

Environmental Science Issues Common Core State Standards for High School Mathematics Alignment

		Unit 1 – Issue Analysis	Unit 2 – Biodiversity	Unit 3 – Energy, Technology, and Society	Unit 4 – Feeding the World	Unit 5 – Pollution	Unit 6 – ESI Research
CCSS: Conceptual Category – Number and Quantity							
The Real Number System	• Extend the properties of exponents to rational exponents.						
	• Use properties of rational and irrational numbers.						
Quantities	• *Reason quantitatively and use units to solve problems.			X	X	X	
The Complex Number System	• Perform arithmetic operations with complex numbers.						
	• Represent complex numbers and their operations on the complex plane.						
	• Use complex numbers in polynomial identities and equations.						
Vector and Matrix Quantities	• Represent and model with vector quantities.						
	• Perform operations on vectors.						
	• Perform operations on matrices and use matrices in applications.						
CCSS: Conceptual Category – Algebra							
Seeing Structure in Expressions	• *Interpret the structure of expressions.						
	• *Write expressions in equivalent forms to solve problems.						
Arithmetic with Polynomials and Rational Expressions	• Perform arithmetic operations on polynomials.						
	• Understand the relationship between zeros and factors of polynomials.						
	• Use polynomial identities to solve problems.						
Creating Equations	• Rewrite rational expressions.						
	• *Create equations that describe numbers or relationships.						
Reasoning with Equations and Inequalities	• Understand solving equations as a process of reasoning & explain the reasoning.		X	X			
	• Solve equations and inequalities in one variable.		X				
	• Solve systems of equations.				X		
	• *Represent and solve equations and inequalities graphically.				X		

		Unit 1 – Issue Analysis	Unit 2 – Biodiversity	Unit 3 – Energy, Technology, and Society	Unit 4 – Feeding the World	Unit 5 – Pollution	Unit 6 – ESI Research
CCSS: Conceptual Category – Statistics and Probability							
Interpreting Categorical and Quantitative Data	• *Summarize, represent, and interpret data on a single count or measurement variable.		X	X		X	
	• *Summarize, represent, and interpret data on two categorical and quantitative variables.					X	
	• *Interpret linear models.						
Making Inferences and Justifying Conclusions	• *Understand and evaluate random processes underlying statistical experiments.		X				
	• *Make inferences and justify conclusions from sample surveys, experiments, and observational studies.	X	X	X		X	
Conditional Probability and the Rules of Probability	• *Understand independence and conditional probability and use them to interpret data.						
	• *Use the rules of probability to compute probabilities of compound events in a uniform probability model.						
Using Probability to Make Decisions	• *Calculate expected values and use them to solve problems.			X		X	
	• *Use probability to evaluate outcomes of decisions.		X	X			