

Unit 1: States of Matter: Ask your own questions assignment

In this assignment, you are to create 5 solid (pun intended) questions on the States of Matter readings.

How to start this assignment?

Read the printed out notes provided to you on the different states of matter and phase changes.

You are then to create 5 questions in the following format:

1. 3 multiple choice questions regarding both states of matter and phase changes.
2. 1 short response question
3. 1 open response question that relates to real life applications to the content in the booklet. You are encouraged to perform research of this question.

For each question (where applicable), you are to

- a. Provide the correct answer and describe WHY it is correct. (some answers can be answered in a sentence)
- b. Provide explanations of why the incorrect responses are incorrect (some answers can be answered in a sentence). This is mainly for M/C type questions

Bad Question types:

- Your questions **cannot** be simple definition questions such as:
 - Define endothermic reaction
 - What is plasma?
- They **cannot** be compare and contrast questions
 - What is the difference between solids and liquids?
 - What is the difference between endothermic and exothermic reaction?
- They **cannot** be simple multiple choice questions such as
 - A solid is
 - A. Compressible, dense and has fixed volume
 - B. Dense, fixed volume, but not compressible
 - C. Ionized gas, not dense and does not have volume
 - D. None of the above.

Good question criteria:

Requires application of the concepts

Ex. Substance such as alcohol tend to leave a “colder” sensation than water because

- a. *Alcohol has a faster rate of evaporation than water*
- b. Alcohol has lower energy than water
- c. Water has a faster rate of evaporation than water
- d. Water has a higher vapor pressure than alcohol.

Requires relating the concepts to real life

Ex. An unopened can of Coke was brought to the peak of Himalayas where the temperature is at -33 Centigrade. One can observe the unopened can of Coke would

- a. Shrink due to the molecules coming together in lower energy environments.
- b. Expand due to the molecules moving faster in lower energy environments.
- c. *Expand due to the expansion of water from liquid to solid phase.*
- d. Stays the same.

Assessment:

This assignment is worth 15 marks with 3 marks for each question.

3 marks – The question shows depth and understanding. Answering the question requires a strong understanding and application of the concept at hand.

2 marks - The question requires good understanding of the concepts. More application of the concepts in answering the question is required.

1 mark - The question does not require strong understanding or only requires rote memorization of facts to answer.