

Petroleum-Related Lesson Plan
of
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Derricks to Desks Summer 2005

Objective: Through weekly observations, recordings, calculations and graphing, students will know the concepts of mean, median and mode and will organize and display data in the appropriate graph.

Curriculum Areas: Reading, writing, mathematics and Earth science.

Materials: Pencil, paper, eraser, composition book for recording observations, construction paper, ruler, colored pencils.

Anticipatory Set:

- T. will ask students what they think is one of the biggest expenses of maintaining a car. T. writes responses on dry erase board and students copy information in journals.
- S. respond with *fuel* as being a big expense.
- T. explains to students that once a week for the next 4 weeks they will be recording gasoline prices of 3 different stations.
- Ex: Citgo, Shell, and a Fastrip convenience store.

Procedures :

- After initiating the anticipatory set, T. will offer an example to students of how to record and track observations in journal, calculate the mean, median and mode, and transfer data in a bar graph.
- Ex:
- Week 1: Citgo=\$2.50 gl., Shell=\$2.79 gl., Fast \$2.59 gl.
- Week 2: Citgo=\$2.54 gl., Shell=\$2.85 gl., Fast \$2.64 gl.
- Mean/average= add the sum and divide by the # in a given set. Wk.#1 sum of \$7.88 divided by 3 = \$2.62 gl. mean, median/middle # \$2.59 gl. and mode/repeat # none.
- Repeat steps for Wk. 2 and graph in bar graph.
- Students will be asked to answer the following questions using

the information given in their graphs.

- QUESTIONS
- What is the mean, median, and mode for weeks 1 through 4?
- What is the difference between the price of gas of the highest and lowest for each week.
- Was one brand/gas station consistently higher than the other two stations? Which one?
- Were the recordings made on the same time and day for each week?
- What season of the year was the data collected?
- Did this assignment influence the way you shop for gas?
- Why do you think there is such a discrepancy between prices from one station to the next?
- What are you doing to economize the amount of fuel you use?
- Ex: carpool, walk to soccer practice, combine errands etc...
- Did you enjoy this assignment and what did you learn?

Informal assessment:

T. circulates the classroom during dependent and independent practice. T. monitors student progress by performing a once a week notebook check of students recorded observations. T. asks students individual questions to assess for comprehension.

Reteach as necessary.

Formal assessment:

Students will be assessed on their ability to complete the assignment.

Closure:

Review all of day's concepts, answer questions and reteach as necessary. T. leaves sample recordings and graph on bulletin board for student reference.