

How are taste and smell connected?

Adapted from "Smell versus Taste Behavioral Science Project", Crystal Clear Science Fair Projects

Objectives:

To study two of the five senses (smell and taste)
To learn that smell and taste are linked senses.

Definitions/Background:

Our senses allow us to explore the world, and experience the world around us.

Our five senses = touch, smell, taste, sight, and hearing.

Materials:

Items for smelling - infused into cotton balls. (orange slice juice, banana oils?, lemon slice, bottle of vanilla extract, cinnamon, licorice, etc.)

Jellybeans for tasting – get a few flavors/sort them; or use lollipops sorted by flavor?

Pre-class setup:

Get the smells into the cotton balls. Maybe set up different stations around the room with different smells at each, so you know where each smell is.

Method:

1. Ask: how do you know what something smells like?
 - a. Nose
 - i. Molecules of "smell" interact with receptors in nose
 - ii. Brain interprets smell
2. Ask: how do you know what something tastes like?
 - a. Mouth
 - i. Molecules of "taste" interact with receptors in mouth
 - ii. Brain interprets taste
 - iii.
3. Ask: do smells affect taste?
4. Do expt:
 - a. Split students into groups and send them to stations.
 - b. At stations, they should smell a cotton ball *while* tasting a jellybean.
 - i. Note the taste of the jellybean.
 - ii. Record station #, jellybean color, taste sensation. (see worksheet)
 - c. Rotate students to a new station (=new smell) and repeat.

See also: <http://www.sciencenetlinks.com/lessons.cfm?BenchmarkID=6&DocID=392>

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Station 1:

Jellybean color: Taste:

Station 2:

Jellybean color: Taste:

Station 3:

Jellybean color: Taste:

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Other ideas for senses:

- * Taste: salt, strawberry, lemon, sugar, cheese, red pepper
- * Touch: sandpaper, cotton ball, bean bag, ice, rock, sand
- * Smell: licorice, old shoe, fragrant flower, orange, cinnamon
- * Hearing: bell, wind chime, gavel or drumstick, ticking clock, water-filled container, coffee can filled with rice
- * Sight: watercolors, plaid material, bowl, old telephone, stuffed animal, shoe