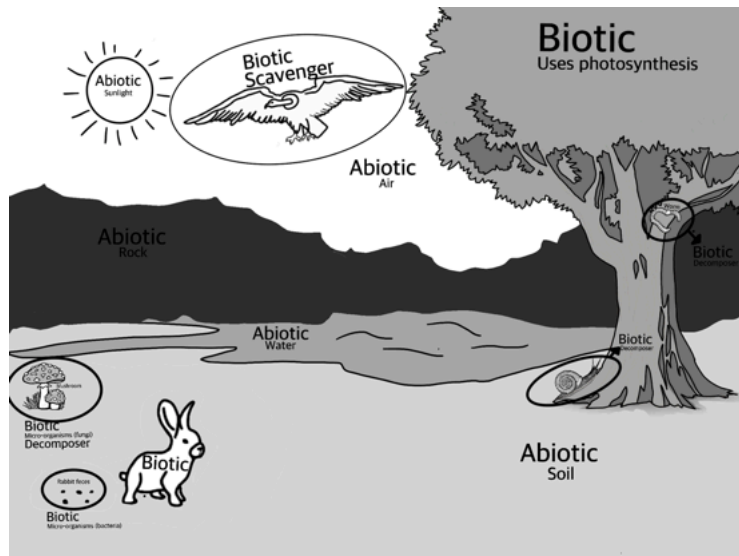## Answer Key

Biotic and Abiotic, what is the difference?

Answers may vary. Biotic: trees, grass, plants, birds, deer, duck. Abiotic: air, water, rocks, soil, clouds, wind.

How to code a plant

Algorithm: Photosynthesis process; **Conditional:** Nutrients in the soil, Deepness of the roots, Amount of oxygen released; **Loop:** Photosynthesis, Watering the plant; **Data:** Amount of water needed, Carbon dioxide, Type of plant, Location; **Bug:** Over-watering, Flood, Dryness, Insects.

Ecosystem Challenge

Extinction and Coding

Western Black African Rhino: FuncWesternBlackAfricanRhino, TrophyHuntingAndPoaching;
California Grizzley Bear: FuncCaliforniaGrizzleyBear, Overhunting;
Thylacine: FuncThylacine, PoachingAndOverhuntingAndIntroductionOfANewSpecies.

Program the Organism

Plant code:
1. Repeat forever
2. When I feel there is carbon dioxide in the air
3. Open leaf pores
4. When I feel there is water in the soil
5. Absorb water with roots
6. If I receive sunlight for energy, then convert carbon dioxide into glucose
7. If chlorophyll is present, convert carbon dioxide into oxygen
8. Release oxygen

Animal and human code:
1. Repeat forever
2. When I receive oxygen
3. Breathe in
4. If there is sugar present in my body, then break it down into water and carbon dioxide. Else, eat food.
5. Use the energy
6. Breathe out to release carbon dioxide.