



**Subject: Mathematics**  
**Lesson Title: How Far Do NFL Teams Travel?**

**MATHEMATICS: How Far Do NFL Teams Travel?**

**Goals/Objectives:**

- Convert miles to feet and inches
- Finish a pattern on a table
- Plot points on a graph
- Read large numbers
- Multiply and divide with large numbers
- Convert large numbers to scientific notation

**National Standards met:**

- (3-5): Understand the effects of multiplying and dividing whole numbers
- (3-5): Identify and use relationships between operations, such as division as the inverse of multiplication, to solve problems
- (3-5): Develop fluency in adding, subtracting, multiplying, and dividing whole numbers
- (3-5): Describe, extend, and make generalizations about geometric and numeric patterns
- (3-5): Represent and analyze patterns and functions using tables and graphs
- (3-5): Carry out simple unit conversions within a system of measurement
- (6-8): Understand both metric and customary systems of measurement
- (6-8): Understand relationships among units and convert from one unit to another within the same system
- (6-8): Develop an understanding of large numbers and recognize and appropriately use exponential and scientific notation

**Methods/Procedures:**

- Each student will get a piece of ribbon that is 1 inch long. They will measure 3 other pieces of ribbon with their 1 inch long ribbon: 2 feet, 3 feet, and 4 feet. Once they have determined how many inches equal those three measurements they will report those to the teacher to put on a table on the chalkboard. If a student doesn't understand how the correct answers were calculated, they should be shown how to get the correct measurement.

Inches				
Feet	1	2	3	4



- The students should be able to look at the table and answer how many inches are in a foot. They should be able to extend this table to find out how many inches are in 9, 10, 11, etc. feet.
- Students will then make a line graph plotting the inches and feet. They should be able to use this graph to determine how many feet are 96 inches, etc.
- Once they understand the relationship between inches and feet, they will then discuss how many feet are in a mile. (5,280 feet = 1 mile)
- Different problems should be posed to the students so that they become familiar converting between inches, feet, and miles.
- Students will then use the worksheet to convert between miles, feet, and inches. They should practice reading the numbers correctly.
- Teachers may also provide only inches or feet on the worksheet and ask the students to convert those as well.
- Older students will write the feet and inches in scientific notation.

### **Materials:**

- 1 inch ribbon for each student or pair of students
- 1 ribbon for each student or pair of students in the following sizes: 2 feet, 3 feet, 4 feet
- Worksheet

### **Assessment:**

- Classroom participation
- Worksheet



Name \_\_\_\_\_

### Total Air Miles NFL Teams Traveled (2006 preseason and regular season)

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Directions: Convert each amount of air miles to feet and inches.

Team	Air Miles	Feet	Inches
Oakland Raiders	30,702		
Seattle Seahawks	30,298		
San Francisco 49ers	25,752		
San Diego Chargers	25,344		
Arizona Cardinals	24,108		
St. Louis Rams	21,530		
Houston Texans	20,314		
Dallas Cowboys	20,124		
Miami Dolphins	19,422		
Denver Broncos	19,410		
Kansas City Chiefs	18,244		
Minnesota Vikings	17,802		
Green Bay Packers	17,024		
Pittsburgh Steelers	16,984		
Philadelphia Eagles	15,672		
New England Patriots	15,200		
Cleveland Browns	14,856		
Detroit Lions	14,852		
Tennessee Titans	14,838		
New Orleans Saints	14,402		
Tampa Bay Buccaneers	14,204		
Chicago Bears	13,872		
New York Jets	13,784		
Baltimore Ravens	13,574		
Indianapolis Colts	13,178		
New York Giants	13,148		
Washington Redskins	12,422		
Jacksonville Jaguars	12,390		
Buffalo Bills	10,574		
Atlanta Falcons	9,550		
Cincinnati Bengals	9,240		
Carolina Panthers	8,966		

Source: National Football League



# TEACHER ANSWER KEY

Team	Air Miles	Feet	Inches
Oakland Raiders	30,702	162,106,560	1,945,278,720
Seattle Seahawks	30,298	159,973,440	1,919,681,280
San Francisco 49ers	25,752	135,970,560	1,631,646,720
San Diego Chargers	25,344	133,816,320	1,605,795,840
Arizona Cardinals	24,108	127,290,240	1,527,482,880
St. Louis Rams	21,530	113,678,400	1,364,140,800
Houston Texans	20,314	107,257,920	1,287,095,040
Dallas Cowboys	20,124	106,254,720	1,275,056,640
Miami Dolphins	19,422	102,548,160	1,230,577,920
Denver Broncos	19,410	102,484,800	1,229,817,600
Kansas City Chiefs	18,244	96,328,320	1,155,939,840
Minnesota Vikings	17,802	93,994,560	1,127,934,720
Green Bay Packers	17,024	89,886,720	1,078,640,640
Pittsburgh Steelers	16,984	89,675,520	1,076,106,240
Philadelphia Eagles	15,672	82,748,160	992,977,920
New England Patriots	15,200	80,256,000	963,072,000
Cleveland Browns	14,856	78,439,680	941,276,160
Detroit Lions	14,852	78,418,560	941,022,720
Tennessee Titans	14,838	78,344,640	940,135,680
New Orleans Saints	14,402	76,042,560	912,510,720
Tampa Bay Buccaneers	14,204	74,997,120	899,965,440
Chicago Bears	13,872	73,244,160	878,929,920
New York Jets	13,784	72,779,520	873,354,240
Baltimore Ravens	13,574	71,670,720	860,048,640
Indianapolis Colts	13,178	69,579,840	834,958,080
New York Giants	13,148	69,421,440	833,057,280
Washington Redskins	12,422	65,588,160	787,057,920
Jacksonville Jaguars	12,390	65,419,200	785,030,400
Buffalo Bills	10,574	55,830,720	669,968,640
Atlanta Falcons	9,550	50,424,000	605,088,000
Cincinnati Bengals	9,240	48,787,200	585,446,400
Carolina Panthers	8,966	47,340,480	568,085,760

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