

SOLAR LESSON PLAN FORMAT

Age Level: 4th grade

Subject(s) Area: Physical Education and Math

Materials Needed:

- poly circles
- paper and pencils
- basketballs for each group
- cards with numbers on them
- equation papers

Standards:

Code and description:

S1.E17.4 a&b – Dribbling/ball control with hands.

- a. Dribbles in self-space with both the preferred and the non-preferred hands using a mature pattern.
- b. Dribbles in general space in control of ball and body while increasing and decreasing speed.

4.OA.2 - Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison

Objectives:

What will the students know or be able to do?:

Students will be able to dribble a basketball with a mature pattern and with ease.

Students will be able to formulate the answers to multiplication equations by using the multiplicative comparison and the additive comparison.

Cognitive Level of Lesson: Level 6: Creating

Learning Activities:

Opening Element: Students will complete a two song jog warm up. When music stops they will find the nearest index card and complete the math equation. Once they are done they can continue to jog.

Instructional Methods:

Math Facts Basketball

1. Have each of the students get a basketball and have them line up across the long end of the gym.

- a. Have them practice dribbling the basketball across the gym using the correct form
 - b. Start them off by just walking across the gym and then have them speed up when they show they have control of walking and dribbling
 - c. After this is done have the students put their balls away and then sit in front of the white board for instructions for the next activity
2. Students will be split into groups of 4 and will start on Polly circles at one end of the gym and are given a sheet of paper with multiplication facts on it. The students' job is to solve the multiplication fact and then think of numbers that can add up to that number.
 - a. Example: $6 \times 7 = 32 = 9 + 9 + 8 + 6$, $2 \times 3 \times 3 = 18 = 9 + 9$
 3. When the music starts, one student will dribble the ball with their dominant hand to the other side of the gym to pick up a number that they could use to add to get their product answer. Then the student will dribble back to their team using their non-dominant hand.
 - a. Students should be focused on having a controlled dribble and not going fast and losing control of the ball
 - b. Once the team has completed one problem, they can move on to the next one on their sheet of paper
 - c. Students should write their addition equation on the paper under the multiplication fact

Guided Practice Strategies: Students will have whole group instructions before the warm up and before the activity. Students will be working in groups during the activity to solve the math problems.

Independent Concrete Practice/Application: Students will independently jog and practice their dribbling skills.

Differentiation: Differentiation will happen during when students dribble at their own pace during the activity. Depending on the students skill ability with dribbling, I could add cones and the students would have to weave around the cones while dribbling to the other side, I could add in a cross over while dribbling, and I could also make the length in which the students have to dribble shorter or longer depending on skill level also

Wrap-Up: At the end of the lesson talk through some of the equations and what addition facts the different groups used for the different multiplication equations

Assessment:

Formative: Observation of students and their dribbling skills, as well as the groups' papers will be handed in to see how they did with their math facts.

Individual Measurability: Students will be individually practicing their dribbling skills.

Reflection:

For my second lesson I integrated math into the physical education lesson for the two fourth grade classes on Tuesday. For the physical education standard I used, S1.E17.4 a&b, which is described as

dribbling/ball control with hands. For the math standard I used 4.OA.2, which is described as multiply to solve word problems involving multiplicative comparison and distinguishing multiplicative comparison from additive comparison. During the lesson I used dribbling and multiplication and addition to create a lesson that I hoped would be a great way to get students to see how fun math can be, especially when paring it with another subject, like physical education. I thought that this lesson was a little challenging for the fourth grade students, but not too challenging that they would not be able to complete the activity. It was great to see the student go through the process of not understanding to understanding within the short amount of time that was given for the lesson.

I started off my lesson with a warm up of jogging to 2 songs. While the students were running, I would stop the music and the students would have to solve a math problem that was written on a flash card around the gym. This was a great way for the students to warm up for physical education class and for the math that they were going to do later in the lesson. I would like to change the amount of cards that I made because I only had 10 problems and I should have had twice as many. I also should have written the multiplication signs differently because I usually write a star (*) but the fourth graders did not know that those stars meant to multiply.

The next activity I did was review the proper way to dribble a basketball with the students. This went great because the students were willing to participate in the review. One skill I need to work on is making sure to call on students with their hands raise, as to reduce the amount of blurting that was happening during the review. Then I started to give the student directions on the activity that I had planned. This went okay for the first class and way better with the second class. I think this was because I did a better job at explaining the activity, I gave each student a sheet of paper to see what they were supposed to do, and I visually demonstrate how to play the activity. Once the students understood the game they seemed to enjoy it. At the end of the lesson, the students were amazed at how fast the time had gone and I thought this was great because it showed the students that math can be fun enough to make time go by really fast.

A few aspects of the lesson that I would change was to give all the students their own paper for all the classes and to have less problems on the sheet paper that I gave them. I would do the first because it helped the second class understand the activity better. The second one, I would do because neither of the classes got through more than five of the problems so having 20 on the paper was way too much. I underestimated the complexity of the lesson and prepared too many questions.

Overall I think that my second lesson was very successful. The students seemed to enjoy the lesson and they were able to practice their dribbling skills with both their dominant and non-dominant hands. I really enjoyed being able to go into physical education class and see how they run and what they can entail. These classes have been eye opening and have taught me more about how to differentiate lessons based on the differences of the skill levels of each students.