

Name: \_\_\_\_\_

## Heredity & Genetics

### TRAITS & THE ENVIRONMENT

- Some traits are not \_\_\_\_\_ inherited or learned. These traits are the result of complex \_\_\_\_\_ between an organism's \_\_\_\_\_, \_\_\_\_\_ factors and individual \_\_\_\_\_.
- Environmental factors can affect the \_\_\_\_\_ of certain traits that are inherited. In other words, things in the environment can \_\_\_\_\_ what an organism looks like or how it functions because these factors affect the information \_\_\_\_\_ in an organism's \_\_\_\_\_.
- \_\_\_\_\_ factors are most responsible for influencing inherited traits. For example:
  - \_\_\_\_\_ light from the sun causes a person's skin to darken.
  - \_\_\_\_\_ influences some rabbits' and cats' fur color. In the Himalayan rabbit, cold temperatures cause fur to turn black. In Siamese cats, cooler body regions (head & feet) cause fur to darken.
  - \_\_\_\_\_ influences flower color. Hydrangeas are blue when the soil pH is low. Hydrangeas are pink when the soil pH is high.
- The individual \_\_\_\_\_ an organism makes can affect the traits of that organism.
- \_\_\_\_\_ and \_\_\_\_\_ are two things that often affect the physical \_\_\_\_\_ of an organism. For example:
  - A dog that eats \_\_\_\_\_ and \_\_\_\_\_ will be fit.
  - A dog that eats a lot and lacks physical activity will be \_\_\_\_\_.
  - A dog that lacks proper nutrition will be \_\_\_\_\_ and its growth may be \_\_\_\_\_.
- What traits cannot be influenced by the environment?

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### NATURE VS. NURTURE

- There is a great scientific debate about what traits are controlled by genetics or "\_\_\_\_\_ " and which are controlled by an organism's experiences or "\_\_\_\_\_ ".
- We call this debate "\_\_\_\_\_ vs. \_\_\_\_\_."
- Many scientists believe that traits are the result of \_\_\_\_\_ between an organism's genetics, environmental factors and individual choices. In other words, an organism's \_\_\_\_\_ to certain things in the environment and \_\_\_\_\_ that it makes will influence the inherited traits that are coded in an organism's \_\_\_\_\_.
- Some traits are influenced by what an organism is exposed to during its \_\_\_\_\_. In other words, certain things in the environment, such as toxins or nutrients, can affect an organism's \_\_\_\_\_ as an \_\_\_\_\_.