A.P. Biology Class

Rapina

11/8/12

Transpiration Lab

Environments/ biomes

Question:

How do different environmental factors affect the rate of transpiration?

Hypothesis

 Environmental factors will impact transpiration by changing the rate at which it occurs.

Variables

 Manipulated

 Environmental factors

Levels of treatment: tropical rainforest, wind (eastern Washington), temperate rainforest, artic, desert, control (room environment)

 Tropical: Kelly, Katie, McM

 Temperate: brennen, Gunner

 Windy: Rhett, lauren, MMcc

 Arctic: Maile, Lydia

 Desert: meera, Anna, Andrew

 Control: Blake, Max

 Responding

 Amount of water lost, (ml/m2)

 Controlled Variables

Same plant species (Anthurium), same amount of water, same pH, same solute concentration, same stem length,

Materials

Tropical- heat lamp (100) , spray bottle, plastic bag/box (big very big see gunnar’s measurements),

Temperate-spray bottle, bag, outside

Windy- fan

Arctic-dry ice, fan, bag

Desert- heat lamp,

Main list- plant, stand, water, potometer, petroleum jelly, pencil, paper

Procedure

1. Gather materials
2. Set up potometer