



**Food for the Future  
Next Generation Sunshine State Standards At a Glance**

Grade	Subject	Benchmark Code	Benchmark	What is Plant Breeding?	History of Plant Breeding	Plant Breeding Genetics	Plant Breeding Ethics	Food for the Future
6 <sup>th</sup> Grade	Health	HE.6.C.1.4	Recognize how heredity can affect personal health.			●		
	Science	SC.6.N.1.4	Discuss, compare, and negotiate methods used, results obtained, and explanations among groups of students conducting the same investigation.					●
		SC.6.N.1.5	Recognize that science involves creativity, not just in designing experiments, but also in creating explanations that fit evidence.		●			●
		SC.6.N.2.3	Recognize that scientists who make contributions to scientific knowledge come from all kinds of backgrounds and possess varied talents, interests, and goals.		●			
	Social Studies	SS.6.W.2.1	Compare the lifestyles of hunter-gatherers with those of settlers of early agricultural communities.		●			
		SS.6.W.2.2	Describe how the developments of agriculture and metallurgy related to settlement, population growth, and the emergence of civilization.		●			
7 <sup>th</sup> Grade	Health	HC.7.C.1.4	Describe how heredity can affect personal health.			●		
	Science	SC.7.L.16.1	Understand and explain that every organism requires a set of instructions that specifies its traits, that this hereditary information (DNA) contains genes located in the chromosomes of each cell, and that heredity is the passage of these instructions from one generation to another.		●	●		
		SC.7.L.16.2	Determine the probabilities for genotypes and phenotype combinations using Punnett squares and pedigrees.			●		
		SC.7.L.16.4	Recognize and explore the impact of biotechnology on the individual, society, and the environment.	●	●		●	
		SC.7.N.2.1	Identify and instance from the history of science in which scientific knowledge has changed when new evidence or new interpretations are encountered.		●			
	Social	SS.7.C.2.12	Develop a plan to resolve a state or local problem by					●



	Studies		researching public policy alternatives, identify appropriate government agencies to address the issue, and determining a course of action.						
		SS.7.C.2.13	Examine multiple perspectives on public and current issues.						●
8 <sup>th</sup> Grade	Health	HE.8.C.1.4	Explore how heredity and family history can affect personal health.			●			
		HE.8.C.2.6	Analyze the use of technology on personal and family health.						●
	Science	SC.8.N.4.1	Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels.						●
		SC.8.N.4.2	Explain how political, social, and economic concerns can affect science, and vice versa.		●		●		●
	Social Studies	SS.8.A.4.6	Identify technological improvements that contributed to industrial growth.		●			●	
		SS.8.E.2.1	Analyze contributions of entrepreneurs, inventors, and other key individuals from various gender, social, and ethnic backgrounds in the development of the United States economy.		●				
		SS.8.E.2.3	Assess the role of Africans and other minority groups in the economic development of the United States.		●				
SS.8.E.3.1		Evaluate domestic and international interdependence.						●	
9 <sup>th</sup> -12 <sup>th</sup> Grade	Science	SC.912.L.14.6	Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health.				●		
		SC.912.L.16.2	Discuss observed inheritance patterns caused by various modes of inheritance, including dominant, recessive, dominant, sex-linked, polygenic, and multiple alleles.			●			
		SC.912.L.16.4	Explain how mutations in the DNA sequence may or may not result in phenotypic change. Explain how mutations in gametes may result in phenotypic changes in offspring.			●			
		SC.912.L.16.9	Explain how and why the genetic code is universal and common to almost all organisms.			●			
		SC.912.L.16.14	Describe the cell cycle, including the process of mitosis. Explain the role of mitosis in the formation of new cells and its importance in maintaining chromosome number			●			



			during asexual reproduction.					
		SC.912.L.16.17	Compare and contrast mitosis and meiosis and related to the processes of sexual and asexual reproduction and their consequences for genetic variation.			●		
		SC.912.L.17.8	Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and introduction of invasive, non-native species.	●				●
		SC.912.L.17.12	Discuss the political, social, and environmental consequences of sustainable use of land.	●				
		SC.912.L.17.18	Describe how human population size and resource use relate to environmental quality.					●
		SC.912.N.2.5	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.	●	●			
		SC.912.N.4.1	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.				●	
		SC.912.N.4.2	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.	●			●	●
	Social Studies	SS.912.A.1.5	Evaluate the validity, reliability, bias, and authenticity of current events and Internet resources.					●
		SS.912.A.1.6	Use case studies to explore social, political, legal, and economic relationships in history.	●			●	●
		SS.9.12.E.2.3	Research contributions of entrepreneurs, inventors, and other key individuals from various gender, social, and ethnic backgrounds in the development of the United States.		●			
		SS.912.G.5.3	Analyze case studies of the effects of human use of technology on the environment of places.	●				●
		SS.912.G.5.6	Analyze case studies to predict how a change to an	●				



			environmental factor can affect an ecosystem.					
		SS.912.W.9.1	Identify major scientific figures and breakthroughs of the 20 <sup>th</sup> century, and assess their impact on contemporary life.		•			