Grade 5 Curriculum Map					
Unit : Variables - FOSS					
Key concepts	**Standards**	**Assessments**	**Content**	**Skills**	**Lessons**
Students will understand that …		Students will demonstrate their learning by ….	Students will know …	Students will be able to …	
	S5.A.1.1.1 - Explain how certain questions can be answered through scientific inquiry and/or technological design. **S5.A.1.1.2 - Explain how observations and/or experimental results are used to support inferences and claims about an investigation or relationship.** **S5.A.1.1.3 - Describe how explainations, predictions, and models are developed using evidence.** **S5.A.2.1.1 - Design a simple, controlled experiment (fair test) identifying the independent and dependent variables,**	*Recorded data from investigations *Note-booking *Observations *I-Checks *Response sheets	**to conduct a controlled experiment**	*identify variables that affect the outcome of an experiment.	Investigation 1: Swingers Investigation 2: Lifeboats Investigation 3: FOSS Planes Investigation 4: Flippers

Science as Inquiry	**S5.A.1.1.1** **S5.A.1.1.2** **S5.A.1.1.3** **S5.A.2.1.1** **S5.A.2.1.2**	*Recorded data from investigations *Note-booking *Observations *I-Checks *Response sheets	**how**	*design and conduct a scientific investigation.	Investigation 1: Swingers Investigation 2: Lifeboats Investigation 3: FOSS planes Investigation 4: Flippers
	S5.A.1.1.2 **S5.A.1.1.3**	*Recorded data from investigations *Note-booking *Observations *I-Checks *Response sheets		*use data to construct two-coordinate graphs and use graphs to make predictions.	Investigation 1: Swingers Investigation 2: Lifeboats Investigation 3: FOSS planes Investigation 4: Flippers
	S5.C.1.1.2 - Differentiate between volume and mass.	*Recorded data from investigations *Note-booking *Observations *I-Checks *Response sheets	**ses to conduct investigations and build explanations.**	*experiment with variables that do and do not affect the behavior of pendulums.	Investigation 1: Swingers
	S5.C.1.1.2	*Recorded data from investigations *Note-booking *Observations *I-Checks *Response sheets		*relate the capacity of boats to the mass they can hold before sinking.	Investigation 2: Lifeboats
	S5.C.3.1.1 - Differentiate between the mass and weight of an object.	*Recorded data from investigations *Note-booking *Observations *I-Checks *Response sheets		*relate the effect of variables to the distance a plane travels.	Investigation 3: FOSS planes

	S5.A.3.1.1 **S5.A.3.1.2 - Explain how the mass of an object resists change to motion (inertia).**	*Recorded data from investigations *Note-booking *Observations *I-Checks *Response sheets	**how to use scientific thinking proces**	*list the related objects that make up a system.	Investigation 3: FOSS planes Investigation 4: Flippers
	S5.3.2.6.B1 - Explain how changes in motion require a force.	*Recorded data from investigations *Note-booking *Observations *I-Checks *Response sheets		*relate the effect of variables to the trajectory of objects.	Investigation 4: Flippers

Physical Science: Motion and Design - Carolina Curriculum					
Key concepts	**Standards**	**Assessments**	**Content**	**Skills**	**Lessons**
Students will understand …		Students will demonstrate their learning by ….	Students will know …	Students will be able to …	
	S5.C.3.1 - Explain the relationships between mass, force, and movement.	*Teacher observation *Notebooks *Work products *Drawings *Record sheets	**rces and their relationship to motion.**	*explain that force is a push or pull on an object.	Lessons 1 - 3 Lesson 16
	S5.C.2.1 - Describe basic energy types and sources, and how energy can be changed from one form to another.	*Teacher observation *Notebooks *Work products *Drawings *Record sheets *Graphs/charts		*recognize that an unbalanced force is necessary to make a resting object move, bring a moving object to rest, or to change the direction of a moving object.	Lessons 1 - 5 Lessons 11 - 16

the relationship between forces, motion and energy.	**S5.C.3.1**	*Teacher observation *Notebooks *Record sheets *Data table	**types of fo**	*recognize that friction is a force that opposes motion.	Lesson 3 Lessons 8 - 10 Lessons 13 - 16
	S5.C.3.1	*Teacher observation *Notebooks *Record sheets *Data table	**how forces affect motion within simple machines.**	*compare load and effort.	Lesson 4 Lessons 9 - 10 Lessons 13 - 16
	S5.C.3.1	*Teacher observation *Record sheets *Data table *Design challenge		*explore the effect of forces in simple machines.	Lesson 3 Lessons 9 - 12 Lessons 13 - 16
	S5.C.2.1.3 - Distinguish between kinetic and potential energy.	*Teacher observation *Record sheets *Graphs/charts	**different forms of energy.**	*explain how all energy can be considered to be kinetic or potential.	Lesson 6 Lesson 7 Lessons 13 - 16
	S5.C.2.1.1 - Describe how energy exists in many forms and can be transformed within a system.	*Teacher observation *Record sheets *Data tables		*recognize that energy is a property of many substances and is associated with multiple forms (e.g. electrical, mechanical, heat, light, sound, nuclear).	Lessons 11 - 16
	S5.C.2.1	*Teacher observation *Record sheets *Data tables *Graphs/charts		*recognize that energy can be stored and released to make an object move.	Lesson 6 Lesson 7 Lessons 9 - 16

Life Science: Environments - FOSS					
Key concepts	**Standards**	**Assessments**	**Content**	**Skills**	**Lessons**

Students will understand …		Students will demonstrate their learning by ….	Students will know …	Students will be able to …	
tic factors of an ecosystem are connected.	**S5.B.3.2 - Explain how renewable and nonrenewable resources provide for human needs.**	*Teacher observation *Notebook	**how abiotic factors affect organisms.**	*identify abiotic factors in an environment.	Investigation 1
	S5.B.3.1 - Describe the relationships between organisms in different ecosystems.	*Teacher observation *Notebook *Performance assessment *Response sheet		*observe ecosystems over time.	Investigation 1 Investigation 2 Investigation 4 Investigation 6
	S5.B.3.1	*Teacher observation *Notebook *Performance assessment *Response sheet		*investigate how varying abiotic factors affect organisms.	Investigation 1 Investigation 2 Investigation 6
	S5.B.3.1.1 Describe the roles of producers, consumers, and decomposers within a local ecosystem.	*Teacher observation *Notebook *Performance assessment	**that organisms can be categorized by the role they serve in an ecosystem.**	*examine the role of produces, consumer and decomposer. *analyze interactions of organisms within an ecosystem (e.g. predator/prey, etc.)	Investigation 5
	S5.B.3.1.2 - Describe the relationships between organisms in different food webs.	*Teacher observation *Notebook *Performance assessment		*construct food webs for various ecosystems.	Investigation 5
	S5.B.3.1.2	*Teacher observation *Notebook *Performance assessment	**tter and y cycle gh the stem.**	*demonstrate how energy from the sun flows through food webs.	Investigation 5

how the biotic and abio	**S5.B.3.1**	*Teacher observation *Notebook *Performance assessment	**how ma energ throu ecosy**	*identify cycles in an ecosystem (food, water, etc.)	Investigation 5
	S5.B.2.1 - Explain how certain inherited traits and/or behaviors allow some organisms to survive and reproduce more successfully than others.	*Teacher observation *Notebook *Record sheets	**the importance of biodiversity for the survival of the species and well-being of the ecosystem.**	*classify organisms by their characteristics.	Investigation 2 Investigation 3 Investigation 4
	S5.B.2.1.4 - Identify changes in environmental conditions that can affect the survival of populations and entire species.	*Teacher observation *Response Sheet *Performance assessment		*explore challenges for survival of species and ecosystems (pollution, invasive species, disease, etc.)	Investigation 4 Investigation 6
	S5.B.2.1	*Teacher observation *Response Sheet *Performance assessment		*examine how different adaptations have allowed organisms to survive in their environment.	Investigation 2 Investigation 4 Investigation 6