## Grade 8 Science

Unit 3: Fluids and Viscosity
Core Lab Activity 7-2B pg. 282-3
"The Flow Rate of Liquids"

Name: $\qquad$

Section \#: $\qquad$

| Purpose: | How can you compare the flow rates of various liquids? |  |
| :--- | :--- | :--- |
| Materials: | ramp made of smooth material | stack of books |
|  | thermometer | measuring spoon |
|  | stopwatch | rubber gloves |
|  | wax pencil | tape |
|  | paper towels | soap for cleaning |
|  | water | 2 "testing" liquids |

Procedure: Refer to text Pages 282-3
Hypothesis: (Which liquid do you believe will have the fastest flow rate? The slowest?) 2 marks
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Independent Variable: (1 mark)
Dependent Variable: (1 mark) $\qquad$
Controls: (provide at least 4) (2 marks) $\qquad$
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Observations: (6 marks)

| Liquid | Time (s) | Flow Rate <br> (cm/s) | Ranked Flow <br> Rate | Ranked <br> Viscosity |
| :---: | :---: | :---: | :---: | :---: |
| Water |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

## Analysis:

1. Describe two sources of error that may have affected your results. How could you reduce these errors? (4 marks)
2. How is the rate of flow of a liquid related to its viscosity? (2 marks)
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3. Construct a bar graph of your data. Use a different color for each liquid. Be sure to include a legend. (5 marks)

Title:

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Conclusion: (Was your hypothesis correct? What have learned about flow rate?) (2 marks)
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