ARC Week at Glance

Topic: Mutations and Biotechnology: Course: Biology Grade(s): 10-12 Dates: 01/27/25-01/31/25

	Learning Target (I am learning about…)	Criteria for Success (I can…)	Activation/ Instruction	Collaboration/ Guided Practice	Independent Learning/ Assessment
			*(Include at least one/two formatives*in any part of the lesson as needed)*		
Monday	I am learning how to develop an argument based on evidence to support the claim that inheritable genetic variations may result from: non-lethal errors occurring during replication, meiosis, or from heritable mutations.	I can construct an explanation based on evidence to support the claim that inheritable genetic variations may result from: non-lethal errors occurring during replication, meiosis, or from heritable mutations	Do Now: Describe a mutation. Provide a visual.	Students will complete the lesson on Mutations to answer the prompt: How can genetic variations result during replication, meiosis, or from heritable mutations?	Using Cornell Notes, students will state how genetic variations result from non-lethal errors occurring during replication, meiosis, or from heritable mutations Students will complete the summary from their Cornell Notes.

Tuesday	I am learning how to develop an argument based on evidence to support the claim that inheritable genetic variations may result from: non-lethal errors occurring during replication, meiosis, or from heritable mutations.	I can construct an explanation based on evidence to support the claim that inheritable genetic variations may result from: non-lethal errors occurring during replication, meiosis, or from heritable mutations.	Do Now: State a type of mutation. Provide a visual.	Students will conduct philosophical chairs to support their argument that inheritable genetic variations may result from: • new genetic combinations through meiosis (crossing over, nondisjunction) • non-lethal errors occurring during replication (insertions, deletions, substitutions); and/or • heritable mutations caused by environmental factors (radiation, chemicals, and viruses). Students will state their assertions using chart paper.	Students will discuss their assertions on their argument that inheritable genetic variations may result from: non-lethal errors occurring during replication, meiosis, or from heritable mutations. Students will complete a 3-2-1 from what they have learned.

Wednesday	I am learning how to ask questions to gather and communicate information about the use and ethical considerations of biotechnology in forensics, medicine, and agriculture.	I can ask questions to gather and communicate information about the use and ethical considerations of biotechnology in forensics, medicine, and agriculture.	Do Now: Describe genetic variation. Provide an example. Students will conduct a KWL on Biotechnology in Forensics, Medicine, and Agriculture.	Students will complete the lesson on Biotechnology to answer the prompt: What is the use and ethical considerations of biotechnology in forensics, medicine, and agriculture. Students will also seek to answer the question from the "What do you **W**ant to know" portion of their KWL.	Students will complete the **L**earn portion of their KWL chart to answer their questions and the prompt.

Thursday	I am learning how to ask questions to gather and communicate information about the use and ethical considerations of biotechnology in forensics, medicine, and agriculture.	I can ask questions to gather and communicate information about the use and ethical considerations of biotechnology in forensics, medicine, and agriculture.	Do Now: What is Biotechnology. Provide an example.	Students will conduct a Jigsaw to communicate information about the use and ethical considerations of biotechnology in forensics, medicine, and agriculture. Students will state their findings using chart paper.	Students will conduct a gallery walk of other students' information and complete a 3-2-1 from what they have learned.

Friday	I am learning how to construct the structures of DNA	I can construct the structures of DNA	Do Now: What are the structures of DNA?	The teacher will demonstrate extracting DNA from a strawberry. The teacher will discuss rubric on how to create a DNA model. The assignment will be a test grade. The student will have the opportunity to build models in class and complete a flip chart on DNA structure.	The students will build models of DNA using paper or a DNA Model Kit.

**Please highlight your literacy tasks, your major grades and your minor grades. I suggest color coding.