

HOW TO PLAY DOT CARD GAMES

Math children are practicing:

- Number names
- Number order to five (and then higher)
- Subitizing: Recognizing how many immediately
- Cardinality: Knowing how many in all
- Using one-to-one correspondence when counting
- Number conservation: recognizing that objects in different arrangements can still represent the same number

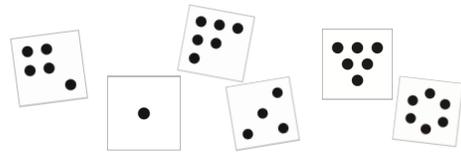
Materials

- 2 decks of dot cards
 - Green:** Numerals
 - Pink:** Ten-Frames
 - Yellow:** Dice Configuration
 - Green:** Organized to Subitize
 - Red:** Organized to Subitize
 - Blue:** Circular Configuration
 - Orange:** Scattered Configuration
- 25 tokens (hold on to these for session 2)
- *Other:* Any counting objects in your classroom

Picture Book: Ten Black Dots by Donald Crews

Classic counting picture book: one black dot makes a sun, 2 black dots the eyes of a fox, and three black dots a snowman, etc. As you read, have the group count the dots on the page together. This book is a great compliment to the dot card games where kids are practicing one-to-one counting and subitizing

- *Circle time:* Read the book aloud. Ask a few children to touch the dots in the book as you count them together. Talk about what they see and predict what number of dots might be on the next page.
- *Art table:* Use circle stickers, stamps, or bingo daubers to have each child create their own picture with up to 10 dots. Have children tell you about what they draw and write it down on their paper: “I used 5 dots in all. 4 dots to make car wheels, 1 dot to make a steering wheel.”



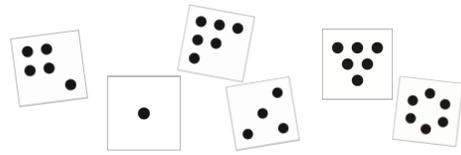
✓	Game	Materials
	Fingers, Fingers, 1, 2, 3. How many do you see?	Fingers
	Number jump	None
	Number clap	None
	How many in my hand?	Tokens
	Quick images	Dot cards
	Match the Dots	Dot cards
	Hungry Numbers	Dot cards
	Can you find?	Dot cards

Suggestions for play:

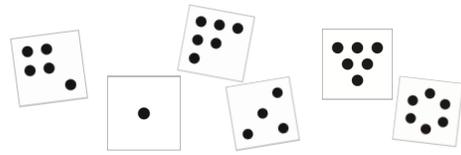
- Start with fewer cards on the table at one time, so children aren't overwhelmed with choices
- Place tokens in a small, open container so children have access to them, but they are contained

Subitizing Questions:

- Can you show me how many with your fingers?
- Do you know how many without counting one-by-one?
- How could we do it a different way?
- What is one more? What is one less?
- What strategy did you use?
- What did you do when you weren't sure?

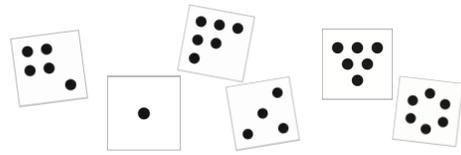


Numbers, Numbers 1, 3, 3. How many do you see?		
Skills practiced: subitizing, number names		
Materials: Hands		
1-20 players	1-5 minutes	Ages 2+
<p>1. Hold your hands behind your back. Chant “<i>Fingers, Fingers 1,2, 3. How many do you see?</i>” Hold up three fingers .</p> <p>2. Children say three or show three with their fingers.</p> <p>3. Keep playing with different numbers of fingers, focusing on 1-5, and slowly moving up to 10.</p> <p>4. Vary how you show the number on your fingers, for example like  or  or with 2 hands like .</p> <p><i>Variation:</i> Hold up any number of fingers on your hands and ask children to hold up that same number of fingers on their hands but in a different way.</p>		
<p>Things to notice as children play.</p> <p>This is a great game to play during transitions, as part of your circle time routine, or when you have just a couple minutes. The critical learning in this game is that numbers can be composed (or made) in different ways. You can make 5 with five fingers on one hand and zero on the other, or with four and one, or with three and two. These different combinations all make five. This helps children recognize that smaller numbers are part of larger numbers (e.g., 3 and 1 are two parts of 4).</p>		

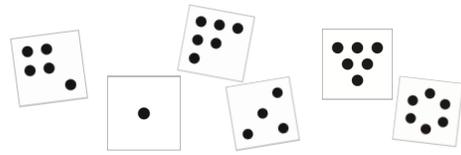


Number Jump		
Skills practiced: counting out, number names, cardinality		
Materials: Bodies		
1-20 players	1-5 minutes	Ages 3+
<ol style="list-style-type: none"> 1. Say, "Let's jump three times. Ready? One, two, three, STOP. We jumped three times!" (Show one, two, and three fingers while you are jumping). 2. Repeat with other numbers. 		
<p>Things to notice as children play.</p> <p>Children are practicing counting out to a certain number. Watch if they are able to synchronize their counting with their jumping, count in the correct order, and if they know to stop when they reach the given number. These are each important skills for them to practice.</p>		

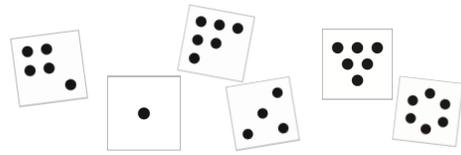
Numbers Clap		
Skills practiced: counting out, number names, cardinality		
Materials: Hands		
1-20 players	1-5 minutes	Ages 3+
<ol style="list-style-type: none"> 1. Say, "Listen carefully, can you clap the same number of times as me?" Clap two times. 2. Children respond. 3. Ask, "How many times did I clap?" <p><i>Variations:</i> You can also have children jump the number of times that you clapped or any other movement that makes sense.</p>		
<p>Things to notice as children play.</p> <p>This is slightly more complicated than Number Jump because children have to listen for how many times you clapped, repeat it, then recall the number name. Stick with number under 5, unless the children are ready and really want a challenge.</p>		



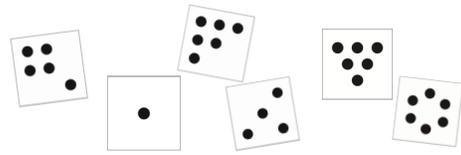
How Many in My Hand?		
Skills practiced: counting out, number names, cardinality		
Materials: Tokens (or other small objects)		
1-20 players	1-5 minutes	Ages 3+
<ol style="list-style-type: none"> 1. Hide three tokens in your hand. 2. Say, "I'm hiding some tokens. Can you help me count to find out how many?" 3. Take out one token and place it where children can see. Count together slowly, "one, two, three". 4. Show your empty hand and ask, "How many tokens there are in all?" 5. While gesturing over the three tokens, say, "Three tokens, there are three tokens in all." 6. Repeat with different numbers of counters. 		
<p>Things to notice as children play.</p> <p>As you play with children, notice if they can count one-by-one, if they are counting in the correct order, and if they know that the final number they counted is the number of tokens in the whole group (cardinality). When you start playing this game, you can help them by counting with them. As they gain more experience, start to let them do the counting and have the children tell you how many in all. This game is a great formative assessment of children's early mathematics skills.</p>		

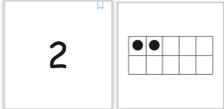


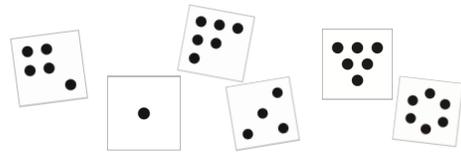
Quick Images		
Skills practiced: subitizing, cardinality, number names		
Materials when you first play Yellow Dice 0-5; Pink Ten-Frame 0-5; Red or Blue Organized to Subitize 0-5		Later games Add Orange Scattered Configuration Add Blue Circle Configuration Add cards 6-10
1-20 players	5-10 minutes	Ages 3+
<ol style="list-style-type: none"> 1. Say, “I’m going to show you a card for just a few seconds. Try to remember what you see, then tell me how many dots were on the card. Ready?” 2. Hold up a card for about three seconds, then put it face down. 3. Ask, “How many dots?” 4. Children can call out their response or show on their fingers. 5. If you would like to extend this activity ask children, “How did you know how many?”. They may respond I saw two dots and two dots and knew that was four. 		
<p>Things to notice as children play.</p> <p>This is a great game to play during transitions, as part of your circle time routine, or when you have just a couple minutes. This game let’s children practice subitizing—seeing how many quickly. Researchers have found that children who are strong at subitizing tend to do better in mathematics as they go through school. By playing this game you are helping children to build a strong visual image of number. As children gain experience, it is particularly fun to talk about how they saw smaller groups in the larger set. For example, “I saw a group of two dots, and a group of three dots, and I knew that was five.” Each child may “see” how many a different way.</p>		

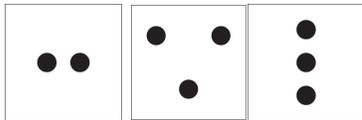
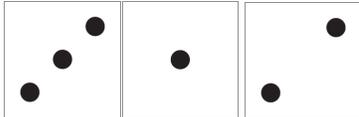
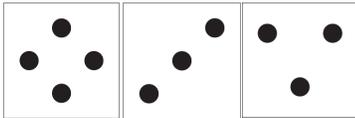


Match the Dots		
Skills practiced: Counting, cardinality, subitizing		
Materials when you first play Yellow Dice 0-5; Pink Ten-Frame 0-5		Later games Add other configurations (any color) 0-5 Add numbers 6-10
1-4 players	5-10 minutes	Ages 3+
<ol style="list-style-type: none"> Place all the cards face up. (With the first game, you'll have 12 cards spread out. If that is too many, just remove a pair. You can add more pairs when children are ready.) Say, "I'm going to try go find two cards with the same number of dots I think these cards have the same number! Is that a match? What do you think? Why?" <div> </div> Say, "Now, it's your turn. Can you find two cards with the same number of dots?" See if you can find all the matches. 		
<p>Things to notice as children play.</p> <p>Some children may count the dots on each card to confirm that they have the same number. Notice when they count if they know the number count order (1, 2, 3, 4, ...) and if they are able to coordinate the number words with their finger pointing at just 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. Help them name the last number they count as the total number in the set—this helps them practice cardinality or knowing how many in all.</p> <p>As children gain more practice with these cards, they may know immediately how many dots there are. This is called subitizing—recognizing how many immediately. Subitizing is an important early mathematics skill that children should practice. You can model this by saying, "I saw 4 dots here, and 1 more dot, and I knew immediately that that was 5!"</p> <div> </div> <p>You may want to limit the number of cards on the table to 10 or 12, so you can choose which numbers you want children to work with. Perhaps you start with 0 to 4, then after a few games, move to cards with 2 to 6 dots.</p>		



Hungry Numbers		
Skills practiced: Numeral recognition, counting, connecting numerals with quantity		
Materials when you first play Green Numeral Cards 0-5; Yellow Dice 0-5; Pink Ten-Frame 0-5		Later games Add Red and Blue Organized to Subitize 0-5 Add Blue Circle Configuration 0-5 Add Orange Scattered Configuration 0-5 Add cards 6-10
1-18 players	5-10 minutes	Ages 4+
<ol style="list-style-type: none"> 1. Arrange numeral cards in order from 0 to 5. At first, you can do this for children, then do it together, then ask them to arrange the cards. 2. Mix together the other cards you are using into a deck, face-up. 3. Say, “These numbers are hungry and they eat these cards. But, they only eat cards that match their number. Let’s look at the top card, which number is the same as the number of dots on this card?” 4. “Great, this card has 2 dots on it, so we’ll put it next to the card that says 2!” <div style="text-align: center;">  </div> <ol style="list-style-type: none"> 5. Play continues as children take turns feeding the numeral cards. 		
<p>Things to notice as children play.</p> <p>This activity could be introduced during circle time or small group. You could use it as a transition activity by giving each child a card and having them feed it to the matching numeral before they leave circle.</p> <p>This games gives children practice in recognizing quantity (the number of dots on a card) with numerals that represent that quantity. It is important for you to reinforce this learning by saying the number name so that students can connect the quantity with the symbol with the name.</p>		



Can you find?		
Skills practiced: subitizing, cardinality, number names		
Materials when you first play Yellow Dice 0-5; Pink Ten-Frame 0-5; Add Red and Blue Organized to Subitize 0-5		Later games Add Orange Scattered Configuration Add Blue Circle Configuration Add cards 6-10
1-4 players	5-10 minutes	Ages 4+
<p>1. Place 3 small dot cards on the table, each with different quantities on them. (Begin with quantities 1 to 3 before adding the 4 and 5 cards. Wait until children are strong with numbers 1 to 5 before adding the 6 cards).</p>  <p>2. Ask, "Can you find the card with 2 dots?" (Notice if they can see 2 immediately or need to count.)</p> <p>3. Say, "Ready for a new set?" Put down new cards. Ask, "Can you find the card with 3 dots?"</p>  <p>4. Continue to play. When children are comfortable with the numbers 1, 2, and 3. Add the four dot cards. See if they are able to subitize four (probably by chunking 2 groups or 2).</p> 		
<p>Things to notice as children play.</p> <p>This game builds on the quick images game where children practice seeing how many quickly. However, this game is harder because children have to see how many on three different cards then figure out which card matches the number the teacher said. To make it a little easier, you can start with just two cards. To add a challenge, you can add more cards or use cards with larger numbers of dots.</p>		