**Scientific Method - Worksheet**

Read the following article and answer the questions below:

Smallpox was the dreaded disease of the 1700s. It often killed, but even when it did not, it disfigured the face and body with large pockmarks. If you survived smallpox, however, you were safe from a second attack. —you were now immune.

An English doctor, Edward Jenner, heard stories that anyone who caught cowpox (a

very mild dis­ease that resembled smallpox) became immune not only to cowpox but also to smallpox. He decided to test the idea. On May 14, 1796, he found a milkmaid who had cowpox. He took the fluid from a blister on her hand and injected it into an eight‑year‑old boy named James Phipps, who, of course, got cowpox. Two months later, Jenner injected the boy with smallpox, by taking pus from the sore of a smallpox victim. The boy did not get smallpox. He was immune.

The term ‘Vaccination’ describes the first use of cowpox inoculation to create immunity to smallpox. The new technique was reported in many scientific journals e.g. Nature. Its use quickly spread all over Europe and America. It was the first time that a serious and frightening disease could be reliably prevented. However, it was not until 1977 [almost 200 years later] that smallpox was finally eradicated from the human population.

Complete this table using the information from the extract above:

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| **Steps in the Scientific Method** | **As applied to the Smallpox story** |
| **1. Observation** |  |
| **2.. Hypothesis** |  |
| **3. Prediction** |  |
| **4. Experiment** |  |
| 5. **Result** |  |
| 6. **Conclusion** |  |
| 7. **Communication** |  |

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| smithers2Smithers thinks that a special juice will increase the productivity of workers. He creates two groups of 50 workers each and assigns each group the same task (in this case, they're supposed to staple a set of papers). Group A is given the special juice to drink while they work. Group B is not given the special juice. After an hour, Smithers counts how many stacks of papers each group has made. Group A made 1,587 stacks, Group B made 2,113 stacks. | What was the initial hypothesis?  How was the hypothesis tested?  Identify the Control Group  Are there flaws in this research? What are they?  How could this experiment be improved? |
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