Name _____ Period _____ Date _____

The Nature of Science – Ch. 1

Part A – Pure Science vs. Applied Science

Identify each of the following examples as PURE (P) or APPLIED (A) sciences.

1. Development of antibiotics (e.g. Penicillin).
2. Study of the moon's phases.
3. Discovery of a new species of marine life.
4. RADAR tracking of storms.

Part B – Scientific Method

READ THIS STORY AND ANSWER THE QUESTIONS:

Joe baked a cake for his mother's birthday. When he removed the cake from the oven, Joe noticed that the cake had not risen. Joe guessed that the baking powder he had used was too old. He designed the following experiment to test his idea.

Joe prepared two cakes – one using the same ingredients as his first cake and one using fresh baking powder. After preheating oven to 350°F, he placed both cakes in the oven for 30 minutes. After 30 minutes, he removed both cakes and noticed that neither one had risen. He decided that the baking powder wasn't the cause of his problem.

1. Underline Joe's hypothesis.
2. Circle Joe's conclusion.
3. Box-in Joe's observation(s).

4. What was the independent variable in Joe's experiment? _____

5. What was the dependent variable in Joe's experiement? _____

6. What was the control in Joe's experiment? _____

7. What were the constants in Joe's experiment (assuming he did it correctly)?

8. Based on his conclusion, what should Joe do next?