Part 1: Engage - Chemistry of Onions (40mins)

Activity 1: – Why Do Onions Make Us Cry?

Watch the video clip showing someone cutting an onion and experiencing tearing.

As you watch the short clip of Jacque Pepi (famous French Chef) sharing Onion cutting techniques, ponder and respond to the following questions:

1. Why do onions make us cry?

_____

_____

_____

2. What do you think is happening on a molecular level when an onion is cut?

_____

_____

_____

3. Is this a chemical or physical change?

_____

_____

_____

Activity 2: Smell & See

Examine the raw onion samples at your table. (Do not touch unless instructed).

Carefully open the sealed container with chopped onion and waft the scent toward your nose.

Record your observations:

Smell Description (give a robust description):

Tear Reaction (None / Mild / Intense): _____

Color or texture notes (if any):

Activity 3: Group Discussion

In your table groups, discuss and write down your thoughts to the following questions:

1. Why do onions make people cry?

2. What chemical do you think is being produced?

3. What happens on a molecular level when an onion is cut?

4. Is this a chemical or physical change? Explain your reasoning.

Vocabulary (dedicate 10 mins to this section. Use the game platform (Quizlet, Quizizz or Kahoots) that your teacher selected to help you engage with this vocabulary list. Don't forget to take the quiz.

Enzyme

Volatile compound

Sulfoxide

🔬 **Resources at Your Table:** - Onion samples
- Sealed container with pre-cut onion for scent exploration