

# Activity: Confirmation Bias and Pseudoscience

## Part I. Falsifiability

In this section, you will evaluate whether a given hypothesis is structured in a way that it can be scientifically tested and potentially disproven. If a hypothesis is not falsifiable, your task is to rewrite it so that it is.

**1. Hypothesis:** “Meditating daily will make you feel more spiritually connected.”

i) Is it falsifiable? Explain why or why not:

ii) If not, rewrite it as a falsifiable hypothesis:

**2. Hypothesis:** “Eating blueberries improves memory performance.”

i) Is it falsifiable? Explain why or why not:

ii) If not, rewrite it as a falsifiable hypothesis:

**3. Hypothesis:** “A person’s star sign influences their personality.”

i) Is it falsifiable? Explain why or why not:

ii) If not, rewrite it as a falsifiable hypothesis:

**4. Hypothesis:** “Listening to classical music improves concentration.”

i) Is it falsifiable? Explain why or why not:

ii) If not, rewrite it as a falsifiable hypothesis:

## **Part II. Validating a Hypothesis**

**Instructions:** For each hypothesis below, identify what evidence or test would need to be conducted to confirm or disconfirm it.

**1. Hypothesis:** “If a plant is watered daily, then it will grow taller.”

i) Test Needed to Confirm:

ii) Test Needed to Disconfirm:

**2. Hypothesis:** “If a student studies for at least 2 hours a day, then they will pass the final exam.”

i) **Test Needed to Confirm:**

ii) **Test Needed to Disconfirm:**

**3. Hypothesis:** “If a person exercises regularly, then they will have a lower resting heart rate.”

i) **Test Needed to Confirm:**

ii) **Test Needed to Disconfirm:**

**4. Hypothesis:** “If a car has more than 100,000 miles, then it will require more frequent maintenance.”

i) **Test Needed to Confirm:**

ii) **Test Needed to Disconfirm:**