

Bio I

Worksheet: Scientific Method

Problem: Do cars using Exxon gasoline get better gas mileage than cars using other gasoline?

Hypothesis:

Controlled Experiment:

- What is the experimental variable?
- List the materials needed in the experiment.
- List the controls that will be used in the experiment
- Graph the following data:

Distance in miles	Exxon Gasoline used in gal.	Shell Gasoline used in gal.
25	.5	.8
45	2	2.2
55	2.5	2.3
100	4.5	4.7
150	6	6.5
200	8.5	8.6

- Graph title:

Problem: Will the use of the Firestone 10X tire increase a car's gas mileage?

Hypothesis:

Controlled Experiment:

- What is the experiment variable?
- List the materials that will be needed to carry out the experiment
- Write out the steps of the experiment so that they are easy to follow.
- List the controls used in the experiment.
- Why are these controls necessary in the experiment?

- Graph the following data:

Car type	Firestone Tires/Gas Mileage	Goodyear Tires/Gas Mileage
Chevy Cavalier	26	25
Dodge Dart	27	29
Ford Probe	32	31
Ford Contour	40	43
Hundi	35	41
KIA	43	41

- Graph Title:

- What conclusion(s) can be determined from the above experimental data?

- Explain what would happen to your conclusion(s) if the controls were left out of the experiment?