

Numbers, Numbers, 1, 2, 3

Players 1+



Ages 2



5-10 min

GOAL

To say and to show how many fingers are being held up.

MATERIALS

Hands



VOCABULARY

How many
Same
Different

QUESTIONS

How many fingers do you see?
Can you show me a different way to show that many?

HOW TO PLAY

1. Hold your hands behind your back.
2. Chant, “Numbers, numbers, 1, 2, 3. How many fingers do you see?” Hold up three fingers on one hand.
3. Wait for children to say “three” and ask them to show three using their own fingers.
4. Put your hands behind your back again and continue playing with different numbers of fingers.

5. Vary the ways you hold up your fingers. You can show three:



TIPS FOR PLAYING

- Start with 1 to 5 fingers. As children progress, show 6 to 10 fingers.
- If children are ready for numbers more than 10, you can ask a friend to lend their hands to make numbers up to 15 or 20.
- This game can be played anywhere. You can play for a short time or a long time. It's great when you're waiting in line or as a transition activity in the classroom.

WHAT CHILDREN ARE LEARNING

- Five is a great number to start practicing composing numerals because we have five fingers on each hand.
- This game helps children recognize that smaller numbers are "hiding inside" larger numbers (e.g., that 3 and 1 are two parts of 4).

MATH TOPICS

Number: Counting and Cardinality

VIDEO



Watch Game Video

View the QR code in your smartphone's camera app or QR code reader to watch a video that shows how to play Numbers, Numbers, 1, 2, 3.

Number Clap

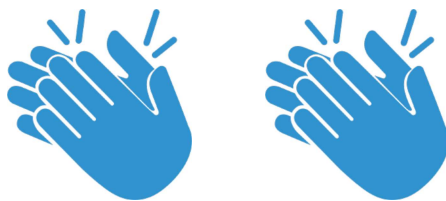
Players 1+ Ages 3+ 5-10 min

GOAL

To hear and recognize a number of claps, clap the same number of times, and say how many times you clapped.

MATERIALS

Your hands



VOCABULARY

Same number of times
How many times

QUESTIONS

How many times did we clap?
Can you clap the same number of times?

HOW TO PLAY

1. Get your hands ready to clap and your ears ready to listen.
2. Say, "Listen carefully. Can you clap the same number of times as me?" Clap twice.
3. Wait for children to clap, then ask, "How many times did you clap?". Wait for children to respond ("Two!").
4. Continue playing using different numbers of claps.

TIPS FOR PLAYING

- In addition to clapping, you can use all different types of motion. Children can jump, spin, stomp, or whistle the number of times that you clapped.
- To start, focus on numbers one to five. Then, when children are ready for more challenge, try numbers up to 10.
- To keep the game going, you can have the children take turns leading.

WHAT CHILDREN ARE LEARNING

- Children are working with a lot of mathematical ideas. They listen to the claps and determine how many claps. They hold that number in their head while they count their own claps up to that number. And finally, they label the claps with a number word, like "two" or "three."

MATH TOPICS

Number: Counting and Cardinality

VIDEO



Watch Game Video

View the QR code in your smartphone's camera app or QR code reader to watch a video that shows how to play Number Clap.

Make 5! with Fingers

Players 1+ Ages 4+ 5-10 min

GOAL

To show 5 using two hands.

MATERIALS

Hands



VOCABULARY

In all
How many more
Take away
Remove

QUESTIONS

How many more fingers do we need to make five?

HOW TO PLAY

1. Hold your hands behind your back.
2. Say, "Let's work together to hold up five fingers in all. I'm going to hold up some fingers. Now, with your hand, hold up the rest of the fingers to make five in all."
3. Bring one hand forward and hold up two fingers.
4. Ask, "How many fingers am I holding up? How many more fingers do we need to make five?"

5. Wait for children to hold up three fingers.
6. Say, "Yes! I am holding up two fingers, and three more fingers makes 5! 1, 2, 3, 4, 5. Five fingers."
7. Put your hands behind your back. Continue playing using different combinations of fingers.



TIPS FOR PLAYING

- Players can make different numbers other than 5. They can make combinations of 3 or 4, or if children are ready for more of a challenge, they can make numbers up to 10.
- If children are ready for numbers more than 10, you can ask a friend to lend their hands to make numbers up to 15 or 20.
- To practice subtracting numbers, you can ask the child to hold up 5 fingers while you hold up fewer than 5 fingers, and then ask, "How many fingers do you need to take away to get to my number of fingers?"

WHAT CHILDREN ARE LEARNING

- This game focuses on number composition — knowing that two smaller numbers make up a larger number. This is the foundation for addition and subtraction. In this game, children are adding together the number of fingers being held up on two hands.
- It's important for children to recognize that a given quantity can be represented in different ways — with fingers, numerals, dots in different configurations, and more. Having practice playing with number in many forms helps to strengthen this concept.

MATH TOPICS

Number: Counting and Cardinality

VIDEO



Watch Game Video

View the QR code in your smartphone's camera app or QR code reader to watch a video that shows how to play Make 5! with Fingers.

More, Less, Same with Fingers

Players 1-20+ Ages 4+ 5-10 min

GOAL

To recognize how many fingers are being held up and then show more, less, or the same number of fingers on your hands.

MATERIALS

Hands



VOCABULARY

Same
More
Less/fewer
Compare

QUESTIONS

How did you know?
How many more?
How much less?

HOW TO PLAY

1. Hold your hands behind your back.
2. Bring one hand forward and hold up three fingers. Say “Can you hold up the same number of fingers as me?”
3. Wait for children to show three fingers (in any configuration).
4. Put your hands behind your back again. This time, bring one hand forward and show two fingers. You can have children

show the **same** number of fingers or, if you'd like to introduce an extra challenge, choose one of the following questions:

Level 1: "Can you hold up **more** fingers than me?" Give children time to figure out how to show more fingers.

Level 2: "Can you hold up **exactly one more** finger than me?" Give children time to figure out exactly one more than you.

Level 3: Ask the child to hold up more fingers than you are holding up and then ask, "**How many more** is that? **How do you know?**"

5. When children are comfortable talking about "more than", you can ask the same questions, substituting with the term "**fewer than**".* This is an early step toward understanding addition and subtraction.

*In English, fewer is typically used for countable objects and less is used for continuous quantities. In these directions, we use both words because some children and families may be more familiar with one or the other. Use the vocabulary that works best for you.

TIPS FOR PLAYING

- You can switch roles with the children. Have them hold up their fingers and tell you to hold up more, less, or the same number.
- Show quantities of fingers in all different ways. For example, first show 4 with two hands: 3 fingers on one hand and 1 finger on the other. Then show 4 with 2 fingers on one hand and 2 fingers on the other.

WHAT CHILDREN ARE LEARNING

- Talking about more, less, and the same helps build children's math vocabulary.
- Thinking about one more and one less also helps children learn the order of numbers: 4 is one more than 3 and 2 is one less than 3.

MATH TOPICS

Number: Counting and Cardinality

VIDEO



Watch Game Video

View the QR code in your smartphone's camera app or QR code reader to watch a video that shows how to play More, Less, Same with Fingers.

How Many Are Hiding? with Fingers

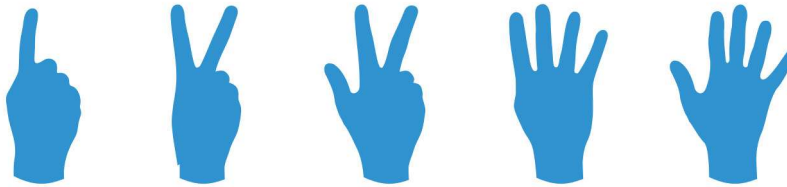
Players 1-4 Ages 4+ 5-10 min

GOAL

To name how many fingers are hiding.

MATERIALS

Hands



VOCABULARY

How many?
Hiding
Up
Behind

QUESTIONS

How did you remember there were five in all?
How did you figure out how many were hiding?

HOW TO PLAY

1. Hold up your hand with five fingers extended. Ask, “How many fingers are here?”
2. Hide one finger. Ask, “How many fingers are hiding?”
3. Once children identify the number of fingers hiding, continue playing by hiding different numbers of fingers. Try hiding all of your fingers and none of your fingers! This makes children laugh and give silly answers.

Note: Have children take on the role of the “hider.” They will enjoy hiding their fingers for you!

TIPS FOR PLAYING

- Try playing this game with your palm facing toward the other player and then with the back of your hand facing toward the other player. Does it make a difference? Is it easier or harder to say how many are hiding when children can't see the fingers that are down?

WHAT CHILDREN ARE LEARNING

- This game helps children recognize that bigger numbers, like 5, are made up of smaller numbers, like 1 and 4. This is referred to as number composition and is an important skill for children to learn to help them with addition and subtraction later on.
- Children are practicing saying how many they don't see instead of how many they do see. This is an important skill, but it can be hard. If it seems too challenging, you can have children say how many they do see until they are ready to say how many are hiding.

MATH TOPICS

Number: Counting and Cardinality

Number: Operations

VIDEO



Watch Game Video

View the QR code in your smartphone's camera app or QR code reader to watch a video that shows how to play How Many Are Hiding with Fingers.

Counting Together

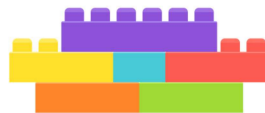
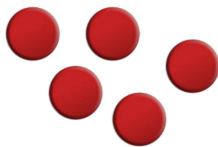
Players 1-20 : Ages 2+ : 1-5 min

GOAL

Children count the number of objects in your hand.

MATERIALS

Small counters, like tokens or figurines



QUESTIONS

How many are there in all?

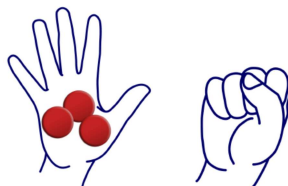
How do you know?

Can you show me how you counted?

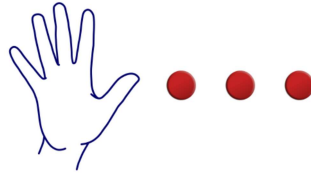
Do you know how many without counting one by one?

HOW TO PLAY

1. Hide 3 objects in your hand. Tell children you hid some objects in your hand and they are going to help you count aloud to find out how many.



2. Take one object from your hand and place it where children can see. Count together, "one, two, and three."



3. Show your empty hand and ask children how many tokens there are in all. Reiterate that there are 3 tokens in all.
4. Try this with different numbers of counters, making sure the children count with you. Play in small group and whole group settings.

WHAT CHILDREN ARE LEARNING

- This is a quick and simple counting game that even very young children can play. As children play, notice where their counting skills are. Some children may just be learning to count or learning counting words. Others may be ready for higher numbers, like five or seven. And some might just like to watch others count the tokens before they play themselves. All of these are great ways for children to be interested in counting!
- When children label a set size by saying, "three tokens in all," they are practicing their cardinality skills.

MATH TOPICS

Number: Counting and Cardinality

Number: Operations

VIDEO



Watch Game Video

View the QR code in your smartphone's camera app or QR code reader to watch a video that shows how to play Counting Together.

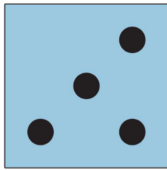
Copy My Dots

Players 1-4 Ages 3+ 5-10 min

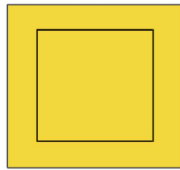
GOAL

Use tokens to copy the dot card.

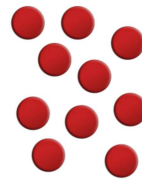
MATERIALS



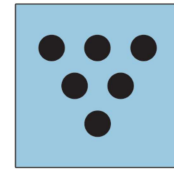
Large Dot Cards: 0-5



Blank Square



Tokens



Large Dot Cards: 6-10

VOCABULARY

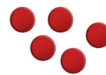
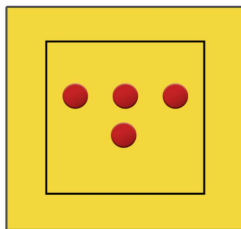
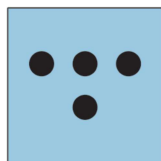
Arrangement/configuration
Straight line
Up/down
Across
Diagonal

QUESTIONS

Do you have the same number of tokens on your card as on the dot card?
Did you arrange the tokens on your square in the same arrangement as the dot card or in a new way?

HOW TO PLAY

1. Choose a large dot card from the deck.
2. Say, "Let's make a copy of this card with our tokens on this blank square."



3. Watch how children copy the arrangement. Do they lay out the same number of tokens? Do they organize the tokens in the same arrangement or in a different way?
4. Continue with a new card.

TIPS FOR PLAYING

- To start, children may want to place their tokens directly on top of the dots on the dot card instead of using the blank square. This is a great first step and helps them practice one-to-one correspondence.
- The frame provides boundaries to help children arrange their dots. The sides provide a reference for where the dots go.
- Once children are comfortable copying the 1 to 5 dot cards, use higher number cards.

WHAT CHILDREN ARE LEARNING

- Notice if children know the number order when counting (1, 2, 3, 4, ...) and can coordinate the number word said while pointing to one dot at a time. When they are able to count one object at a time in the correct number order, they are using one-to-one correspondence.
- As children count out their tokens to match the number of dots on the card, they're practicing cardinality: knowing how many in all. You can help them by saying, "How many dots are on the dot card in all?" And if they're not sure, say, "You counted 1, 2, 3, 4 dots. So there are 4 dots in all!"

- You can also help children see that cardinality stays the same no matter how the tokens are arranged. For example, once they know that there are four dots in all, you can line the tokens up, or arrange them in the square's four corners, or even stack them. Each time there's a new arrangement, have children remind you how many tokens there are in all.
- As children gain experience with with the larger cards, you can use smaller dots cards. This helps them see that the arrangement can be transferred even when the size of the dots is different.

MATH TOPICS

Number: Counting and Cardinality

Patterns and Structure

VIDEO



Watch Game Video

View the QR code in your smartphone's camera app or QR code reader to watch a video that shows how to play Copy My Dots.

How Many Are Hiding?

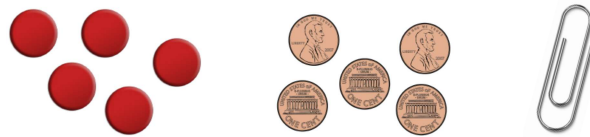
Players 1-4 Ages 4+ 5-10 min

GOAL

To name how many tokens are hiding underneath the covering.

MATERIALS

5 tokens: counters, pennies, or other small items



1 cloth, piece of paper, or other covering



VOCABULARY

How many
Token
Hiding
Underneath

QUESTIONS

How did you remember there were five in all?
How did you figure out how many were hiding?

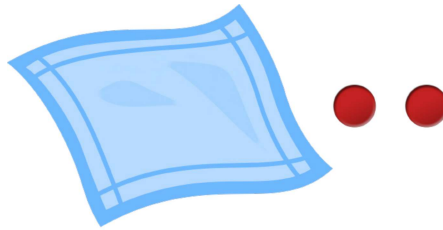
HOW TO PLAY

1. Ask children to place the tokens on the table or floor.



2. Have children count the number of tokens. Ask, “How many tokens are here?”
3. Once children have counted the five tokens, say, “Close your eyes!”

Use the cloth to cover up three of the tokens.



4. Have children open their eyes. Ask, “How many tokens are hiding?”



Some children might quickly recognize that three tokens are hiding. Others will need your help to remember that there were five tokens in all. Have them count to five by pointing to or tapping the two visible tokens and then tapping the cloth one time for each hidden token.

5. Once children identify the number of tokens hiding, continue playing by hiding different quantities of tokens underneath the cloth. Try hiding all of the tokens and none of the tokens! This makes children laugh and give silly answers.

Note: Have children take on the role of the “hider.” They will enjoy hiding the tokens for you!

TIPS FOR PLAYING

- When first playing this game, if 5 objects is too challenging, you can use 3. If 5 objects is too easy, you can use 6 or more.
- Starting with 5 objects is helpful because children have 5 fingers on their hand. They start to realize that they can

represent quantities with their fingers, and that if they see five of something, it's the same number of things as they have fingers on their hand.

- Encourage children to count the objects they can't see by pointing to each item beneath the cloth and whispering its number name "1, 2, 3..."

WHAT CHILDREN ARE LEARNING

- Children are practicing not saying how many objects they see and instead saying how many they don't see. This is hard. If it seems too challenging, you can have children say how many they do see until they are ready to say how many are hiding.
- Children are practicing early addition and subtraction skills. They are learning that 5 is composed of smaller numbers like 3 and 2; or 4 and 1. This is part of understanding what it means to be 5 of something.

MATH TOPICS

Number: Counting and Cardinality

Number: Operations

VIDEO



Watch Game Video

View the QR code in your smartphone's camera app or QR code reader to watch a video that shows how to play How Many Are Hiding.