Name- Date- Period-

Water in the Biosphere Student Capture Sheet

Guiding Questions

What is the biosphere?
Is there water in the biosphere right now? How do you know?
How is the biosphere an important part of the water cycle?

Engage

1. Record how many living things you can observe in one minute.

2. The biosphere is _____
   _____

3. Prediction: Water is _____ (not present, somewhat present, highly present) in the biosphere today.

Explore Circle the land cover you determined based on the classification key.

General Water Requirements for Plants

High	Medium	Low	Very Low
Cultivated Agriculture Cultivated Non-Agriculture Wetland	Deciduous Forest Deciduous Shrubland Grassland Forb Community	Evergreen Forest Evergreen Shrubland	Urban Barren Land Open Water

Other Observations of Signs of Life

Tracks

Scat

Fur, feathers, bones

Animal homes

Nests

More signs:

Explain

Based on the data you collected, water is _____ (not present, somewhat present, highly present) in the biosphere today.

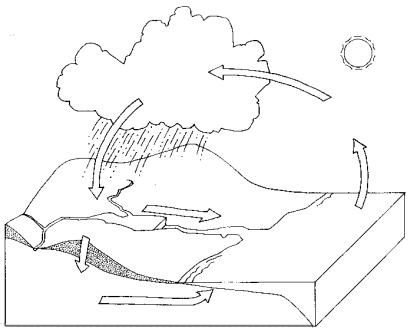
_____

_____

_____

Evaluate

Label the parts of the water cycle that involve the biosphere and describe how the biosphere is an important part of the water cycle.



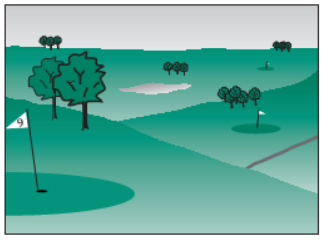
Land Cover Classification Key

(adapted from the GLOBE Program's MUC Field Guide)

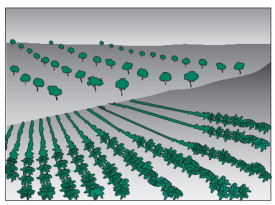
1a. Site is Developed (used by humans for buildings, farms, sports fields, etc.)	Go to 2
1b. Site is Natural – not used by humans (forest, pond, meadow, etc.)	Go to 4
2a. Site has been built on with homes, stores, roads, etc. more than 40%	**Urban**
2b. Plants, grass, crops cover more than 60%	Go to 3
3a. Fields of crops, orchard trees or sod for grass	**Cultivated Agriculture**
3b. Sports, field, golf courses, parks	**Cultivated Non-Agriculture**
4a. There is little or no vegetation (plants)- may be no growth or surface water	Go to 5
4b. Vegetation is present	Go to 6
5a. Site is land with little vegetation	**Barren Land**
5b. Site has water like a river, lake or pond	**Open Water**
6a. Land is saturated with water some or most of the year	**Wetland**
6b. Land is not saturated with water some or most of the year	Go to 7
7a. More than 60% is woody vegetation (with bark like trees or shrubs)	Go to 8
7b. More than 60% ground cover is herbaceous (plants have no bark like grasses and flowers)	Go to 11

Urban

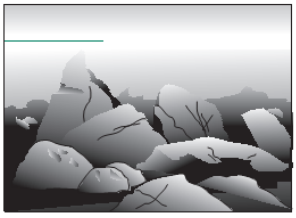
Cultivated Non-Agriculture



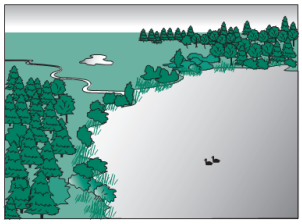
Cultivated Agriculture



Barren Lnd

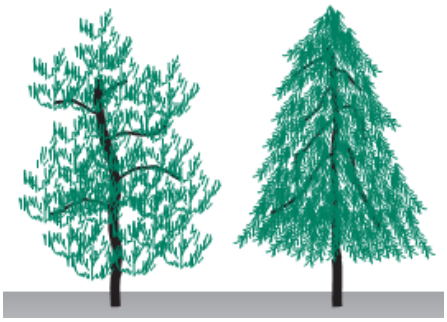


Open Water

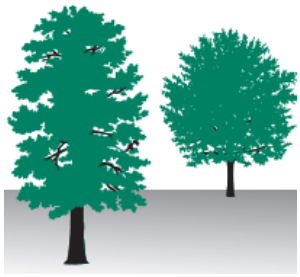


8a. Trees taller than 5 meters cover more than 40% of the sky	Go to 9
8b. Trees shorter than 5 meters cover more than 40% of the ground	Go to 10
9a. More than 50% of the trees are evergreen (keep leaves or needles all year)	**Evergreen Forest**
9b. More than 50% of the trees are deciduous (lose their leaves in the fall)	**Deciduous Forest**
10a. More than 50% of the shrubs are evergreen (keep leaves or needles all year)	**Evergreen Shrubland**
10b. More than 50% of the shrubs are deciduous (lose their leaves in the fall)	**Deciduous Shrubland**
11a. Plants are more than 60% grasses (grass, sedges, cattails)	**Grassland**
11b. Plants are more than 60% broad-leaved plants like clovers, ferns, flowers	**Forb Community**

Examples of Evergreen Shrubs and Trees

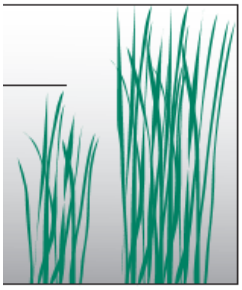


Examples of Deciduous Shrubs and Trees

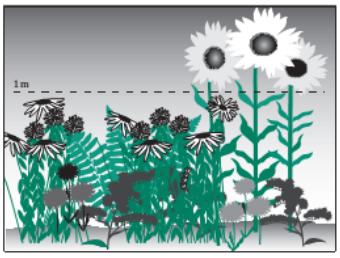
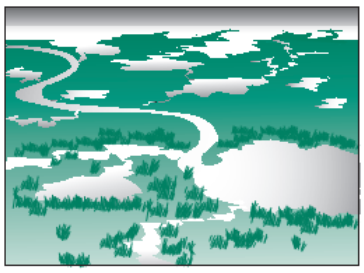


Herbaceous Vegetation

Grassland



Forb Communities



Wetland