

Grade 7 and 8: Life Science					
Ecosystems - FOSS and Organisms- From Macro to Micro (STC)					
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 ...	
science as inquiry is the process they will using in science.	S8.A.1.1.1 S8.A.1.1.2 S8.A.1.1.3 S8.A.2.1.1 S8.A.2.1.4 S8.A.2.1.5 S8.A.2.2.1 S8.A.2.2.2 S8.A.2.2.3 S8.A.3.1.1 S8.A.3.1.2	*Recorded data from Investigations * Lab reports *Note-booking *Teacher observations	about scientific inquiry. and be able to demonstrate the abilities to do scientific inquiry.	*explain current scientific knowledge, models and understanding that guide scientific investigations. *use appropriate tools and techniques to gather, analyze and interpret data.	(P&E) and (OMM) Interspersed throughout the modules
	S8.B.1.1.1 S8.B.3.1.2	*Organism cards *Discussion *Participation *Observation log	living things undergo fundamental life processes. an organism is any complete living thing.	*define organism. *distinguish between living and non-living things.	(OMM) Lesson 1 (P&E) Inv. 1
injected.	S8.B.1.1.1 S8.B.1.1.2 S8.B.1.1.3	*Card sort *Observations *Response sheets *Research project *Ecosystem log sheets *Mid-	how abiotic factors affect organisms.	*identify abiotic factors in an environment.	(P&E) Inv. 2 (P&E) Inv. 3 (P&E) Inv. 7
	S8A.1.3.2 S8A.1.3.3 S8.B.1.1.1 S8.B.1.1.2 S8.B.1.1.3 S8.B.3.1.2	*Response sheets *Note booking *Mid-Summative Exam		*observe ecosystems over time.	(OMM) Lesson 4 (OMM) Lesson 12 (P&E) Inv. 3 (P&E) Inv. 4
	S8.A.1.3.2 S8.B.3.1.2 S8.B.3.2.1	*Note booking *Teacher observations *Mid-Summative Exam *Log sheets		*investigate how varying abiotic factors affect organisms.	(P&E) Inv. 2 (P&E) Inv. 3 (P&E) Inv. 4 (P&E) Inv. 7

how the biotic and abiotic factors of an ecosystem are con

S8.B.3.1.3 S8.B.3.1.3 S8.A.1.1 S8.A.1.2 S8.A.2.1	*Response sheets *Note booking project *Research	that organisms can be categorized by the role they serve in an ecosystem.	*examine the role of producer, consumer and decomposer.	(P&E) Inv. 7
S8.A.3.1.4 S8.B.3.1.1 S8.B.3.1.3	*Response sheets *Quick writes *Research project		*construct food webs for various ecosystems.	(P&E) Inv. 4 (P&E) Inv. 7
S8.B.3.1.2 S8.B.3.1.3 S8.B.3.2.1 S8.B.3.2.2	*Response sheets *Note booking *Mid-Summative Exam *Population Study		*analyze interactions of organisms within an ecosystem (e.g. predator/prey, etc.)	(P&E) Inv. 3 (P&E) Inv. 4 (P&E) Inv. 7
S8.B.3.1.1	*Discussion *Group participation	how matter and energy cycle through the ecosystem.	*demonstrate how energy from the sun flows through food webs.	(P&E) Inv. 5
S8.B.2.1.1 S8.B.2.1.2 S8.B.3.2.3 S8.A.3.1.4 S8.B.3.1.1 S8.A.3.1.1 S8.A.3.2.3	*Quick writes *Note booking sheets Exam *Response *Mid-Summative		*identify cycles in an ecosystem (food, water, etc.)	(P&E) Inv. 5
S8.B.1.1.1 S8.B.1.1.2 S8.B.1.1.3	*Response sheets *Note booking *Organism cards	the importance of biodiversity for the survival of the species and well-being of the ecosystem.	*classify organisms by their characteristics.	(OMM) Lesson 1 (P&E) Inv. 2
S8.B.3.2.3 S8.B.3.3.1 S8.B.3.3.2 S8.B.3.3.3	*Response sheets *Note booking Summative Exam *Research project *Final		*explore challenges for survival of species and ecosystems (pollution, invasive species, disease, etc.).	(P&E) Inv. 6 (P&E) Inv. 7 (P&E) Inv. 8
S8.B.1.1.1 S8.B.3.2.1 S8.B.3.3.2 S8.B.3.3.3 S8.B.3.3.4	*Note booking observations *Reflections *Populations and Ecosystems final exam *Teacher		*examine how different adaptations have allowed organisms to survive in their environment.	(P&E) Inv. 6 (P&E) Inv. 7 (P&E) Inv. 8 (P&E) Inv.10

that all living things have structures with specific functions which enable organisms to function as a whole.	S6.B.1.1.3 S8.A.2.2.3 S8.B.1.1.1 S8.B.1.1.2	*Scientific drawings quiz *Cartoons	*Microscope use *Response sheets	that all organisms are composed of cells and that cells are the fundamental unit of life.	*observe, draw, and describe unicellular organisms.	(OMM) Lesson 12 (OMM) Lesson 15 (OMM) Lesson 16 (OMM) Lesson 17
	S8.A.2.2.3 S8.B.1.1.1 S8.B.1.1.2	*Teacher observations *Scientific drawings sheets	*Response sheets		*compare and contrast plant and animal cells.	(OMM) Lesson 7
	S8.A.3.1.2 S8.B.1.1.4	*Teacher observations *Participation *Response sheets			*Describe the levels of organization from cell to organism.	(OMM) Lesson 1 (OMM) Lesson 2
	S7.B.1.2.1	*Note booking collection *Teacher observations *Scientific drawings	*Data	how reproduction is essential to the continuation of life forms.	*describe the life cycle of cells.	(OMM) Lesson 8
	S7.B.1.2.1 S11.B.2.2.2	*Note booking *Data collection *Graphs *Scientific drawings division models	*Teacher observations *Cell		*model the stages of cell division.	(OMM) Lesson 8
	S7.B.1.2.3 S8.B.1.1.1 S8.B.3.2.3 S11.B.1.1.3	*Response sheets drawings booking logs	*Scientific *Note *Observation		*compare and contrast reproductive and life cycles of different organisms.	(OMM) Lesson 2 (OMM) Lesson 3 (OMM) Lesson 5 (OMM) Lesson 6 (OMM) Lesson 18 (OMM) Lesson 19 (P&E) Inv. 1
	S8.A.1.3.2	*Response sheets *Note booking sheets key responses	*Response *Dichotomous	that we can classify organisms based on their structure.	*use a dichotomous key to identify organisms.	(OMM) Lesson 20
	S8.A.1.3.2 S8.B.1.1.3	*Response sheets drawings booking	*Scientific *Note *Organism cards		*categorize organisms by kingdom based on their characteristics.	(OMM) Lesson 1

that every organism has a set of genetic instructions that determines its inherited traits.	S6.B.3.1.1.3 S8.B.1.1.1 S8.B.2.2.2	*Response sheets *Note booking	that traits of an organism are carried on one or more genes located in the chromosomes.	*explain that chromosomes are located in the nucleus.	(OMM) Lesson 8 (P&E) Inv. 8
	S8.B.2.2.2 S8.B.2.2.1 S8.B.2.1.5	*Response sheets *Scientific drawings *Note booking		*show that a pair of chromosomes is needed for a trait to be expressed (allele).	(P&E) Inv. 9
	S7.B.1.2.2	*Response sheets *Note booking	how genes affect the traits that are passed on from parent to offspring.	*distinguish how different living things reproduce (asexual, sexual).	(OMM) Lesson 9 (OMM) Lesson 18 (OMM) Lesson 19
	S8.A.1.2.3	*Note booking *Response sheets *Punnett squares		*apply Mendelian concepts of genetics (dominant/recessive, independent and segregation).	(OMM) Lesson 18 (P&E) Inv. 9
	S8.A.1.2.3	*Note booking *Reading Activity		*review Mendel's contribution to genetics.	(OMM) Lesson 18 (P&E) Inv. 9
	S8.B.2.2.2	*Note booking *Punnett squares	how genetic information can be expressed.	*demonstrate how genes combine to determine characteristics.	(OMM) Lesson 19 (P&E) Inv. 8 Inv. 9 (P&E)
	S8.B.2.1.3 S8.B.2.2.1 S8.B.2.1.5	*Final OMM exam		*research how genes can be manipulated to produce desired outcomes (i.e. mass, selection, genetic engineering, human genome project).	(OMM) Lesson 19
	S8.B.2.1.3 S8.B.2.2.1 S8.B.2.1.5			*describe mutation's effects on a trait's expression.	(P&E) Inv. 10