Vocabulary: Temperature and Sex Determination

Vocabulary

- Embryo – an organism in an early stage of development.
  - In plants, embryos develop inside seeds.
  - In invertebrates, fish, amphibians, birds, reptiles, and a few mammals, embryos develop inside eggs.
  - In most mammals, embryos develop inside the mother's body.
- Hypothesis – a tentative explanation that can be tested by doing experiments.
  - Hypotheses often are written as if/then statements. For example "If fertilizer is added to the soil, then the plants will grow more quickly."
- Mean – the sum of a set of numbers divided by the number of items in the set.
  - The mean of a set of numbers is also known as the set's *average*.
  - For example, the mean of 2, 3, and 7 is 4. (2 + 3 + 7 = 12, 12 ÷ 3 = 4)
- Sex – a set of two or more categories used to identify an organism's reproductive role.
  - Most species that reproduce sexually have only two sexes: male and female.
    - Males typically produce small, motile gametes called spermatozoa.
    - Females typically produce larger, less mobile gametes called ova. When the ova are fertilized by the sperm cells, the female carries the developing offspring or eggs.
  - A few species have more than two sexes. In fact, the slime mold *Physarum polycephalum* has more than 500 sexes!
- Sex chromosomes – two chromosomes that determine an individual's sex.
  - In humans and most other mammals, the two sex chromosomes are the X chromosome and the Y chromosome. Females have two X chromosomes (XX). Males have one X chromosome and one Y chromosome (XY).
  - Not all animals have the same sex chromosomes as humans. For example, the sex chromosomes of birds and some lizards are the Z chromosome and W chromosome. Female birds are ZW, and male birds are ZZ.
  - In some types of reptiles, sex is determined not by genetics but by environmental conditions as the eggs incubate. The mechanisms for this are not fully understood.
- Trial – a single time an experiment is conducted.