What are the advantages and disadvantages of asexual and sexual reproduction in a...

Science, Biology



ADVANTAGES AND DISADVANTAGES OF ASEXUAL AND SEXUAL

REPRODUCTION IN ANIMALS al Affiliation) Introduction In order to ensure continuity and surviving of population, species pass their gene on through reproduction. Reproduction is the introducing and creation of a new individual or individuals from existing individuals. Animals reproduce primary in two ways through sexual reproduction or asexual reproduction (Alters, & Alters, 2006).

Sexual Reproduction

It involves the combination or fusion of gametes, male's sperms cells and ova (female egg cells), during reproduction. During the mating process, eggs cell and sperm cells form zygote which is a fertilized combination of the cells. Division of the zygote takes place repeatedly resulting to the growth of an embryo. This embryo grows inside the female or outside in other animals into multi cellular organism.

As a result of the shared genetic information in sexual reproduction by the gametes, the off spring produced contains variety. This constitutes part of the advantages of sexual reproduction since the genetic variation gives the species an advantageous element of survival. Furthermore, genetic variation results to evolution of species which form better organisms (Kent, 2000). This species have better surviving traits in the unstable environments. Species which reproduce sexually have low extinction rates. This is beneficial as it ensures continuity of population.

Sexual reproduction has several disadvantages. To this end, the need to have both male and female mate for reproduction is some time inconveniencing since both may not be willing (Rinkevich & Matranga, 2009).

It also consumes excessive time and energy to look for a suitable partner.

Moreover, there is no assurance after fertilization that the nucleus cell of male will fuse with the female cell. Furthermore, counter-productive genetic combination conditions should be stable.

Lastly, sexual reproduction is not as efficient and rapid as other forms of reproduction. Due to the long process involved, not many off springs are produced at a time.

Asexual Reproduction

Asexual reproduction involves one organism producing an offspring identical to it genetically. It requires one parent to reproduce. In single celled organisms the parent cells are split into two cells' with equal content by binary fission. Multi-cellular organisms use a process known as mitosis to split cells into cells with equal number of chromosomes.

Asexual reproduction has several advantages. One, it is very beneficial to the types of animals that stay in one area or not able to look for mates to reproduce. The fact that asexual reproduction does not need mating of female and male gives is advantageous to these animals as they are able to reproduce as they are. Another advantage, since no need to find a mate many off springs are produces without costing a lot of energy and time. Furthermore asexual reproduction is easier and faster as compared to sexual reproduction. A large number of off springs are quickly reproduced from one parent under convenient surroundings.

On the other end, lack of genetic variation of asexual reproduction in off springs is a disadvantage. This is because all the organisms are genetically, possess the same weakness and it will be difficult for them to survive in

unstable environments. This makes the organisms' vulnerable to diseases which can destroy a big number of this off springs. As a result extinction rates are high. The fact that asexual reproduction can reproduce many off springs in a short time, closely together create competition for space and food. This competition is determines the survival of the species.

In conclusion sexual reproduction has a complicated structure as compares

In conclusion sexual reproduction has a complicated structure as compares to asexually reproduction. Both have they advantages and disadvantages which make them convenient for certain species and environments.

References

Alters, S., & Alters, B. J. (2006). Biology: understanding life. Hoboken, NJ: John Wiley & Sons.

Crow, J. (2012, October). Life sciences. Journey of heredity, 83, 169-173.

Exploring life science. (2000). Terrytown, N. Y.: Marshall Cavendish.

Farley, J. (1982). Gametes & spores: ideas about sexual reproduction, 1750-1914. Baltimore:

Johns Hopkins University Press.

Kent, M. (2000). Advanced biology. Oxford: Oxford University Press.

Rinkevich, B., & Matranga, V. (2009). Stem cells in marine organisms. Dordrecht: Springer.

Taylorlifescience / Sexual Reproduction. (n. d.). taylorlifescience / FrontPage.

https://assignbuster.com/what-are-the-advantages-and-disadvantages-of-asexual-and-sexual-reproduction-in-animals/

Retrieved

November 28, 2012, from

 $http://taylor lifescience.\ pbworks.\ com/w/page/19600962/Sexual$

%20Reproduction