NGSS Grade 3 Standards Conceptual Flow Map

*conceptual flow map is a working draft and subject to revisions throughout the year

Unit/Estimated Dates	Phenomena/ Topic	Standards
Unit 1 Playground Forces **Dates** August-September	Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object. Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion. Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other. Define a simple design problem that can be solved by applying scientific ideas about magnets.	**3-PS2-1**: The student is expected to plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object. **3-PS2-2**: The student is expected to make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion. **3-5-ETS1-1**: The student is expected to define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. **3-5-ETS1-3**: The student is expected to plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved. **3-PS2-3**: The student is expected to ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other. **3-PS2-4**: The student is expected to define a simple design problem that can be solved by applying scientific ideas about magnets. **3-5-ETS1-1**: The student is expected to define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.

Unit 2 **Life Cycles of Survival** **Dates** October-November	Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death. Construct an argument that some animals form groups that help members survive. Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms. Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.	diverse life cycles but all have in common birth, growth, reproduction, and death. **3-LS3-1**: The student is expected to analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms. **3-5-ETS1-2**: The student is expected to generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of t**3-LS1-1**: The student is expected to develop models to describe that organisms have unique andhe problem. **3-LS2-1**: The student is expected to construct an argument that some animals form groups that help members survive. **3-LS4-2**: The student is expected to use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing. **3-5-ETS1-1**: The student is expected to define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. **3-5-ETS1-2**: The student is expected to generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. **3-5-ETS1-3**: The student is expected to plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.
Unit 3 **Surviving in Different Environments** **Dates** December-March	Use evidence to support the explanation that traits can be influenced by the environment Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all. Make a claim about the merit of a solution to	3-LS3-2: The student is expected to use evidence to support the explanation that traits can be influenced by the environment. 3-5-ETS1-1: The student is expected to define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. 3-LS4-4: The student is expected to make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change. 3-5-ETS1-1: The student is expected to define a simple design problem reflecting a need or a want that includes specified criteria for

	a problem caused when the environment changes and the types of plants and animals that live there may change.	success and constraints on materials, time, or cost. 3-5-ETS1-2: The student is expected to generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. 3-LS4-3: The student is expected to construct an argument with evidence that in a particular habitat some organisms can survive well, some do not survive as well, and some cannot survive at all. 3-5-ETS1-1: The student is expected to define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. 3-LS4-1: The student is expected to analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago. 3-LS4-1: The student is expected to analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago. 3-5-ETS1-2: The student is expected to generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.
Unit 4 **Weather Impacts** **Dates** April-May	Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season. Obtain and combine information to describe climates in different regions of the world. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.	3-ESS2-1: The student is expected to represent data in tables and graphical displays to describe typical weather conditions expected during a particular season. 3-ESS2-2: The student is expected to obtain and combine information to describe climates in different regions of the world. 3-5-ETS1-1: The student is expected to define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. 3-ESS3-1: The student is expected to make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard. 3-5-ETS1-2: The student is expected to generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.