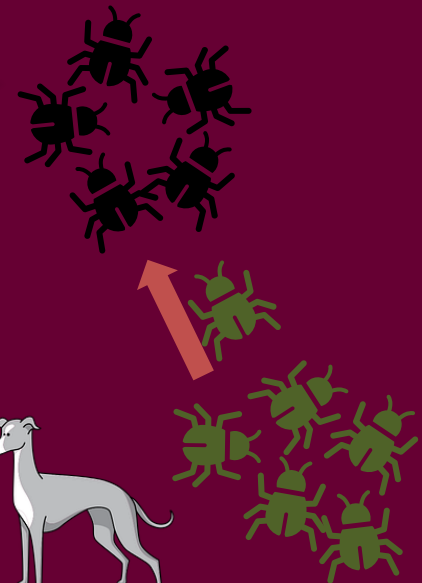
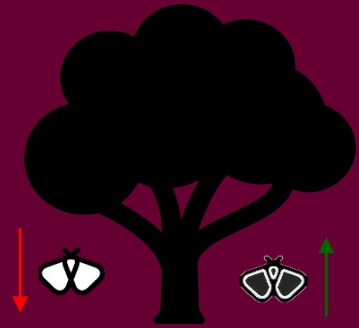


Evolutionary Mechanisms

- What is Evolution?
- Mechanisms of Evolution
- Natural Selection
- Genetic Drift
- Gene Flow
- Sexual Selection
- Artificial Selection



TeachWithFergy

Preview File

Please enjoy this preview of your Student Version of the lesson. I've created this PDF for ease of viewing and to decrease the file size but of course, your lesson will be in PowerPoint format.

- Some slides appear blank because they have been removed.
- Student versions have portions of the text removed which is given in the teacher version and appear as _____
- Other slides may have on them, this represents writing that has been removed.

What is Evolution?

-

- _____

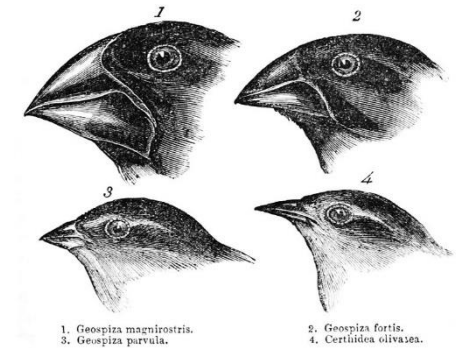
-

- _____

- Changes that put an organism at a disadvantage decline

- _____

- _____



What is Evolution?

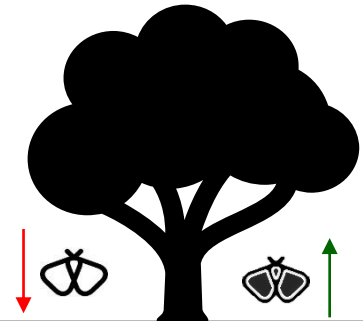
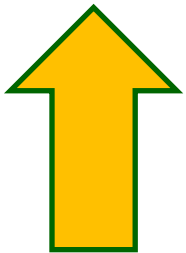
- Four primary factors for evolution

— _____

— _____

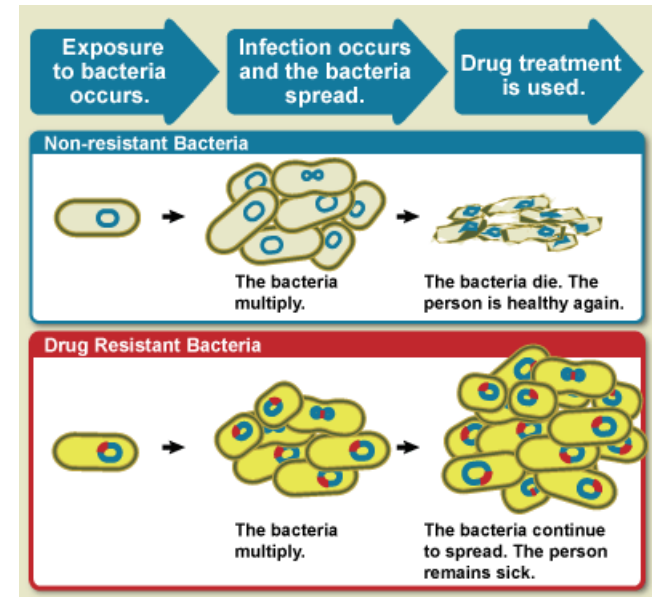
— _____

— _____

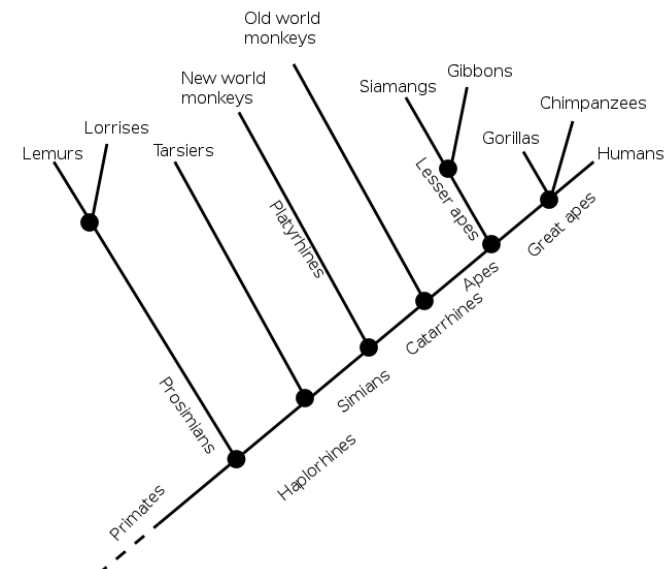


What is Evolution?

- Microevolution

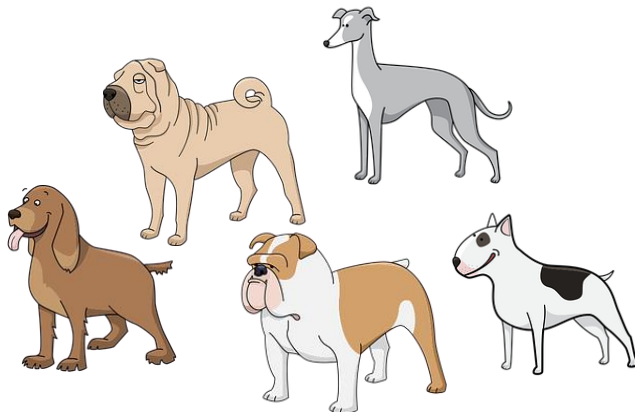
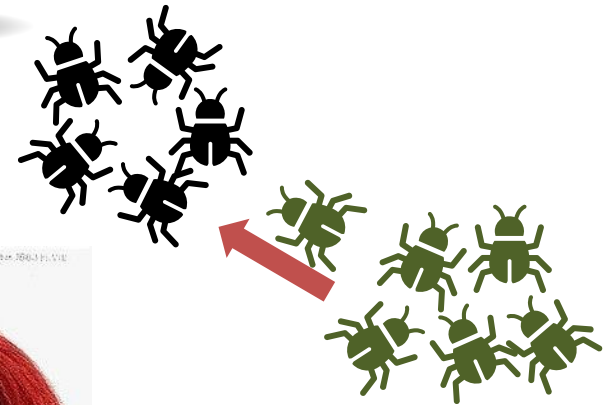
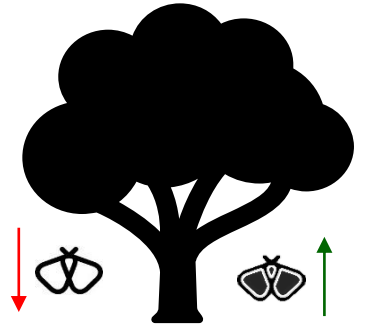


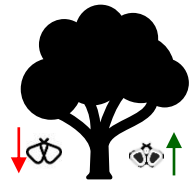
- Macroevolution (speciation)



Mechanisms of Evolution

-
-
-
-
-
-





Natural Selection

- Recall

-

- The genetic code

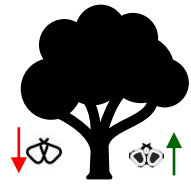
-

- Genes code for specific traits

-

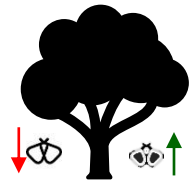
- Proteins determine appearance, structure, and function of organisms

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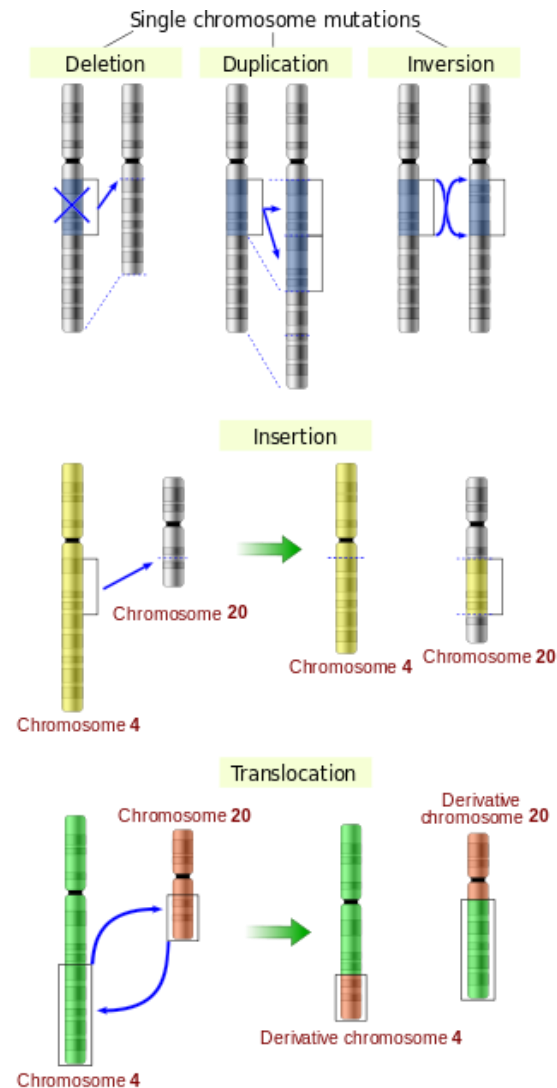


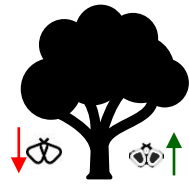
Natural Selection

- Fitness level due to variations in individuals
- _____
 - Alleles: _____
- Genetic mutations:
 - _____
 - _____



Natural Selection





Natural Selection

- Genetic mutations

- _____

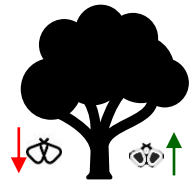
- Due to predation, illness, or inability to successfully reproduce, etc.

- _____

- Due to ability to hide from predators, overcome illnesses, and reproduce successfully, etc.

- _____

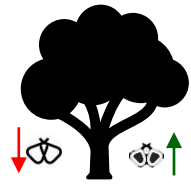
-



Natural Selection

-
- Genotype: _____
- Phenotype: _____

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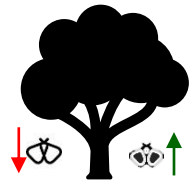
Natural Selection

- Adaptations: _____

—

- Adaptations are not intentional, but rather brought about by natural selection
-





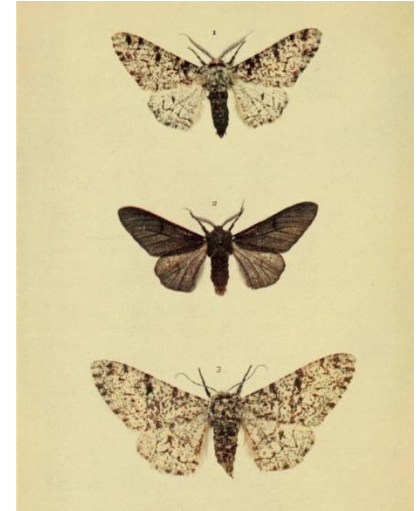
Natural Selection

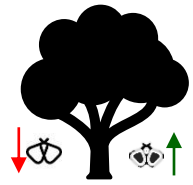
- For natural selection to occur:

— _____

— _____

— _____





Natural Selection

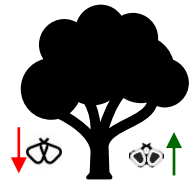
- Early misconception
 - Jean Baptiste Lamarck (1801):

.....

- E.g., _____

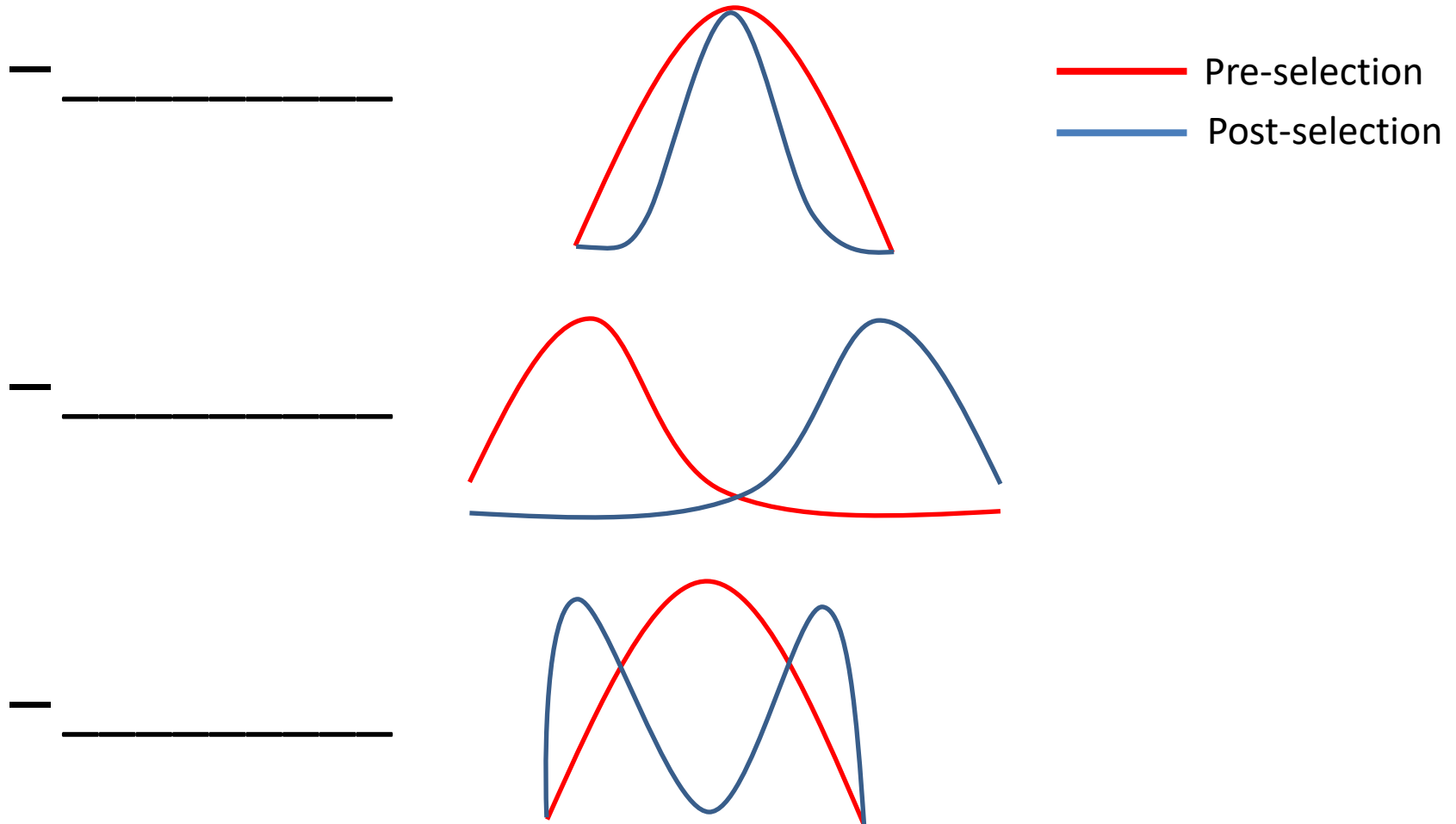


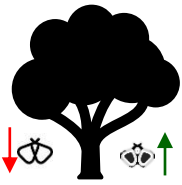
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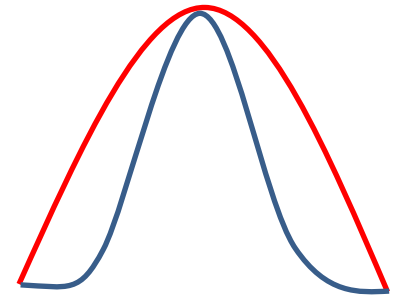
Natural Selection

- Three types of natural selection





Natural Selection



•

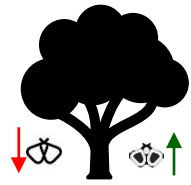
—

— _____

— Narrows distribution/range of variation

— _____





Natural Selection

- Stabilizing selection examples

—

- Too small: _____
- Too large: _____

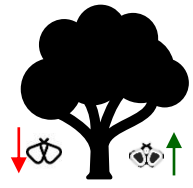
—

- Too small: _____
- Too large: _____

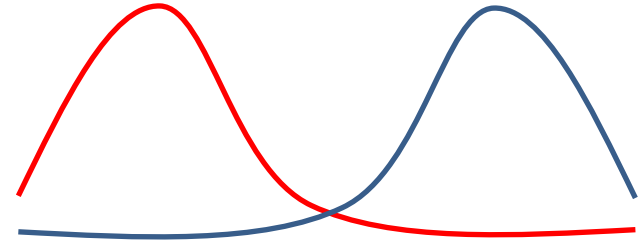
—

- Too short: _____
- Too tall: _____



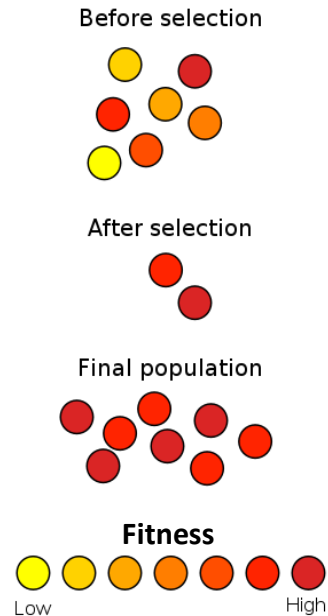


Natural Selection

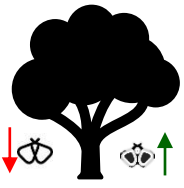


- _____
-
- _____

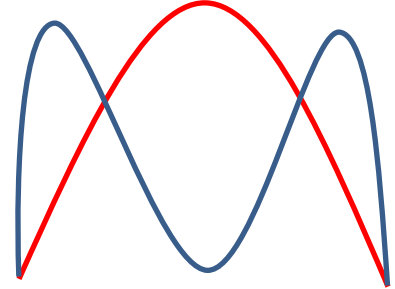
– Generally associated with environmental changes



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Natural Selection

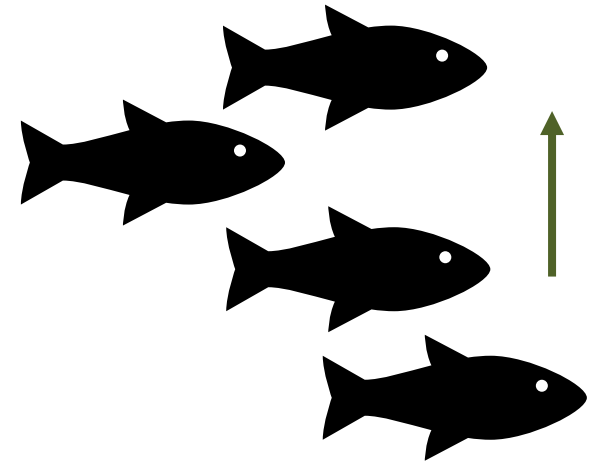
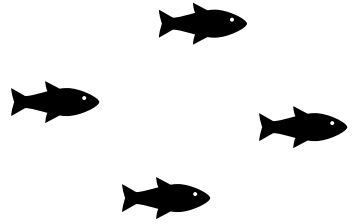


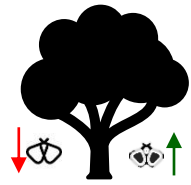
•

— —

— Rare

— _____





Natural Selection

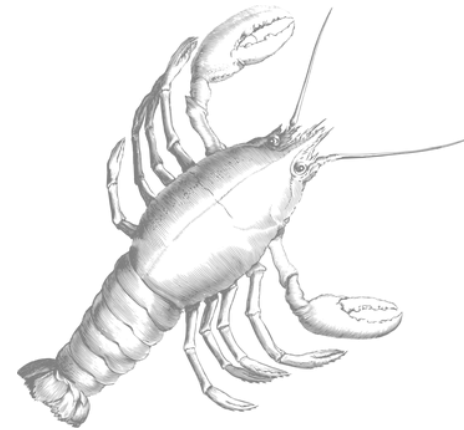
- Disruptive selection examples

- Peppered moths

- _____
 - _____

- Lobsters

- _____
 - _____
 -

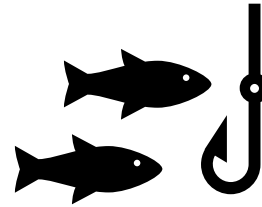




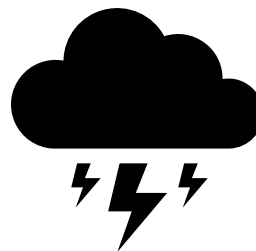
Genetic Drift

- _____

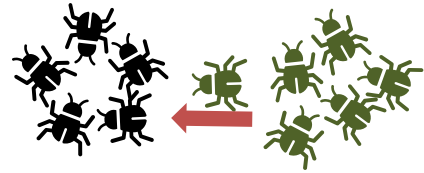
- Death
- Failure to reproduce



-
 - _____
 - _____



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Gene Flow

- _____
- Increases genetic variation in population entered
- Examples





Sexual Selection

- Also called non-random mating

- _____

-

- Two general categories

- _____

- _____





Sexual Selection

- Examples

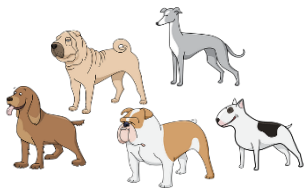
- _____
- _____
- _____
- _____



-

- Examples

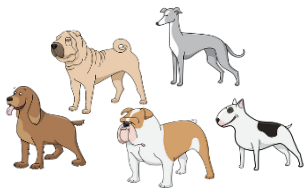
- _____
- _____



Artificial Selection

- _____
- Dogs
- Crops
- Livestock





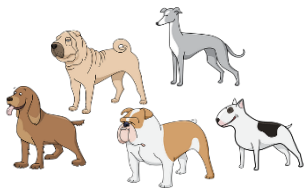
Artificial Selection



- Agriculture
 - Strongest or tamest individuals
 - _____
 - _____
 - Greater nutritional content in fruits and vegetables
 - Fruit and vegetable appearance/taste
 -



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Artificial Selection

- Pets

- _____

- Cat breeds

-

- _____

- Common ancestor of all dogs and wolves was a (now-extinct) species of wolf



Check Your Understanding

- Name the five mechanisms of evolution and give a brief definition of each

— _____

— _____

— _____

— _____

— _____