

Care and Handling of Live Organisms

DSM Food Chains and Webs

The Food Chains and Webs module requires three types of live organisms:

- Anoles (chameleons)
- Crickets (food for anoles)
- Earthworms

The Teacher Guides provides detailed background information and care instructions. This document summarizes the care, feeding and disposal of these organisms.

Anoles

Anoles (aka green anoles or American chameleons) are native to the southeastern United States. They are branch dwelling organisms that eat only live insects. They drink the water they need from dew or rain drops on leaves. They do not usually drink from large stationary water sources such as ponds or lakes. They need the reflection of light from water droplets to be able to detect the presence of water.

The average anole is 5–8 inches long from head to tail. They have five long slender toes on each foot. Anoles move by methodically crawling – and sometimes leaping – long distances. They will change colors from green to brown with temperature change and if they are stressed, angry or scared.

The tails anoles of are designed to come off as a defense mechanism. They will regrow their tails, but the new tail has a slightly different look.

A distinguishing characteristic of the anole is the bright red dewlap present in all males and some females. Anoles can inflate this vividly colored piece of cartilage located under their chins to make themselves look larger and more dominant. This behavior is most often seen in territory disputes or when males are courting females.

Like other reptiles, anoles are ectothermic (cold-blooded) animals that regulate their body temperature using the environment. Anoles bask on a tree branch or a rock, absorbing heat from the sunlight. To warm up quicker, some anoles change color, from green to brown, because dark colors absorb more sunlight than light colors do. To cool down, anoles seek shade and shelter beneath a rock or log. They can also change color, from brown to green, to absorb less sunlight.

When the shipment arrive

Place a crumpled paper towel in the terrarium. Break seal of shipping container and quickly empty chameleons into terrarium and close lid. Spray spring water on inside walls and vegetation daily. They will need no feeding until class time.

Care and feeding

In nature, anoles consume a wide variety of small insects and insect larvae. However, they only eat food that is alive and moving. Small crickets (or nymphs) are the recommended food. To feed your anole, simply place the 2-3 crickets in the habitat. Anoles will not overeat.

Make sure there is always clean, fresh water available to your anole. You may try a small, shallow bowl, but the anole will likely drink water from the foliage in the habitat. Mist the plants in the habitat with water daily. This provides water for the plants and an alternative source of water for the anole.

Anoles need heat. The easiest way to provide heat is to shine a 100-W light bulb into part of its habitat for 12-14 hours a day. Natural sunlight can also provide heat and vitamin D, but be careful not to leave your anole's habitat in the sun for too long.

At the end of the unit

Anoles are extremely easy to maintain well and will live many years beyond the end of the science unit.

- 1) Anoles make great classroom pets! Keep them in your classroom for the school year for students to continue observing their behavior.
- 2) Anole Adoption: offer to send the anoles home with students whose families agree to care for the anoles. Sample adoption paperwork is available.

Crickets

Crickets are the main food source for the anoles. Crickets need to be kept in a separate container until it is time to feed the anoles. A critter carrier, terrarium or small box with holes will suffice. Put only the number of crickets needed for feeding (2-3 per anole) at a time. If there are too many in the habitat, the crickets may attack the anole.

Adult males produce the song for which the crickets are known. The sound is produced by rubbing the wings together. Male crickets chirp to attract females.

When the shipment arrives

Crickets arrive in a plastic bag with egg carton pieces/crumbled paper. They dislike overcrowding and should be transferred to an alternate container (kit supply bucket) as soon as possible.

Care and feeding

Crickets are primarily herbivorous but accept a variety of foods. Slices of fresh apples, pears, and potato, pieces of lettuce, and oats with water are foods that provide moisture. Dry dog food provides high protein and cuts down on cannibalism.

At the end of the unit

As its primary food source, any remaining crickets should be used to maintain the anoles either in the classroom, sent home with students, or returned to the Science Center with the anoles.

Earthworms

Earthworms are annelids—segmented worms. They live in soil and feed on nonliving organic matter in the soil. Earthworms are important in creating and maintaining soil fertility.

Earthworms are sometimes called night crawlers from their habit of emerging from the soil at night. Earthworms avoid sunlight, which can kill them.

Although they are land animals, earthworms are dependent on moisture in the material that surrounds them. They do not have eyes or ears, but are able to sense heat, light and touch. They do have a mouth through which they ingest decaying matter found in the soil. They breathe through their skins, which must be kept moist at all times.

When the shipment arrives

Open the container and inspect your organisms. Discard any dead worms. The worms can be retained in the shipping materials if you keep them cool and moist.

Care and feeding

Keep the earthworms in a cool, dark, moist place.

Earthworms require cool temperatures of 15° C (60° F) or lower to do well. This makes it difficult to maintain earthworms for lengthy periods in the classroom.

Be certain that they have adequate moisture. Mist the foliage in the terrarium daily. Use only aged tap water or bottled or spring water if your tap water is chlorinated.

At the end of the unit

Earthworms can be kept in the classroom habitat until they die a natural death.

Disposal of Unwanted Specimens

CAUTION: DO NOT RELEASE LIVE ORGANISMS INTO YOUR LOCAL ENVIRONMENT!

If released, any organism not native to your local environment has the potential of destroying the ecological balance. This applies to everything from algae and daphnia to snails and frogs.

If the organisms cannot be maintained with security in your classroom or laboratory, or sent home with student to be cared for at home, it should be humanely destroyed. All organisms can be anesthetized and euthanized by low temperatures. Freeze the organisms before disposing of them.