Pre-Kindergarten/Kindergarten Activities

This is a collection of activities that can be done with Pre-K-Kindergarten aged students. These activities can be used for a Family Math Night or Curriculum Night, a Kindergarten Enrollment Fair, or to engage parents and students as they wait during parent/teacher conferences.

Strategies for organizing activities for an event:

- Set up stations (one per activity)
- Recruit 2 volunteers per station
- Provide all necessary materials for the station
- Make copies of directions to send home with parents

All of the stations are represented in the table below. The table provides information regarding the materials needed, the key ideas and a game from ST Math that can connect to the activity at that station. This information can assist teachers in helping students and parents make connections to games students may have seen in class.

A family direction sheet is available for each station. This outlines the activity, specifies how to play, and offers information around vocabulary words and questions family members can ask to promote thinking. All of the activities are designed for parents and children to play together.

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Station Name	Materials Needed	Key Idea(s)	ST Math Game Connection
Creating Patterns	• Any household item that can be used to make patterns. Examples: buttons in 3 different sizes or colors; small/medium/ large forks or spoons or plates; crayons in 3 different colors; pennies/nickels/ dimes; etc	Understanding patterns	**Pre-K Objective:** Intro to Patterns Game: Intro to Monkey Patterns **Kindergarten Optional Objective:** Exploring Patterns
How Many?	• Cards with numerals 0-5 • Household counters (buttons, barrettes, bingo chips, beans, pennies, Cheerios, etc.)	Counting to 5	**Pre-K Objective:** Number Sense to 7 Game: Match Count to 7 **Kindergarten Objective:** Number and Objects to 5 (Module 1) Game: Match Count
Number Match	• 40 of the same small item (buttons, barrettes, bingo chips, beans, pennies, Cheerios, etc.) • 3 pieces of blank paper	Counting to 5	**Pre-K Objective:** Number Sense to 7 Game: Match Count to 7 **Kindergarten Objective:** Number and Objects to 5 (Module 1) Game: Match Count
Counting Jar	• Household counters (buttons, barrettes, bingo chips, beans, pennies, Cheerios, etc. • Index Cards (for extension activity)	Counting to 5	**Pre-K Objective:** Number Sense to 7 Game: Match Count to 7 **Kindergarten Objective:** Number and Objects to 5 (Module 1) Game: Match Count
Fill a Ten Frame to 10	• Ten frame mats • Number cards • Counters (buttons, barrettes, bingo chips, beans, pennies, Cheerios, etc.)	Counting to 10	**Pre-K Objective:** Number Sense to 10 Game: Alien Capture to 10 **Kindergarten Objective:** Number and Objects to 10 Game: Alien Capture
How Many Shoes?	• JiJi's friends cards • Numeral cards • Shoes cards	Counting	**Kindergarten Objective:** Make 10 and Number Pairs (Module 1) Game: Bouncing Shoes to 10
Number Pairs	• 8 cups or paper plates • 20 small countable items (buttons, barrettes, bingo chips, beans, pennies, Cheerios, etc.) • Index cards	Number pairs	**Kindergarten Objective:** Make 10 and Number Pairs (Module 2) Game: Partners
Which is More?	• 20 small countable items (buttons, barrettes, bingo chips, beans, pennies, Cheerios, etc.) • Number Cards • Duct Tape • Quarter • Marker	Comparing numbers	**Pre-K Objective:** Comparing Quantities Game: More/Less Parachute **Kindergarten Objective:** Greater Than, Less Than, Equal To Game: More/Less Parachute
Yummy Math Stories	• Snacks such as oyster crackers, cereal, or fish crackers	Explore numbers and relationships	**Pre-K Objective:** Number Sense to 10 Game: Bird Expressions to 10 **Kindergarten Objective:** Understanding Addition and Subtraction within 5 Game: Bird Expressions Addition

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Creating Patterns

Activity for Pre-K/Kindergarten age children
This game focuses on helping children explore ABC, ABB, and AAB patterns.
Examples of these patterns include: ABC - red, green, blue, ABB - small, large, large, AAB - ball, ball, bat

Directions:

- Gather 10-12 each of at least three household items.
- Line up the items to make an ABC pattern for your child, such as red crayon, blue crayon, green crayon.
- Help your child "read" the pattern by pointing to and naming each item.
- Encourage your child to copy the pattern you created.
- Repeat the steps above with ABB and AAB pattern.

Notes for Parents:

Math words to use:	Materials	Sample Questions to Ask:
Pattern **Copy** **Same** **Repeat**	• Any household item that can be used to make patterns. Some examples include: buttons in 3 different sizes or colors; small/ medium/large forks or spoons or plates; crayons in 3 different colors; pennies/ nickels/ dimes; etc.	• How would you describe the pattern? • Repeat part of the pattern. What comes next? How do you know? • Can you make a pattern that is different than the one we just did? Can you make a pattern that is the same, using different items? • Repeat the pattern with a mistake in it. Is this pattern correct? Why or why not?

Ideas for extending the learning:

- Have your child create a pattern based on your description as an ABC, ABB, or AAB pattern.
- Have your child create patterns using features of items like size, color, or orientation.
- Find patterns in the world around you, examples: striped shirts, wrapping paper, and tiled floors.

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How Many?

Activity for Pre-K/Kindergarten age children

This game focuses on helping children develop the ability to recognize numerals and to relate the numerals to their corresponding quantities.

Directions:

- Shuffle the cards.
- Place them face down in a pile.
- Have your child draw a card and read the number to you.
- Have your child use the household counters to represent the number on the card. They should count them out loud to prove the number on the card is the same as the number of counters.
- Repeat steps 3 and 4 by drawing a new card.

Notes for Parents:

Math words to use:	Materials	Sample Questions to Ask:
One **Two** **Three** **Four** **Five** **Counting** **Total**	• Cards with numerals 0-5 • Household counters (buttons, barrettes, bingo chips, beans, pennies, Cheerios, etc.)	• What is the number on the card? • How many counters do you have? • How do you know the number of counters you have matches the number on the card? • Can you tell me how many counters you need to have one more than the number on the card? One fewer?

Ideas for extending the learning:

- Have your child repeat the activity using two different items to represent the number. For example, if the number is 5, your child may use 2 buttons and 3 pennies to represent 5. Ask them to compare the numbers.
- Take turns with your child drawing a card and representing the number with the counters. Once you both take a turn, ask your child who has more. Have them count the items to prove it.
- Place all the cards face up on the table. Have students get a handful of counters. Once they count them, have them select the number card that they feel represents the number of items they have.

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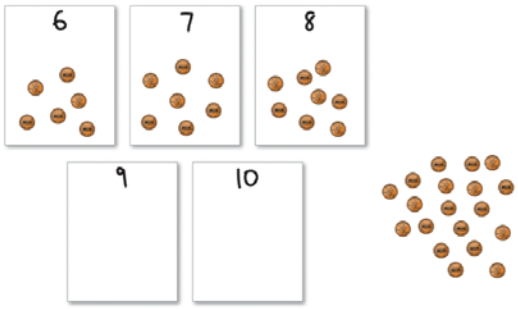
Number Match

Activity for Pre-K/Kindergarten age children
This game focuses on helping children explore numbers 6-10. Children will practice recognizing the numerals 6, 7, 8, 9, and 10. They will also practice counting up to ten.

Directions:

- Cut three pieces of paper into halves to create 5 cards.
- Write the number 6, 7, 8, 9 or 10 on each card.
- Give your child 40 of the same small items.
- Have your child count out six pennies (or beans, etc.) and place them on the card that says 6.
- Repeat with the other cards.



Notes for Parents:

Math words to use:	Materials	Sample Questions to Ask:
Six **Seven** **Eight** **Nine** **Ten** **Count** **Amount** **More** **Less** **Most** **Least**	• 40 of the same small item (buttons, barrettes, bingo chips, beans, pennies, Cheerios, etc.) • 3 pieces of blank paper	• Point to a card. How many things are on this card? • Point to two cards. Which card has more? Which card has fewer? How do you know? • Which card has the most out of all the cards? How can you tell?

Ideas for extending the learning:

- Place the cards face up in a row above the items. Give the child between 6 and 10 items. Ask them to select the card that represents the number of items you gave them. Repeat this several times.
- Repeat the activity, this time with the cards face up and not in order. Once your child has placed the items on all the cards, have them place the cards in the correct order.

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Counting Jar

Activity for Pre-K/Kindergarten age children
This game focuses on giving children practice exploring numbers 0-5. They need to practice recognizing numerals 0, 1, 2, 3, 4, and 5. They need to understand that the number 0 means zero objects, 1 means one object, and so on.

Directions:

- Work with your child to collect 20 small items for hands-on counting. When collecting try to get 4 or 5 different small items such as pennies, buttons, beads, toy cars, etc. Collect a different number of each item. Two of the items could have the same number so you can discuss numbers that are the "same" or equal.
- Place the items in a container like a jar or a bag.
- Have your child remove the items from the container, sort and count them.
- Talk to them about the number of each type of item they have. Have them count to prove their answer.
- Help your child compare the amounts of the different items.

Math words to use:	Materials	Sample Questions to Ask:
One **Two** **Three** **Four** **Five** **Count** **Amount** **More** **Less**	• Household counters (buttons, barrettes, bingo chips, beans, pennies, Cheerios, etc.) • Index Cards (for extension activity)	• How many of each item do you have? • Which items do you only have 3 of? 4? 5? • Which items do you have the most of? The least? • Compare two items. How many more/ less of this item do you have compared to that one? • Point to two items. Which is more/less? How do you know?

Ideas for extending the learning:

- Place the cards face up in a row above the items. Give the child between 6 and 10 items. Ask them to select the card that represents the number of items you gave them. Repeat this several times.
- How many of each item do you have?
- Which items do you only have 3 of? 4? 5?
- Which items do you have the most of? The least?
- Compare two items. How many more/less of this item do you have compared to that one?
- Point to two items. Which is more/less? How do you know?

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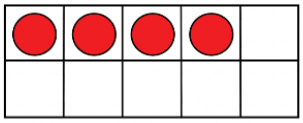
Fill a Ten Frame to 10

Activity for Pre-K/Kindergarten age children
This game focuses on giving children experience using ten frames to help them build number sense. A ten frame is a visual tool used to represent numbers 0-10. It allows us to represent the quantity of a number and helps with understanding ten and exploring the relationship of numbers.

A ten frame needs to be filled in consecutively, by placing one object at a time in one square and working up a column. You can have your child use it by filling up one column before going to the other to help them see, for example, that 6 is one more than 5 and 9 is one less than 10. To explore doubles and even/odd numbers, the ten-frame can be filled up using both columns at the same time.

Directions:

- Give your child a ten frame. You should have one, too.
- Give students one counter and have them place it on the ten frame. Have them say the number one and show one on their mat.
- Pick a number card. Have students represent that number with the counters on their ten frame. You should do this as well by drawing your own card.
- Have your child say the numeral name on the card and then count to show they have that number represented on their ten frame.
- Have your child check your ten frame to make sure the counters on your ten frame correctly represent the number card you selected.



Math words to use:		Materials	Sample Questions to Ask:
One **Two** **Three** **Four** **Five** **Six** **Seven** **Eight** **Nine** **Ten**	**Ten frame** **Counting** **Total** **Add** **Take away**	• Ten Frame Mats • Number Cards • Counters (buttons, barrettes, bingo chips, beans, pennies, Cheerios, etc.)	• How many counters are on your mat? • How many counters are on my mat? • Who has more counters? Who has fewer? • Who has the bigger number? Smaller number? • Make a mistake on your ten frame by putting too many/few...Is my ten frame right or wrong? Why? How many do I need to add/take away?

Ideas for extending the learning:

- Shuffle the number cards and place them face down. Draw a card and have your child draw a card. Keep the card secret. Use the counters to represent the number on the ten frame. Show each other the number cards that were drawn. Have your child determine who has the bigger/smaller number. Use the counters on the ten frames to prove the answer. You can also ask them to compare the numbers and tell you how many more or how many less.
- Create a number on your ten frame. Hide the ten frame, but tell your child the number. Have them build a number on their ten frame that is bigger/smaller than your number. Show them your ten frame and compare.

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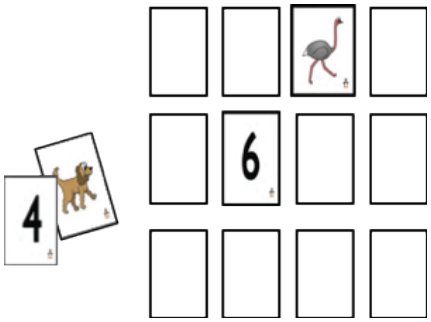
How Many Shoes?

Activity for Pre-K/Kindergarten age children
This game focuses on providing children opportunities to match different ways to represent numbers. Children will first determine how many the number represents and then will match it with other ways to show that number.

Directions:

- This game uses two sets of cards. Choose from JiJi's friends cards, numeral cards, or shoes cards.
- Shuffle the cards as one large deck and place them face down on the table spread out for the matching game.
- Have children flip two cards over and determine if they represent the same quantity.
- If they do match, your child should explain why and then remove that pair and place them in their personal pile (face up beside them).
- If the cards do not match, your child will flip them back over so they are face down and it will be your turn to flip two cards over. Take turns until all the cards are removed. Each person should count up their matches. Whoever has the most cards wins.



Notes for Parents:

Math words to use:		Materials	Sample Questions to Ask:
One **Two** **Three** **Four** **Five** **Six** **Seven** **Eight** **Nine** **Ten**	**Match** **Same** **More** **Less**	• JiJi's friends cards • Numeral cards • Shoes cards	• What is the number represented on your card? • Compare the two cards that you flipped over. How are they the same/different? • If you could change one of your cards to make it match the other, what change would you make and why?

Ideas for extending the learning:

- Mix all three sets of cards together into one large deck. Make sure it is shuffled. Pick a target number between 2 and 10. Write that number on a piece of paper and place it on the table. Deal 4 cards tor yourself and your child. (Can play with up to 3 people, or make an extra set for each type of card.) Place the remaining cards, face down in a pile in the middle of the table. Looking at the cards in your hand try to make the target number. You can use one card or a combination of cards. If you can make that target number, place those cards on the table. (For example, the target number is 7. I can put down a dog with 4 legs, the number 2, and a 1 shoe card. This will give me 7 altogether.) Once you have played cards from your hand, draw additional cards so that you have 4 cards in your hand at all times. If you can't play any cards from your hand you can trade up to 2 cards from you hand with new cards from the deck. Game play continues with the same target number until one person is able to play all the cards in their hand or no one has playable cards.

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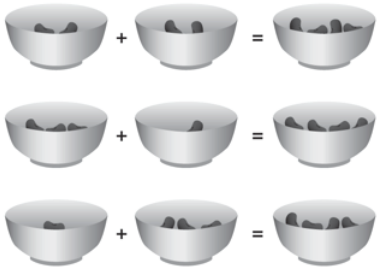
Number Pairs

Activity for Pre-K/Kindergarten age children

This game focuses on giving children the opportunity to explore different ways to compose numbers up to five. Children are learning to combine two numbers to represent a third. For example, the number four can be represented as three plus one (4 = 3 + 1) or two plus two (4 = 2 + 2).

Directions:

- Prepare 8 empty cups or paper plates and 20 beans or small countable items.
- Place 1-5 beans in each cup or on each paper plate.
- Use number cards 1 - 5. Shuffle the cards and put them face down on the table.
- Draw a card and have your child read the number on the card.
- Have them show which two cups or paper plates have enough items on them that can be used to represent the number on the card. For example, if the number on the card was 5, a child may select a cup with 3 beans and a cup with 2 beans to represent 5 things.
- Have the child find all possible pairs.



Notes for Parents:

Math words to use:		Materials	Sample Questions to Ask:
One **Two** **Three** **Four** **Five**	**Pair** **Addition** **Subtraction** **Counting** **Total**	• 8 cups or paper plates • 20 small countable items (buttons, barrettes, bingo chips, beans, pennies, Cheerios, etc.) • Index cards	• Which two bowls can I use to make 2? 3? 4? 5? • How are you figuring out the pairs to make? • Can you find all possible pairs?

Ideas for varying the activity:

- For a fun twist on this activity, use skittles or M & M's. As the child makes pairs, they get to eat the candy in the dish.
- Repeat the activity, but focus on creating number pairs that make ten.

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Which is More?

Activity for Pre-K/Kindergarten age children
This game focuses on having children explore number relationships. Children will identify items that are greater than or less than a given number.

Directions:

- Gather 20 small countable items (beans, buttons, pennies, barrettes, etc.).
- Tape a small piece of duct tape to the front and to the back of a quarter. On one side write MORE and on the other side write FEWER.
- Shuffle the number cards and place them face down in a pile on the table.
- Have your child select a card from the pile and turn it over.
- Flip the coin to determine if your child should use the counters to represent a number that is MORE or FEWER. For example, if the card chosen from the pile is 8 and the coin flip reveals MORE, the child should use the counters to represent a number that is more than 8.
- Have your child prove that they are correct.

Notes for Parents:

Math words to use:		Materials	Sample Questions to Ask:
One **Two** **Three** **Four** **Five** **Six** **Seven** **Eight** **Nine** **Ten**	**More** **Less** **Fewer** **Total**	• 20 small countable items (buttons, barrettes, bingo chips, beans, pennies, Cheerios, etc.) • Two sets of Number Cards • Duct Tape • Quarter • Marker	• What number did you represent? Why? • Are there other numbers that you could have represented? Which ones? • Compare the two amounts. How much bigger/ smaller is one over the other?

Ideas for varying the activity:

- Put 10 of the countable items in a bowl and leave the other 10 on the table. Have your child grab a handful of the countable items from the bowl. Have them count to determine the number of items they have. Place the Number Cards in a pile face down on the table. Have your child flip one over and tell you if it is MORE or LESS then the items they counted. They can use the counters to show they are correct.

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Yummy Math Stories

Activity for Pre-K/Kindergarten age children
This game focuses on counting, addition, and subtraction. It is designed to encourage students to tell math stories. Storytelling uses a different part of our brain and helps make math more meaningful to children.

Directions:

- Give the child 5 of the same snacks and explain what they represent. Select from:
- Alien spaceships (oyster crackers)
- Donuts (oat cereal such as Cheerios)
- Fish (fish crackers)
- Ask the child to count the number of snacks.
- Tell a story that a giant space monster (or hungry customer or big shark) has come along and zapped (or eaten) 3 spaceships. After the child eats 3 snacks, ask, “How many are there now?”
- Continue the story with snacks being added and eaten and asking how many snacks the child has now. Be sure to have your child eat all of them sometimes so the answer is zero.

Notes for Parents:

Math words to use:	Materials	Sample Questions to Ask:
Count **Add** **Subtract**	• Snacks such as oyster crackers, cereal, or fish crackers	• How many are there now? • If a customer wanted 8 donuts, how many more would have to be made? • If a shark wanted to eat 6 fish, how many more need to join the school? • The giant space monster ate some of the spaceships. How many did the monster eat? How many are left? Have your child count to say how many they are going to eat, count them, then eat them. Have them tell you how many are left. • Allow the child to tell some stories with the adults eating the snacks. What does your child say if you count incorrectly?

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