

MISCELLANEOUS INVERTEBRATES

Annelids (redworm and earthworm)

(*Eisenia foetida*, *Lumbricus terrestris*)

Uses: Study of the characteristics of animals, recycling and change

Level: Easy (redworms) to advanced (earthworms)

Unit(s): STC®: *Soils*, Grade 2

Special requirements: Moisture, protection from light



(Pictured: [top] earthworms compared to [bottom] redworms)

Redworms and earthworms are annelids—segmented worms. They are very similar, but earthworms reach much larger sizes than

redworms do. Both live in soil. Both feed on nonliving organic matter in the soil, but redworms require a much higher organic content than earthworms. Because of this, redworms are often used to help speed composting. Earthworms are important in creating and maintaining soil fertility. Redworms and earthworms avoid sunlight, which can kill them. Earthworms are sometimes called night crawlers from their habit of emerging from the soil at night.

Care and handling of cultures: IMMEDIATELY UPON RECEIPT, OPEN THE SHIPPING CONTAINER AND INSPECT YOUR SHIPMENT. Discard any dead worms. The worms can be retained in the shipping materials if you keep them cool and moist. 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. Redworms tolerate higher temperatures, up to 25° C (77° F), which makes them a much better choice for extended classroom use, but anything above 29° C (84° F) can be harmful. See your Teacher's Guide for the care and use of these annelids.

FAQs

Q. How can I tell the difference between male and female earthworms?

A. Each redworm and earthworm is both male and female. In a copulating pair, each worm gives and receives sperm.

Q. Our worms died after a few weeks. What happened?

A. Although they are land animals, redworms and earthworms are dependent on moisture in the material that surrounds them. They breathe through their skins, which must be kept moist at all times. Be certain that they have adequate moisture. Use only aged tap water. In a few cities, aging the tap water does not remove the chlorine compounds, and a special water conditioner must be used in those areas. Keep both redworms and earthworms under darkened conditions because sunlight can kill them. Remember that earthworms need cool temperatures.

Q. Where are earthworms found?

A. Earthworms are found in most soils. They are absent from dry desert areas, and some soils are too acidic for earthworms. Redworms are more common around and in compost and manure piles.

Q. What is the difference between an earthworm and a redworm?

A. Other than average size, the anatomical differences (differences in body structure) are technical and difficult to observe. They do differ in behavior. Redworms live in the upper 25 cm or so of the soil, usually under a thick layer of litter or other organic matter. Earthworms go much deeper and build vertical, more-or-less permanent burrows in which they live.