

Math-sketball

Pillar: Active Living

Division II

Grade: 4

Core Curriculum Connection: Mathematics

I. Rationale: Students exhibit their understanding of multiplication involving single-digit numbers while demonstrating their ability to dribble a basketball. This active living activity calls upon students to practice their multiplication skills and apply them in a problem solving context. Not only are they honing their math skills, but they are actively participating in learning the fundamentals of dribbling, ball control, and ball manipulation.

II. Curriculum Outcomes: Grade 4 Math

Strand: Number

General Outcome: Develop number sense.

Specific Outcomes:

5. Describe and apply mental mathematics strategies, such as:

- using repeated doubling to determine basic multiplication facts to 9×9 and related division facts.

[C, CN, ME, R]

III. Materials:

Multiplication flashcards, paper and pencil for each group, team basket, basketballs, tennis balls, scrimmage vests, bean bags, jacks, green foam balls, one tennis shoe (wild card), and poly spots, and calculators.

IV. Procedure:

1. Students will be divided into small groups of 3-4 and positioned at different locations in the gym. Each group will be given two basketballs, paper and pencil for problem solving and a team basket.
2. Scattered throughout the "playing area" will be a number of different objects. Each object will have a different point value:
Tennis ball = 1
Scrimmage Vests = 3
Bean Bag = 5
Jacks = 10
Nerf balls = 20

Tennis Shoe = (wild card) any number needed

Poly spots = 25

3. The teacher will give each group/team a multiplication flash card problem to solve. When the group figures out the correct answer, one team member will dribble into the "play area" and begin to collect the correct number of objects that will equal the answer of the multiplication problem. (If the group's problem is 4×3 , the correct answer is 12. A correct assortment of objects would be 2 bean bags and 2 tennis balls or the wild card.) Each student can only collect one object at a time. The first student must dribble the basketball out into the "play area" and collect the first object. They may stop their dribble when picking up the object. Once the object is in hand, they will dribble the basketball back, place the object in their team basket and pass the basketball to another team member who then dribbles out to collect the next object. While one student is collecting an object, the remaining members of the group are bounce passing the other basketball to each other. Once the group is finished, they will get their item basket checked for the correct amount of items. If they are correct, they will be given a different multiplication flash card problem to solve.

4. At various times the teacher will instruct the students on the type of dribbling that will need to be used: dribble backwards, dribble with the non-dominant hand, dribble at a low level, etc.

V. Assessment Ideas:

While students are dribbling, a teacher-assessment of their multiplication and problem-solving abilities may be taking place.

VI. Teaching Suggestions:

Initially, the entire class will complete a math problem together by practicing the process of dribbling into the "play area" and selecting the correct items.

VII. Source:

- lesson idea adapted from [PE Central](#).