**KEY Questions: Please answer the following!**

**5.2 B3-Compare sexual and asexual reproduction in terms of advantages and disadvantages**

* distinguish between sexual reproduction (e.g., human) and **asexual reproduction (e.g., binary fission, budding, vegetative, fragmentation) in representative organisms**
* relate sexual and **asexual reproduction to adaptability of organisms**

1. What features do all methods of asexual reproduction have in common?



1. What type of cells reproduce asexually in humans?
2. What type of organisms reproduce asexually (give three examples and type of asexual reproduction)



1. Explain what would happen to a population of asexually produced off spring that are all clones of each other if the environment suddenly became hostile?

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1. What are advantages to having variation in the offspring (i.e. non-identical offspring)?
2. What are three advantages of asexual reproduction?



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1. What features do all methods of asexual reproduction have in common?

* one parent
* offspring genetically identical to parent and each other
* no specialized cells for reproduction

1. What type of cells reproduce asexually in humans?

In humans somatic cells (body cells such as skin, stomach, liver, muscle cells)

1. What type of organisms reproduce asexually (give three examples and type of asexual reproduction)

* Simple bacteria – binary fission or spore formation or mitosis
* Yeast – budding via mitosis
* Strawberries, potatoes- vegetative reproduction
* Fungi – formation of spores
* Fragmentation – starfish, Eurasian milfoil

1. Explain what would happen to a population of asexually produced off spring that are all clones of each other if the environment suddenly became hostile?

The environmental change would probably lead to extinction because there is no variation in all the organisms genetically…. They will all react the same way to the change in the environment…..

1. What are advantages to having variation in the offspring (i.e. non-identical offspring)?

Variation allows some individuals to survive due to differences in genes while others do not i.e . disease or a hostile change in the environment will kill off those cells, organisms that cannot adapt to change!

1. What are three advantages of asexual reproduction?

Large numbers of offspring produced quickly from one parent

Energy not required to find a mate

Large numbers ensure some survive in unfavourable conditions

Large colonies can out-compete other organisms for nutrients (stomach flu)