Academy of Richmond County

Teacher: Mrs. Appajodu Subject: Science Course: Biology Date(s): September 2nd to Sept. 5th

Standards:

- SB5 a: "Analyze and interpret data to determine the significance of the relationship between traits and adaptations in organisms."
- SB5 e: "Evaluate the impact of environmental changes on biodiversity."
- SB6: "Use scientific principles to evaluate the consequences of human impact on ecosystems."

	Pre-Teaching **Learning Target** **Success Criteria**	**Activation of Learning** ***(5 min)***	**Focused Instruction** ***(10 min)*** ****I DO***	**Guided Instruction** ***(10 min)*** ****WE DO***	**Collaborative Learning** ***(10 min)*** ****YOU ALL DO***	**Independent Learning** ***(10 min)*** ****YOU DO***	**Closing** ***(5 min)***
Tuesday 09/02/2025	Students will understand the concept of speciation and its importance in evolution. Students will be able to define speciation and perform the worksheet.	Video on Speciation What is a Species?	Discuss the two types of speciation: allopatric and sympatric. Address the common misconception that speciation only occurs in isolated environments.	Types of Speciation Set clear expectations for group discussions: respect others' ideas and stay on topic.	GD on Speciation Opening Point- Speciation is the process by which new species arise. It often occurs when populations of the same species become reproductively isolated, either due to geography, behavior, or other evolutionary pressures.	Worksheet on the opening video	Exit ticket - definition of speciation and one example.
Wednesday 09/03/2025	Students will be able to explain the evidence of speciation and analyze how it supports the theory of evolution. Students will complete a written analysis of a case study on speciation, identifying key evidence and explaining its significance.	Scaffold questioning: • Easy: "What is allopatric speciation?" • Medium: "Can you give an example of sympatric speciation?" • Hard: "Why is genetic divergence crucial for speciation?"	A PowerPoint presentation, including visuals of fossils and genetic data.	Write a short essay comparing allopatric and sympatric speciation, citing examples. Set expectations: essays should be 1-2 pages, double-spaced, and include at least one diagram.	Case Study on Speciation		TOTD- write one new thing they learned about speciation

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Thursday 09/04/2025	🎯 Students will be able to explain how human activities impact speciation, including examples of both positive and negative effects on biodiversity. ✅ Students will complete a written response discussing a specific human activity that influences speciation and provide examples of its effects on biodiversity. This will be evaluated using a rubric focused on clarity, accuracy, and depth of understanding.	Recap Speciation and types with examples	**Discuss on Common Misconception:** Students may think that all human impact is negative; clarify that some human actions can aid in conservation and biodiversity.	Research Project on Speciation- Investigate a real-world example of speciation and explain how it illustrates the processes of evolution and biodiversity. <u>Behavioral expectations: Students should work quietly and independently, using resources provided.</u>		Evidence of evolution worksheet	Share one new thing they learned about human impact on speciation with a partner.
Friday 09/05/2025	🎯 Students will be able to synthesize knowledge from the unit and demonstrate understanding of speciation. ✅ Students will complete a synthesis essay that requires them to integrate key concepts of speciation, supported by relevant evidence from the unit.	Progress Learning assessment- Evolution		• Divide students into small groups to discuss specific examples of speciation. • Guiding questions that progress from basic- What is allopatric speciation, to complex - How do environmental factors influence speciation? • Monitor group discussions, offering support and prompting deeper thinking as needed.			