

Solutions

2.1 A Explain both a benefit and a cost. Reducing stomatal opening conserves water but can limit carbon dioxide entry. A feature cannot be judged as universally best without its ecological context.

2.2 $\text{rate} = \text{mass} / (\text{area} \times \text{time}) = 8 / (0.20 \times 2) = 20 \text{ g}/(\text{m}^2 \text{ h})$.

2.3 False. An individual organism does not evolve a new inherited trait because it needs it. A plausible story about function is a hypothesis requiring evidence.

2.4 adaptation. adaptation means A heritable feature benefiting survival or reproduction in a context.

3.1 Both give $30 \text{ g}/(\text{m}^2 \text{ h})$. Match humidity, temperature and plant condition; equal recorded water loss is not proof of equal survival or adaptation. Repeat with representative samples.