

Name: Heidi Nunley

Grade Level/Subject: 8th Math

Topic: Distance Word Problems

Objectives (P.A.S.S.): Standard 2.1b: The student will use the basic operations on rational numbers to solve problems in real life situations.

Introduction: The teacher will introduce the distance formula $D=R \times T$ and describe each component of the formula; distance, rate and time. Then, the teacher will introduce some real life situations where the distance formula can be used. (Example: How long does it take someone driving at a steady speed to get from point A to point B?)

Instructional process: The students will create a foldable to help them solve distance word problems. The teacher will give the students directions (attached) to make the foldable. This is one of the more complicated foldables for 8th graders, so the teacher will need to go through each step of the foldable process with the students. As the teacher discusses the foldable he/she should give examples of where each component can be used and why it is important. The students will then be able to use their foldables on daily work and tests.

Closure: The teacher will review the distance formula and check each students' foldable to make sure that they have all of the important information. If time permits, the teacher will let the students use their foldables to work distance problems either on the board or in their notebooks.

Assessment: The teacher will grade each foldable by ensuring that each student has all of the important information listed on the foldable instructions. The student must have all of the information, so the teacher will have the students add information if needed to get credit for the foldable.

Modifications/Accommodations:

The teacher will provide an ELL student with a Spanish/English math reference book to aid in the communication of the concepts.

A gifted student will be allowed to work at a faster pace on the foldable by following the instructions and they will be allowed to decorate the foldable when they are finished.

Reflection: N/A (I have been on maternity leave since August 17 and have not taught any lessons this school year.)

FOLDABLE – DISTANCE WORD PROBLEMS

MATERIALS: 8 ½ x 11 colored paper, scissors, markers

STEP 1: Fold a sheet of paper “hot dog” style

STEP 2: With the paper horizontal, and the fold of the “hot dog” up, fold the right side toward the center, trying to cover ½ of the paper. (By folding the right edge over first, the final product will open and close like a book.)

STEP 3: Fold the left side over the right side to make a book with three folds.

STEP 4: Open the folded book. Place your hands between the two thicknesses of paper and cut up the two “valleys” on one side only. This will form three tabs.

TABS:

- 1st – Equal Distance – Round trip problems – Distance going = Distance coming back and Overtake problems – Distance A = Distance B
- 2nd – Total Distance – Away problems – Distance A + Distance B = Total Distance; Apart problems – Distance A + Distance B = Total Distance and “2 parts to one trip” problems – Distance 1 + Distance 2 = Total Distance
- 3rd – Head Start Distance – Distance A = head start distance + Distance B.

UNDER EACH TAB – Choose a problem from your book that corresponds with each type of problem on the top tab to put underneath each tab. Example: an Equal Distance problem should go under the Equal Distance tab.

STEP 5: Fold the paper back into the book position. On the front of the book write “Distance Word Problems” and the distance formula “ $D=r \times t$ ”.

STEP 6: Open the front of the booklet, on the middle flap define D, r and t; Distance, Rate and Time.

STEP 7: When the booklet is folded up on the back write the equivalent fractions for periods of time. Example: 30 min = ½ hour, 40 min = 2/3 hour, 20 min = 1/3 hour, 45 min = ¾ hour or (no. of min ÷ 60 = fraction of hours).

STEP 8: Don’t forget to put your name, class period and date on your foldable.

STEP 9: DECORATE!!!