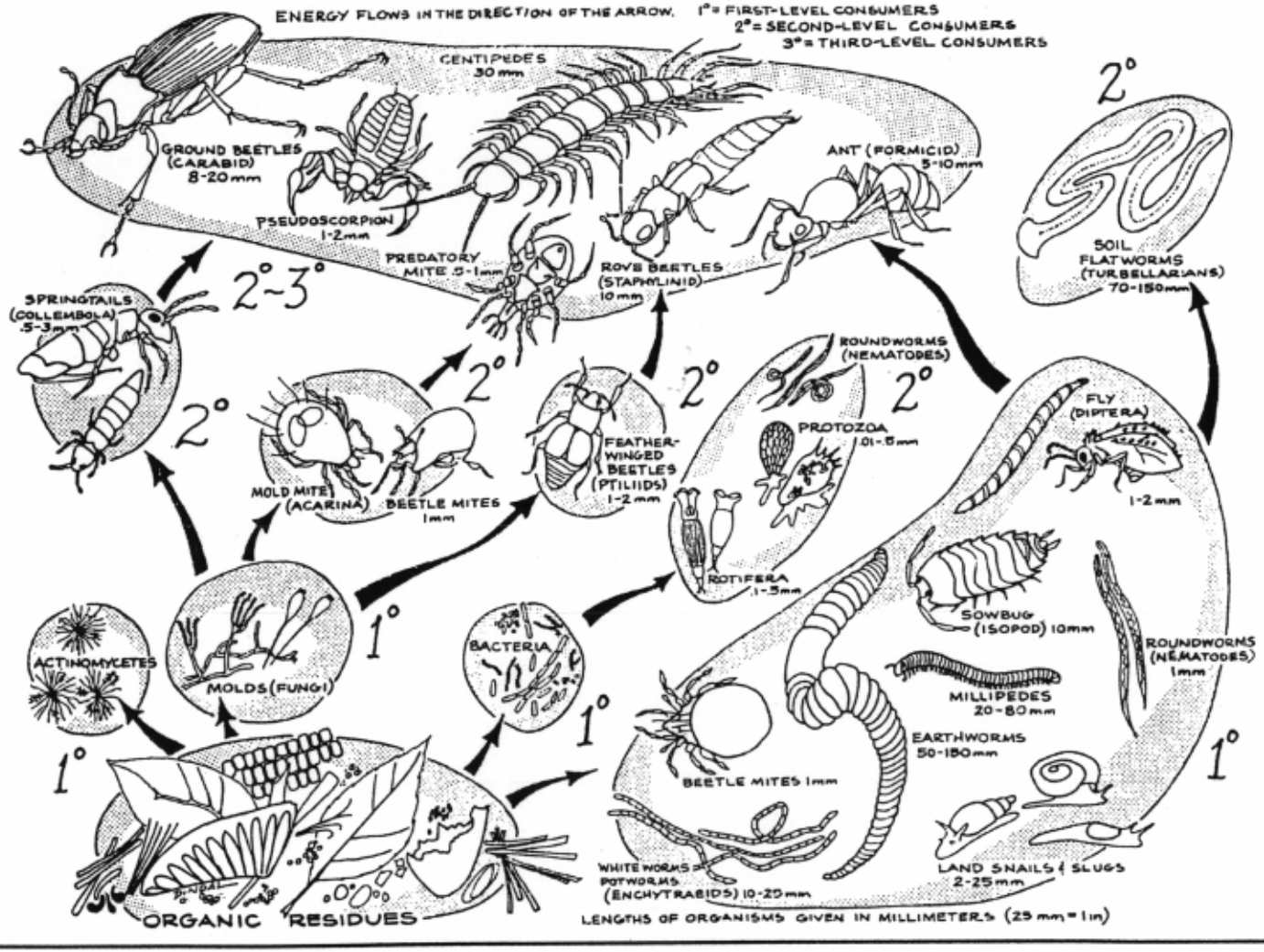
Name_____

Food Web of the Compost Pile



Many types of organisms in a worm bin break down organic materials to simpler forms that can be recycled into other kinds of living tissue. A food web shows relationships between organisms, based upon who eats whom. Dead organic materials are first eaten by organisms like molds and bacteria. These are known as first-level (1°) consumers. Earthworms, beetle mites, sowbugs, enchytraeids, and flies also consume waste directly. First-level consumers are eaten by second-level (2°) consumers such as springtails, mold mites, and protozoa. Third-level (3°) consumers are flesh-eaters, or predators, which eat 1° and 2° consumers. Predators in a worm bin might include centipedes, rove beetles, ants, and predatory mites.

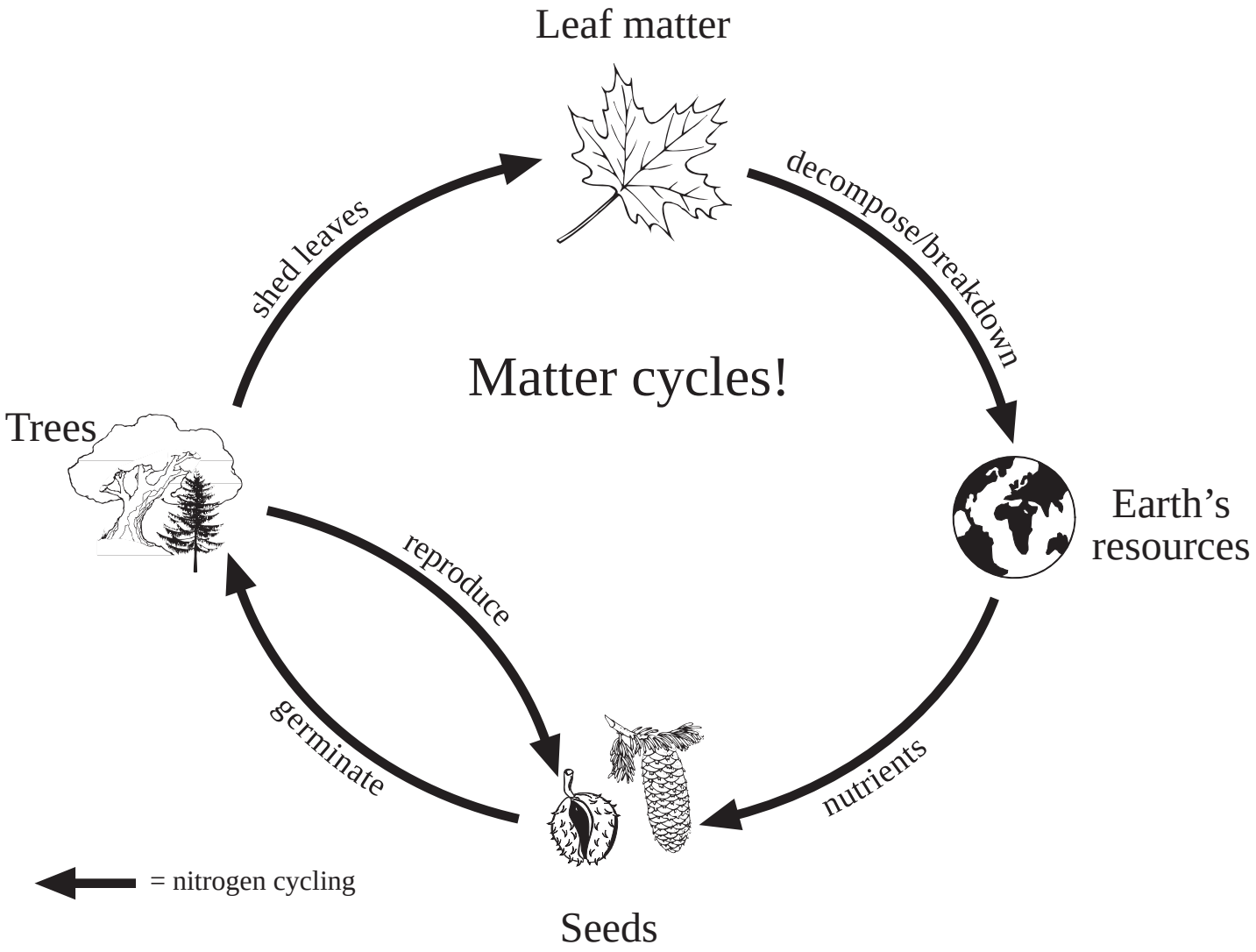
Wormformation

Source: *Worms Eat Our Garbage*
Adapted with permission from Dr. Daniel Dindal.
(See Related Resources for more information.)

Name _____ Date _____

Teacher Pages

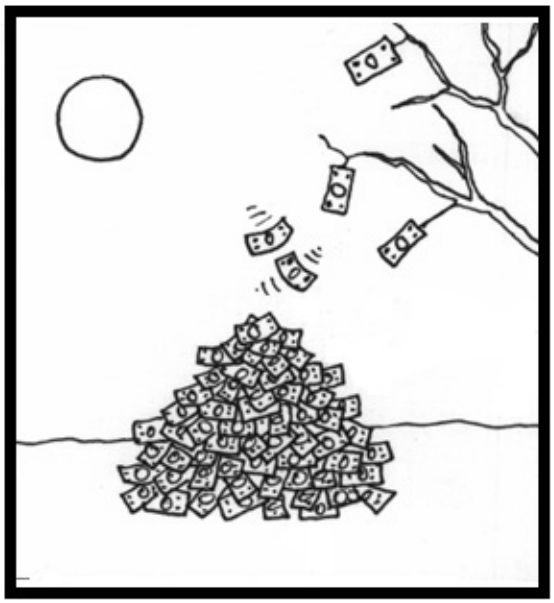
"Leaf" It in Your Yard (Composting)
Nitrogen Matter Cycle



Nitrogen: a colorless, odorless, tasteless gas that makes up about 4/5, or 80%, of the Earth's atmosphere. It is used by plants and animals after being converted into a compound (combined with other elements such as oxygen). Plants and animals need nitrogen in order to make proteins for growth.

The Nitrogen Cycle and Plants: The Earth's resources (soil, air, water) provide the nutrients for seed growth. ***Nitrogen*** (one of these nutrients) passes to seeds through the soil. Seeds germinate into plants which use ***nitrogen*** for growth. When adult plants reproduce, they pass ***nitrogen*** into seeds that will continue the cycle of plant growth. Plants such as trees may shed their leaves annually as a winter adaptation to save water. These fallen leaves with the help of bacteria, fungi, and small consumers (worms, pillbugs,millipedes, etc.) return ***nitrogen*** to the Earth's resources (soil, air, water) to be used again. Eventually all plants die. When this happens the plant is decomposed with the help of bacteria, fungi, and small consumers (worms, pillbugs, millipedes, etc.), and ***nitrogen*** once again returns to the Earth's resources (soil, air, water) where the process starts all over again.

The Benefits of Composting



SAVE MONEY

Waste hauling fees are lower and less money is spent to buy fertilizer for lawns and plants.

GET EXERCISE

Turning a compost pile is aerobic for the consumers in the pile as well as you! Think of it as environmental jazzercise!

SAVE ENERGY AND REDUCE POLLUTION

Fewer trucks are needed to haul waste. Fewer factories are needed to produce chemical fertilizers.

REDUCE LANDFILL SPACE USED

Leaves are not hauled to a landfill, but are composted into nutrient-rich soil.