

1. Identify each of the following activities in the scientific method as:
(1) Observation (2) Hypothesis (3) Experiment (4) Theory
 - a) Formulate a possible explanation for your experimental results **Theory or Hypothesis**
 - b) Collect data **Observation**
 - c) Design an experimental plan that will give new information about a problem **Experiment**
 - d) State a generalized summary of your experimental results **Theory or Hypothesis**

2. At a popular restaurant, where Smith is the head chef, the following occur:
 - (a) Smith determines that sales of the chef's salad have dropped. **Observation**
 - (b) Smith decides that the chef's salad needs a new dressing. **Hypothesis**
 - (c) In a taste test, four bowls of lettuce are prepared with four new dressings: sesame seed, oil & vinegar, blue cheese and anchovies. **Experiment**
 - (d) The tasters rate the dressing with the sesame seeds the best. **Observation**
 - (e) After two weeks, Smith notes that the orders for the chef's salad with the new sesame seed dressing have doubled. **Observation**
 - (f) Smith decides that the sesame dressing improved the sales of the chef's salad because the sesame dressing improved the taste of the salad. **Theory**Identify each of the above as an:
(1) Observation (2) Hypothesis (3) Experiment (4) Theory

3. Classify each of the following statements as an observation, hypothesis or theory:
 - (a) Aluminum melts at 660°C **Observation**
 - (b) Dinosaurs became extinct when a large meteorite struck the Earth and caused a huge dust cloud that severely decreased the amount of light reaching the Earth. **Hypothesis or Theory**
 - (c) The 100-yard dash was run in 9.8 seconds. **Observation**
 - (d) Marble statues undergo corrosion in acid rain. **Observation**
 - (e) Analysis of ten ceramic dishes showed that four dishes contained lead levels that exceeded federal safety standards. **Observation**
 - (f) Statues corrode in acid rain because the acidity is sufficient to dissolve calcium carbonate, the major component of marble. **Hypothesis or Theory**