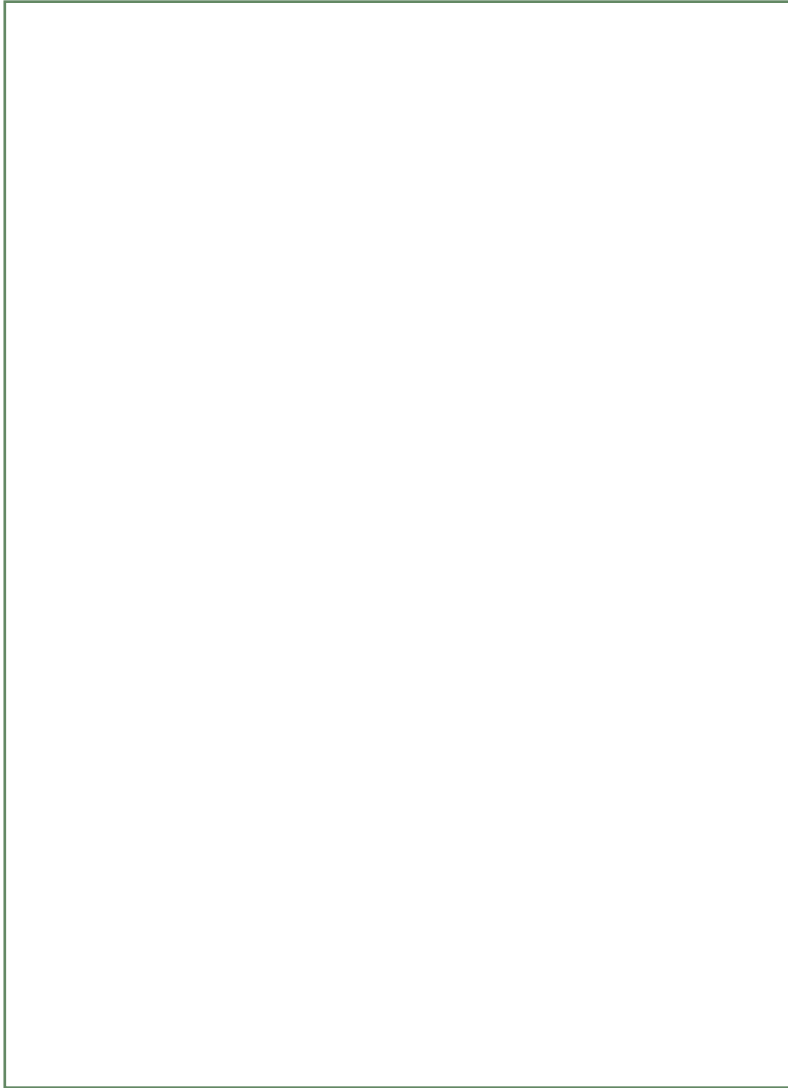
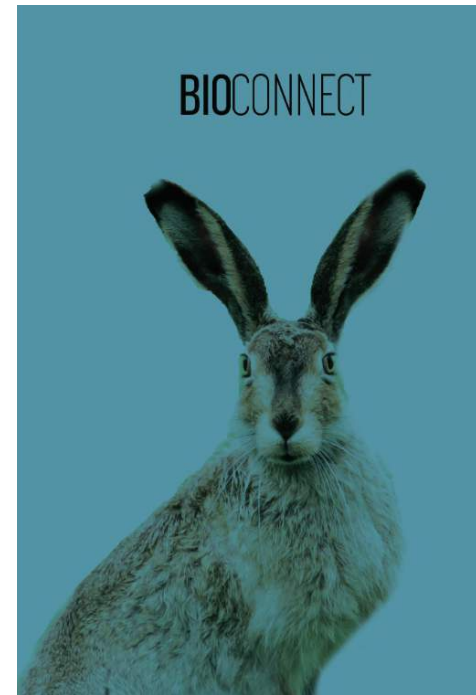


Notes



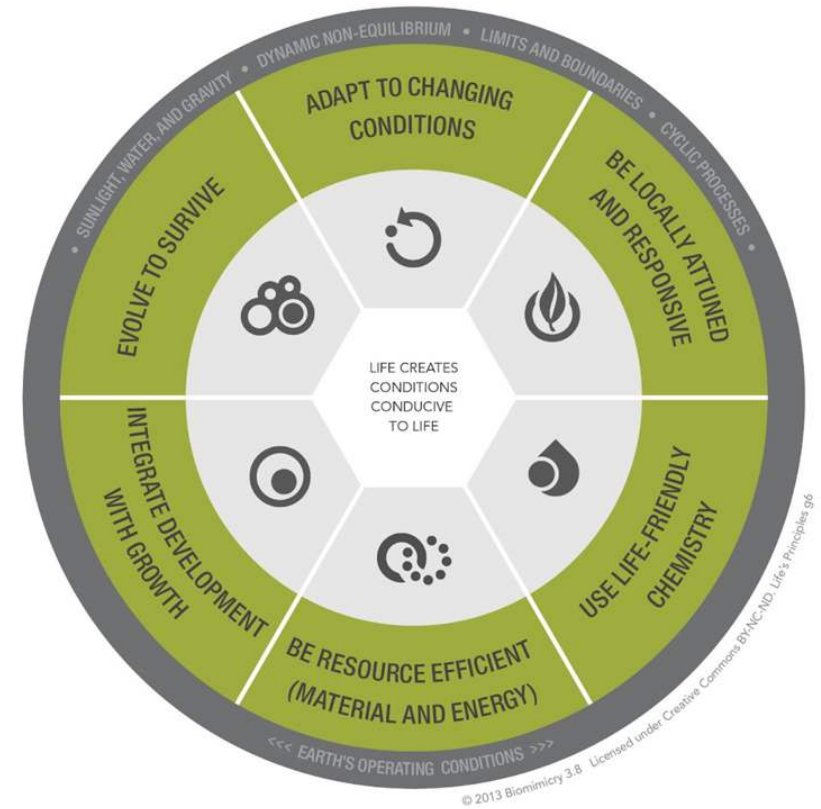
BIOCONNECT

Teacher Workshop



Observation

Use your 5 senses. What do you notice? What do you wonder?



LIFE'S PRINCIPLES

Biomimicry DesignLens

Form, Strategy, Function

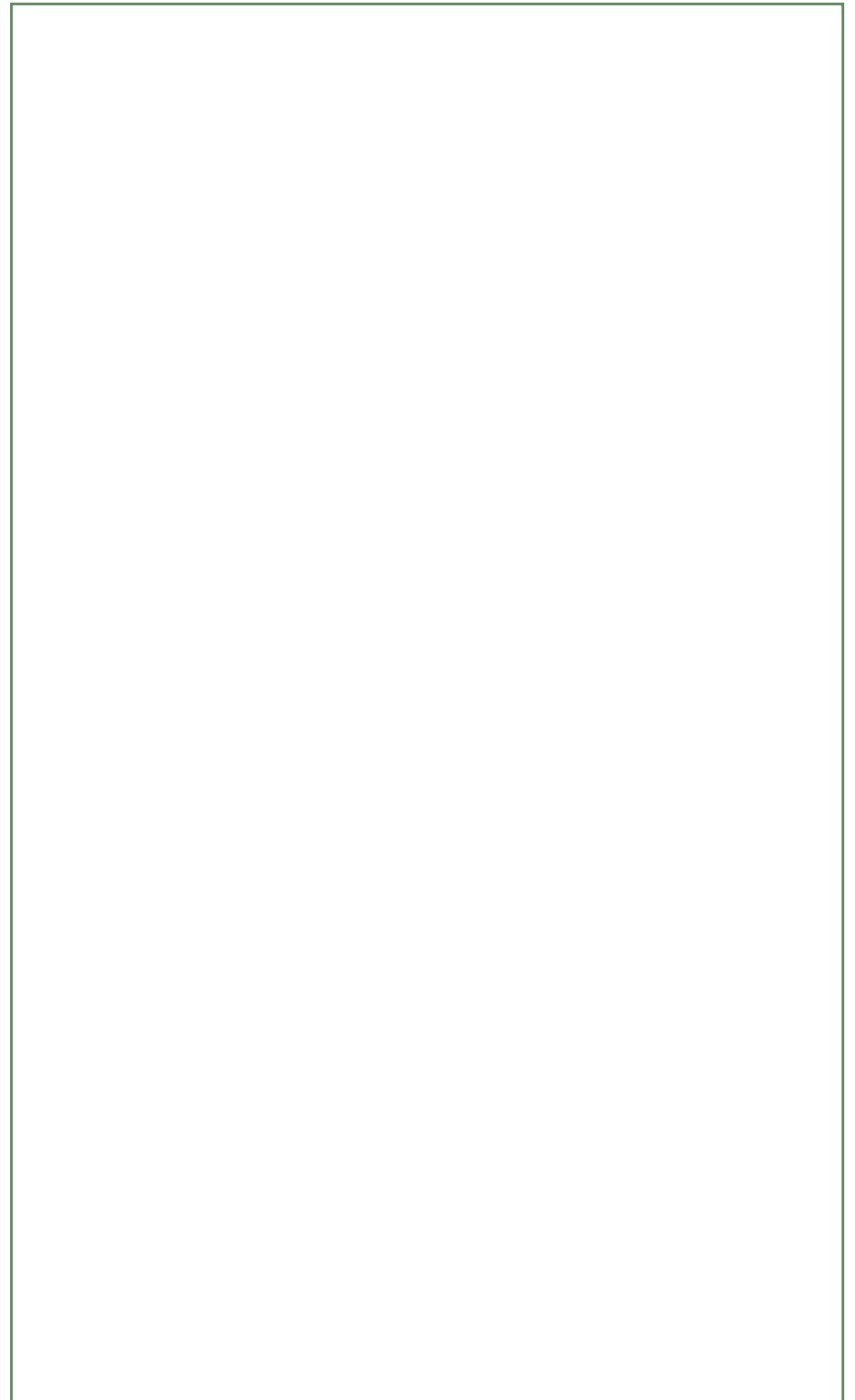
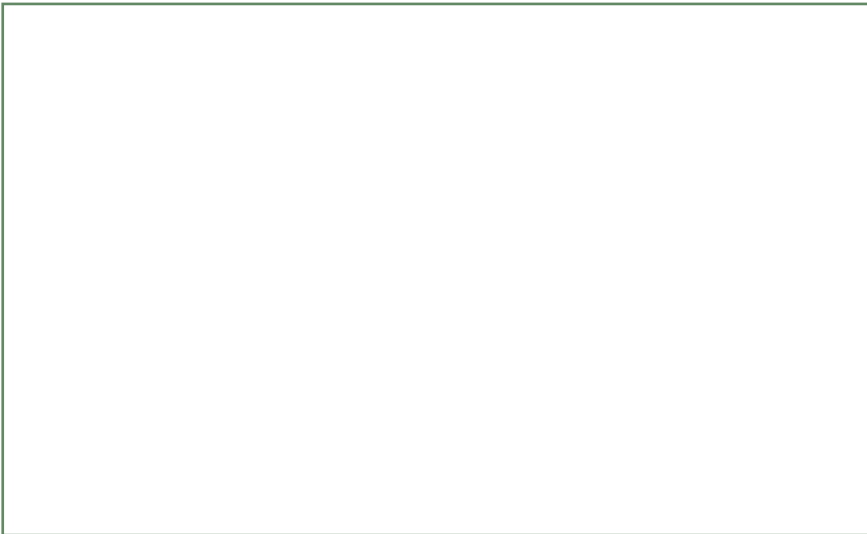

Form: the SHAPE it takes in the biology of the organism

Strategy: HOW the organism accomplishes the function

Function: WHAT the organism is doing

A biological strategy is a characteristic, mechanism, or process that an organism or ecosystem exhibits to meet a function.

As you go through the stations, choose 1-2 organisms that inspire you the most and write/sketch the form, strategy, and function.



3D Stations

Rabbit Ears

Place rabbit model under heat lamp and observe what happens.

Record how long it takes the ears to change colors _____

Discuss: Why is this adaptation so important for desert animals?

Camel Fur

Step 1: Place camel model with cover under heat lamp. After 1 minute, observe how the inside has changed color, and record the temperature: _____

Step 2: Take off the cover and place it back under the heat lamp.

Record the temperature at 30 seconds: _____ and 1 minute: _____

Coyote Fur

Feel the top and under layers of the fur.

Discuss: Does the fur (cover) help to manage the temperature? Why do you think that a thick layer of fur would be useful in the desert?

Namib Beetle

Discuss first: Water is highly cohesive, meaning that it tends to “bunch” together. What works best to move water?

Lightly spray the model and observe what happens.

Saguaro Cactus

Pull out the middle part and observe how the ridges between each section are different (one shows before a rainstorm, the other shows after the saguaro receives water).

One mature saguaro can hold 200 gallons of water. A gallon of water weighs 8.32 pounds. How many pounds would a saguaro be if it was holding all 200 gallons of water?

Outdoor Stations

Soil Absorption

Description of soil	Water Absorption Rate

Discuss why soils might absorb water at different rates. How would this impact the living organisms that survive in this ecosystem?

Human Impact

Description of ground	Temperature

Discussion questions: Which has the highest temperature? What does that tell you about humans’ impact on the desert?

What are some negative AND positive effects humans have on the desert environment?

Evaporative Cooling

Spray one arm with water, then discuss: What does the hand with water sprayed feel like; is it cooler than the other non-sprayed hand? Why would spraying water help you feel cooler? Which desert animals use evaporative cooling and how do they use it?