

Guided Lesson Notes

Name: _____ Date: _____

History of Science

Directions: Complete this study guide as you move through the lesson. By taking notes, you are more likely to remember what you are learning. The completed study guide can be used for practice activities and to prepare for quizzes and exams. Be sure to save each study guide so you can access it when you need it.

Essential Vocabulary

As you encounter these scientific terms in the lesson, enter the meaning and an example (or two) for each. You can even draw a picture. If there are other unfamiliar words you find, enter them in the blank spaces provided.

| | |
|------------------|---------------------|
| <i>physics</i> | <i>history</i> |
| <i>science</i> | <i>scientists</i> |
| <i>discovery</i> | <i>philosophers</i> |

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Introduction to Science

1. Who were the two Greek men that made discoveries because they were curious about why certain things in their world behaved?

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2. Why was Aristotle considered the “father of philosophy”?

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3. What concept is considered to be the birth of science?

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4. How is physics formally defined?

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Historical Figures in Physics

Match the following physicists with the discovery they are best known for:

| Physicists | Discoveries | (Letter match) |
|-------------------------|-----------------------------------------------------|----------------|
| a. Aristotle (335 BC) | Proved all objects fall at the same rate | |
| b. Copernicus (1543 AD) | Created the electric battery | |
| c. Galileo (1564-1642) | Created atomic theory | |
| d. Newton (1679) | Used logic to study motion and its causes | |
| e. Volta (1800) | Known for Laws of Motion and Gravitation | |
| f. Dalton (1802) | Proved Earth rotates around the sun | |
| g. Maxwell (1855-1856) | Major contributor to the field of quantum mechanics | |
| h. Einstein (1905) | Created models of black holes | |
| i. Schrödinger (1926) | Created string theory | |
| j. Oppenheimer (1942) | Developed the theory of relatively | |
| k. Hawking (1974) | Discovered electromagnetic fields | |
| l. Greene (1999) | Known as the “father of the atomic bomb” | |

The History of Science

List five major moments in the history of science in the chart below. Include the date(s) and the discoveries associated with those moments.

| Year | Describe the discovery |
|------|------------------------|
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Order Up

Put the following discoveries in the order they were made, starting from the earliest (1) to the latest (8).

- _____ Black holes
- _____ The electric battery
- _____ Objects fall at the same rate
- _____ Earth rotates around the sun
- _____ Matter is made up of atoms
- _____ Force makes acceleration
- _____ The atomic bomb
- _____ $E = mc^2$

Great Minds

Write the discovery that is most commonly associated with each scientist.

| Scientist | Discovery |
|-----------|-----------|
| Aristotle | |
| Galileo | |
| Newton | |

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|--------------------|--|
| Volta | |
| Einstein | |
| Oppenheimer | |
| Hawking | |