Student Resource 2.3

Reference Sheet: The Scientific Method

Directions: Use this flow chart of the scientific method as a model for developing your own hypothesis and test using the scientific method. Study the example given in this reference sheet before you begin work on your own chart.

Steps of the Scientific Method

No

Yes

Make an observation

Ask a question

Research and observe

Form a hypothesis

Test the hypothesis

Analyze results and draw conclusion

Reject hypothesis and try again

True?

Example

Yes

Observation: Sometimes my headaches go away in a couple hours without taking medication.

Question: What is a natural remedy for a low-grade headache?

Research and observation: Internet research shows that some people claim that drinking water and doing mild exercise can relieve a headache by increasing circulation and blood flow.

Hypothesis: If a person with a low-grade headache drinks water and participates in mild exercise, she will feel relief.

Test: A group of people with low-grade headaches is asked to drink a glass of water, participate in 15 minutes of mild exercise, and then drink another glass of water. In 30 minutes, they are asked to report if they still have a headache.

Results and analysis: 93% of the people in the group said that they no longer felt a headache after drinking water and exercising. So, it’s concluded that exercise and water are a natural remedy for many people with a low-grade headache.

True?