

# Sense of Smell

**Note:** It will be assumed throughout this unit that the class is arranged into base groups of four students each.

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## Prior Knowledge:

- How to use Power Point
- Scientific Process
- Word Processing
- Making Graphs

## Objective:

- The students will participate in a cooperative experiment.
- The students will develop a methodology to measure the affect and effects of specific scents.
- Students will conduct test using their methods.
- Students will collect and organize data by creating a day log in their science journal.
- Students will create graphs and charts on the computer.
- Students will present their findings to the class using a Power Point presentation.

## Anticipatory Set:

Take a volunteer from the class and have her/him come to the front of the class. Have the student sit in a chair and blindfold them. Place a flower under the student's nose and ask them to breathe in. Present the question, "How does this smell make you feel?" Ask the student responds, place a container of vinegar under the students nose and ask them to breathe in. Present the question again, "How does this smell make you feel?" Now ask the class, "Does what you smell effect how you feel and think?"

## Materials:

- 7 small containers with lids for each group of 4-5 students
- Blindfolds
- Student Science Journal
- Group Evaluation Form

## Procedure:

1. Have the students get into their base groups. Make sure there is an even number of groups.
2. Students will use the next 10-20 minutes to decide the methodology for their experiment. They need to keep in mind every detail of how they are going to keep track of effect and affect reactions to the seven smells they will choose. Record of their methodology must be kept in their science journal. This will serve as the first entry in their day log. *(Be sure to explain that the day log serves two purposes: accountability and duplication. Therefore, entries must be specific and detailed.)*
3. Students will use the next day to develop their questionnaires and tests using a computer word processing program. Tests should measure cognitive processing skills (e.g. math problems, sequencing events, etc.) Questionnaires should measure degree of sensation. Day log must be done.
4. Pair each group with another group. Each group will now be the subjects in the other groups experiment.
5. Allow at least two days for experimenting. On day one, Group A will conduct their experiment on Group B. While on day two, Group B will conduct their experiment on Group A. Day log must be done.
6. Allow two to three days for the students to organize their findings by developing graphs, charts, and a power point presentation for the class.

## Closure:

Class presentations will lead to discussing the important of the sense of smell on the body. How involuntary and voluntary reactions occur. Discuss how this should apply to the classroom. What scents should be introduced? How will that effect productivity. (e.g. studying, exam performance?)

## Evaluation:

The students will be evaluated on participation in the experiment, day log, and power point. Each student will complete a group evaluation form.

Possible Odors:

<u>Primary Odor</u>	<u>Example</u>
Camphoric	Moth balls
Musky	Musk perfume/aftershave
Floral	Roses
Peppermint	Mint candy
Ethereal	Alcohol
Pungent	Vinegar
Putrid	Sulfur

Empty Container = Control