Classroom Activity

10 Big Question: What is life?

Taste interactions

Taste and tactile sensations often interact with one another, often resulting in ‘suppression’ of one or the other. In winemaking (and in food production) this is a complex but important consideration in balancing flavour. You can experience this for yourself with the following simple activities.

Sugar versus acidity

For this part of the activity you will need to prepare the following:

- Solution 1: Into one cup of water dissolve one teaspoon of sugar.
- Solution 2: Into a second cup of water add one tablespoon of lemon juice.
- Solution 3: Into a third cup of water, dissolve one teaspoon of sugar AND add one tablespoon of lemon juice.

Taste each sample in order and compare their levels of sweetness and acidity. Is the sweetness of solution 3 less than, equal to, or more than that of solution 1? Is the acidity of solution 3, less than, equal to, or more than that of solution 2?

Sugar versus astringency

For part 2, you will need to brew a pot of strong black tea (three cups) and allow it to cool to room temperature.

Taste the tea. The puckering, drying sensation you experience is caused by phenolic compounds extracted from the tea leaves and is known as astringency.

Now pour a little of the tea into three separate cups. To the first add a teaspoon of sugar. To the second add a teaspoon of lemon juice. Leave the third as it is. Taste each sample and compare their levels of astringency.

Which is the most astringent? Which is the least astringent? Based on your findings, how might a winemaker mask excessive astringency in a wine?