D.H.H. Lengel Middle School Curriculum
Grade 5 science
Length of Block:
Blocks per cycle:
Length of Course: Yearly

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Description of Course: The goal of this class is to expose students to the topics in midlevel science. Students will have the opportunity to be introduced to a variety of topics in earth science, life science, and physical science. Introductory information in these areas will help prepare them for the in depth studies in these topics in subsequent years.

Core Resources Available for Teachers for Instruction:

Interactive Science: Grade 5

Core Resources Available for Teachers for Instruction:

Interactive Science: 5th Grade

Parent

Marking Period	Unit Name	Objectives	Standards	Vocabulary	Assessments	Timeline
1	**Ch 1:Nature of science**	Students will understand what a scientist is and how they investigate. Students will learn the steps of the scientific method, how to collect/interpret data, and how they give supporting conclusions.		**Scientific Method models**	**Test**	**2 wks**
1	**Ch 2: Design and Function**	Students will understand modern technology. Students will understand the design process that scientists use to develop new technology.		**Technology Microchip Prosthetic Prototype**	**Test**	**2wks**

1	**Ch 3: Classifying Organisms**	Students will know what tools are used to classify organisms.		**Dichotomous Key**	**Quiz**	**2wks**
1	**Ch 4: Growth and Survival**	Students will know that food provides animals with materials needed for body growth and repair. Students will know that food provides animals with energy needed for body warmth and movement. Students will know that plants acquire their material for growth primarily from air and water. Students will know that plants and animals alike take in gases and water and release waste matter. Students will understand that organisms will only survive in an environment where their needs are met.	3.3.7A 3.2.7B 3.1.7A 3.1.7C 3.1.7.A8 3.1.6.A2 S8.B.3.1.1 S8.B.3.1.3 S8.A.3.2.1 S8.A.3.2.3	**Food chain** **Food web** **Argument** **Evidence** **Minerals** **Ecosystems** **Researchable species** **Web of life**	**Food web activity** **Test**	**2wks**
2	**Ch 5: Structure and Function**	Students will understand how the characteristics of one generation are passed onto the next generation, including how variation occurs even among			**Quiz**	**3wks**

		siblings. Students will understand how their are so many similarities among organisms, yet such a vast amount of different plants, animals, and microorganisms.				
2	**Ch 6: Ecosystems**	Students will understand that a healthy ecosystem is one with a variety of species to meet the needs of a stable web of life. Students will understand that new species can damage the balance of an ecosystem. Students will understand that matter cycles among plants, animals, and microbes. Students will understand how and why organisms interact with their environment and what is the effect of their actions.	3.3.7A 3.2.7B 3.1.7B 3.3.7.C 3.1.6.A2 S8.B.3.1.1 S8.B.3.1.2 S8.B.3.1.3	**Ecosystem** **Transfer energy** **Invasive species** **Noninvasive species** **System** **Cycles** **Matter** **Microbes** **Decomposers** **Decomposition**	**Test**	**2wks**
2	**Ch 7: The Water Cycle and Weather**	Students will understand how winds and clouds in the atmosphere interact with landforms to	3.5.7C S8.D.2.1 S8.D.2.1.1 S8.D.2.1.2	**weather**	**Quiz**	**3wks**

		determine patterns of weather.	S8.D.2.1.3			
3	**Ch 8: Earth Surface**	Students will understand that all Earth's processes are the result of energy flowing and matter cycling. All energy is derived from the sun. This flow/cycle is responsible for chemical and physical changes among organisms. Students will know that the Earth's major systems are: geosphere, hydrosphere, and biosphere. Students will know that the ocean is important for supporting a variety of ecosystems, organisms, landforms, and climate. Students will know that most freshwater is in glaciers or underground, and the remainder can be be in streams, lakes, wetlands, and the atmosphere. Students will understand that water is in a continuous cycle.	3.4.7.B 3.4.7.A 3.1.7.A 3.1.7.B 3.1.7.E 3.1.7.C 3.2.7.A 3.2.7.B 3.2.7.C 3.2.7.D 3.5.7.D 3.5.7.B 3.8.7.B 3.3.4.A4 3.3.4.A5 3.3.6.A4 3.3.5.A4 3.3.6.A4 3.3.8.A4 4.3.10.A S8.A.1.1 S8.A.1.3 S8.A.2.1 S8.A.2.2 S8.A.3.1 S8.A.3.2 S8.A.3.1.4 S8.D.1.1.1 S8.D.1.3 S8.D.1.3.4 S8.A.1.2	Atmosphere Biosphere Chemical Change Energy flow Geosphere Hydrosphere Model Physical change Distribution Precipitation Transpiration Water cycle Water system Human impact Research Resources	**Test**	**4wks**

		Students will understand that human activities have an impact on the environment.	S8.D.1.3.1 S8.D.1.1 S8.B.3.3 S8.C.2.2.3			
3	**Ch 9: Earth and Space**	Students will understand the sun is a star. Students will understand that stars range greatly based upon their distance from Earth. Students will understand the orbits of Earth around the sun, the moon around the Earth, together with the rotation of Earth on its axis.	3.3.8.B 3.3.8.B1 3.3.5.B1 S8.D.3.1 S8.D.3.1.1 S8.D.3.1.3	Relative distance Stars Sun Apparent brightness Earth Data Graphical display Patterns Representation Shadows	**Test**	**3wks**
4	**Ch 10: Properties of Matter**	Students will understand when two or more different substances are mixed, a new substance with different properties may be formed. Students will understand that matter of any type can be subdivided into particles that are too small to be seen, but the matter still exists. Students will understand that measurements of a variety of properties can be	3.4.7A 3.2.7B 3.1.7B 3.1.7C 3.2.5.A6 3.2.3.A4 3.2.6.A4 3.2.7.A4 S8.C.1.1.3 S8.A.1.3 S8.A.2.2 S8.A.2.1 S8.C.1.1.2 S8.C.1.1.1	Chemical Change Physical Change Mass Temperature Volume Condensation Evaporation Matter Particles Hardness Mohs scale Porosity Properties Solubility Streak test Conservation of Mass	**Test**	**3wks**

		used to identify materials. Students will understand that the amount of matter is conserved when it changes form.		Mixtures Compounds Dissolve		
4	**Ch 11: Forces and Motion**	Students will understand the impact of gravity. Students will understand and predict interactions between objects.	3.4.7C 3.4.7D 3.3.6.B1 3.3.7.B1 S8.C.3.1 S8.D.3.1 S8.D.3.1.1 S8.D.3.1.2	Gravitational Force	**Test**	**2wks**
4	**Ch 12: Changing Forms of Energy**	Students will understand how energy is transferred and conserved. Students will know how waves are used to transfer energy and information.	4.1.7C S8.B.3.1.1 S8.B.3.1.2 S8.B.3.1.3 S8.C.2.1 S8.C.2.1.1 S8.C.2.2.1	Energy flow Flow Chart Model Photosynthesis	**Test**	**2wks**

Teachers will also use articles with science topics in their preparation for state standard assessments.