A variety of books** & **three different toys**
6. *Math Card Games* book, N4

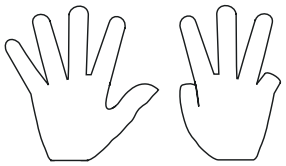
ACTIVITIES FOR TEACHING:

Warm-up. Continue reading the book and singing the song, "Yellow is the Sun."

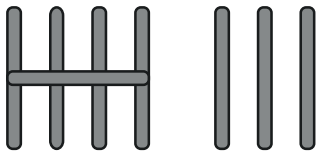
Randomly show quantities 1 to 7 on your fingers for 1 to 2 seconds and ask the child to name the quantity.

Say any number from 1 to 7 and ask the child to show it on her fingers.

Quantity 8. Show 8 on your fingers and tell her that is 8. Ask her to make 8 with her fingers. Now ask her to make it with the tally sticks. Also ask her to make 8 with the tiles using two colors. See the figures below.



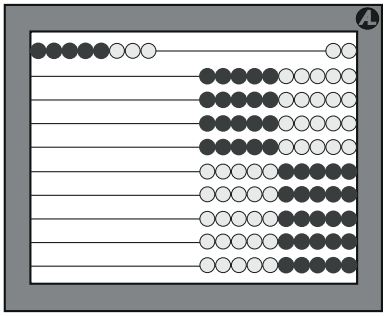
Eight.



Eight.

Eight.

Quantities on the abacus. Ask the child to enter on the abacus various quantities from 1 to 7. Then ask her to enter 8. See the figure below.



Eight.

Enter various quantities from 1 to 8 and ask her to state the quantity.

EXPLANATIONS:

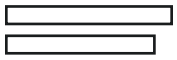
Overview Video QR code for Lessons 9 through 12 or go to RightStartMath.com/resources/teaching-support.

Eight is often the most difficult quantity to subitize.

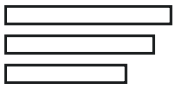
It is very important that the child enter and read quantities on the abacus without any counting.

ACTIVITIES FOR TEACHING CONTINUED:

Comparison words. Show the child two of the cut out strips of different lengths. See the left figure below. Say: When we talk about two pieces, we say which strip is *longer*. Add a third strip and tell her that when there are three things, we say which piece is *longest*.



Which strip is longer?



Which strip is longest?

Show her two books and ask: Which of these two books is *thicker*? Pick up a third book and say: Which of these three books is . . . ? [thickest]

Next choose three books, one obviously older than the others. Ask: How could you ask about the books being old? [Which book is oldest?] Set one of the newer books aside and repeat the question? [Which book is older?]

Ordinal counting. This activity can be used for a child to learn to incorporate learning with playing. Ask the child to put 3 toys in a row. Ask the child which toy is first. Which toy is second? Encourage the child to rearrange the toys and to ask similar questions, for example: What position is the ball in?

Finger Card Memory. Play the Finger Card Memory game from the *Math Card Game*s book, N4.

In conclusion. Show 8 on your fingers and ask: How much is this? [8] Ask her to show 8.

EXPLANATIONS CONTINUED:

Note: There is a duplicate strip that is not needed.

These strips will be used again in a later lessons.

A common error in spoken English is using "longest" when comparing two lengths.

Ordinal counting is familiar to most children. It has an additional value in beginning mathematics because of the sounds "thir" and "fif," which we need in English to pronounce thirteen, thirty, one-third, as well as fifteen, fifty, and one-fifth.

The first toy should be the one on the child's left because we read from left to right.

Lesson 10: Ordering

OBJECTIVES:

1. To learn the term *beside*
2. To order by length

MATERIALS:

1. *Yellow is the Sun* book
2. Tally sticks
3. Cotter Abacus
4. Strips for sorting
5. *Math Card Games* book, N2 and N6
6. Tally Stick cards, cut apart (Appendix p.19)*

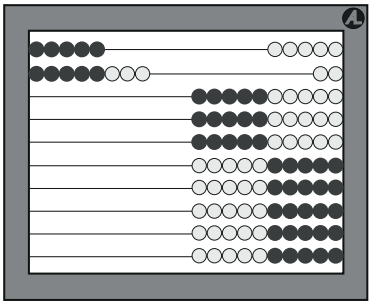
ACTIVITIES FOR TEACHING:

Warm-up. Continue reading the book and singing the song, "Yellow is the Sun."

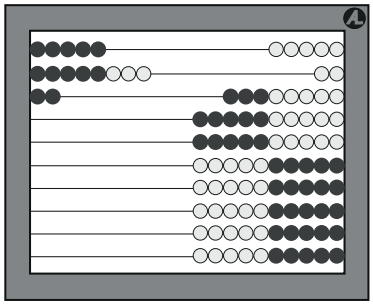
Randomly say a quantity from 1 to 8, then ask the child to show the quantity with his fingers and with the tally sticks.

Ask the child to enter various quantities from 1 to 8 on the abacus.

Next ask the child to put 5 beads on the first wire of the abacus. Then ask him to put 8 beads on the 2nd wire. See the left figure below. Ask: Which row is longer? [second] Which row is shorter? [first]



Which row is longer?



Which row is longest?

Now have the child enter 2 on the third line. Ask: Now which row is the longest? [second] Which row is the shortest? [third]

The term beside. Sit next to the child and tell him you are sitting *beside* him. Tell him to stand beside the table. Now recite the nursery rhyme Little Miss Muffet; tell him to sit down when he hears *beside*.

Little Miss Muffet and her spider can be seen at Storybook Land in Aberdeen, South Dakota.

EXPLANATIONS:

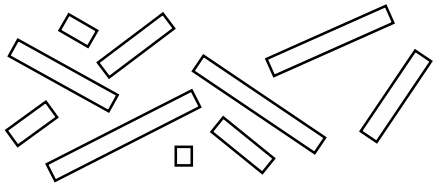
It is very important that the child enter and read quantities on the abacus without any counting.

ACTIVITIES FOR TEACHING CONTINUED:

Little Miss Muffet

Little Miss Muffet sat on a tuffet,
Eating her curds and whey.
Along came a spider who sat down beside her
And frightened Miss Muffet away.

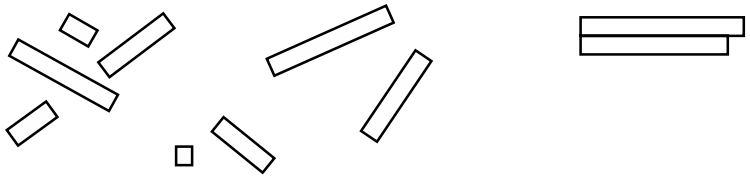
Ordering. Lay out the ten strips with no overlapping. Explain to him that we want to put the strips in order, starting with the longest.



The strips in random order.

Show him how to find the longest; pick up a strip that appears to be the longest and compare it to other long strips. If a longer strip is found, pick it up and lay the other one down.

Lay the longest strip off to the side. Repeat the process, each time choosing the longest of those remaining. It does not matter for the ordering procedure whether the longest is on top or bottom. Ask the child to continue until all are sorted.



The strips with the two longest in order.

Ask the child to mix up the strips and put them in order again, now starting with the shortest.

Ordering games. Play the Finger Cards in Order game, in the *Math Card Games* book, *N2.* Also play the Tally Cards in Order game, N6, with the Tally Stick cards.*

In conclusion. Show 7 on your fingers and ask: How much is this? [7] Ask him to show 7 on the abacus. Repeat with 8.

EXPLANATIONS CONTINUED:

Putting objects in order is an everyday skill, as well as a mathematical skill.

*The tally stick cards are found on page 19 in the Appendix. They are also found in the Appendix packet.