

2011-2012 Alabama Seventh Grade Course of Study

Alignment to Science Modules, GLOBE, and “Fill in the Holes” Activities

Course of Study Objective	Science Module, Lesson GLOBE, Lesson “Fill in the Holes” Activity
1. Describe characteristics common to living things, including growth and development, reproduction, cellular organization, use of energy, exchange of gases, and response to the environment.	<u>OMM</u> -Lessons 1, 2, 3, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 <u>Hum. Bod.</u> -Lessons 10, 11, 12, 13
<ul style="list-style-type: none"> • Identifying homeostasis as the process by which an organism responds to its internal or external environment 	<u>Hum. Bod.</u> -Lesson 22
<ul style="list-style-type: none"> • Predicting how an organism’s behavior impacts the environment 	<u>OMM</u> -Lessons 2, 4, 5, 6, 12, 13
<ul style="list-style-type: none"> • Identifying unicellular organisms, including bacteria and protists, by their methods of locomotion, reproduction, ingestion, excretion, and effects on other organisms 	<u>OMM</u> -Lessons 1, 11, 12, 15 <u>Hum. Bod.</u> -Lesson 9
<ul style="list-style-type: none"> • Identifying the structure of a virus 	<u>Hum. Bod.</u> -Lesson 9
2. Identify functions of organelles found in eukaryotic cells, including the nucleus, cell membrane, cell wall, mitochondria, chloroplasts, and vacuoles Example: mitochondria releasing energy for use in cellular respiration	<u>OMM</u> -Lessons 7, 10, 11
<ul style="list-style-type: none"> • Identifying components of the cell theory 	<u>OMM</u> -Lesson 7
<ul style="list-style-type: none"> • Identifying cells as prokaryotic or eukaryotic 	Fill in the Hole—Cell Type
<ul style="list-style-type: none"> • Listing the sequence of the mitotic cell cycle 	<u>OMM</u> - Lesson 8
3. Relate major tissues and organs to the skeletal, circulatory, reproductive, muscular, respiratory, nervous, and digestive systems to their functions.	<u>Hum. Bod.</u> -Lessons 1,2,3,4,5,6,7,10, 11,14,15,16,18,19,20,21,22
<ul style="list-style-type: none"> • Arranging in order the organizational levels of the human body from the cell through organ systems 	<u>Hum. Bod.</u> - Lesson 1
4. Describe organisms in the six-kingdom classification system by their characteristics	<u>OMM</u> -Lessons 1,2,3,6,7,11,13,14, 15,16,17,18,19
<ul style="list-style-type: none"> • Recognizing genus and species as components of a scientific name 	<u>OMM</u> -Lessons 1,3
<ul style="list-style-type: none"> • Identifying contributions of Aristotle and Linnaeus to the early history of taxonomy 	<u>OMM</u> -Lesson 1

Course of Study Objective	Science Module, Lesson GLOBE, Lesson “Fill in the Holes” Activity
5. Identify major differences between plants and animals, including internal structures, external structures, methods of locomotion, methods of reproduction, and stages of development	<u>OMM</u> - Lessons 1, 7
<ul style="list-style-type: none"> Describing the processes of photosynthesis and cellular respiration 	<u>OMM</u> - Lesson 10 <u>Hum. Bod.</u> -Lesson 12, 13
6. Describe evidence of species variation due to climate, changing landforms, interspecies interaction, and genetic mutation. Examples: fossil records over geologic time, rapid bacterial mutations due to environmental pressures	<u>OMM</u> -Lessons 11, 13
7. Describe biotic and abiotic factors in the environment Examples: biotic-plants and animals; abiotic-climate, water, soil	<u>OMM</u> -Lessons 4, 5, 6, 9, 10, 11, 12, 13, 14, 15, 16, 18
<ul style="list-style-type: none"> Classifying organisms as autotrophs or heterotrophs 	Fill in the Hole –Autotrophs and Heterotrophs
<ul style="list-style-type: none"> Arranging the sequence of energy flow in an ecosystem through food webs, food chains, and energy pyramids 	<u>OMM</u> -Lessons 12
8. Describe the function of chromosomes	<u>OMM</u> -Lesson 8, 9, 19
<ul style="list-style-type: none"> Identifying genes as parts of chromosomes that carry genetic traits 	<u>OMM</u> -Lessons 8, 19
9. Identify the process of chromosome reduction in the production of sperm and egg cells during meiosis	<u>OMM</u> - Lesson 9, 19
10. Identify differences between deoxyribonucleic acid (DNA) and ribonucleic acid (RNA). Example: DNA-double helix, contains thymine; RNA-single stranded, contains uracil	Hudson-Alpha Institute for Biotechnology-Genetics Module
<ul style="list-style-type: none"> Identifying Watson and Crick as scientists who discovered the shape of the DNA molecule 	<u>Hum. Bod.</u> - Lesson 1
11. Identify Mendel’s laws of genetics	<u>OMM</u> -Lessons 19
<ul style="list-style-type: none"> Recognizing Down’s syndrome and sickle cell anemia as inherited genetic disorders 	Hudson-Alpha Institute for Biotechnology-Genetics Module
<ul style="list-style-type: none"> Using a monohybrid Punnett square to predict the probability of traits passed from parents to offspring 	<u>OMM</u> -Lesson 19