

Science 9 – Home Learning Week 2

Outcomes:

- distinguish between sexual and asexual reproduction in representative organisms
- explain the importance of using the terms gene and chromosome properly

Notes:

For this week we will focus on Sexual Reproduction. Here are some notes to keep in mind.

- In sexual reproduction genetic information from two cells is combined to produce a new organism.
- Sexual reproduction is common among multicellular organisms.
- Sexual reproduction produces new combinations of genes that may allow organisms to adapt better to a given environment.
- Offspring in sexual reproduction are not identical to each parent or usually not identical to each other.
- Some organisms use both methods of reproduction (sexual and asexual).

Assignment:

Research the following questions:

1. How many chromosomes does a human cell have?
2. What makes human cells different from other animal cells (i.e. a dog cell or a mouse cell)?
3. Humans have _____ chromosomes that are split into _____ pairs.
4. One chromosome in each pair comes from the _____ and the other comes from the _____.
5. The two specialized sex cells (called gametes) are a _____ and an _____.
6. What do the two cells form when they are combined during sexual reproduction? (hint: it starts with a 'Z')
7. Do males and females have different chromosomes? Give a short explanation.
8. What are homologous chromosomes?
9. What is a gene?
10. Find an example of an organism that can reproduce using both methods.
11. Organisms that reproduce sexually show a greater range in their characteristics than organisms that reproduce asexually. Why do you think this is?

Here is a YouTube video and other links that will help answer some of the questions:

- Sperm and Eggs Cells | Cells | Biology | FuseSchool

<https://www.youtube.com/watch?v=CuxaXghfyeE>

- Chromosomes Fact Sheet

<https://www.genome.gov/about-genomics/fact-sheets/Chromosomes-Fact-Sheet>

- Check the first section of this website

<https://genetics.thetech.org/ask/ask257>

Just like last week, you may email me your responses and I will provide feedback! The feedback this week will be to see if you answered all the questions correctly! 😊

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Good luck! Next week will look at more definitions/types of sexual reproduction.

Ms. Doucet