

BOTANY, PLANT PHYSIOLOGY AND PLANT GROWTH

Lesson 8: ENVIRONMENTAL FACTORS

Segment One – Light - Draw a line to connect the term with its related action.

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| Light quantity | a. Grow plants under light bulbs emitting all colors of the light spectrum. |
| Light quality | b. Move a plant from full shade to full sun. |
| Light duration | c. Block light on chrysanthemums for a few hours each day. |

Segment Two - Temperature - Draw a line to connect the process with the related idea.

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| Photosynthesis | a. This process rapidly increases as temperature rises, and can dangerously outpace its reverse process. |
| Photosynthesis example | b. To encourage growth, move heat-loving palms from outdoor cold to a greenhouse heated to optimum growing temperatures. |
| Respiration | c. To conserve sugar reserves, reduce nighttime temperatures 15 degrees lower than daytime temperatures. |
| Respiration example | d. This process increases, to a point, as temperature rises. |

Segment Three – Water - Mark T or F for True or False.

- ___ If temperatures increase, then transpiration decreases.
- ___ Warm air will hold less water vapor than cold air.
- ___ If air movement increases, then transpiration increases.
- ___ Water helps stabilize plant temperatures through condensation.
(It is through evaporation, not condensation.)
- ___ If humidity increases, then transpiration decreases.
- ___ Stomata do not operate during transpiration.
- ___ If water is depleted, then photosynthesis will stop.