

Exercises Plant Basics

1. Complete the two formulas and explain how they are connected:

- Photosynthesis: _____ + Water + _____ → Sugar + _____
- Respiration: Sugar + _____ → _____ + Water + Energy (ATP)

2. Source to Sink

In early summer, sugar is produced in the leaves of a strawberry plant. Identify the SOURCE and the SINK for this sugar. Which tissue (xylem or phloem) transports it? Now, in late autumn, the root becomes a storage organ. Does it become a source or a sink?

3. The Out-of-Order Code

The slides states: "The principal growth stages need not proceed in the strict sequence... but can occasionally also proceed in parallel." Can you think of an example?

4. Decode the Stage

A wheat plant has emerged, and 5 leaves are fully unfolded on the main shoot. What is the principal growth stage (0-9)?

5. Logic Chain

Put the four main cultivation steps in the correct logical order

- Harvesting & Storage
- Sowing/Planting
- Plant Protection
- Fertilisation

6. The text mentions sensors for optimising fertilisation and plant protection. For one of these, propose:

- What could a sensor measure? (e.g., leaf colour, soil moisture)
- How would this data help the farmer make a better decision?