Name: _____ Period: _____ Date: _____

www.sciencemusicvideos.com: Scientific Method Study Guide

Interactive Tutorial Instructions:

1) Work in pairs with your table partner.
2) Sign into the computer as a guest.
3) On certain quizzes and flashcards, you'll be asked to sign in. This lets me see how you're doing, so I can help you learn the material. Your username is your first name followed by your last name (mine would be glennwolkenfeld). Your password is your student ID. If you have a long, multiple part name, check with me.
4) Push yourself toward total mastery, especially on the flashcards. If you don't know the material on the card, make sure that you click ***need more practice***.
5) As you work, check off activities as you complete them.
6) The website is always available for you if you need more practice.

I. Go to www.sciencemusicvideos.com. At the main menu, click item 1, Scientific Method. At the next menu, click "1. Science is, Science Isn't"

1. Do the vocabulary matching activity. Study the list as much as you need to. Check the box below when you are sure you know all the terms.

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2. Complete the "Reading: What Science is and isn't."

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3. Complete the "Checking Understanding: What Science Is and Isn't." Your final score is up to you. Take the quiz as many times as you want until your satisfied with your score, then record it below (it's also recorded on-line).

☐ **FINAL SCORE: _____ attempts to get all ____ questions right.**

4. In the space below, write a brief summary of what this section was about. Doing this kind of summary again (we did a similar activity in class) is really important for deep, substantial learning.

II. Click the link for "Controlled Experiments." This is also item 2 on the "Scientific Method Tutorials Menu."

1. Do the matching activity for the steps of the scientific method. Study the list as much as you need to. Check the box below when you are sure you know all the terms.

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2. Complete the "Interactive Reading: A case study: The Link Between Cancer and Smoking."

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Write a very brief summary of what you learned in this section.

3. Read "Controlled Experiments: General Features. As you do, answer the multiple choice questions (with the same title).

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4. Work on the flashcards that cover the vocabulary about the scientific method and controlled experiments. Be very strict with yourself. Only mark "Got it" if you really understand the term. Otherwise, give yourself more practice.

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5. Read "A controlled experiment to test the smoking/cancer connection. Most of this reading is in the form a multiple choice quiz.

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6. Read "What Happened Next"

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Write a brief summary of what you learned in this section.

7. Take the quiz that concludes this section.

☐ **FINAL SCORE: _____ attempts to get all ____ questions right.**

8. Pause and think about what you now understand about how experiments work. This should include everything you know (both from this tutorial, and from prior knowledge). Write your brief summary of your understanding in the space below.

III. Click the link for "Theories and Hypothesis" This is also item 3 on the Scientific Method Tutorials Menu.

1. Read "Readings about Hypothesis and Theories"

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2. Take the checking understanding quiz. Check to make sure that you're logged in.

☐ **FINAL SCORE: _____ attempts to get all ____ questions right.**

3. Answer the following questions

a) How are hypothesis and theories similar?

b) How are hypothesis and theories different?

EXTRA CREDIT EXTENSION: Once you finish all the work above, please read The Shameful Past: The history of the discovery of the cigarette-lung cancer link. You can find the link under "Next Steps" on the "Scientific Method and Controlled Experiments" page.

Use the space below to take notes and to write a short summary (required for extra credit)