

Biology Week 3 Home Learning

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Starter

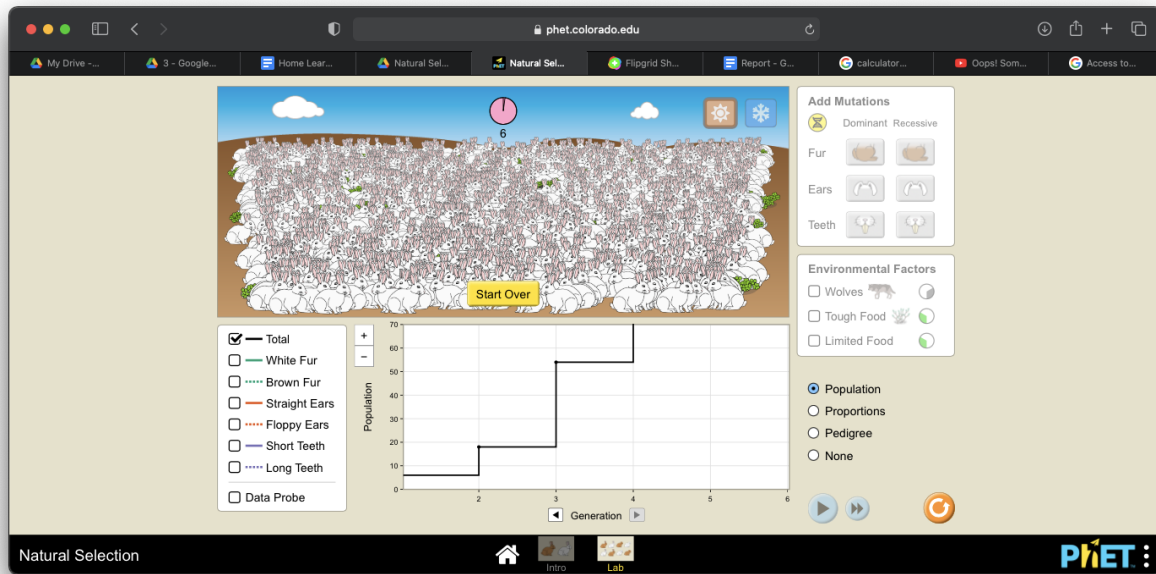
1. The term species means the breed of organism
2. The term adaptation is a change made to adapt to a habitat
3. An example of a structural adaptation would be a dog wagging its tail as this helps them to communicate how they are feeling for us to better understand what they desire.
4. The term mutation means an error in the DNA that was copied

Why are there so many turtles?

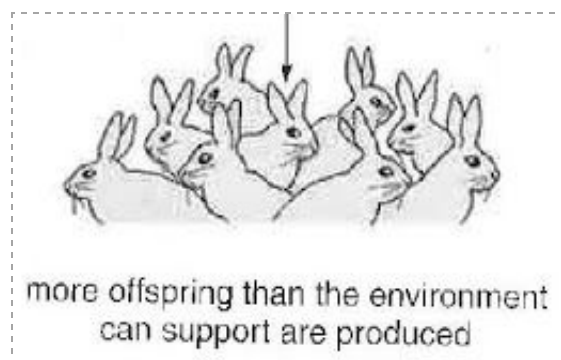
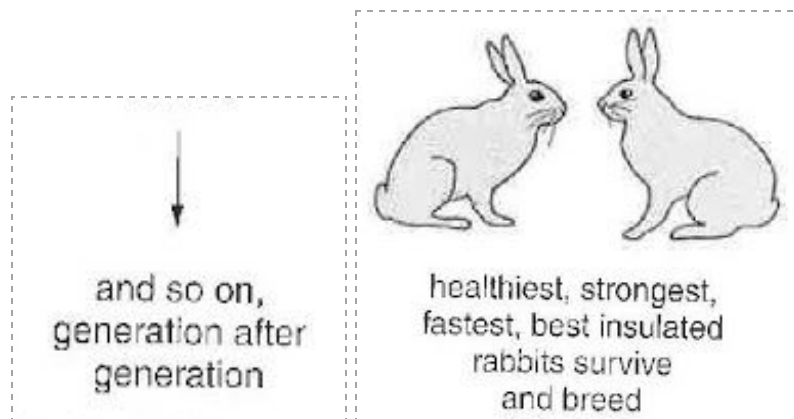
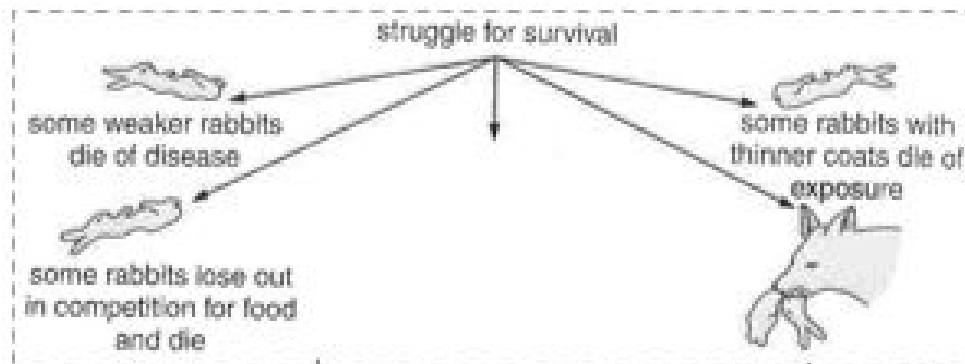
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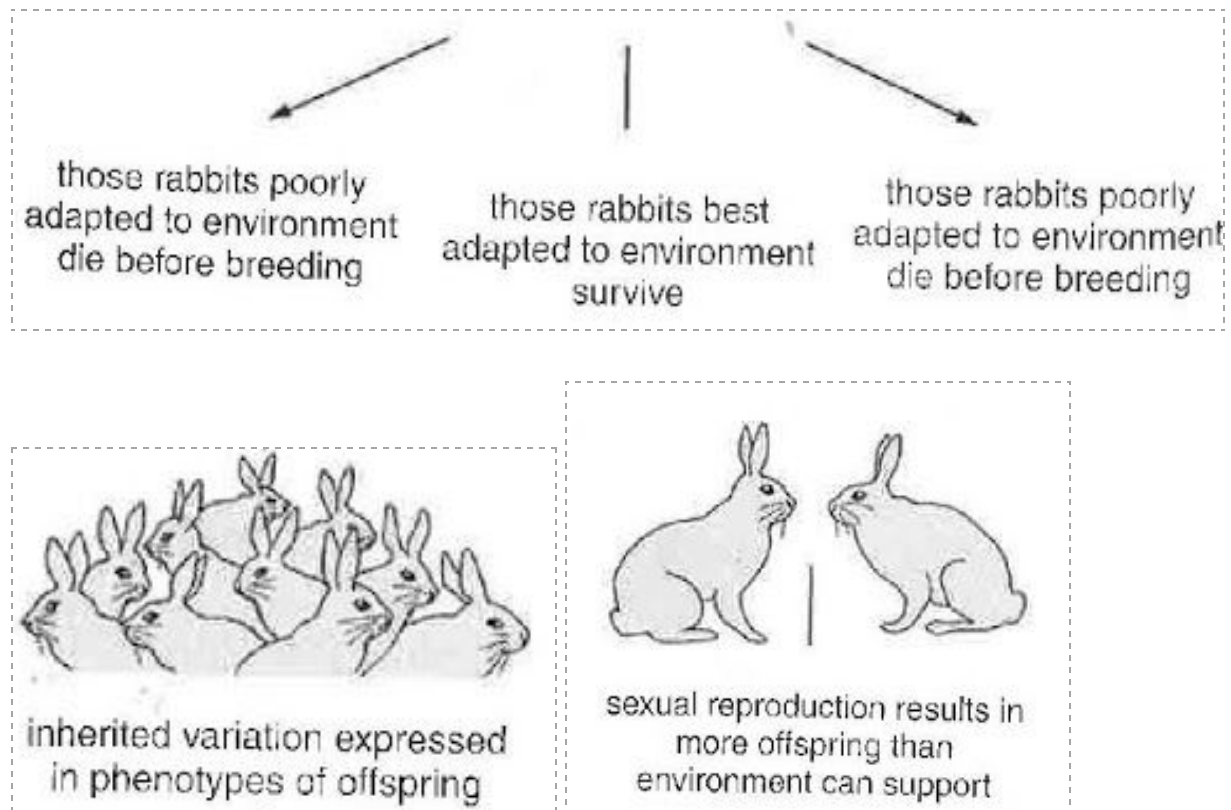
Natural Selection

- In nature, species produce more offspring than the environment can sustain because not all of the offspring will survive to reproduce.
- Natural selection is survival of the fittest.
- It means that the organisms in a population best adapted to their environment survive long enough to reproduce and pass on their genes.



- Natural selection is survival of the fittest
- Species produce more offspring than the environment can sustain
- Amongst offspring, variation exists meaning that some will be more likely to survive
- Natural selection occurs when there are selection pressures (e.g. not all offspring survive due to predation, disease, competition for resources etc.)
- The best adapted individuals in a population are more likely to survive to reproduce
- This ensures that favourable alleles that give the selective advantage are passed on to offspring.
- These alleles increase in frequency within the population as a result.





Question Time

Selection pressure is the pressure to make a choice,

Selective advantage is an advantage gained by making a selection

Variation

Variation is the way something changes, variation in a population can occur from mutation.

Variation is important because it can assist a population in adaptation, allowing them to be better suited to their environment.

- Variation is the difference in DNA and characteristics between individuals of a population.
- Variation occurs when new alleles appear as a result of mutation.
- These new alleles produced by mutation can result in plants and animals becoming better adapted to their environment.
- Variation within a population is important because it makes it possible for a population to adapt and evolve over time in response to changing environmental conditions.

Exam questions

A

So they can adapt to better survive

Natural selection helps kill off organisms that aren't fit enough to survive.