EMERGENCY CLOSING LEARNING PLAN

BIOLOGY

TEXTBOOK LOGIN INFORMATION

RESOURCES	ACTIVITIES TO CONSIDER
Notes, textbook chapter 1, https://study.com/academy/lesson/how-to-design-an-experiment-lesson-for-kids.html	Design an experiment to determine whether salt water has a negative effect on corn plant growth. Identify the independent variable, dependent variable, constants, and control group, and describe in a paragraph how you would perform the experiment.
Textbook chapter 2, notes, calculator desmos.com	Observe a nutrition label on any food item. (Just pick a random snack!) Calculate the number of Calories per serving from carbohydrates, proteins, and fat using this information: 1 gram of carbohydrates = 4 Calories; 1 gram of protein = 4 Calories; 1 gram of fat = 9 Calories. Does your total match the total Calories per serving listed on the package? If not, can you suggest why not? Look at the ingredients. Which ingredients contain carbohydrates? Which contain protein? Which contain fat?
Notes, textbook chapter 2, https://www.khanacademy.org/science/high-school-biology/hs-biology-foundations/hs-water-and-life/a/hs-water-and-life-review	Earth is known as the "Water Planet," and in fact, when scientists look for evidence of life on other planets, the first thing they look for is water. Answer the following questions: 1. What would happen to earth's temperature if a large portion of the oceans were to disappear, and why? 2. How do our cells use water? 3. Why does it hurt so bad when you belly flop into a pool? 4. The solid form of a substance is usually more dense than the liquid form of that same substance. So why does ice (a solid) *float* in liquid water?
Notes, textbook chapter 1, https://www.scientificamerican.com/article/are-viruses-alive-2004/	COVID-19 is a disease caused by a *virus*. What characteristics of living things do coronaviruses exhibit, and which characteristics do they lack? Make a list of each, then answer this question: Are coronaviruses living?
Notes, textbook chapter 8, https://www.thoughtco.com/what-are-prokaryotes-	Draw a Venn diagram comparing and contrasting prokaryotic cells and eukaryotic cells. Then draw another Venn diagram comparing and contrasting animal cells and plant cells.

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Notes, textbook chapter 11, https://www.cellsalive.com/mitosis.htm	Pretend you are observing an **animal** cell with **four** total chromosomes under the microscope. The cell is undergoing mitosis. For each stage of mitosis (prophase, metaphase, anaphase, telophase), sketch a picture of what the chromosomes are doing. Include centrioles and spindle fibers.
Notes, textbook chapter 12, https://www.youtube.com/watch?v=qIGXTJLrLf8	Assume R is the allele for red fur in a fox, and r is the allele for white fur. Assume a heterozygous red male fox breeds with a heterozygous red female fox. 1. What is the genotype of the male? 2. What is the genotype of the female? 3. What is the expected genotype ratio of the offspring? 4. What is the expected phenotype ratio of the offspring? Assume the male is heterozygous for thick fur (Ff) and the female has thin fur (ff). What is the probability that there will be any white, thin-fur offspring?
Notes, textbook chapter 13, https://www.dna-worldwide.com/resource/160/history-dna-timeline	Draw a timeline with each of the following researchers and their contributions to our understanding of DNA/heredity: Avery, Chargaff, Franklin, Griffith, Hershey & Chase, Watson & Crick, Wilkins