



# *Number Sense Activities*

DIRECTIONS FOR MY FAVORITE NUMBER  
SENSE ACTIVITIES

# Number Sense Activities

The educators at Mathematically Minded, LLC, believe that in order to build a child's mathematical mind, connections must be built that help show children that mathematics is logical and not magical. **Building a child's number sense helps them see the logic in numbers.** We encourage you to use these activities in ways that build children's sense of numbers in four areas (Van de Walle, 2013):

- 1) **Spatial relationships:** recognizing how many without counting by seeing a visual pattern.
- 2) **One and two more, one and two less:** this is not the ability to count on two or count back two, but instead knowing which numbers are one and two less or more than any given number.
- 3) **Benchmarks of 5 and 10:** ten plays such an important role in our number system (and two fives make a 10), students must know how numbers relate to 5 and 10.
- 4) **Part-Part-Whole:** seeing a number as being made up of two or more parts.

# Ten-Frame Concentration

## You need:

- Ten Frame and Dot Pattern Cards (ten pairs of cards, each pair are numbers that Make 10) (download Subitizing Cards at [www.BuildMathMinds.com/Freebies](http://www.BuildMathMinds.com/Freebies))

1. Layout all 20 cards face down in 4 rows of 5.
2. This game is played just like Memory or Concentration, but instead of matching cards you will need to find pairs that will "fill a ten frame."
3. Player 1 flips over two cards, if those two cards will "fill a ten frame" they get to keep those cards, even if they aren't both ten frame cards. If not, they turn them back over and play continues to the next person.
4. Once Player 1 flips over two cards, it is the next player's turn, even if Player 1 made a match.
5. Make sure you are watching the other players so that you can concentrate on where the cards are for your turn.

## *Differentiation:*

-Use with Five Frames instead and students try to flip over two cards that fill a Five Frame.

# I-Spy Addition

*adapted from Georgia Dept. of Education Performance Standards Framework*

## You Need:

sets of Subitizing cards for each pair of students (download at [www.BuildMathMinds.com/freebies](http://www.BuildMathMinds.com/freebies) )

1. Students will need a deck of 20 subitizing cards (can be just dot patterns or combine them with ten frame and/or MathRack cards). Arrange the cards face up in 5 rows with each row containing 4 cards.
2. Player One finds a number combination and tells Player Two ONLY the sum. "*I spy two cards that add to 12.*" Player Two looks for 2 cards next to each other, horizontally or vertically (can do diagonally if the students are capable), that create the Part-Part-Whole combination that Player One saw. **It does not have to be the exact parts that Player One spotted, as long as the combination shares the same sum.**
3. If Player Two finds two parts that make the whole, they get to pick up the cards. If Player Two cannot find the two cards, Player One gets to pick up the cards.
4. As cards are picked up, shift the remaining cards to fill in the empty spaces. Play continues until all the cards have been collected. The winner is the player with the most cards.

## PreK/K Adaptation

1. Player 1 finds an amount on a card and tells Player 2 the number. "*I spy a card that has 4.*" Player 2 looks for a card that has the amount that Player 1 saw. It does not have to be the exact card that Player 1 spotted, as long as the amount on the card is the same.
2. If Player 2 finds a card that matches the amount Player 1 said, they pick it up. If Player 2 cannot find the card, Player 1 gets to pick it up.



# Make Ten Go Fish

## You need:

- Deck of cards with **only Ace-9** or create a deck using sets of Ten Frame Cards (1-9)

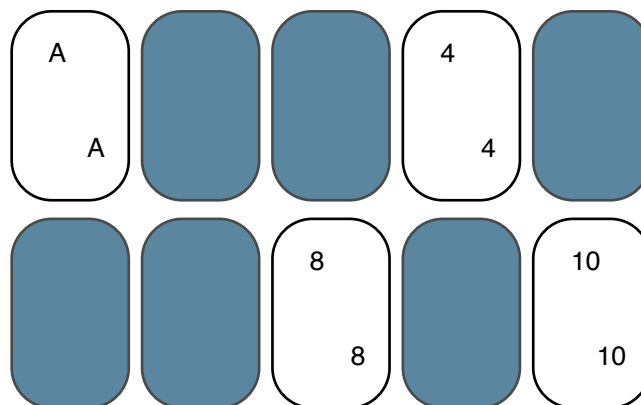
1. This game is played just like Go Fish but instead of matching cards, you want to make pairs that add up to ten.
2. Deal 5 cards to each player.
3. On each player's turn they can lay down any "Ten Pairs" they have in their hand, then they ask any player for a number they need (example: I have an Ace so I ask another player if they have a nine).
4. If that player has the nine they give it to the player who asked and the play continues to the next player. If not, the other player says "Go Fish" and the player draws one from the leftover deck of cards. Then it is the next player's turn.
5. Play ends when one player has gotten rid of all the cards in their hand.

# 1 through 10

## You need:

- Standard Deck of Cards or make your own deck using Subitizing Cards
- Works best with two players, but can do three

1. Deal ten cards to each player, face down, in two rows of five.
2. Flip over the top card in the deck and the first player can choose to take that card or draw from the stack. Players place the card they draw in the correct position. “1” (ace) is the top left position, “6” is the bottom left position, “10” is the bottom right position (similar to placing objects sequentially in a ten frame).
3. As you place a card, you flip over the card that was in that position. If you can use that card, place it in the correct position. If not, discard it and play moves to the next player. The next player can take the discard card or the card from the stack. If you play using face cards, face cards are considered garbage cards and are not playable.
4. A round stops when a player places all ten cards in the correct position. Then in the next round, the winner of the previous round gets one less card dealt. The game ends when one player no longer has any cards.



# Savvy Subitizing

## You will need:

- Pack of Savvy Subitizing cards for every group of 2–5 students (download at [www.BuildMathMinds.com/freebies](http://www.BuildMathMinds.com/freebies) )

1. Shuffle the deck, deal out 4 cards to each player and put the rest of the deck face down in the middle as a draw pile.
2. There are NO TURNS in this game, so keep an eye on all the stacks that are created and play whenever you can. (Can modify and have kids take turns to turn down the stress level of the game.)
3. To start playing, anyone with a “1” can start a stack by laying it out on the table. As you play a card, make sure to take a card from your draw deck so that you always have the original amount of cards in your hand.
4. You can add cards from your hand to any pile out on the table IF you have a card that is one more than the top card of that pile.
5. When a “10” gets played on a stack, the person playing the 10 card grabs the stack and puts the cards in their “score pile.”
6. If you have trouble getting rid of a card in your hand, you can place it facedown in your “discard pile” and draw a new card from the draw pile.
7. Keep playing until someone runs out of cards, they shout “DONE!” and everyone stops playing. As an alternative, when you run out of cards, you can pick up your discard pile and continue play.
8. To score, count the number of cards in your “score pile” and subtract the number in your “discard” pile.

## *Differentiation:*

–Start like normal, but instead of playing a card that is one more, you can play either one more or less.

–Start a stack if you have a 10, then cards that get played have to be one less than the number shown. Players start at 10 and work down to 1.

# Roll and Record

## You need:

- 1 die
- Recording sheet

1. This game can be done with a partner but can also be done independently.
2. Roll 1 die. Determine the amount shown.
3. On the recording sheet, write the numeral for each roll in the boxes above that number.
4. The game is over when one column is full.

## *Differentiation:*

-Play with 1 number cube and 1 wooden cube with +0, +1, -0, -1, could also put in +/-2. (Version 2 Recording Sheet)

-Play with 2 dice and add the amounts on each, write the addition problem shown on the dice in the box above the sum. (Version 3 Recording Sheet)

-Play with 1 dot cube and 1 number cube. (Version 3 Recording Sheet)

-Play with 2 number cubes. (Version 3 Recording Sheet)

## Version 1 Recording Sheet

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>

## Version 2 Recording Sheet

<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>

### Version 3 Recording Sheet

<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>



# Countdown to Race Time

*This activity is adapted from Activity IA5.2: The Great Race in the book Teaching Number in the Classroom with 4-8 year-olds by Wright, et. al*

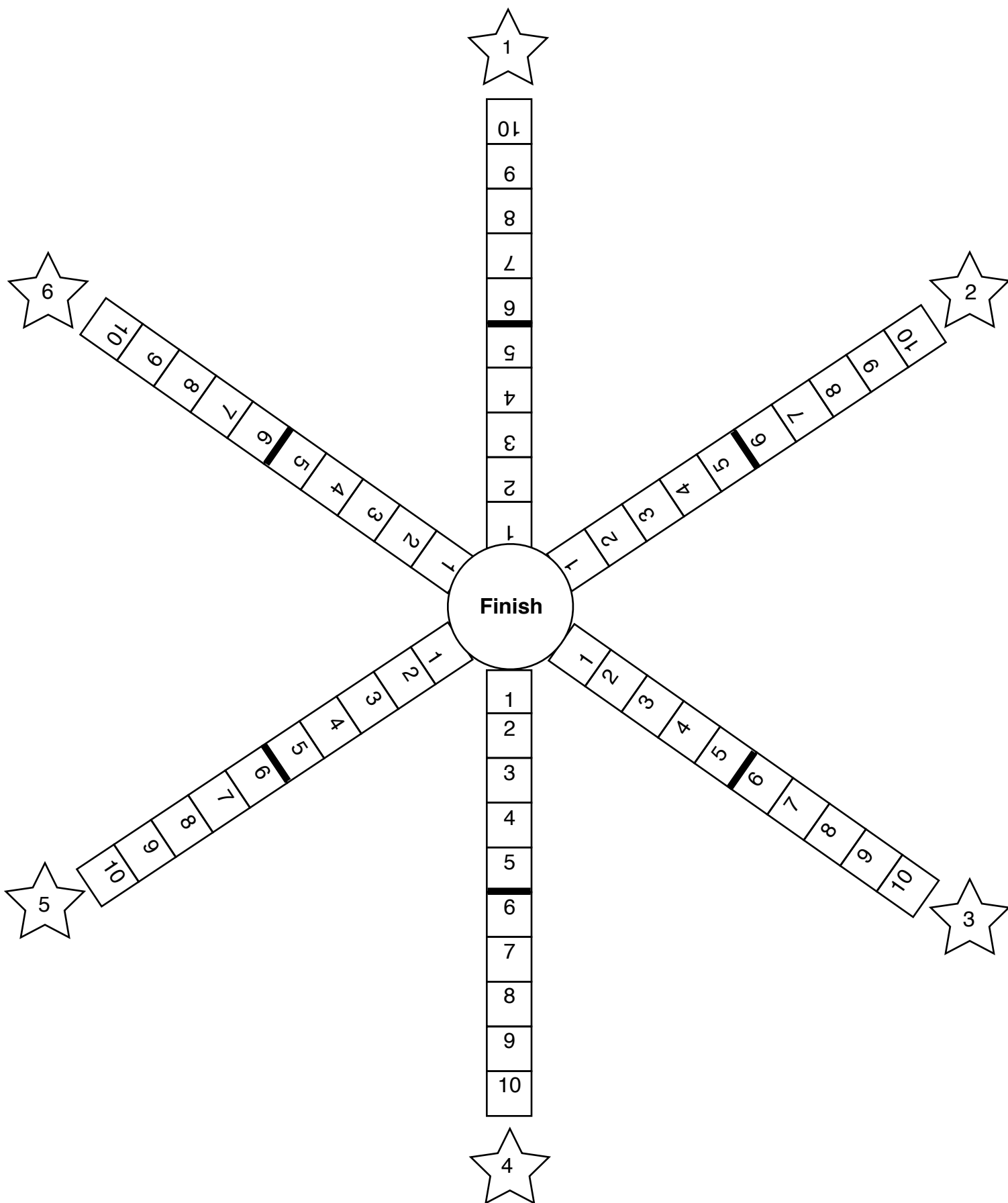
## **You Need:**

Countdown to Race Time game board (BLM #5) for each group of 6 players, 1-6 dot die, marker for each star

1. Each player picks one of the six stars. If there are less than 6 players, then each player can play more than one of the numbers.
2. Players take turns rolling the die. The number rolled indicates which player gets to cross off a space in their star's line, getting them down one spot closer to the finish. For example, if a four is rolled, the player in the lane with the numeral 4 crosses off the '10' spot in 4's line, showing they have 9 more to go until they reach the finish.
6. Players continue to roll until one of the players reaches the finish.

## *Differentiation:*

-Have only one person be the roller of the die, because it can be confusing when Player 5 rolls a 1 which means Player 1 gets to cross off a number. Then after one number reaches the finish line, another player gets to roll the die.



# Along the Path

## You need:

- Number Paths for each player (download or purchase at [www.BuildMathMinds.com](http://www.BuildMathMinds.com)), the ones you can purchase have a coating that allows students to write on them with dry erase markers and wipe them off easily.
- Wooden Cube with +0, +1, +2
- Dry Erase Marker for each player

1. First player rolls the cube and crosses off that amount on their Number Path.
2. Play continues to each student, crossing off the amount they roll each time.
3. The winner is the first player to reach the end of the path (20).

## *Differentiation:*

-Wooden Cube with -0, -1, -2. Once students have worked up to the 20, they can work down the path to be the first person to erase their Path.

-Wooden Cube with +0, +1, +2, -0, -1, -2. Have players go Up and Down the path. The winner is the first player to reach the end of the path (20).

# *Bump*

## Directions

Each child takes 8 unifix cubes of one color. Their partner should have 8 of a different color. The first child rolls 2 dice (or 1, depending upon the game you are playing) and puts a cube on that number. If the other player's cube is on that number, they get to BUMP it off. If your own cube is already on that number, link another cube with it and it freezes that spot.

Any time there are two cubes of the same color on a spot, that freezes that spot and you cannot bump that person's marker off. The winner is the player that uses all of their markers first.

# *One More Than* BUMP

**2**

**7**

Roll the die. Then, put your marker on the spot that is “1 more than” the amount you rolled.

**5**

**3**

**6**

**4**

# *One Less Than*

## BUMP

**2**

**0**

Roll the die. Then, put your marker on the spot that is “1 less than” the amount you rolled.

**5**

**3**

**1**

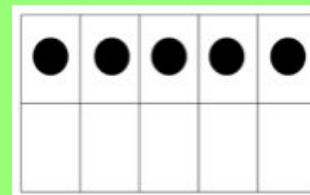
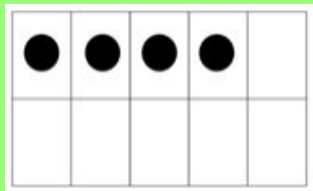
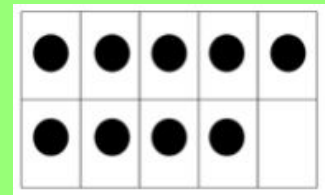
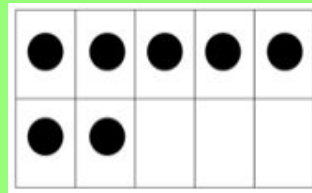
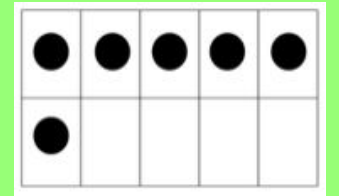
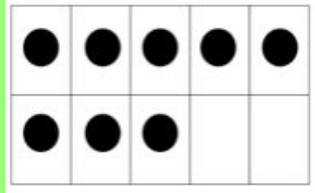
**4**



# *Make Ten*

## BUMP

Roll the die. Then, put your marker on the spot that has the ten frame you would need in order to “Make Ten.”  
For example, if I roll a 4, I would place my marker on the ten frame showing 6 because  $4 + 6$  makes 10.



# *Capture 4*

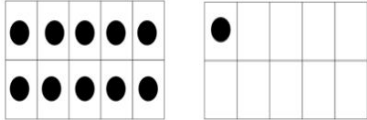
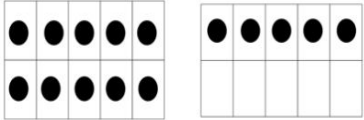
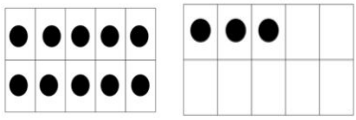
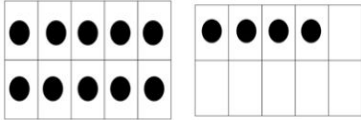
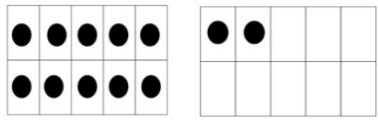
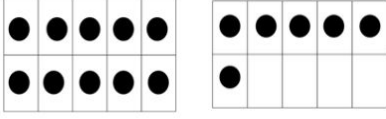
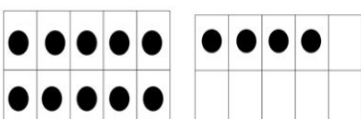
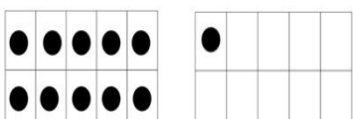
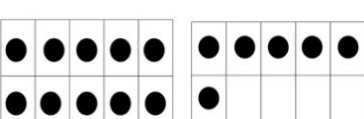
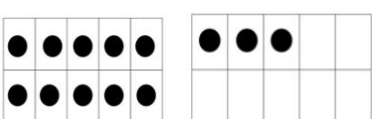
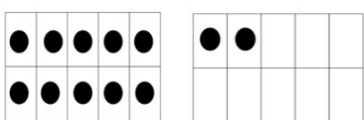
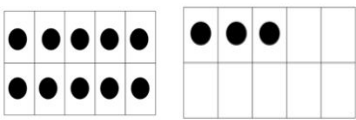
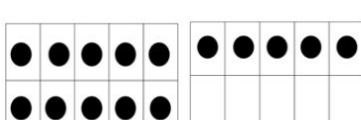
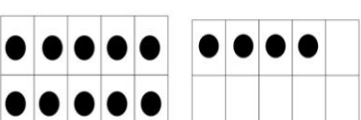
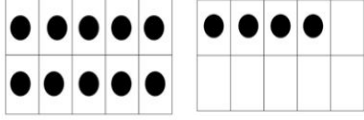
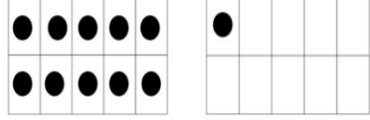
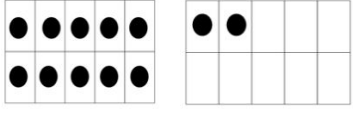
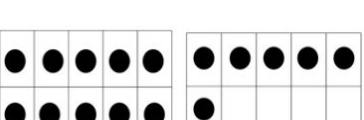
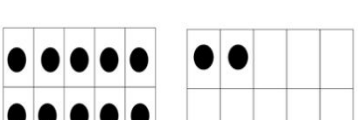
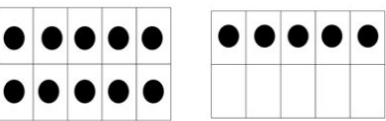
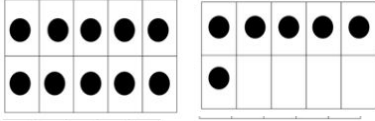
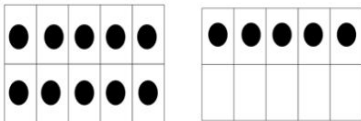
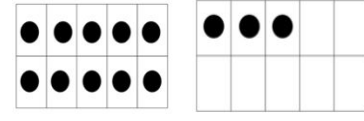
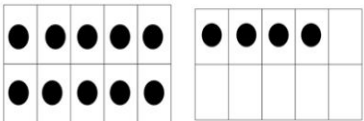
## Directions

These are meant to be played with a partner, but you could also do students versus teacher.

Students have to think strategically to capture 4 spaces in a row, either horizontally, diagonally, or vertically.

\*Print these off and then students can place cubes on the spots they capture (each student would need their own color) or you can put it in a sheet protector and have them mark off the spots they capture with whiteboard markers (each student would need their own color).

# Capture 4: Add 10

				
				
		FREE		
				
				

Roll a regular die, then add 10 to the amount you rolled. Then place your marker on that amount to capture it. Play moves to the other player. First person to capture 4 in a row (horizontal, vertical, or diagonal) wins.

# *Difference To...*

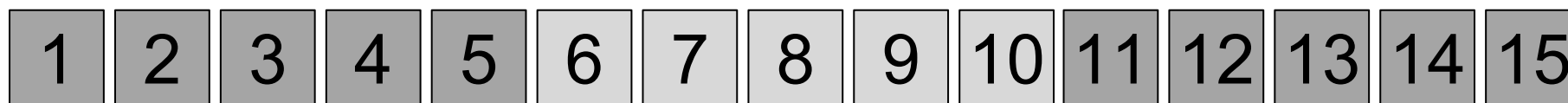
## Directions

Students roll dice, add amounts together, and then find the difference to a predetermined number.

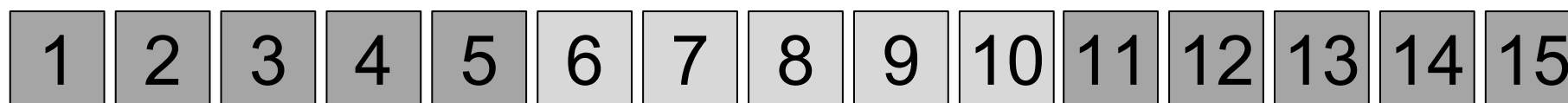
The sheets for this game are designed to be printed out and slipped into sheet protectors.

There are blank parts in the directions of each game to allow you to change certain parts of the game depending upon what you want your students to focus on. Plus, students can write on the sheet protector with whiteboard markers and wipe it off for each new game.

# Player 1

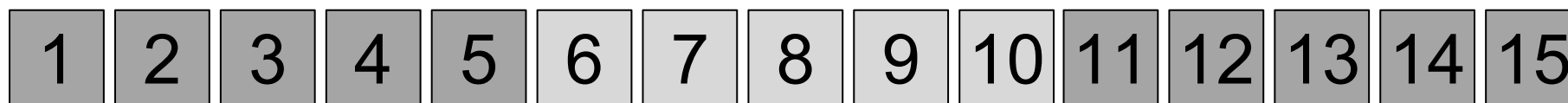


# Player 2

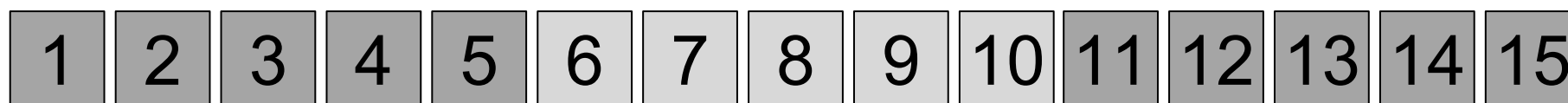


- 1) **Roll the dice \_\_\_\_ times.**
- 2) **Use the number path to record the amount you rolled.**
- 3) **Find the difference from \_\_\_\_.**
- 4) **The player with the smallest difference wins.**
- 5) **Wipe off your work and PLAY AGAIN.**

# Player 1



# Player 2



- 1) Roll the dice 1 times.
- 2) Use the number path to record the amount you rolled.
- 3) Find the difference from 8.
- 4) The player with the smallest difference wins.
- 5) Wipe off your work and **PLAY AGAIN**.



# Player 1



# Player 2



- 1) **Roll the dice \_\_\_\_ times.**
- 2) **Use the number path to record the amount you rolled.**
- 3) **Find the difference from \_\_\_\_.**
- 4) **The player with the smallest difference wins.**
- 5) **Wipe off your work and PLAY AGAIN.**

# Player 1

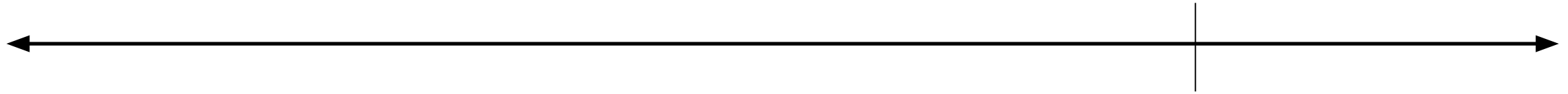


# Player 2

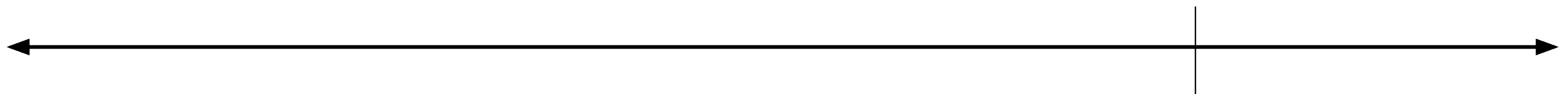


- 1) Roll the dice 2 times.
- 2) Use the number path to record the amount you rolled.
- 3) Find the difference from 10.
- 4) The player with the smallest difference wins.
- 5) Wipe off your work and **PLAY AGAIN**.

# Player 1

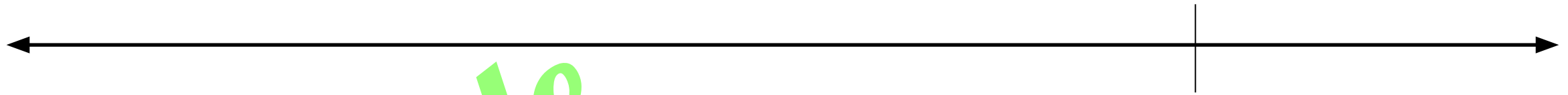


# Player 2

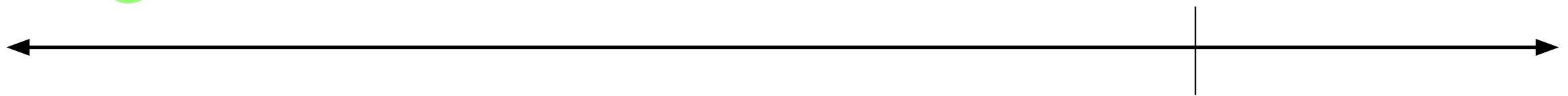


- 1) **Roll the dice \_\_\_\_ times.**
- 2) **Use the number line to record the amount you rolled.**
- 3) **Find the difference from \_\_\_\_.**
- 4) **The player with the smallest difference wins.**
- 5) **Wipe off your work and PLAY AGAIN.**

Player 1



Player 2



- 1) Roll the dice 3 times. *Add them, then add 50.*
- 2) Use the number line to record your total amount.
- 3) Find the difference from 100.
- 4) The player with the smallest difference wins.
- 5) Wipe off your work and **PLAY AGAIN.**

# Difference To....

Player 1		Player 2	
My Roll	Difference to _____	My Roll	Difference to _____
Total Difference		Total Difference	