

Build a Warmup Assignment

Name: _____

Institution: _____

Subject taught: _____

Specific topic _____

Key Idea(s): _____,

_____,

New Jargon: _____,

_____,

Important skills: _____,

_____,

Build your Warmup Assignment by forming a few questions. Use the template questions on the back if needed. There is an example attached.

Question:

Question:

Question:

Question: Explain what <jargon> means in your own words.

Question: Explain the similarities and differences between the terms <jargon 1> and <jargon 2>

Question: <Key Idea> is used to describe <situation>. What can you say about <this example>

Question: Which of the statements following do you think is true? Explain your reasoning

- a. <True statement>
- b. <False Statement>
- c. <common misconception>
- d. <both a and c>
- e. <both b and c>

Question: <key idea> is similar in some ways to <previous key idea>. What are the important similarities? What are the important differences?

Question: Under what circumstances can we use <important skill>? What are some circumstances in which <important skill> does not apply?

Question: Rank the following <things> in order of <property>. Explain how you determined your ranking.

Question: Applied properly, <key idea> has the potential to help millions of people. Are there also disadvantages to <key idea>? What are the most serious?

Question: Unusual thing happens in certain circumstances. How does <key idea> explain this?

Question: We have solved problems before using <old skill>. What new problems can <important skill> solve that <old skill> could not?

Question: Give an example of how <key idea> applies to your daily life.

Example: A newly built Warmup assignment

Name: Tricia McMillan

Institution: University of Dentrass

Subject taught: 300 level Electromagnetism

Specific topics: The day we start magnetostatics

Key Idea(s): Magnetic forces and fields, Biot-Savart law

New Jargon: Current densities (surface and vol.), continuity, cyclotron motion, cycloids, permeability of free space.

Important skills: Use Lorentz force law in statics or dynamics problems, connect current with current density, apply Biot-Savart to determine fields

Build your Warmup Assignment by forming a few questions.

Question 1: In your own words, explain why a magnetic field cannot do any mechanical work. Now, explain how it is that a large electromagnet can be used to pick up a wrecked car.

Question 2: Explain how you can relate a spinning charged object to a circulating electric current

Question 3 The continuity equation describes conservation of charge in situations where electric current is flowing. Write a similar equation describing conservation of mass where a gas is flowing. Be sure to define all of your variables, and state the units!

Question 4: Compare the Biot-Savart law to the expression that gives the electric field of a charge distribution. What is the same, and what is different? What do you expect for the dependence of magnetic field on distance from an infinite sheet of current?