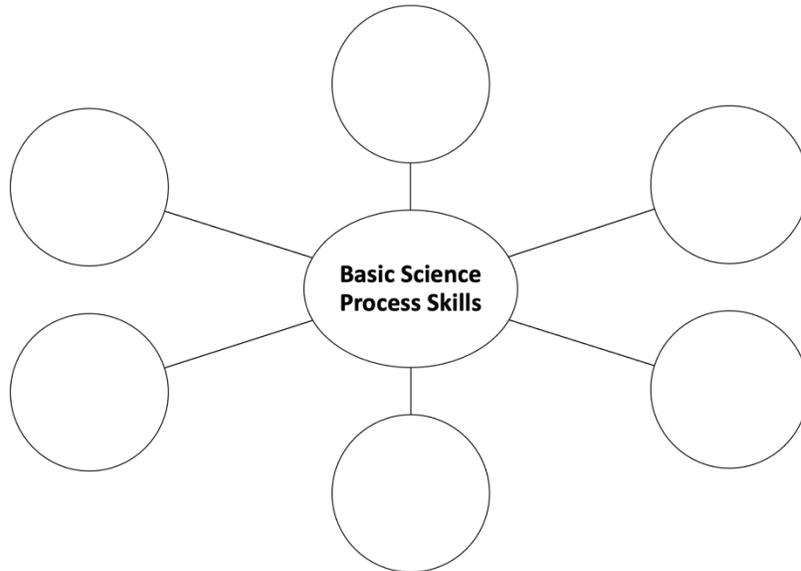


Basic and Integrated Science Process Skills Assignment – Student Edition

I. Identification

Write the six basic science process skills.



II. Modified True or False

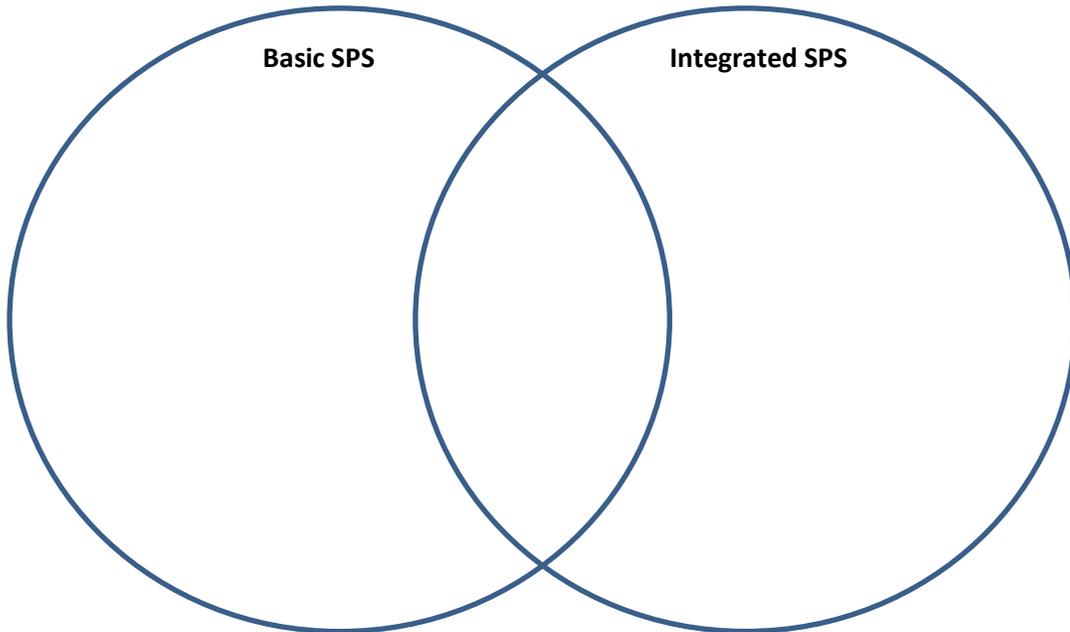
On the blank, write **true** if the statement is true. If false, change the underlined word/s to make the statement true.

- _____ 1. The five senses are used to make quantitative observations.
- _____ 2. You can use numbers to measure an object by counting, weighing, or using a tool like a ruler to find its dimensions.
- _____ 3. Quantitative data involves numbers, while qualitative data involves descriptions using senses.
- _____ 4. When you infer, you are assuming based on your wants.
- _____ 5. To classify, you are looking for ways that things are different.
- _____ 6. Predictions are a guess about what will happen in the future based on patterns of no evidence.
- _____ 7. It is important for scientists to always share what they have learned with the community.

Basic and Integrated Science Process Skills Assignment – Student Edition

III. Venn Diagram Completion

Complete the Venn diagram below to compare and contrast basic and integrated science process skills. Write the unique characteristics in the outer circles and the similarities between them in the overlapping section.



IV. Making Observations and Inferences

Make 3 observations and inferences about the picture below.



Photo Credit: Rodrigo Abd/Associate Press NYTimes

Observations:

1. _____
2. _____
3. _____

Inference:

- _____
- _____
- _____

Basic and Integrated Science Process Skills Assignment – Teacher Edition

V. Identification

For each item below, specify the independent and dependent variables, as well as constants.

1. The height of bean plants depends on the amount of water they receive.

I: _____ D: _____ C: _____

2. A student wants to see which type of bread will grow mold the fastest.

I: _____ D: _____ C: _____

3. Students measured the amount of gas produced from a reaction of baking soda and vinegar by placing a balloon filled with different amounts of baking soda on the mouths of bottles containing 5mL of vinegar and seeing how much the balloons expanded.

I: _____ D: _____ C: _____

4. Some lab mice were given a treat for completing a maze, while another set of lab mice were not given a treat for completing the same maze. Scientists recorded how quickly they would complete their maze after three trials.

I: _____ D: _____ C: _____

5. A group of students were preparing for a test. 3 students studied for an hour and the other 3 students studied for 30 minutes. The students who studied for an hour scored higher on the test than the other 3 students.

I: _____ D: _____ C: _____

VI. Hypothesizing

Write a hypothesis for the given scenario.

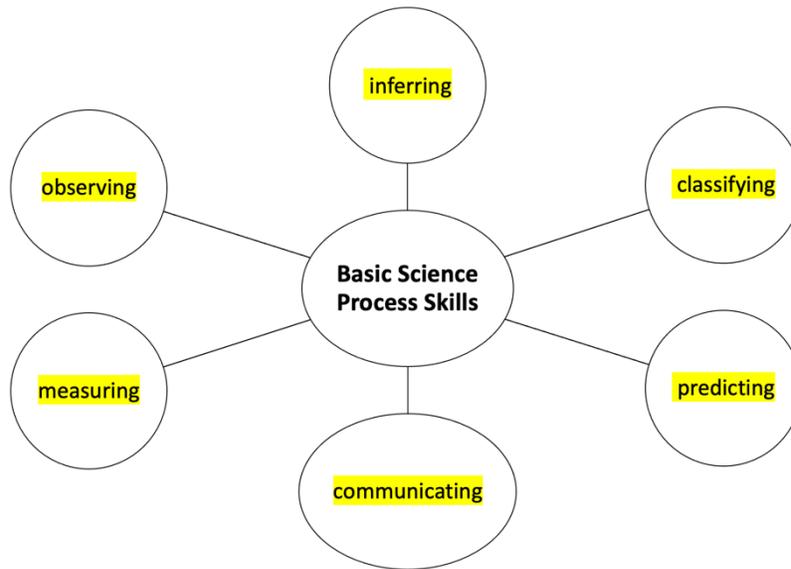
1. Do saltwater and freshwater have the same boiling point?

2. Does the amount of time watching television affect the reading scores of students?

Basic and Integrated Science Process Skills Assignment – Teacher Edition

I. Identification

Write the six basic science process skills.



II. Modified True or False

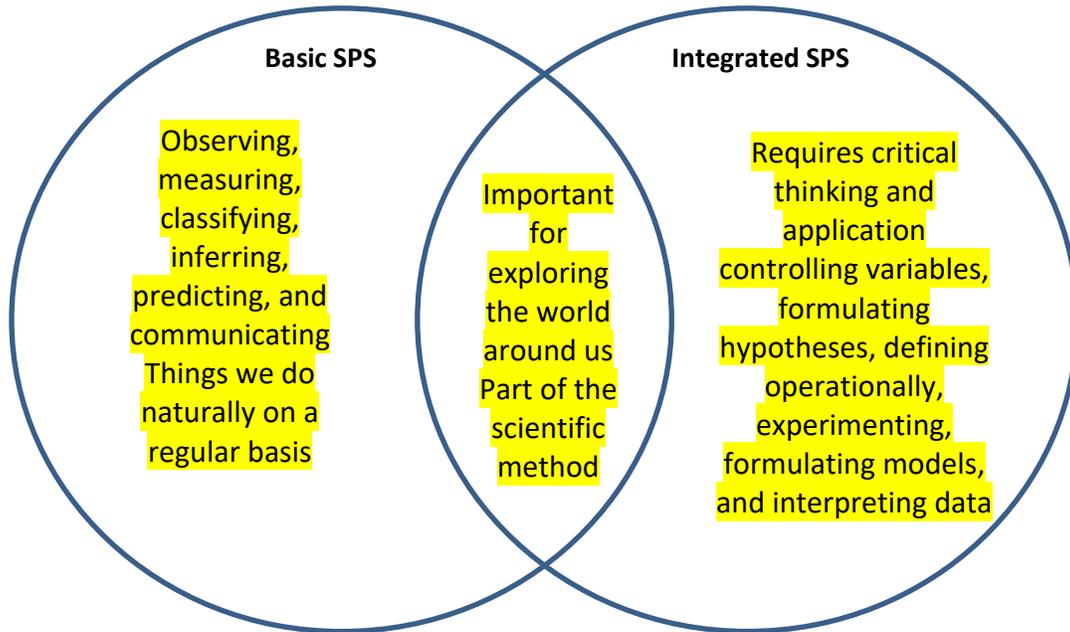
On the blank, write **true** if the statement is true. If false, change the underlined word/s to make the statement true.

- qualitative 1. The five senses are used to make quantitative observations.
- true 2. You can use numbers to measure an object by counting, weighing, or using a tool like a ruler to find its dimensions.
- true 3. Quantitative data involves numbers, while qualitative data involves descriptions using senses.
- observations 4. When you infer, you are assuming based on your wants.
- similar 5. To classify, you are looking for ways that things are different.
- evidence 6. Predictions are a guess about what will happen in the future based on patterns of no evidence.
- true 7. It is important for scientists to always share what they have learned with the community.

Basic and Integrated Science Process Skills Assignment – Teacher Edition

III. Venn Diagram Completion

Complete the Venn diagram below to compare and contrast basic and integrated science process skills. Write the unique characteristics in the outer circles and the similarities between them in the overlapping section.



IV. Making Observations and Inferences

Make 3 observations and inferences about the picture below.



Photo Credit: Rodrigo Abd/Associate Press NYTimes

Possible answers

Observations:

1. There is a man's head above water.
2. The water is muddy.
3. There is rope that cordons the hole with water. Maybe the rope was placed to prevent people.

Inference:

- Maybe the guy fell into the hole with water.
Maybe it rained so the soil got carried into the water.

Basic and Integrated Science Process Skills Assignment – Teacher Edition

V. Identification

For each item below, specify the independent and dependent variables, as well as constants.

1. The height of bean plants depends on the amount of water they receive.

I: amount of water **D:** height **C:** bean plants, soil, sunlight

2. A student wants to see which type of bread will grow mold the fastest.

I: type of bread **D:** mold growth **C:** environment and exposure to elements

3. Students measured the amount of gas produced from a reaction of baking soda and vinegar by placing a balloon filled with different amounts of baking soda on the mouths of bottles containing 5mL of vinegar and seeing how much the balloons expanded.

I: amount of baking soda **D:** size of balloon after reaction **C:** balloon type, 5mL of vinegar, bottle type

4. Some lab mice were given a treat for completing a maze, while another set of lab mice were not given a treat for completing the same maze. Scientists recorded how quickly they would complete their maze after three trials.

I: treat given **D:** time to complete maze **C:** maze, lab mice, environment, type of treat

5. A group of students were preparing for a test. 3 students studied for an hour and the other 3 students studied for 30 minutes. The students who studied for an hour scored higher on the test than the other 3 students.

I: amount of time studying **D:** score on test **C:** test, study materials

VI. Hypothesizing

Write a hypothesis for the given scenario.

1. Do saltwater and freshwater have the same boiling point?

If saltwater and freshwater are boiled, then freshwater will have a lower boiling point.

2. Does the amount of time watching television affect the reading scores of students?

If students watch more television, then their reading scores will be lower.