LONG BRANCH PUBLIC SCHOOLS

Pacing Guide - 8th Grade Science

	Marking	Period 1								
	.viai iiii B					ELA Common Core Standards				
Day	Unit	Topic	Desired Outcome	NGSS	Reading	Writing	S&L	Math	21st Century	Technology
	ng Day 1 ng Day 2		Rules, Procedures, Syllabus, Safety							
1 2 3 4 5 6	Unit 1	Elements to Compounds	Develop models to describe the atomic composition of simple molecules and extended structures.	PS1-1	RST.6-8.1, RST.6-8.3, RST.6-8.7	WHST. 6-8.7, WHST. 6-8.8	S.L. 8.5	MP.2, MP.4, 6.RP.A.3, 6.NS.C.5, 8.EE.A.3, 6.SP.B.4,	9.1	8.1 & 8.2
7		Si	ummative Unit Assessment & Green Project Check Point	PS1	1			6.SP.B.5		
8 9 10	Unit 2 R	Chemical Reactions and	Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.	PS1-2	RST.6-8.1, RST.6-8.3, RST.6-8.7 WHST. 6-8.	WINCT CO.7		MP.2, MP.4, 6.RP.A.3, 6.NS.C.5, 8.EE.A.3, 6.SP.B.4, 6.SP.B.5	9.1	
11 12 13		materials	Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.	PS1-3		WHST. 6-8.8	S.L. 8.5			8.1 & 8.2
14		Sı	ummative Unit Assessment & Green Project Check Point	PS1				0.3P.B.3		
15 16 17	Unit 3	Energy and	Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.	PS1-4	RST.6-8.1, RST.6-8.3, RST.6-8.7	WHST. 6-8.7,		MP.2, MP.4, 6.RP.A.3, 6.NS.C.5, 8.EE.A.3, 6.SP.B.4, 6.SP.B.5	9.1	
18 19 20	Omit 3	Conservation	Develop and use a model to describe how the total number of atoms does not change in a chemical reaction and thus mass is conserved.	PS1-5		3, WHST 6-8 8	S.L. 8.5			8.1 & 8.2
21		Sı	ummative Unit Assessment & Green Project Check Point	PS1						

ا	Marking Period 2				ELA Co	ELA Common Core Standards				
Day	Unit	Topic	Desired Outcome	cccs	Reading	Writing	S&L	Math	21st Century	Technology
1 2 3	Unit 4	Energy Transfer (Chemical)	Undertake a design project to construct, test, and modify a device that either releases or absorbs thermal energy by chemical processes.	PS1-6	RST.6-8.1, RST.6-8.3, RST.6-8.7	3, WHST. 6-8.7,	S.L. 8.5	MP.2, MP.4, 6.RP.A.1, 6.RP.A.2, 6.RP.A.3, 7.RP.A.2, 6.NS.C.5, 8.EE.A.1, 8.EE.A.2.	9.1	8.1 & 8.2
4		, , ,	Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.	PS3-3						0.1 0.012
6			mmative Unit Assessment & Green Project Check Point	PS 3, ESS 3				0.55.4.2		
7 8 9	Unit 5	Temperature, it 5 Heat and Kinetic Energy	Plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample.	PS3-4	RST.6-8.1,	WHST. 6-8.1,		MP.2, MP.4, 6.RP.A.1, 6.RP.A.2,		
10 11 12	Offics		, , , ,	RST.6-8.3, RST.6-8.7	WHST. 6-8.7, WHST. 6-8.8	S.L. 8.5	6.RP.A.3, 7.RP.A.2, 6.NS.C.5,	9.1	8.1 & 8.2	
13		Su	mmative Unit Assessment & Green Project Check Point	PS3				8.EE.A.1,		
14 15 16 17 18	Unit 6	molecules to cells	Conduct an investigation to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells.	LS1-1	RST.6-8.1, RST.6-8.3, RST.6-8.7	WHST. 6-8.1, WHST. 6-8.2, WHST. 6-8.7, WHST. 6-8.8, WHST. 6-8.9	S.L. 8.5	6.EE.C.9, 6.SP.A.2, 6.SP.B.4	9.1	8.1 & 8.2
19		Sı	mmative Unit Assessment & Green Project Check Point	LS1		VVIIST. 0-8.9				
20		·	Review for Ben	chmark						
21			Benchmark							

Benchmark

	Marking	Period 3						ELA	Common Core S	andards	
Day	Unit	Topic	Desired Outcome	cccs	Reading	Writing	S&L	Math	21st Century	Technology	
1 2	Unit 7 Cells to system	Cells to systems	Develop and use a model to describe the function of a cell as a whole and ways parts of cells contribute to the function.	LS1-2	RST.6-8.1, — RST.6-8.3, RST.6-8.7	WHST. 6-8.1, WHST. 6-8.2, WHST. 6-8.7, WHST. 6-8.8, WHST. 6-8.9	S.L. 8.5	6.EE.C.9, 6.SP.A.2, 6.SP.B.4	9.1	8.1 & 8.2	
3 4 5			Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells.	LS1-3						6.1 X 6.2	
6		Summa	tive Unit Assessment & Introduction to Green School Project 3	LS1							
7 8 9	11-2-0	Chemical reactions to	Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.	LS1-6	RST.6-8.1, RST.6-8.3, RST.6-8.7	WHST. 6-8.1, WHST. 6-8.2, WHST. 6-8.7, WHST. 6-8.8, WHST. 6-8.9	S.L. 8.5	6.EE.C.9, 6.SP.A.2, 6.SP.B.4	9.1	8.1 & 8.2	
10 11 12	Unit 8	Unit 8 provide energy for cells	Develop a model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter moves through an organism.	LS1-7							
13			Summative Unit Assessment	LS1	7						
14 15 16	Unit 9		O Slave of Sacrana	Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.	LS2-3	RST.6-8.1,	WHST. 6-8.1,	S.L. 8.1, S.L.	MP.4, 6.RP.A.3.		
17 18 19	Unit 9 Flow of Energ	Flow of Effergy	Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.	LS2-4	1 RST 6-8 7 RL I	WHST. 6-8.2, WHST. 6-8.9	8.4, S.L. 8.5	6.EE.C.9, 6.SP.B.5	9.1	8.1 & 8.2	
20		Summa	tive Unit Assessment & Completion of Green School Project 3	LS2							
21 22			Various State Testing on Various Day i	n Marking	Period 3						

	Marking Period 4		Period 4		ELA Common Core Standards					
Day	Unit	Topic	Desired Outcome	cccs	Reading	Writing	S & L	Math	21st Century	Technology
1 2			Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects.	PS2-1	RST.6-8.1, RST.6-8.3	WHST.6-8.1, WHST.6-8.7		MP.2, 6.NS.C.5, 6.EE.A.2, 7.EE.B.3, 7.EE.B.4	9.1	
4	Unit 10 Force	Force	Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.	PS2-2			S.L. 8.5			8.1 & 8.2
6		Summat	tive Unit Assessment & Introduction to Green School Project 4	PS2						
7 8 9	Unit 11	11 Energy and Force	Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.	PS3-1	RST.6-8.1, — RST.6-8.3, RST.6-8.7	WHST.6-8.1, WHST.6-8.7	S.L. 8.5	6.RP.A.1, 6.RP.A.2, 7.RP.A.2, 8.EE.A.1, 8.EE.A.2,	9.1	8.1 & 8.2
10 11			Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system.	PS3-2						0.1 & 0.2
12			Summative Unit Assessment	PS3						
13 14			Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development	ESS3-3	RST.6-8.1,	WHST. 6-8.1, WHST. 6-8.2, WHST. 6-8.7, WHST. 6-8.8, WHST. 6-8.9	S.L. 8.5	MP.2, 6.RP.A.1, 7.RP.A.2, 6.EE.B.6, 7.EE.B.4	9.1	
15 16	Unit 12 Force of Na	Force of Nature	Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.	ESS3-4 RST.6-8 RST.6-8						8.1 & 8.2
17 18			Ask Questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century		- KS1.6-8.7					
19		Summa	tive Unit Assessment & Completion of Green School Project 4	ESS3	1					

Final Benchmark