**INSTRUCTOR GUIDE TEMPLATE**

**ACTIVITY TITLE: Jelly Bean Taste Test**

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| \***Theme**: | Sensation |
| \***Objective**(s):  *(What key learning do you want students to come away with?)* | Understanding the senses of taste, smell, and how they work together to create the perception of flavor. |

**LESSON OUTLINE:**

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| **1. Introduction:**  *Plan a script of what you will say to start.*  *- What will this be about? Why’s it interesting?*  *(Hook)* | Hello everyone! Have you all ever smelled something before? What about taste? Where do you taste/smell? We always think about our noses doing the smelling and our tongues doing the tasting, but what if your nose is actually doing some of the tasting as well? In this activity I want everyone to take a jelly bean but before you eat it, I want you to hold your nose closed using your finger and thumb… |

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| **2. Building Background:**  *List questions you can use to immediately engage your audience and prepare their thinking for your activity.*  *-What prior knowledge might they have about/related to your topic?*  *-What prior knowledge (background) do they need for your activity?* | Have you ever smelled/tasted something before?  Does your nose help you taste?  Can anyone describe what a taste bud is?  Where are taste buds located?  How does your nose smell?  What is a smell?  (No prior knowledge needed. The intuitive knowledge of the attendee will be used to guide dialogue during the activity). Taste buds and olfactory receptors will be defined during this discussion before moving on to the activity. |

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| **3. Lesson & Activity:**  *Outline the key components of your lesson.*  **Plan/Note**:  - key ideas/ vocabulary  - scaffolds  - images/media  - extension questions  \*Consider how to best deliver your content!  \*Plan interactive components that encourage active thinking in your students. | Lesson summary:  Attendees are engaged by volunteer and asked some basic questions about smelling and tasting (see above). Jelly beans are distributed to attendees, who will taste the jelly bean while holding their nose and, after a couple of seconds of chewing, release their noses.  The perception of flavor is informed both by odorants from smelling food (or here released from the chewed jelly bean) and by tastants, the chemicals in food that are picked up by receptors in taste buds.  Without the sensory information supplied by odorants, we can’t have a full appreciation of the perception of flavor and hence the jelly bean won’t be as sweet, tangy, and ultimately flavorful as when both our nose and tongue are able to transfer their full capacity of chemical cues. Note: for reference, this information will be on a posterboard that has diagrams and visual references, i.e. taste buds and neurons embedded in mucus membrane.  Attendees can then try a jelly bean enjoying its full palate of flavors and will be encouraged to ask questions during the wrap-up, when the volunteer explains about the convergent sensory information of taste and smell. |

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| **4. Wrap Up:**  *- Review key ideas*  *- Share takeaways and final thoughts*  *- Discuss connections to other questions and ideas. Extensions.*  *- Ask: Who could you teach what you learned here today?*  *- Ask/Suggest: What can I do to learn more?* | Key takeaways and ideas are that taste is mediated by taste buds and smell by olfactory receptors. The concept will be taught that senses are not simply discrete but that rather they often work together to create a greater capacity for perception than when they act alone. A real life example of the nose and jelly bean demonstration are when you’re sick and your nose is stuffy you often can’t taste food.  People are always interested in what’s going on at the university. Perhaps mention that the Zucker and Axel laboratories are conducting research in ZMBBI, just upstairs! |

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| **MATERIALS NEEDED: *\*\*(please list all items and quantities necessary for preparation)*** |
| Jelly beans, sanitary wipes/gloves |

\*\*attach any printouts to end of document here

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| **Other Notes** |
| get a bag of jelly beans with only a few flavors so people are less choosy and aren’t afraid of getting a flavor they won’t like |

**Extra Resources:**