

# *Extension: Asexual Reproduction Webquest*

Click on the link "extension" to get to the correct website.

## **Introduction:**

What is asexual reproduction?

After asexual reproduction, how does the genetic information in the newly made organisms compare to the genetic information of the parent organisms?

Is asexual reproduction a very complex process as compared to sexual reproduction? State why you think so.

## **Binary fission.**

Briefly explain, in your own words, the process of binary fission:

What types of organisms use binary fission as a method of asexual reproduction?

Binary fission allows some organisms to rapidly reproduce. Explain why binary fission is an efficient process:

## **Budding:**

*Yeast:*

How does the reproduction of yeast cells differ from bacteria?

How do the two resulting yeast cells differ? What parts of the resulting yeast cells are identical?

*Hydra:*

Explain the body morphology (shape and structure) of a hydra.

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Are hydra autotrophic or heterotrophic? (look beyond their color and find your answer from the reading!)

Hydra reproduce asexually by the same method as yeast cells. How does budding in hydra differ from budding in yeast cells? (consider the anatomy of a hydra as compared to a yeast cell.)

### **Sporulation:**

Many types of fungus reproduce through a process called sporulation. Explain in your own words this method of asexual reproduction.

Why is sporulation important?

How is a *spore* different from a plant's *seed*?

### **Vegetative Propagation:**

There are many natural methods that plants use to naturally reproduce asexually. Bulbs, rhizomes, and runners are just a few of these methods. Chose one of these *natural* methods of asexual reproduction and explain it in your own words. Describe how a plant forms this structure, the way in which it grows, and how it will produce a new and genetically identical plant.

There are many artificial methods of asexual reproduction that are commonly used to reproduce favorable plants. The process of grafting, for instance, is used extensively throughout food production for fruit crops such as apples, grapes, and oranges.

If the stem of one apple tree is grafted onto a different apple tree, the stem will soon grow and develop and then later fruit. Will this stem make fruit like its original tree, or will it make fruit like the tree that it has been grafted onto?

### **Parthenogenesis:**

Briefly describe the process of parthenogenesis.