




Observation and Hypothesis

- 1st step: Make an observation
 - Example: Why is there little ground vegetation in this forest?
- 2nd step: Create a hypothesis
 - If...then statement
 - Example: **if** there are tall trees blocking sunlight, **then** few plants will grow near the ground.









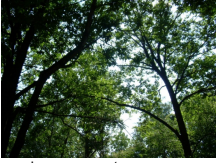











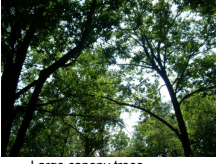
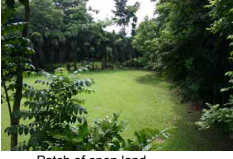
3rd step: Design an Experiment

Two parts to an experiment:

- 1) Control group
 - Receives no special treatments
 - Used as comparison
 - The “normal” group
- 2) Experimental Group
 - Receives the treatment
 - Contains the independent variable
 - **Independent variable** = one factor that differs from the control group
 - Data collected is called the **dependent variable**



Control Group		Experimental Group	
 6 hours sun/day	 8cm rain/month	 6 hours sun/day	 8cm rain/month
 Grazing animals	 60° temp	 Grazing animals	 60° temp
 Large canopy trees		 Patch of open land	
The experimental plants grew 1 meter taller. What most likely caused this change?			

Control Group		Experimental Group	
 6 hours sun/day	 8cm rain/month	 4 hours sun/day	 8cm rain/month
 Grazing animals	 60° temp	 Grazing animals	 80° temp
 Large canopy trees		 Patch of open land	
The experimental plants grew 1 meter taller. What most likely caused this change? Unknown! Too many changed variables!			
