

Natural Selection Checklist

Organism _____ Trait _____

Natural selection causes a trait to become more or less common in a population over the course of multiple generations. Not all change over time is the result of natural selection. But we can use evidence to infer whether natural selection is at work, even if it acted in the past.

Has the frequency of the trait in the population changed over time? Yes No

Example: Over time, some colors become more common in the population.

Evidence:

Natural selection requires three ingredients:

1. Variability Yes No

Does the trait vary among individuals in the population?

Example: Individuals are different colors.

Evidence:

2. Heritability Yes No

Is the trait influenced by genes that pass from parents to offspring?

Example: Offspring tend to be the same color as their parents.

Evidence:

3. Reproductive advantage Yes No

Are individuals with a certain trait variation more successful at reproducing than others?

Example: Individuals of some colors are more successful at reproducing than others because they are better able to survive to adulthood.

Evidence:

Is this an example of natural selection? (Are all three ingredients present?) Yes No