***Viscosity & Fluids Worksheet*** Name:

Date:

Total out of /31 \_\_\_\_/4 Class:

Turn to pages ***92-93*** in the **Science and Technology 8** textbook. Use those pages as well as your notes to help you answer the following questions. Any of these questions could be seen on an upcoming quiz.

1. Give two examples of a fluid with a viscosity much higher than water and two examples of fluids with a viscosity close to that of water.

***High Viscosity Fluids Fluids with Viscosity Close to that of Water***

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1. What is the one and only factor that can change the viscosity of a fluid? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What is the relationship between viscosity of a liquid and its flow rate?

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1. How can you test the viscosity of a liquid?

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1. a) What is the effect of temperature on the flow rate of a ***liquid***, and thus the viscosity? Explain your answer.

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b) What is the effect of temperature on the viscosity of a **gas**? Explain your answer

/ 2

1. Fill in the blanks with the appropriate words/phrases from the list below: PARTICLES x 2, SLOWLY, FLUIDS x 2, ATTRACTION x 2, FLOWS x 2, WEAK, STRONG, FAST, HIGH VISCOSITY, LOW VISCOSITY

In \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ with a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

between the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is very \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and therefore

/ 14

the fluid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ very \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Oppositely, in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

with a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ between the

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is very \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and therefore the fluid

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ very \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. If you have an engine oil that has a very high viscosity when its cold or below a temperature of - 10 °C, but it’s viscosity drops to normal level once it warms up passed a temperature of + 30 °C, What would the engine oil look like at first and would it protect the engine at that point? And what would the oil look like after the engine had been running for a while and would it protect the engine then (hint… most car engines run at 98 °C)

/ 4

1. What should you do every time you use you car in the winter before you drive off?

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1. Bonus Question… Asphalt is the black, sticky, tar material that binds gravel in the pavement that covers streets and highways. Explain why paving is almost always done the in the summer months?

[](http://massbrokenstone.com/wp-content/uploads/2013/06/IMAG0284.jpg)

/ 2