

Bell Ringers PBL Unit
Teacher's Resource
Nanomedicine: The Fight for DNA

Week 1

Monday

Tuesday:

What were two size dependent properties that were observed in the mess about activity yesterday?

Wednesday

If the goal is to make a medicine dissolve quicker to be more effective, which form would be a faster choice-a large pill or a powdered form? Why?

Thursday

Why did the gummy capsule form into a self-assembled structure when placed in a solution with calcium chloride?

Friday

What are the four "worlds" in the metric scale? What is the correct order going from largest to smallest?

Week 2

Monday

If the cell is on the micro scale, what world would DNA be in? Which nano-property was exhibited in the complementary strands of DNA sticking together?

Tuesday

What is one way that DNA is similar to RNA and one way that they are different? What are the three players in protein synthesis and in what order?

Wednesday

How does the information along RNA get translated into a protein strand?

Thursday

Describe the transcription, translation process.

Friday

The ability to digest the sugar "lactose" in cow's milk is a mutation in humans. There are some humans who don't have the enzyme "lactase" that breaks down the lactose properly. Why is this mutation present?

Week 3

Monday

Are all mutations bad? Why or why not? What are the three categories?

Tuesday

What is Gregor Mendel the father of? What did he study?

Wednesday

Draw a Punnett Square. The trait you are observing is eye color. The father has the genotype "HH" and her phenotype is brown eyes. The mother has the

genotype “Hh” and her phenotype is brown eyes. What would the Punnett Square look like to describe their potential children?

Thursday

From the video last night, what makes a disease heritable?

Friday

What is the difference between traits that are codominant and traits that are incompletely dominant?

Week 4

Monday

What are three types of information can you find on a pedigree?

Tuesday

What are you planning to do during work time today?

Wednesday

What are three good qualities of an engaging presentation?

Thursday

What did you learn from having peer feedback on your presentation yesterday?

Friday

What strategies did you use during this project to prevent yourself from procrastinating? What ended up being the most difficult part of the project?