

THE RELATIONSHIP BETWEEN SMELL AND TASTE

STUDENT BOOK Chapter 7, page 220

Goal

Determine the role of taste and smell in the perception of flavours of foods.

1. What is the independent variable in this lab?

2. What is the dependent variable in this lab?

Hypothesis

I think that _____
because _____

Materials

- 6 fruit purées of similar texture (e.g. baby foods) in containers marked A to F
- 6 teaspoons
- bandana
- onion
- nose clip (optional)

Procedure

1. Assign a task to each team member.
 - Test subject: person who tastes the fruit purées.
 - Experimenter: person who handles the fruit purées.
2. Blindfold the test subject and ask him/her to block his/her nose.
3. Have the test subject taste half a teaspoon of purée A. The test subject should try to identify the purée. Record the result.
4. Repeat step 3 with purée B.



Name: _____ Group: _____ Date: _____

5. Ask the test subject to stop blocking his/her nose.
6. Have the test subject smell half a teaspoon of purée C. The test subject should try to identify the purée. Record the result.
7. Repeat step 6 with purée D.
8. Hold a piece of onion under the nose of the test subject.
9. Have the test subject taste half a teaspoon of purée E. The subject should try to identify the purée. Record the result.
10. Repeat step 9 with purée F.
11. If applicable, have the test subject smell and taste purées he/she did not recognize. The test subject should try to identify the purées. Record the results.
12. Record the real flavour of each purée.
13. Clean up and put away materials.

Results

Record your results in the table below. Give the table a title.

Title:

	Identification of purées					
	A	B	C	D	E	F
By taste only (blocked nose)						
By smell only						
By taste only (onion under nose)						
By taste and smell: unidentified purées						

Identification of different purées

Purée A:

Purée B:

Purée C:

Purée D:

Purée E:

Purée F:



Name: _____ Group: _____ Date: _____

Analysis of the results

1. How many purées did the test subject recognize by taste with a blocked nose?

2. How many purées did the test subject recognize by only smell?

3. How many purées did the test subject recognize by only taste?

4. Based on your results, does smell contribute significantly to the perception of flavours?

5. Are the results you obtained conclusive? If not, what are the possible sources of error?

6. How could you improve the protocol for this lab?

Conclusion

1. Complete the following sentence:

Perception of flavour depends _____

2. Was your hypothesis confirmed or not? Explain your answer.



Name: _____ Group: _____ Date: _____

APPLICATION

1. What role does the tongue play in the perception of flavour?

2. What role does the nose play in the perception of flavour?
