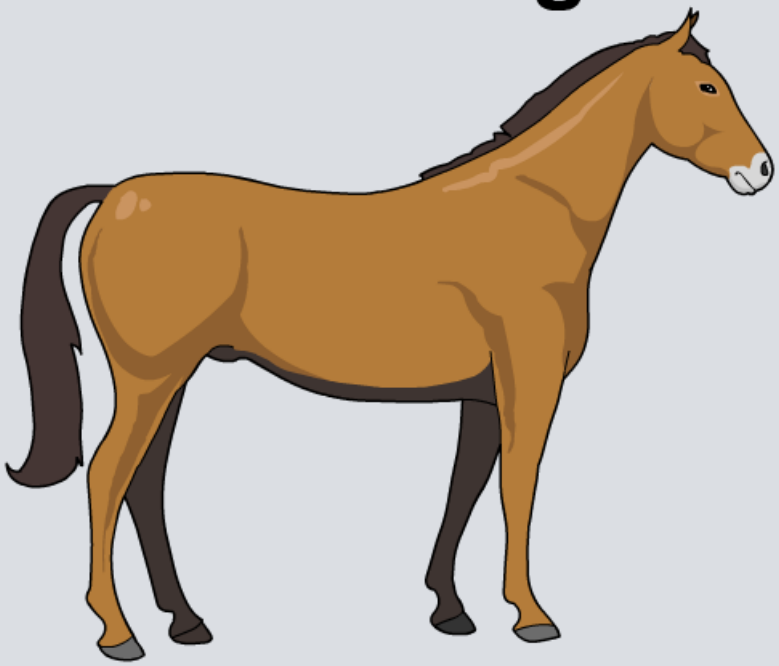
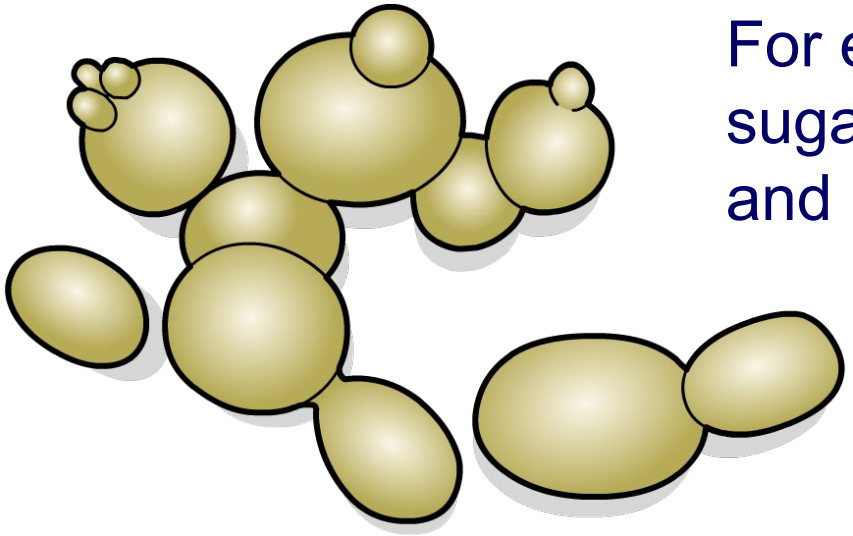
Selective Breeding



What is genetic engineering?

Living things naturally create useful products.

Genetic engineering can be used to make living things produce other, more valuable, products.



For example, yeast naturally converts sugar into carbon dioxide and alcohol, and is used in baking and brewing.

Yeast can also be genetically engineered to produce vaccines for human diseases.

Genetic engineering is about changing the DNA of a living thing to change its characteristics.

Early genetic engineering

People have been doing a simple form of genetic engineering for thousands of years. This is called **selective breeding**.

Selective breeding, or **artificial selection**, is a process where people try and improve plants and animals by selecting and breeding only those that have desirable characteristics.

For example, a farmer might choose the two largest cattle in his herd and breed them together so that the offspring will be even bigger and produce more meat.

Examples of selective breeding

Many plants and animals are selectively bred to improve their characteristics. What are some examples?

- Breeding sheep to produce more wool.
- Breeding wheat to produce more grain.
- Breeding tomatoes to have more flavor.

Other examples include breeding racing horses to become faster, and breeding dogs to obtain unique characteristics (e.g. bulldog, greyhound, Chihuahua).