

# High School Biology

## Asexual reproduction worksheet

1. Explain what asexual reproduction is, using a spider plant as an example.

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2. Name two other organisms that reproduce asexually.

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3. Complete the following sentences using the words in the box below.

a) In ..... reproduction, the cells of the offspring are produced by  
..... from the parent cells. This means the ..... in these cells are  
identical to the parent plant.

b) The new organism is a ..... of the original.

asexual   mitosis   alleles   parent   clone   osmosis



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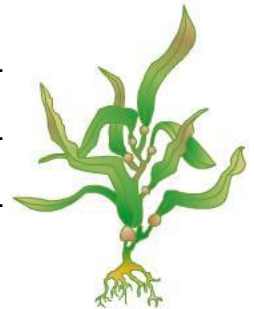
4. Describe how to clone a spider plant using the process of tissue culture.

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5. Why is cloning a plant easier than cloning an animal? Use the following terms in your answer: stem cells, specific cells, differentiation.

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6. Human clones are commonplace in our society.

a) What are they more commonly called?

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b) Describe the natural process that creates a human clone.

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c) Give two reasons why many people believe that artificial human cloning is not ethically acceptable.

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7. Dolly the sheep, born in 1996, was the first mammal to be cloned from an adult cell.

a) Give one disadvantage or risk of cloning an animal.

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b) List two ways in which cloning an animal could be advantageous to humans.

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8. Explain the process of nuclear transfer that was used to produce Dolly. Include the following terms: nucleus, egg cell, enucleated, division, electric current, udder cell, DNA, surrogate, embryo.

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**9. Explain why the DNA could not be taken from a sperm or egg cell for the above process.**

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**10. Describe a possible complication of using genetically modified pigs to supply humans with replacement organs.**

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