

Bowling Ball Launcher Activity
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EXE 650: LIEU Instructional Activity

*Are you and your children missing Dave and Buster Arcade's ½ off Price Games every Wednesday or 2\$ Midnight Monday Bowling? I don't know about you but I sure do miss those fun moments. Are you cooped inside with your children complaining about being bored? I don't know about you but my first -grade students are! But, don't you worried. I have a fun, engaging activity to keep you and your children busy, and keeping up with their learning indoors. This activity is called the **Bowling Ball Launcher**.*

Targeted Skills:

In this activity, the children will be able to:

1. Develop fine motor skills
2. Develop gross motor skills
3. Recognize number identification from 1-10
4. Practice adding number values
5. Explore different combinations to calculate the sum of numbers
6. Practice one to one correspondence-matching color ball to the color number printed on paper
7. Count from 1-10
8. Take- turns to play
9. Explore science concepts/ terms

Justification:

This activity provides fun, engaging, and is age-appropriate for young children to develop cognitive skills in math such as number recognition and counting. As the child's cognitive skills develop, young children will be able to think, discern, and learn mathematics generalization through active exploration. In general, numbers are a part of the universe. Everything in life is mathematically orientated. Number recognition and counting will always be a part of our everyday lives. Throughout a person's career, he or she will encounter math problems for an infinite number of reasons. Prior to this, it helps young children to apply these skills in a variety of situations, such as dealing with money, reading the time, counting down to the number of days until their birthday or a favorite holiday. With all this being said, this activity is designed to help young children to gain mathematical cognitive skills that are associated with number recognition, counting, and numeracy development.

In fact, this activity focuses on other essential skills for young children to attain, such as gross and fine motor skills development. Fine motor skills are the use of smaller movements such as holding, throwing, and picking up small objects. Gross motor skills are the use of larger movement such as standing, walking, and ability to balance. By strengthening a child's fine and gross motor skills, it improves the child's growth and independence. In a relation to the importance of math, fine and gross motor developments are also a part of our everyday lives. Such as, walking, running, physical activities, exercise, etc., With this being said, these skills are used to help us perform and stay active daily.

Materials required (include price, quantity required, and links to follow to order materials:

- 1 Cardboard box (or used cardboard boxes) to build a ramp ---\$.62/ 1 ship cardboard box --- [Item 1](#)
(note: Don't want to build a ramp instead purchase a ramp--- (cheap) toy ramp--- \$24.99/ 1 piece
--- [Ramp](#)
- Colorful Pit Balls --- \$23.99/ 100 pieces --- [Item 2](#)
- Markers --- \$5.99/ 1 set --- [Item 3](#)
- Assorted Colors Heavyweight Construction Papers--- \$2.79/ 50 Sheets --- [Item 4](#)

- 11 Plastic baskets (*recommend- laundry or storage basket from dollar tree*) \$11.00 / 11 case ---[Item 5](#)
- Duck- tape --- \$5.49/ 20 yds --- [Item 6](#)
- A pair of scissor --- \$1.00/ 1 pair --- [Item 7](#)
- 30, 60, 90, 120 Second Sand Timers --- \$5.49/ 4 piece --- [Item 8](#)

(*Note: materials are from oriental trading, amazon, dollar tree, & Walmart*) **SAVE BIG!!!**

Instructions: (*to build a ramp*)

1. Purchase all necessary items.
2. If purchased a ramp, skip this step and move onto step 10. If purchased a cardboard box to build a ramp, follow the steps.
3. Tape the bottom of the box to avoid any open gaps. Then flip the box over where the bottom of the box touches your chest. The opening of the box should be facing the opposite of your chest.
4. Choose **ONLY** one side of the box and use the scissor to cut along the sides of the box until it reaches the bottom. After this, there will be a flap
5. Push the top flap towards the bottom until you form a horizontal slide. The flap should meet the opposite end of the box.
6. Tape the edge of the flap to avoid any open gaps.
7. **Optional:** Cut the remaining sides off. Then tape the sides together to avoid any openings.
8. **Optional:** Watch [video](#) for extra support.
9. **Optional:** Decorate or color the ramp, if desire.
10. Place the ramp on an open area. (*backyard, garage or lawn, if desired*)

Instructions: (*to set up ball launch activity*)

1. Take out ten color construction papers.
2. Use any color marker to write a number from 1-10 on each construction paper.
3. Take out ten laundry baskets.
4. Use duck -tape to firmly secure each number on each laundry basket. *The construction paper can be taped anywhere on the basket as long as it's visible.*
5. Set up the laundry baskets in any formation, *you desired*, in front of the ball launch ramp. (*Note: The formation could be a straight line, bowling pins formation, pyramid, etc...*)

Instructions: (*to play*)

1. Select a sand timer (*30, 60, 90, 120 seconds*)
2. Fill the empty (11th) laundry basket with the colorful pit balls.
3. Player 1 would stand in a desired distance in front of the ramp away from the ten laundry baskets. Place the laundry basket with the colorful pit balls beside you where it is easy to reach.
4. Player 2 would use the sand timer to keep watch of time. The second player would either shout “Begin or Stop” when time starts or runs out.
5. When game starts, player 1 would roll one ball at a time up the ramp. The goal is for the balls to land inside the baskets.
6. When game ends, player 1 would check to see which number basket have the most balls, and then gather all the balls and put them in the pit balls laundry for the next player.
7. Player 2 (*or players*) would repeat steps 3 to 6.

Modifications:

Beginner:

For this activity, there are various ways it can be modified to differentiate for students with varying abilities. Students may have difficulties to swing under-hand to roll the ball up the ramp. Perhaps, have the students throw the ball using the overhand, side swing, or the stepping overhead throw without using the ramp. Additionally, students may have difficulties gripping the plastic round ball. Perhaps, have the students throw beanbags. These

modifications would improve and strengthen the child's fine and gross motor developments. Learning to grip and throw in certain directions, would not only increase the flexibility and muscles on the hands, shoulders and arms, but it as well, targets the knees and legs muscles. Another way this activity could be modified for students would be have the students match the color ball to the color construction paper by walking towards the basket instead of throwing. Or better yet, write a number on each ball from 1-10. Then have the students match the ball to the correspondence basket. For example: if the student picked a #5 ball. The student will walk to the basket and put the ball into the #5 basket. By doing this, the students are improving their balance, practicing one to one correspondence, and developing their fine and gross motor skills. Walking is a method to strengthen your gross motor and holding the object is a method to strengthen your fine motor skill. These are certain everyday activities to exercise the child's fine and gross motor development.

Intermediate:

If students can demonstrate mastery with the beginning level and would like to improve their fine and gross motor skills. Perhaps, have the students roll two balls or a much heavier object than a ball up the ramp. Another way this activity could be modified for students would be to include physical exercise. Perhaps, have the students physically skip, jog, crawl, spin, jump, hop, or lunge to roll the ball up the ramp. These modifications would continue to enhance and strengthen the child's fine and gross motor developments.

Advance:

Students may find this activity to be simple and easy to follow. Perhaps, you consider of turning it into a friendly competition; turning up the heat. Perhaps, using a much longer timer and when the player's round ends, the player would use a marker and a paper to record the results of the number of balls in each labeled basket and calculate the total amount for scores. (*ex: if there are 3 balls in the number 4 basket, the player would write the number 4 three times, if there are 1 ball in the number 9 basket, the player would write the number 9 one time, and if there are 5 balls in the number 2 basket, the player would write the number 2 five times. At last, add $2+2+2+2+2+9+4+4+4$*) The higher score wins (*Similar to the game of bowling*) This modification would help students develop numeracy recognition that involves understanding of numbers, counting, problem-solving, and adding number values. Furthermore, this activity allows students to explore related science concepts and terms such as speed, velocity, force, and gravity. Students can learn and gain knowledge of what can happen when the ball goes up the ramp, into the air, and landing in the basket.

Notes:

The prerequisite skills that are needed in this activity includes the ability to take turns and following the rules. With needed assistance, students may require an adult to construct the ramp with the use of tape, folding, and cutting with scissor. Furthermore, students may require adult's imitation to roll the ball up the ramp, using the sand timer of knowing when to shout "begin & stop," and to count and determine which basket holds the most balls. In order to participate in this activity, students will need to demonstrate the ability to swing an object underhand and count proficiency.

This activity reflects on the following developmental skills- counting, number recognition, fine and gross motor. Counting and number recognition are important assets and skills in early childhood. Young children need to develop numeracy proficiency to visually recognize and count numbers. On top of this, fine and gross motor skills are also an essential development for young children. Fine and gross motor skills are movements that allows our bodies to stay active and to perform daily.

Photos:



Comments/feedback: