**Automobile Exhaust Particulate Count** Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Period\_\_\_\_\_

**Purpose:** To compare different makes and models of automobiles by analyzing the number of particulates

 in the exhaust.

**Materials:** -3 “ round exhaust collector paper (quality graph paper)

 - petroleum jelly

 - graph paper

 - microscope

**Hypothesis:**  Create a hypothesis comparing Particulate / in2 vs \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(4 vs. 6 vs. 8 cylinders, mileage, year, make, date of last tune up, etc..)

**Procedure: *IMPORTANT! Your Car Is NOT to move during this investigation!***

**Testing:** 1) Apply parking brake of vehicle

 2) Hold collector paper as close to exhaust pipe as possible without touching

 3) Start auto and let run for exactly 60 seconds

4) At 60 seconds do a ‘snap throttle’ by stepping on the accelerator

 to about half throttle briefly. Shut down engine

 **Record :** Make, Model, year, mileage, # of cylinders, Date of last tune up

 **Observations:**  1) Count particulates using a microscope on low power. Calculate into

 particulates / in2 and record.

 2) Graph your results on back

 **Conclusions:** Compare your results to your hypothesis:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Year |  Make |  Model |  Mileage | # of cylinders | Date of lasttune up | Particulatesper in2 |
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