Unit 2 Day 2 - Unit Rate Activity Classwork   Name: _____

Partners: _____ _____

1. Choose a starting point (A) and a finishing point (B).
    Accurately measure the distance and record it here, including the units: _____

2. Have a member of your team move from A to B in some way. Get creative!
    Use a phone or a stopwatch to record the time here, including the units: _____

3. Use the information you gathered to write a rate and a sentence:

_____ (name) went from A to B by _____ (method) and

this was the rate: _____ (distance/time).

4. A unit rate has either a numerator or a denominator of 1. Each rate can be written as two different <u>unit rates</u>; one has a numerator of 1, the other has a denominator of 1.

Convert your team's rates to two different <u>unit rates</u>:
a.   b.

5. Using the units of measure to help you, explain what each of these <u>unit rates</u> is telling you in the real-world context.

a.   b.

6. We often need to convert a rate's unit of measure to a different unit of measure. For example, if a car's speed was measured in feet/second, we might be interested in converting that rate to miles/hour because that's how we usually discuss the speed of a car.

Complete these common <u>conversion rates</u>:

1 mile = _____ feet   1 hour = _____ minutes   1 pound = _____ ounces

1 meter = _____ cm   1 gallon = _____ cups   1 kilometer = _____ meters

**1 inch = 2.54 cm

7. To convert between different units of measure, we can use the multiplicative identity property to multiply by a giant 1, disguised as a fraction that will be useful to us. For example, since 60 seconds = 1 minute, we could write the multiplicative identity 1 as either $\frac{60\ seconds}{1\ minute}$ or $\frac{1\ minute}{60\ seconds}$. Which of these fractions would we use to help us convert 45 minutes to seconds?

8. You may need more than one conversion rate to completely convert your rate to a different unit of measure. For example, to move from miles/hour to feet/second, you would need one fraction to change miles to feet, then another fraction to change hours to seconds.

Convert your team's original rate (from #3) to miles per hour:

9. I went 25 miles on my bike and it took me 98 minutes. Use conversion fractions to find my cycling rate in miles per hour.

10. The next day I went 10 miles on my bike in 37 minutes. Use conversion fractions to find my cycling rate in feet per second.

11. Daniel drinks a gallon of milk every day. How many cups per month does he drink?
        (Assume 30 days in a month.)