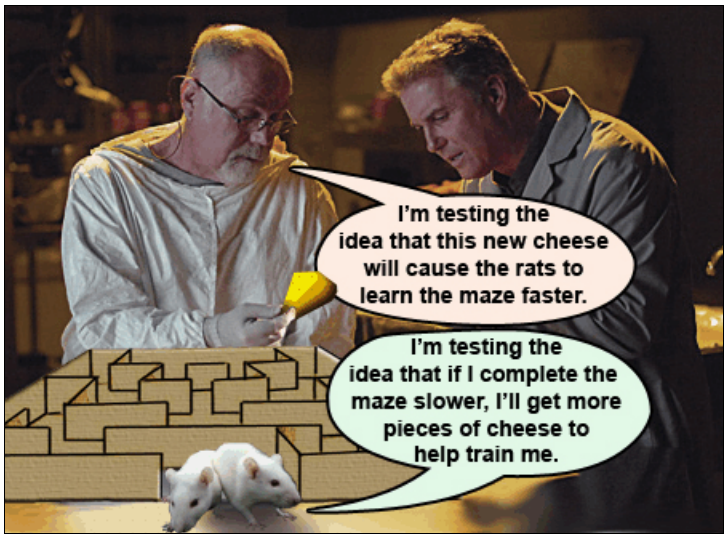
The Scientific Method

Scientists answer questions about the world around them just like you do every day. The main difference is that scientists use an organized approach to verify their conclusions. This organized approach is called the *Scientific Method*. It consists of a series of steps:

- Observe and ask questions
- Form a hypothesis - prediction of what will occur under controlled conditions
- Experiment - test of a hypothesis
- Form a conclusion - the hypothesis is or is NOT supported

The key to verifying conclusions is the **controlled experiment**. This means that two groups are treated differently. Then, the two groups are compared to see what effect, if any, the treatment had. A **control** is a standard for comparison.



A researcher did some blood tests on some body builders to determine why some were more successful than others. The results showed a higher concentration of a certain substance in the blood of the most successful body builders. The researcher developed a new nutritional supplement designed to increase the concentration of this substance in the blood, and help body builders grow muscle. Describe how the scientific method might be used in the development of the nutritional supplement by answering the questions below.

1. What question was the researcher trying to answer? _____

2. What hypothesis was the researcher testing? _____

3. Describe a controlled experiment that would test this hypothesis. _____

4. What results would support the hypothesis? _____