

MISSISSIPPI ALIGNMENT FOR NIH SUPPLEMENT HUMAN GENETIC VARIATION

<b>HUMAN GENETIC VARIATION</b>		
<b>Mississippi Competencies for Biology</b>		
<b>Activity</b>	<b>Competency</b>	<b>Description</b>
2, 3, 4	1.c	Apply the components of scientific processes and methods in the classroom and laboratory investigations.
2, 3, 4	1.d	Communicate results of scientific investigations in oral, written, and graphic form.
2	2.a	Identify the characteristics of living things.
2, 3, 5	5.b	Identify and illustrate how changes in DNA cause mutations and evaluate the significance of these changes.
2, 5	5.f	Examine inheritance patterns using current technology (gel electrophoresis, pedigrees, karyotypes).
1, 2, 3, 4	6.f	Analyze the results of natural selection in speciation, diversity, adaptation, behavior and extinction.
	7.e	Examine long and short-term changes to the environment as a result of natural events and human actions.
<b>Mississippi Competencies for Pre-Algebra</b>		
<b>Activity</b>	<b>Competency</b>	<b>Description</b>
1, 2, 3, 4	1.b	Solve real-life problems involving addition, subtraction, multiplication, and division of rational numbers (i.e., integers, decimals, fractions, and mixed numbers.)
1, 2, 3, 4	1.d	Add, subtract, multiply, and divide rational numbers (i.e., integers, decimals, fractions, and mixed numbers) with and without calculators.
2	1.i	Solve proportions, including unit rate, scale, and measurement. Apply proportional reasoning to real-world problems.
1, 2, 3	5.a	Construct and interpret histograms, bar graphs, line graphs, frequency tables, circle graphs, stem-and-leaf plots, box-and-whisker plots, and scatter plots from given data.
1, 2, 3, 4	5.b	Predict patterns or generalize trends based on given data.
1, 3	5.c	Explain the role of fair and bias sampling and its effect on data.
1, 2, 3, 4	5.g	Collect data. Select and justify the most appropriate representations to organize, record and communicate data.
<b>Mississippi Competencies for Algebra I</b>		
<b>Activity</b>	<b>Competency</b>	<b>Description</b>
1, 2, 3, 4	1	Understand relationships between numbers and their properties and perform operations fluently.

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3	2.d	Explain and illustrate how a change in one variable may result in a change in another variable and apply to the concepts of independent and dependent variables.
1, 2, 3, 4	5.a	Collect, organize, graph, and interpret data sets.
<b>Mississippi Competencies for Language Arts – Grades 9 &amp; 10</b>		
<b>Activity</b>	<b>Competency</b>	<b>Description</b>
All activities	3	The student will produce, analyze, and evaluate effective communication.
All activities	3.c	The student will compose responses to literature, position papers, and expository essays in the informative mode clearly expressing a main idea thoroughly developed by relevant supporting details, which are well elaborated and sufficient in number.
All activities	4	The student will use standard English grammar, mechanics, and sentence structure to communicate.
<b>Mississippi Competencies for Comprehensive Health – Grades 9 - 12</b>		
<b>Activity</b>	<b>Competency</b>	<b>Description</b>
4	3.a	Evaluate how environmental health problems impact personal and community health.
3	3.f	Explain how drugs and medicines have affected the life span of human beings.
3	3.g	List future positive effects of drugs and medicines on society.
3, 5	7.b	Demonstrate the ability to work cooperatively when advocating for healthy individuals.