

Oil and its Everyday Uses

Striking Oil

Worksheet 1: K-W-L Chart

K (Know)	W (Want to know)	L (Learned)
What I know about oil	What I want to know about oil	What I've learned about oil

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Worksheet 2: Science Investigation

Problem: Is the viscosity between different brands of oil the same?

Hypothesis: I hypothesize ...

Materials:

Two Dixie Cups
Balance Scale
Clock or Stopwatch
Four ounces of Quaker State Oil (20w)
Four ounces of Penns Oil (20w)
Two disposable plastic bowls
Funnel
Masking tape
Data Chart (Worksheet 2b)

Procedure:

1. Your teacher will assign your material collector, data collector, clock timer, observers, and oil pourer. You will change jobs after the five trials of one kind of motor oil. After everyone in your group has a job, send your materials person to the table to gather all your materials.
2. Label the cups using masking tape. One Penns Oil cup and a Quaker State Oil cup. Go to where the teacher has the oil and obtain four ounces of each kind.
3. Weigh each type of oil on the balance scale. Mark your weights on your data table. Compare and see if there is a difference in the weight of the two oils.
4. Set up your funnel and bowl to begin your trials. Make sure everyone is aware of his or her job. Begin timing exactly when the oil pourer begins to pour the oil into the funnel. Collect the oil in the bowl and reuse it for the four additional trials.
5. Continue experimenting and collecting the data with both types of oil. Make notes on any variables your group might observe.

Worksheet 2b: Science Investigation Data and Conclusions

Weights: Quaker State oil _____ Pennzoil: _____

Seconds	Quaker State oil	Pennzoil
1		
2		
3		
4		
5		

List any variables or observations

1. _____
2. _____
3. _____
4. _____
5. _____

Make a bar graph of your results on graph paper.

Draw Conclusions

1. Tell if your hypothesis was correct or incorrect.
2. Explain what your group found out from experimenting.
3. Tell if you had to repeat this experiment, what would you change or do differently in the future.
4. Explain your data and any way in which variables affected the outcome.

Worksheet 3: Photo Analysis

Photo Analysis Worksheet from the National Archives and Records Administration

Step 1. Observation

- A. Study the photograph for 2 minutes. Form an overall impression of the photograph and then examine individual items. Next, divide the photo into quadrants and study each section to see what new details become visible.
- B. Use the chart below to list people, objects, and activities in the photograph.

People	Objects	Activities

Step 2. Inference

Based on what you have observed above, list three things you might infer from this photograph.

1. _____
2. _____
3. _____

Step 3. Questions

- A. What questions does this photograph raise in your mind?

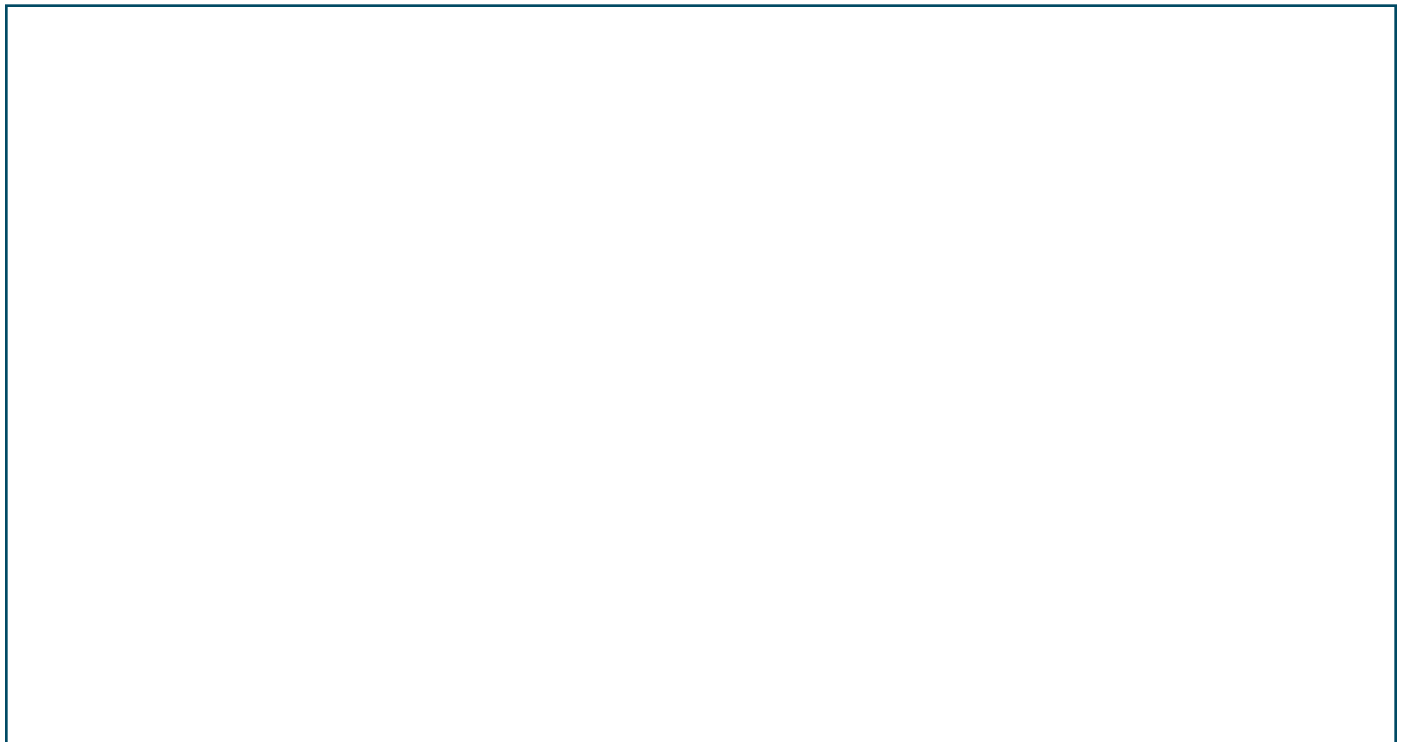
- B. Where could you find answers to them?

Worksheet 4: Mystery Artifact

Write a short paragraph about this object. In the paragraph describe:

- a. Where you think the object originally came from
- b. When it was used
- c. What it was used for
- d. How the object worked (step-by-step)

Draw a picture showing this object in use. Draw it during the time and place you think it was used.



Worksheet 4 Teacher's Key: Mystery Artifact

Write a short paragraph about this object. In the paragraph describe:

- a. Where you think the object originally came from

This object is called a splint-folder. It originally came from Austria, however migrated all over Northern Europe. The splint-folder eventually immigrated to America with the luggage of the settlers of the colonies.

- b. When it was used

It was first used during the middle ages and stayed in use up until the 1600 or even 1700s.

- c. What it was used for

It was used as a source of light and heat.

- d. How the object worked (step-by-step)

It uses the concept of gravity. The ball at the end strikes the charcoal piece held at the other end and creates a fire.