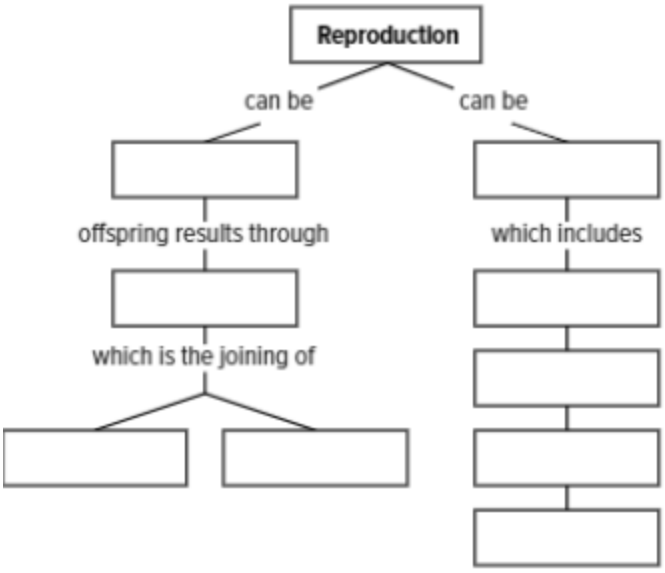
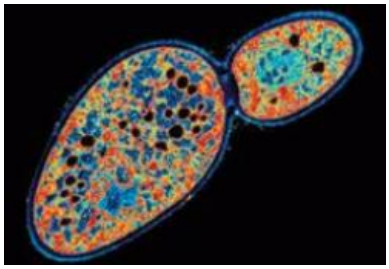
Unit 1 Review: Reproduction

. Copy and complete the following concept map about reproduction.



1. Describe how the photo below represents reproduction. In your description include:
    a. The type of reproduction with reasons to support
    b. What you know about the offspring based on this type of reproduction



2. Make a sketch of an animal cell that shows where the cells genetic material would be found.
3. In what ways would your sketch be different if you were making a sketch of a plant cell? In what ways would it be similar?
4. Explain how the following terms are related: DNA, Chromosome, genetic material.
5. What is the name of the molecule that stores genetic information?
    a. Why is it important that this molecule be duplicated during interphase of the cell cycle?
6. How does the DNA sequence of a parent bacterial cell compare to the DNA sequence of a daughter cell?
7. How is genetic variation important to the survival of a species?
8. In a little less than a month your body replaces all the cells of your skin. Is this an example of mitosis or meiosis? Explain.
9. Both Mitosis and Meiosis are required for humans to reproduce and develop
    a. What role does meiosis play? Explain
    b. What role does mitosis play? Explain
10. Why is sexual reproduction an advantage for an organism? Describe two disadvantages that are also a part of sexual reproduction.

11. Plants can reproduce both sexually and asexually
    a. Describe one way that a plant reproduces asexually
        i. Why is it considered asexual reproduction? What does it tell you about the genetic material of the new plant?
        ii. How do farmers and gardeners use a plants ability to asexually reproduce? Use an example you have learned about.
    b. Describe one way that a plant reproduces sexually
        i. Why is it considered sexual reproduction? What does it tell you about the genetic material of the new plant?
12. Complete the following table

Question	Mitosis	Meiosis
How many cells are produced for every cell that begins?		
How do parent and daughter cells compare to each other?		
How do daughter cells compare to each other?		
Number of divisions of the nucleus?		
Function		

13. In three or four sentences, describe the major events that happen in the cell cycle
    a. Does every type of cell go through the cell cycle? Support your answer with examples
    b. Is the cell cycle exactly the same for every cell in a person's body? Give examples
14. The cells that make up the body of duck contain 80 chromosomes. How many chromosomes are in each of the following cells? Explain your answer for each. Use the terms haploid and diploid in your answers
    a. Egg cell
    b. Sperm cell
    c. Zygote
15. How are haploid cells different from diploid cells? What processes produce these cells?
16. You are working as a counsellor in a summer camp. Some of the buildings are old and the roofs leak. You notice a dark fuzzy looking material you think is mould growing in one of the buildings. Develop an explanation for where the dark fuzzy growth might have come from, how it is growing and how it could cause health problems?
17. Bacteria have both positive and negative influences in the food industry.
    a. What are some of these positive and negative influences?
    b. Develop a hypothesis about the effect of temperature on the reproduction of bacteria?
    c. Describe how you could carry out an investigation to test your hypothesis.

18. The offspring below has a male and female parent. Do all living things have two biological parents? Explain.

19. Explain why sexual reproduction is an advantage for species that live in a changing environment.
20. Compare and Contrast Asexual and Sexual Reproduction (chart we did in class)
21. Give examples of types of Asexual Reproduction
22. Give examples of organisms that undergo asexual reproduction
23. Give examples of organism that use sexual reproduction
24. Why is reproduction important to sustainability and continuity of a species?
25. What are gametes?
26. What is a zygote?
27. What are homologous chromosomes? How do they compare?
28. Which gamete determines the sex of the zygote?