



Integer Football

Lesson Skill/Math Concept: Integers

Academic Vocabulary:

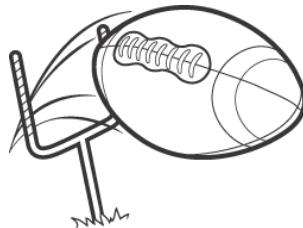
- **Integer:** A whole number
- **Positive Integer:** A whole number with a value greater than zero
- **Negative Integer:** A whole number with a value less than zero

Estimated Time: 40 minutes (60 minutes with extension)

Materials List

Each team of 2 students needs the following materials:

- 4 sheets of copy paper
- 2 strips of transparent tape
- 2-student table/desk (playing field)



Goal: Students will add positive and negative integers to calculate scores.

Background Knowledge: Students must be familiar integers.

Directions:

1. Each pair of students will create a paper football using a sheet of copy paper. Fold the paper “lengthwise” twice. Fold one corner of the paper to create a triangle (top edge of paper should line up with left edge of paper). Fold the “triangle” edge towards the opposite end of the paper. Continue folding, alternating diagonal and horizontal folds (making sure the edges line up), until the end of the paper. Fold the remaining tab into a triangle and insert it into the folded triangle sleeve. Place transparent tape over the inserted edge, securing the shape of the football.
2. Next, each pair of students will make a “goal post.” Fold a sheet of paper “lengthwise” three times. Fold the paper in half (two long ends together) to make a crease in the center and fold back to make it flat. Fold both ends of the paper toward the center crease. After creasing each side, release it. Each end segment should move towards the upright position. It will look like a squared off “U”. Students may need to adjust the folds in their goal posts to make the legs stand upright.
3. Each pair of students moves their chairs to opposite ends of a table, so that they are facing one another across the “playing field”.

4. To determine which student goes first, the paper football is placed at the center of the table or the “field”. Each student will take a turn flicking the ball toward the opposite edge of the table. The student who is able, with one flick, to get the football the closest to the edge without going over, decides who will begin the match.
5. The game will be played in “four quarters.” Each quarter will consist of each student having the opportunity to score a touchdown, followed by an extra point(s) opportunity. The whole game will be played the same, however points for scoring “touchdowns” and “extra points” will increase with every passing quarter. Deductions for “over the edge” and “out of bounds” kick-off penalties will also increase. Each flick will also cost the player point(s). Each player will keep track of his/her own score as well as the score of their opponent. Each student must verify that their opponent’s calculations are correct.
6. The student “kicking off” will place the paper football slightly over edge of the table closest to them and, with their hand, shove or “kick” the ball to the other player. The other player will begin at the point where the football lands. Points will be taken from the “kicker” if the ball goes over the edge. The kick off must then be repeated.
7. Once the football is in play, the person going first will make an attempt to score a “touchdown.” The player will have three opportunities to flick (three fingers on the table recommended) the football towards the edge of the opponent’s side of the table. Each flick will cost the player point(s). A touchdown is scored when any part of the football is over the edge without going over. If, after three flicks, the player has not scored a touchdown and the ball is still on the table, the player must “kick-off.” If the football goes over the edge, points will be deducted and automatically there is a “kick-off” to the other player. If a touchdown **is** scored, the player will receive points and have an opportunity for extra point(s).
8. The player scoring the touchdown will retrieve the football and “stand it” in the middle of the field using their finger. The “goal post” is placed on the edge of the table and the player will make an attempt to flick the football between the “posts.” No points are deducted for this “flick”. For this part of the game, the paper football will have to fly off the table in order for it to clear the bottom part of the goal post. The second player must be mindful of the flying football while verifying the results.
9. After each player has had a chance to score a “touchdown,” the quarter is over. The winner is the player who has the most points at the end of four quarters. Each player starts the game with 50 points. Use the following scoring guide:

Extension

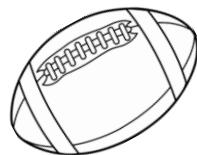
Allow for students to compete in “playoff” games and a championship.

Name: _____

Integer Football Points

	1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter
One "Flick"	-1	-2	-3	-4
Over the edge penalty	-3	-5	-7	-9
Out of bounds penalty	-4	-6	-8	-10
Touchdown	+10	+20	+30	+40
Extra points flick	+2	+4	+6	+8

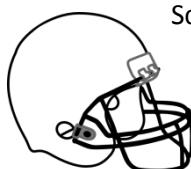
Integer Football Score Card



	1 st Qtr	#	My Points	2 nd Qtr	#	My Points	3 rd Qtr	#	My Points	4 th Qtr	#	My Points
One "Flick"	-1			-2			-3			-4		
Over the edge penalty	-3			-5			-7			-9		
Out of bounds penalty	-4			-6			-8			-10		
Touchdown	+10			+20			+30			+40		
Extra points flick	+2			+4			+6			+8		
My Totals												

1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter	Game Total

Score Verification Signature: _____



Integer Football Post-Activity Questions

1. Which part of the game did you find most challenging? Explain.
2. How difficult was it to keep your score? Did it help to have your opponent verify your score? Explain.
3. The events of Mario's third quarter are outlined below; calculate his total score for this quarter.

One touchdown, two flicks, an extra points flick, and an out of bounds penalty

Reflection

Based on your experience with paper football, would you recommend this game to a teacher as a method to learn adding and subtracting integers? Explain using examples from the game.