Algebraic Thinking and Operations

Backward and Forward Jump Shots

Objective:

By the end of the lesson/activity, the students will be able to:

Recognize how counting relates to addition and subtraction.

Materials:

- Number Lines
- Basketball, ping pong ball or any other ball
- Basket or hoop
- "Numbers for the Court" sheet

Season 4

• "Take it to the Court" handout

Teacher Preparation:

- Create the number line on the floor by writing the numbers (0-20) and placing them from one end of the classroom to the other.
- Place the basket at the number 20 on the floor number line.
- Copy and cut the "Numbers for the Court" sheet and place them in an opaque container.
- Copy enough "Take it to the Court" handouts for each student.

Introduction:

 Show a mini clip of a basketball player making a jump shot. Let the students know they will be attempting their own jump shots today in class.

Question(s):

- "Do think that jump shot was easy or difficult to make? Why?"
- "What do you think makes a shot easier to make?"

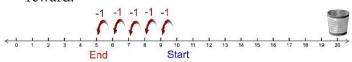
Activity:

• Allow the student to choose a number to stand above on the classroom number line.

South Carolina College- and Career-Ready Standards for Mathematics:

1.ATO.5 Recognize how counting relates to addition and subtraction.

 Allow a student to choose a random number from your "Basketball Numbers" container and move forward or backward that many times. From this spot, allow the student to make a basket as a reward.



Equation: 10 - 5 = 5

Question(s):

- "[Student Name], pulled a negative/positive number. What direction should he/she move? How do you know?"
- "Do you think [Student Name] will be able to make this jump shot from [number the student is standing on]? Why?"
- "What math problem can we create when [Student Name] moved [forward/backward] on the number line?"

Activity (continued):

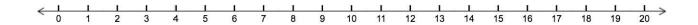
 Demonstrate how to make a math problem from each student's attempt and allow them to show the process on their "Numbers for the Court" sheet.

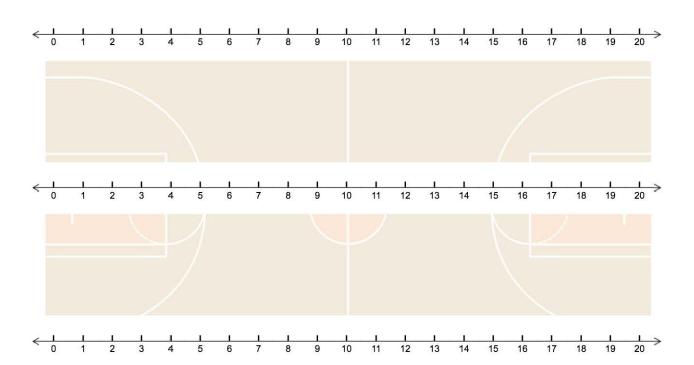
Extensions:

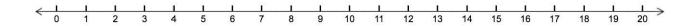
• You may scaffold this activity by separating the negative and positive numbers or mixing them together.



Take it to the Court!







Number for the Court

1 2 3 4 5

6 7 8 9 10

11 12 13 14 15

-1 -2 -3 -4 -5

-6 -7 -8 -9 -10

-11 -12 -13 -14 -15