2009-2010 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.	OMM-Lessons 1, 2, 3, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 Hum. Bod.-Lessons 10, 11, 12, 13
• Identifying homeostasis as the process by which an organism responds to its internal or external environment	Hum. Bod.-Lesson 22
• Predicting how an organism's behavior impacts the environment	OMM-Lessons 2, 4, 5, 6, 12, 13
• Identifying unicellular organisms, including bacteria and protests, by their methods of locomotion, reproduction, ingestion, excretion, and effects or other organisms	OMM-Lessons1, 11, 12, 15 Hum. Bod.-Lesson 9
• Identifying the structure of a virus	Hum. Bod.-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	OMM-Lessons 7, 10, 11
• Identifying components of the cell theory	OMM-Lesson 7
• Identifying cells as prokaryotic or eukaryotic	Fill in the Hole—Cell Type
• Listing the sequence of the mitotic cell cycle	OMM- Lesson 8
3. Relate major tissues and organs to the skeletal, circulatory, reproductive, muscular, respiratory, nervous, and digestive systems to their functions.	Hum. Bod.-Lessons 1,2,3,4,5,6,7,10, 11,14,15,16,18,19,20,21,22
• Arranging in order the organizational levels of the human body from the cell through organ systems	Hum. Bod.- Lesson 1
4. Describe organisms in the six-kingdom classification system by their characteristics	OMM-Lessons 1,2,3,6,7,11,13,14, 15,16,17,18,19
• Recognizing genus and species as components of a scientific name	OMM-Lessons 1,3
• Identifying contributions of Aristotle and Linnaeus to the early history of taxonomy	OMM-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	OMM- Lessons 1, 7
• Describing the processes of photosynthesis and cellular respiration	OMM- Lesson 10 Hum. Bod.-Lesson 12, 13
6. Describe evidence of species variation due to climate, changing landforms, inerspecies interaction, and genetic mutation. Examples: fossil records over geologic time, rapid bacterial mutations due to environmental pressures	OMM-Lessons 11, 13
7. Describe biotic and abiotic factors in the environment Examples: biotic-plants and animals; abiotic-climate, water, soil	OMM-Lessons 4, 5, 6, 9, 10, 11, 12, 13, 14, 15, 16, 18
• Classifying organisms as autotrophs or heterotrophs	Fill in the Hole –Autotrophs and Heteroprophs
• Arranging the sequence of energy flow in an ecosystem through food webs, food chains, and energy pyramids	OMM-Lessons 12
8. Describe the function of chromosomes	OMM-Lesson 8, 9, 19
• Identifying genes as parts of chromosomes that carry genetic traits	OMM-Lessons 8, 19
9. Identify the process of chromosome reduction in the production of sperm and egg cells during meiosis	OMM- Lesson 9, 19
10. Identify differences between deoxyribonucleic acid (DNA) and ribonucleic acid (RNA). Example: DNA-double helix, contains thymine; TNA-single stranded, contains uracil	Hudson-Alpha Institute for Biotechnology-Genetics Module
• Identifying Watson and Crick as scientists who discovered the shape of the DNA molecule	Hum. Bod.- Lesson 1
11. Identify Mendel's laws of genetics	OMM-Lessons 19
• Recognizing Down's syndrome and sickle cell anemia as inherited genetic disorders	Hudson-Alpha Institute for Biotechnology-Genetics Module
• Using a monohybrid Punnett square to predict the probability of traits passed from parents to offspring	OMM-Lesson 19