**EduTOOLBOX – Pre-K Professional Learning Program Lesson Plan**

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| **Content Area:** | **Math: Counting and Quantifying** |
| **Lesson Title:** | **Counting Buttons** |
| **Time Frame/Lesson Length:** | 15 minutes |
| **Lesson Setting:** | This lesson will work best in a small group at a table or on a classroom rug. |
| **Grouping of Students** | Small groups of 4-5 students are recommended for teaching this lesson. Students should be grouped homogeneously (similar levels of ability) for this lesson so that teachers can choose the numerals in which that group of students is working on, without being boring or frustrating for any students involved. |

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| **Lesson Objective:** | The learner will demonstrate understanding of quantities by subitizing the quantity on the dice and counting out that many buttons.  Student-friendly: I can use mental math and counting to answer “how many” questions. |
| **Aligned Standard(s):**  **(TN-ELDS)** | *PK.CC.B.5 Understand that a number represents a corresponding quantity.*  *a. Subitize quantities up to 5 (i.e., the ability to look at a quantity and say the quantity [1-5] quickly, just by looking).*  *b. Given a number from 1-10, count out that many objects* |
| **Assessment Method:** | The learner will demonstrate understanding of quantities by subitizing the quantity on the dice and counting out that many buttons.  The teacher will have a clipboard with pencil/pen to document which students can subitize quantities. |

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| **Background Knowledge** | This lesson builds upon what students have already learned because students will have participated in counting activities during whole and small group to help develop 1-1 correspondence. Games with dice and/or quantities on paper plates can be played beforehand to help introduce subitizing. This activity will put their knowledge of quantities into practice to increase their ability to subitize. |
| **Intentional Vocabulary:** | Subitize- look at a quantity very quickly and know how many there are without even counting  Quantity- an amount of something  It is recommended that the teacher provide a visual or a physical action to help students remember the definition of each word |
| **Materials Needed:** | * collection of buttons * ten frames (optional) * timer for beginning of activity |
| **Considerations for Learning:**  *possible challenges, management issues, and safety considerations* | To help prevent distractions during the lesson, give the students a handful of buttons and tell them they have 2 minutes to play with them before the activity starts. This should help them get their wiggles and explorations out before you need them to focus.  Watch closely to be sure that students to not put the buttons in their mouth. If needed use a different manipulative.  Sometimes having different colors might be challenging for some students, so consider having all blue or red buttons set aside for students who would benefit from only having one color. |

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| **Lesson Procedures and Questioning** | | |
| **Lesson Section** | **Detailed Procedure**  *[Sample teacher script is in italics]* | **Questioning Sequence** |
| **Introduction:** | Welcome students to the table/carpet. *Today we are going to be doing math with buttons! I am going to give you two minutes to explore with your buttons before we get started. When the timer is up we will begin our activity.*  Allow the students time to explore the buttons through sorting, stacking, examining, etc. Engage with them during this time to encourage discovery and communication.  *Wow, I see that your sorted your buttons into different groups. Tell me how you decided where to put them.I noticed that your button tower fell over. What reason do you think that happened? If I put a red button, then a blue button, then a red, then a blue, what comes next?*  When the timer finishes, draw students back to the focus of the group. *Alright, there’s our timer! We had a fun time exploring all of these buttons, and now we are going to use them to practice our math! Today’s activity will help us use what we already know to make us even better counters so we can do math faster!* | Knowledge and comprehension questions are recommended for the introduction.   * *Wow, I see that you sorted your buttons into different groups. How did you decide where to put them?* * *I noticed that your button tower fell over. What reason do you think that happened?* * *If I put a red button, then a blue button, then a red, then a blue, what comes next?* |
| **Exploration:** | If you are using the ten frame templates, pass out one to each student and prompt them to turn it the right direction and point to the beginning square (The top left square with the star as shown on the template.)  *Here is where we start filling our ten frames. When we begin counting this is where you will put your first button. Remember, we fill the top row all the way across and then go back to the bottom.*  If you’re not using the ten frames, skip this part.  *Alright friends, now we are going to need to use our math brains! We are going to practice subitizing. Everyone say subitize. \_\_\_\_\_\_\_\_\_\_\_\_\_ Good. That is a funny word. When you subitize you look at a quantity very quickly and know how many are there without even counting! A quantity is an amount of something. Let’s look at this die. It has dots on each side. Let’s see if we know how many are on this side.* (show a small quantity first) *Can anyone tell me how many dots are on this side?*  Students may answer automatically if they have the ability to subitize already, but if not you can count each dot aloud with your students to find the answer. *When we subitize, we can do math really quickly so we want to practice looking at quantities and knowing how many are there without even counting. It’s almost like magic! Let’s practice!*  *We are going to play a game today and everyone will get their turn. Remember that we have to wait patiently while our friends take their turns and then we will have our turn. Even though might not be your turn, you still need to pay attention because we are all going to be working all the time! So here is how we will play. Each friend is going to get a turn to roll the die. Let’s think about how we should roll this die if we want to be safe and respectful with our materials.*  Allow students to share ideas, such as roll gently, don’t fight over it, don’t throw it across the room, etc.  *That’s right, when it is our turn we will roll the dice gently in front of us and look at the quantity of dots that is on the top of the die. Once we know how many, we will ALL put that many buttons on our ten frame* (or in front of each student if you are opting to not use the ten frame.) *Then we will check our work by all counting our buttons together! Once we all have the right number of buttons we will clear our frames/spots and it will be the next friend’s turn!*  Begin the activity with letting a friend roll the dice, announce the quantity, or count the dots if needed, and then each student responds by filling in their ten frame (or placing that many buttons in front of them). After everyone has filled their ten frame, count aloud as a group to check their answers. Then students will clear their ten frames/spots and the next friend will roll.  Continue moving around the group letting students take turns for as long as the group time allows. Give a warning that there will be one more turn for everyone and then begin to wrap up about 2 minutes before group time is over.  If students have caught on really quickly and are subitizing every roll instantly, go ahead and use two dice for the students to roll and then add the quantities together. For students struggling with 1-1 correspondence, use hand-over-hand help to point to each button as you count, and if needed, place the buttons on the dots on the die for a more hands on approach.  As they put their buttons on the ten frame, make comments and ask questions about how the frame looks. Ex. *If you fill the frame up, how many buttons will that be? You filled up the entire top row and put one button on the bottom row. That looks like 5 plus 1. How many more are needed to make your frame full? What would happen if you add 3 more buttons to your ten frame?* | Application and analysis questions are recommended for the exploration.   * *If you fill the frame up, how many buttons will that be?* * *How many more are needed to make your frame full?* * *What would happen if you add 3 more buttons to your ten frame?* |
| **Closing:** | *Friends, I am so proud of you! You all worked so hard to focus and follow directions in this activity! We used our brains like magic to subitize! Remember, that is when we look at a quantity and know how many without even counting. We used a die today to practice. Can someone tell me when you might use a die?*  Allow students a minute to think and share their answers. The main answer will probably be when playing a game. *A lot of games we play have dice in them! We have to roll the dice to see how far we can move around the board. If we keep practicing subitizing you will get even better at playing those games and your friends and family will think your brain is magic because you don’t have to count- you just know! Thank you for working so hard with me today.*  Collect the ten frames, buttons, and dice from students and prepare for the next group. | Creation and evaluation questions are recommended for the closing.   * *Can someone tell me when you might use a die?* |

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| **Opportunities for Differentiation:** | Students that are not yet subitizing can use their finger to count the dots. For students that do not yet have 1-1 correspondence, have them match the buttons to the dots on the dice to help count. Use their finger and point to each dot/button as you count aloud with them.  Create or use two different colored dice to allow students to have a choice and be in control while they are following your directions. *Would you like the blue die or the yellow die?* |
| **Extending the Learning:** | This activity can be used to go along with *Pete the Cat and His Four Groovy Buttons* to add a literacy connection.  You could also begin addition for students that easily recognize quantities and add in two dice to the game. Have them count the total number of dots all together on the dice for sums higher than 6.  Begin addition/subtraction by rolling one dice die for the beginning quantity and roll another die for the quantity to add/subtract.  This game can be available in the toys and games center during free choice time to allow students a chance to play independently with their peers. |

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| **Appendices (attach resources used, handouts, etc:** |
| Dice template and ten frame attached. Laminate for durability if desired. You can print the dice on colored paper to have two different colored dice as well. Data sheet for subitizing quantities also attached. |









