

## Curriculum Map

Subject: <b>Biology</b>	Grade Level: <b>10</b>	Sixth Week: <b>3rd</b>	Week: <b>1</b>
Instructional Focus Summary	Introduce the concepts of Mendelian genetics, punnet squares, alleles, monohybrid and dihybrid genetics.		
TEKS/SE <b>(Bolded TEKS/SE are assessed with TAKS)</b>  <u>(Power TEKS/Student Expectations are Underlined)</u>  <b>(TEKS below 80% passing on the last TAKS test)</b>	<b>Bio.6 Science concepts. The student knows the structures and functions of nucleic acids in the mechanisms of genetics.</b> <b><u>(C) identify and illustrate how changes in DNA cause mutations and evaluate the significance of these changes</u></b> <b><u>(D) compare genetic variations observed in plants and animals</u></b>		
Concepts/ Vocabulary	heredity genetics monohybrid cross true-breeding P generation F1 generation F2 generation Gregor Mendel		
Resources	Text Ch 8, Section 1		
Instructional Activities	Work monohybrid genetics problems on board to demonstrate how they are worked.		
Assessment			
Integration			
Intervention			
Extension			

<b>Subject: Biology</b>	<b>Grade Level: 10</b>	<b>Sixth Week: 3rd</b>	<b>Week: 2</b>
Instructional Focus Summary	Demonstrate how monohybrid and dihybrid genetics problems are worked.		
TEKS/SE  ( <b>Bolded TEKS/SE are assessed with TAKS</b> )  ( <u>Power TEKS/Student Expectations are Underlined</u> )  ( <b>TEKS below 80% passing on the last TAKS test</b> )	<p><b>Bio.6 Science concepts. The student knows the structures and functions of nucleic acids in the mechanisms of genetics.</b></p> <p><b>(C) identify and illustrate how changes in DNA cause mutations and evaluate the significance of these changes</b></p> <p><b><u>(D) compare genetic variations observed in plants and animals</u></b></p>		
Concepts/ Vocabulary	alleles dominant recessive homozygous heterozygous genotype phenotype law of segregation law of independent assortment punnet square test cross probability		
Resources	Text Ch 8, Section 2		
Instructional Activities	Demonstrate monohybrid and dihybrid problems. Guinea pigs, watermelons, pea plants		
Assessment			
Integration			
Intervention			
Extension			

Subject: <b>Biology</b>	Grade Level: <b>10</b>	Sixth Week: <b>3rd</b>	Week: <b>3</b>
Instructional Focus Summary	Complete dihybrid problems, introduce human dominant disorders, recessive disorders, sex-linked recessive disorders		
<p>TEKS/SE</p> <p><b>(Bolded TEKS/SE are assessed with TAKS)</b></p> <p><u>(Power TEKS/Student Expectations are Underlined)</u></p> <p><b>(TEKS below 80% passing on the last TAKS test)</b></p>	<p><b>Bio.6 Science concepts. The student knows the structures and functions of nucleic acids in the mechanisms of genetics.</b></p> <p><b><u>(C) identify and illustrate how changes in DNA cause mutations and evaluate the significance of these changes</u></b></p> <p><b><u>(D) compare genetic variations observed in plants and animals</u></b></p>		
Concepts/ Vocabulary	<p>pedigree sex-linked recessive dominant recessive Sickle cell anemia Tay-Sachs Cystic Fibrosis Hemophilia Huntington's</p>		
Resources	Text Ch. 8, Section 3 Supplemental worksheets		
Instructional Activities			
Assessment			
Integration			
Intervention			
Extension			

<b>Subject:</b> Biology	<b>Grade Level:</b> 10	<b>Sixth Week:</b> 3rd	<b>Week:</b> 4
Instructional Focus Summary	Continue pedigree studies of human disorders, multiple alleles codominance blood genetics.		
TEKS/SE  ( <b>Bolded TEKS/SE are assessed with TAKS</b> )  (Power TEKS/Student Expectations are Underlined)  ( <b>TEKS below 80% passing on the last TAKS test</b> )	<p><b>Bio.6 Science concepts. The student knows the structures and functions of nucleic acids in the mechanisms of genetics.</b></p> <p><b>(C) identify and illustrate how changes in DNA cause mutations and evaluate the significance of these changes</b></p> <p><b><u>(D) compare genetic variations observed in plants and animals</u></b></p>		
Concepts/ Vocabulary	Polygenic inheritance incomplete dominance multiple alleles codominance human genetic disorders		
Resources	Text Ch 8, Section 3 & 4		
Instructional Activities	Worksheets Lab work on blood genetics		
Assessment			
Integration			
Intervention			
Extension			

Subject: <b>Biology</b>	Grade Level: <b>10</b>	Sixth Week: <b>3rd</b>	Week: <b>5</b>
Instructional Focus Summary	Complete study of pedigrees and genetic disorders. Prepare for test over Ch. 7 and review TEKS		
TEKS/SE <b>(Bolded TEKS/SE are assessed with TAKS)</b>  <u>(Power TEKS/Student Expectations are Underlined)</u>  <b>(TEKS below 80% passing on the last TAKS test)</b>	<b>Bio.6 Science concepts. The student knows the structures and functions of nucleic acids in the mechanisms of genetics.</b> <b>(C) identify and illustrate how changes in DNA cause mutations and evaluate the significance of these changes</b> <u><b>(D) compare genetic variations observed in plants and animals</b></u>		
Concepts/ Vocabulary	polygenic inheritance incomplete dominance multiple alleles codominance human genetic disorders		
Resources	Text Ch. 8 Section 1, 2, 3, 4		
Instructional Activities			
Assessment	Test over Ch. 8		
Integration			
Intervention			
Extension			

Subject: <b>Biology</b>	Grade Level: <b>10</b>	Sixth Week: <b>3rd</b>	Week: <b>6</b>
Instructional Focus Summary	Ch. 11 Genetic Engineering principles Ch. 12 The Origins of Life		
<p>TEKS/SE</p> <p><b>(Bolded TEKS/SE are assessed with TAKS)</b></p> <p><u>(Power TEKS/Student Expectations are Underlined)</u></p> <p><b>(TEKS below 80% passing on the last TAKS test)</b></p>	<p><b>Bio.6 Science concepts. The student knows the structures and functions of nucleic acids in the mechanisms of genetics.</b></p> <p><b>(A) describe components of deoxyribonucleic acid (DNA) and illustrate how information for specifying the traits of an organism is carried in the DNA</b></p> <p><b>(B) explain replication transcription and translation using models of DNA and ribonucleic acid (RNA)</b></p> <p><b>(C) identify and illustrate how changes in DNA cause mutations and evaluate the significance of these changes</b></p> <p><b><u>(D) compare genetic variations observed in plants and animals</u></b></p> <p><u>Bio.3 Scientific processes. The student uses critical thinking and scientific problem solving to make informed decisions.</u></p> <p><u>(E) evaluate models according to their adequacy in representing biological objects or events</u></p>		
Concepts/ Vocabulary	<p>genetic engineering</p> <p>recombinant DNA</p> <p>restriction enzymes</p> <p>vector</p> <p>plasmids</p> <p>gene cloning</p> <p>electrophoresis</p> <p>Human genome project</p> <p>radiometric dating</p> <p>half-life</p> <p>primordial soup model</p> <p>bubble model</p>		
Resources	Text Ch. 11 & 12 worksheets		
Instructional Activities	Worksheets Paper lab worksheets		
Assessment			
Integration			

Intervention	
Extension	