Lesson 1 Small Groups of Objects

Objective

Your student will learn to recognize and name small groups of objects and images without counting.

You Will Need

- ☐ *Hop into Math!* pages 9 to 12
- ☐ 3 Counting Bears
- ☐ Dot Cards 1 to 3, *Brinda's Math Tools,* page 1

Before You Begin

At the beginning of each lesson, you will find a cream-colored "Before You Begin" section like this one. Review these instructions before you begin the lesson.

The actual lesson plan you will teach your student begins after the "Before You Begin" section.

Preview Subitizing

This lesson teaches a skill called *subitizing*. Subitizing is the ability to quickly and accurately recognize the number of items in a small group without needing to count them individually. Instead of counting, a student will quickly know how many objects there are and say the number aloud.

While some students might choose to count each object, in this lesson, we are concentrating on recognizing groups of objects without having to count them. This skill improves the understanding of numbers, making math and daily tasks easier.

New Teaching

Practice Counting

"Let's warm up our math minds by counting as high as we can. We can do this together!"

Count along with your student as high as she can go.

"Way to go! You counted to number _____ (add in the number she counted to)."

Your student is not expected to count to 100 without mistakes until the end of the Level 1 program. Continuous counting practice will be provided in the review section throughout the Level 1 program.

Noticing Quantities of Counting Bears

"Quickly knowing how many objects there are helps us in games, sharing, and lots of other fun stuff we do every day. It is like having a special superpower that makes everything easier and more fun!"

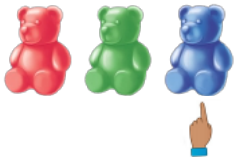
"Before we use our superpowers, let's count small groups of counting bears and notice how we see them."

Show your student 1 counting bear.

"Can you tell me how many bears there are?" *One.*

"That is right! We know there is only 1 counting bear. We can see just 1 bear. Let's try another one."

Show your student 3 counting bears in a line. Point to each bear as you count along with your student.



"How many bears do you see?" *Three.*

"Nice work! There are 3 bears. (point to each bear) I see 1, 2, 3."

Show your student 2 counting bears. You may place them any way you like.

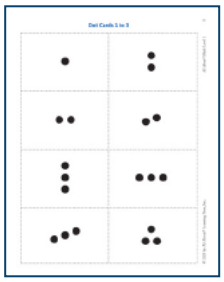
"How many bears do you see?" *Two.*

"Yes, there are 2 bears. With practice, you will be able to tell how many objects there are without needing to count them."

New Teaching
(continued)

Practice Subitizing

"You noticed how many bears you saw in a group."



Dot Cards 1 to 3

Find the *Dot Cards* from *Brinda's Math Tools*, page 1. Cut out each of the dot cards that show 1 to 3 dots.

"Now, I am going to show you some pictures with dots on them. Your job is to look at the picture and tell me how many you see. The idea is to quickly know how many dots there are without counting. It is okay if you need to count each one in the beginning."

Show your student the *Dot Card* of 2 dots as shown in this image.

"Here is a picture of dots. I knew right away there were 2 dots without needing to count. I can see (point to the dots) 1 dot and another dot. There are 2 dots."

"Did you also notice there were 2 dots?"

"Now, it is your turn to try. Remember, it is okay if you need to count the dots."

Show your student the *Dot Card* of 3 dots in a line.

"How many dots do you see?" *Three.*

"Great job! I see 3 dots in a line. (point to each dot) 1, 2, 3."

"You have been telling me how many dots you saw. This time, I would like to know how you knew there were that many."

Show your student the *Dot Card* of 3 dots in a diagonal.

"How many do you see?" *Three.*

"How do you know there are that many?" *I just know it is 3. I counted 1, 2, 3. It looks like the dots on a die.*

New Teaching
(continued)

> Asking your student how she knows how many objects there are will help her understand that numbers represent quantities.
>
> **Tip!**

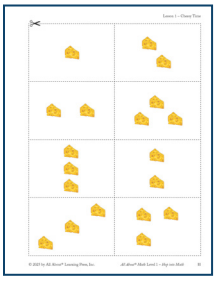
Continue to practice recognizing how many there are using the remaining *Dot Cards*.

Be sure to ask:

- "How many dots do you see?"
- "How do you know there are that many?"

Complete Activity Sheet

"Let's practice finding how many."

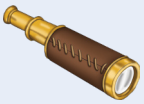


Cheesy Time

Remove pages 9 and 11 from the *Hop into Math!* activity book. Cut out the cheese cards, mix them up, and place them face down.

Tell your student there is a mouse that just loves eating cheese. He cannot seem to get enough of it!

"Let's help the mouse get his fill of cheese! You are going to choose a card. As soon as you flip the card over, tell how many pieces of cheese you see. If you are correct, we can give the cheese to the mouse."



Look For

Your student may want to count each object individually, even with a small group of objects.

Here's How to Help: Provide your student with opportunities to practice the skill of recognizing the number of 1 to 3 objects in a small group without counting. For example, you can encourage your student to quickly recognize how many cups there are at meal time, use blocks to create small groups of objects with different quantities, or identify groups of objects in a grocery store.

Math Reflection

"Let's Reflect!"

Ask some questions to guide your student's reflection:

- "What is one thing you found easy?"
- "What is one thing you want to practice more?"

Extended Practice *(Optional)*

If your student struggles with subitizing, or if she expressed the need for more practice, continue working on this skill.

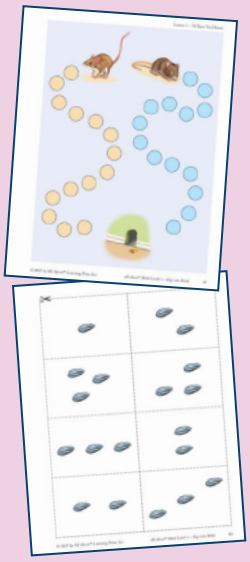
Use your *Dot Cards* or the cheese cards from the *Cheesy Time* activity to continue practicing how quickly your student can recognize how many objects she sees.

Since this is the first lesson on subitizing, she may need to count the objects frequently. This skill will improve over time. She will also practice subitizing in the next few lessons and during daily reviews. Please feel free to proceed to the next lesson or continue to practice using the *Dot Cards*.

If your student can quickly recognize the amount shown on each card, try reducing the amount of time you show the card to challenge her.

Brinda's Math Fun!

I'll Race You Home!



"Let's practice our math skills!"

Materials

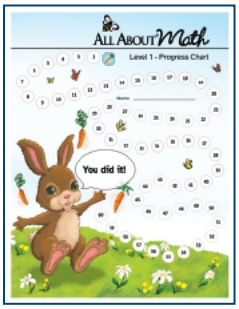
- I'll Race You Home! Gameboard, *Hop into Math!* page 13
- Seed Cards, *Hop into Math!* page 15
- 2 Counting Bears or Connecting Cubes, to use as gamemarkers

Directions

1. Each player will choose a mouse character, or one player can play for both characters and see which one wins.
2. Place a counting bear or connecting cube on each mouse at the starting point.
3. Cut out and mix up the *Seed Cards*. Place them face down in the center of the playing area.
4. Decide who will go first. The first player draws the top card from the stack to tell how many seeds there are without counting.
5. If the player is correct, she can move her marker that many spaces.
6. Continue playing, with each player taking turns drawing cards and telling how many there are.
7. The player who reaches the mouse home first wins!

Track Your Progress

Mark the Progress Chart



Have your student mark Lesson 1 on the Progress Chart.

Lesson 2 Small Groups Around Me

Objective

Your student will learn to recognize small groups of objects in his environment.

You Will Need

- ☐ *Hop into Math!* page 17
- ☐ Dot Cards 1 to 3

Before You Begin

Preview Noticing Small Groups

In this lesson, your student will hunt for clues like a detective to identify small groups of objects within his environment. He will recognize and name groups, including images of objects.

Noticing small groups (subitizing) in the environment provides your student with valuable opportunities to develop foundational math skills, make connections between math and the real world, and build his language abilities.

The focus is on noticing small groups of objects that are together. However, it is okay if your student spots or counts larger groups of objects. When he uses number names to describe these groups, he is connecting quantities with real objects in his environment.

Review Sections and Counting Skills

Throughout Level 1, your student will engage in different counting activities and review other skills previously taught in the review section.

Note that counting skills take time to develop. Your student is not expected to master counting to 100 until the end of Level 1. Over time, your student will understand that, when counting, each object will be counted only once and that numbers have a set sequence. Your student will also learn how to apply counting in different situations.

Prepare

Place 5 small groups of objects, like pencils or other objects around your learning space. There should be one group of 1 object, two groups of 2 objects, and two groups of 3 objects. You are not limited to these objects or environments. If you would like, you can even explore outside.

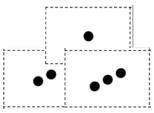
Review

Daily Review

"Let's get started by warming up our math minds and practice counting together to see how high we can go." Count along with your student as high as he can go.

Practice Subitizing

"Now, let's review finding how many dots are in a small group without counting."



Gather the *Dot Cards* you used in the previous lesson, mix them up, and place them face down in front of your student.

"Here are the *Dot Cards* we used in the previous lesson. You are going to turn over a card, tell me how many dots you see, and tell me how you know there are that many."

Have your student turn over one card at a time. After each card, ask:

- "How many dots do you see?"
- "How do you know there are that many?"

If your student can quickly identify how many dots there are without counting, consider reducing the amount of time the card is shown, making adjustments as needed.

New Teaching

Finding Small Groups

"You are becoming a detective by noticing how many objects there are in a small group. There are groups of objects all around us."

Point to a nearby group of 2 or 3 objects. Discuss with your student how many objects there are and how you know there are that many. For example, "Here are 2 pencils that are together. I know there are that many because I can see 1, 2 pencils."

New Teaching
(continued)

Feel free to show a few more examples to your student as needed.

It is okay if your student needs to count each object to tell how many there are. This skill develops over time and with practice.

"Now, it is your turn to put your detective skills to use. Let's pretend to be detectives looking for 5 small groups that are in your environment."

Have your student walk around his environment to find small groups of objects that are together. Give him as much time as he needs to find them. You may step in once your student has found at least 3 groups of objects.

"You used your detective skills to find objects that are in small groups. I am excited to see what you found!"

Have your student show you all the groups he found. As he shows you the groups, ask him the following questions:

- "How many do you see there?"
- "How do you know there are that many?"

"When we see 2 apples or 3 toy cars together, we are learning about how numbers work in our everyday lives."

"You found many groups of objects. Which group was the easiest for you to recognize quickly?" *Student answers will vary. The group with 2 objects together was easy to see.*

Complete Activity Sheet

"Let's show the small groups of objects we found."

My Detective Notes

Turn to page 17 in the *Hop into Math!* activity book.

"You worked really hard as a detective looking for small groups of objects around you. Detectives love to keep notes on what they discover."

"Think about the groups of objects you found. Draw your favorite group of 2 objects and your favorite group of 3 objects on your activity page."

New Teaching
(continued)

Look For
Your student may draw more items than what was seen.

Here's How to Help: Have your student show you the objects he wanted to draw. Count the objects together. Then have him draw only one image per object.

Math Reflection

"Let's Reflect!"

Show your student the *Dot Card* showing 3 dots.

"Show me how you would explain to a friend how many dots you see on this *Dot Card*."

Extended Practice (*Optional*)

If your student is not able to recognize groups of 2 or 3 objects, or he expressed the need for more practice, continue working on this skill.

There may be groups of objects that your student has not discovered yet. Pretend to be adventurers or detectives looking for lost objects. Take a walk through your environment, and look for more objects that are grouped together.

Excitedly point out objects, and discuss how many you see and how you know there are that many.

If it is a nice day, you can even go outside to find objects in nature. The ability to quickly recognize the number of objects in a small group without counting is a skill that develops over time with practice. You can proceed to the next lesson without the full mastery of the skill.

Brinda's Math Fun!

I Spy Small Groups

"Let's practice our math skills!"

Materials

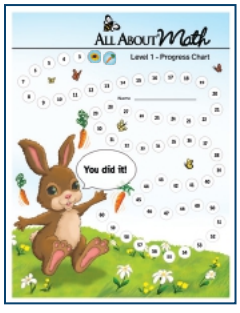
- I Spy Small Groups Number Cards, *Hop into Math!* page 19
- I Spy Small Groups Gameboards, *Hop into Math!* pages 21 to 23
- Two-Color Counters

Directions

1. Place an *I Spy Small Groups* gameboard in front of each player.
2. Cut out and mix up the *I Spy Small Groups* number cards.
3. Use the *I Spy Small Groups* number cards to randomly call out the numbers 1 to 3.
4. Each player will look for the space showing the amount that was called out and will place a two-color counter over that amount.
5. The player who gets 4 in a row first is the winner.

Track Your Progress

Mark the Progress Chart



Have your student mark Lesson 2 on the Progress Chart.


I love seeing groups of 3!
3 yummy dandelions,
3 yummy clover petals!

Lesson 3 Noticing How Many

Objective

Your student will learn to recognize and name small groups of dots and to describe how she sees them.

You Will Need

- ☐ *Hop into Math!* pages 25 to 26
- ☐ Dot Cards 1 to 3
- ☐ Dot Cards 4 to 5, *Brinda's Math Tools*, page 2
- ☐ 5 Connecting Cubes

Before You Begin

Preview Recognizing and Naming Small Groups

In previous lessons, you explored the skill of subitizing, which means quickly recognizing the number of objects in a group without counting each one. In this lesson, you will continue to reinforce the skill of subitizing by increasing the group size to 5. This skill will help your student understand the relationship between numbers and quantities.

Throughout the lesson, you will ask your student how many dots she sees and how she knows there are that many. For example, she may describe 5 dots as a group of 4, with 1 in the middle. This type of questioning builds the understanding that organizing a group of objects in different ways will still show the same quantity. It also builds the foundation of addition by describing how the parts of a group of objects can equal the whole amount.

When you are asked to show your student a *Dot Card*, give her only a few seconds to see the card. Limiting the time she can see the card will encourage her to move away from counting each dot to find the total amount.

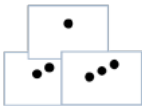
When you are asking your student to find the number of dots in the group, think about using the word "say" instead of "count." For example, instead of saying, "Count the number of dots you see on the card," try, "Say the number of dots you see on the card." It is simple, but language matters.

Review

"Let's get started by warming up our math minds and practice counting together to see how high we can go." Count along with your student as high as she can go.

How Many Dots in the Group?

"Now, let's find the amount of dots in a group."



Find the *Dot Cards* 1 to 3 from *Brinda's Math Tools*.

Hold up a *Dot Card* for your student to see. Hold the card up for only a few seconds, and then put it back down. With each card, ask her, "How many dots did you see?" Continue until you have used all the *Dot Cards*.

You can reduce the amount of time the card is shown if your student can quickly identify how many dots there are without counting.

New Teaching

How Many Do You See?

"We have been working on saying the amount of objects in a group without counting each object. Now, we are going to practice saying the amount of objects in larger groups."

"Let's pretend we are in a grocery store. I need your help telling me how many of each kind of fruit I am putting into the grocery bag so I do not buy too much. We will use the connecting cubes as our pretend fruit."

New Teaching
(continued)

What's in the Shopping Bag?

Remove page 25 from the *Hop into Math!* activity book. Place the shopping bag in front of your student.

Place 3 connecting cubes, as shown in the image, on the shopping bag. You can choose the type of fruit to name the connecting cubes to add some fun!

"How many do you see?" *Three.*

"Great job! I see a group of 2 and 1 on the side. I know that makes a group of 3."

Clear the shopping bag. Then put 5 connecting cubes, as shown in the image, on the shopping bag.

"How many do you see?" *Five.*

"Yes! I see a group of 4, like the four corners of a square, and 1 in the middle. I know that makes a group of 5. I am going to buy 1 more type of fruit."

Put 4 connecting cubes, as shown in the image, on the shopping bag.

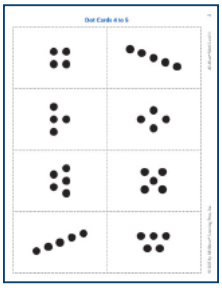
"How many do you see?" *Four.*

"You are right! How did you know there are 4?" *Answers may vary. I see a group of 2 on the top and a group of 2 on the bottom.*

"Thank you for helping me with the groups of fruit. Being able to see how many objects are in a group without counting is one way to find the total amount faster."

New Teaching
(continued)

Is It 2?



Dot Cards 4 to 5

Remove *Dot Cards* 4 to 5 from *Brinda's Math Tools*, page 2. Cut each *Dot Card* apart if you have not previously done so. You will also need *Dot Cards* 1 to 3 from *Brinda's Math Tools*.

Take out the *Dot Cards* showing 1, 2, and 4 dots. You will use the rest of the *Dot Cards* later in the lesson.

"Now, we are going to play a game called 'Is It 2?' When I show you a *Dot Card*, think about whether it shows the quantity of 2. If it is 2, give a thumbs up. If it is not 2, touch your toes." Feel free to modify the actions based on your student's needs.

Display each *Dot Card* one at a time, and each time, ask, "Is it 2?"

Show your student the *Dot Card* with 1 dot, followed by the *Dot Card* with 4 dots, and then the *Dot Card* with 2 dots.

This activity can be adjusted to meet the needs of your student. For example, you can have her do a thumbs down instead of touching her toes. Here are some other examples: stand up or sit down, touch her head or rub her tummy, or say yes or no.

"You did a great job playing the game 'Is It 2?' I can tell you are really catching on to recognizing the number of objects in a group! Now, I would like for you to share with me how you knew whether the amount on the *Dot Card* was 2."

Show your student the *Dot Card* with 1 dot again.

"This was the first card. How did you know it was not showing the number 2?" *I can see there is only 1 dot on the card.*

Show your student the *Dot Card* with 4 dots again.

"This was the second card. How did you know it was not showing the number 2?" *I can see a group of 2 dots and another group of 2 dots. That makes 4 dots total.*

Show your student the *Dot Card* with 2 dots again.

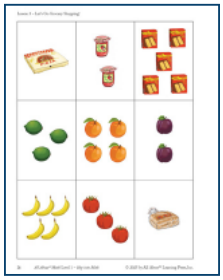
"This was the third card. How did you know it was showing the number 2?" *I can see just a group of 2 dots.*

Asking your student how she compared the amount of dots on the *Dot Cards* to the number 2 increases her number sense by making the connection that numbers represent quantities and that each number has a specific quantity.

Tip!

Complete Activity Sheet

"Let's practice noticing how many are in a group."



Let's Go Grocery Shopping!

Turn to page 26 in the *Hop into Math!* activity book.

Tell your student that you need her help again to find all the items you need from the grocery store. You have all the things you need drawn on a shopping list. Your student will help make sure you get the correct amount of each item. Name the number of each item on the shopping list. For example, you would say "I need 3 tomatoes." Your student would find the image showing 3 tomatoes and cross out those items.

Monitor your student's work for accuracy in crossing out the correct items.

Look For
Your student may want to individually count each object, even with a small group of objects.

Here's How to Help: Provide your student with opportunities to practice the skill of recognizing small groups without counting each object. For example, you can encourage your student to quickly recognize how many small snack items you put out or the number rolled on a die while playing a game. The more your student practices this skill, the easier it will become!

Math Reflection

"Let's Reflect!"

Ask some questions to guide your student's reflection:

- "How can you know the number of objects that are in a group quickly?"
- "What is one thing you found easy?"
- "What would you like more practice with?"

New Teaching
(continued)

Extended Practice *(Optional)*

If your student still needs to count each item instead of subitizing, or if she expressed the need for more practice, continue working on this skill.

Use all the *Dot Cards* to continue practicing how quickly your student can recognize how many objects she sees on each card. You can make it a game to see how many cards she can recognize in 10 seconds.

You can adjust the time (to more or less) that you give your student to recognize the cards.

Your student will continue to practice the skill of subitizing in future lessons. This is also a skill that will develop over time with practice. You can proceed to the next lesson without the full mastery of the skill.

Brinda's Math Fun!

How Many Groceries Do You See?

"Let's practice our math skills!"

Materials

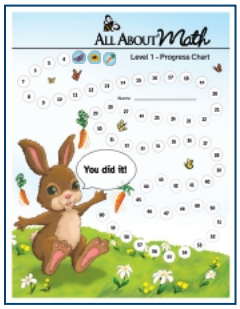
How Many Groceries Do You See? Cards, *Hop into Math!* pages 27 to 29.

Directions

1. Cut out and mix up the cards.
2. Divide the cards so that each player has the same amount.
3. Put the stacks of cards face down in front of each player.
4. At the same time, each player turns over the top card in the stack.
5. The player with the highest number of plums in her shopping bag wins the round and gets to keep the cards.
6. If all the players flip over the same number of plums, they will flip over the next card. Whoever has the highest number wins all of the cards from both rounds.
7. The game ends when one player has all the cards.

Track Your Progress

Mark the Progress Chart



Have your student mark Lesson 3 on the Progress Chart.