**Asexual Reproduction** - one parent produces offspring with genetic makeup that is identical to the parent’s. It occurs in most simple, single celled organisms such as bacteria and some multicellular organisms such as fungi, some plants, and even a few animals.

**Sexual Reproduction** - two parents produce a new organism that has a combination of genes from both parents, and it is not identical to either one. It occurs most often in complex organisms.

1. Complete the following table comparing asexual and sexual reproduction. **/2**

|  |  |  |
| --- | --- | --- |
|  | **Asexual Reproduction** | **Sexual Reproduction** |
| **Number of parents** |  |  |
| **Genetic info compared to****the parents** |  *Same Different* |  *Same Different* |
| **Complexity of organism that usually uses this method** |  *Simple Complex* |  *Simple Complex* |

1. Complete the following chart below to answer the questions. Refer to note/internet  **/7**

|  |  |  |
| --- | --- | --- |
| **Description** | **Type of Reproduction (Asexual or Sexual)** | **Example of organism/cell types** |
| **Mitosis -** division of the nucleus of a cell that produces two genetically identical daughter cells |  | List 2 types of cells in humans1.2. |
| **Budding -** new organism develops by growing off the side of the “adult” |  |  |
| **Parthenogenesis -** embryo develops from an unfertilized egg |  | Look up organism on internet! |
| **Fragmentation -** a piece of an organism breaks off and produces a genetically identical new organism |  |  |
| **External Fertilization -** combination of gametes (sperm & egg) occurs in the ocean resulting in a free swimming embryo |  |  |
| **Vegetative Reproduction** – special cells in a plant stem or roots divide rapidly to form structures that will become identical plants  |  |  |
| **Internal Fertilization** – gametes meet inside the womb of the female. The genetically unique embryo will begin its development in the womb. |  |  |

1. What is the purpose for the transport of seed and pollen? Is this dispersal important to asexual or sexual reproduction?
 /2
2. What role do bees and fruit play in this transport? Look it up! /2
3. Fill in the Venn Diagram comparing and contrasting Sexual and Asexual Reproduction. Have at least **THREE COMMON TRAITS** specific to Sexual and Asexual not already listed in this assignment, and at least **ONE** similarity between the two. **/5**



ASEXUAL

SEXUAL

|  |
| --- |
| 1. Name two important advantages to **sexual reproduction** and two disadvantages. Explain your answer. **/4**
 |
| *Advantages:*  | *Disadvantages:* |
| 1. Name two important advantages to **asexual reproduction** and two disadvantages. Explain your answer. **/4**
 |
| *Advantages:*  | *Disadvantages:* |
| 1. Classify the following as either Sexual or Asexual Reproduction. Give the specific type if Asexual. **/4**
 |
| A small piece of a cactus breaks off the plant, falls to the ground, and begins to grow*Sexual* ***or*** *Asexual* | Pollen from a male poplar tree fertilizes sex cells on a female poplar tree.*Sexual* ***or*** *Asexual* |
| Two earthworms each produce sperm and eggs and fertilize each other*Sexual* ***or*** *Asexual* | A puffball mushroom releases thousands of brown spores when stepped on. These spores will develop into new mushrooms where they land.*Sexual* ***or*** *Asexual* |

 **Total: /30 marks = %**