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How Can I Eat My Vegetables Without Having to Tasting Them?

Purpose:
If the kids haven't already heard that there are regional areas of the tongue that are responsible for the detection of certain tastes, they likely will in the future. We hope to instill a level of understanding in the students that will enable them to refute this suggestion by engaging them in an activity that ultimately has them prove the theory incorrect.

Materials:
A variety of liquids that are sweet (sugar water), salty (salt water), sour (lemon juice) and bitter (coffee), q-tips, student participants.

Procedure:
We will start by providing a brief introductory presentation and introduce the theory of regional areas of the tongue being responsible for certain tastes. We will then ask a series of questions such as who has heard this before, who thinks it might be true, and ask if anyone has tried to use this to use this to their advantage (to avoid tasting certain foods).
Upon gathering feedback from the students, we will ask them to come up with some ideas for an experiment we could design to test the theory. We will assist them by attempting to steer them along the right track without giving them answers.
Once we all agree on the experiment, we will have volunteers come up and we will place the different tastes on the different regions of the tongue and ask them a number of questions (for example, if they can taste the salt more on the tip of their tongue, or the back of their tongue). We will test each of the different regions (front, back, sides), with a number of liquids and have the kids record their results.

Issues:
There is a degree of individual difference that could potentially lead to the false conclusion that there are regional areas of the tongue that are responsible for the detection of different tastes.