



CW Middle School

Science 7 B

1. Reproduction of Organisms-Sexual and Asexual Reproduction (25.00%)

Learning Targets

1.1 I can develop and use models to compare mitosis and meiosis to describe why asexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation.

Learning Target	Descriptor	Definition
4	Proficient	I can develop and use models to compare mitosis and meiosis to describe why asexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation.
3	Developing	I can create of model to illustrate and communicate the phases of meiosis.
2	Basic	I can outline the types of asexual reproduction and discuss the advantages and the disadvantages of for each.
1	Minimal	I can define vocabulary related to reproduction of organisms.
0	No Evidence	No evidence shown.

2. Heredity: Inheritance and Variation of Traits (25.00%)

Learning Targets

2.1 I can summarize Mendel's experimental design and predict the outcomes of first and second generation crosses

Learning Target	Descriptor	Definition
4	Proficient	I can summarize Mendel's experimental design and predict the outcomes of first and second generation crosses
3	Developing	I can use empirical evidence and mathematical reasoning to summarize Mendel's conclusions.
2	Basic	I can outline Mendel's experimental methods.
1	Minimal	I can define vocabulary related to genetics.
0	No Evidence	No evidence shown.

2.2 I can use a Punnett Square and mathematical reasoning to model how inheritance is predicted.

Learning Target	Descriptor	Definition
4	Proficient	I can use a Punnett Square and mathematical reasoning to model how inheritance is predicted.
3	Developing	I can use a pedigree to show how traits are inherited.
2	Basic	I can identify and explain patterns of inheritance that do not follow Mendel's model and cite examples of how the environment influences gene expression.



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Learning Target	Descriptor	Definition
1	Minimal	I can define vocabulary related to understanding inheritance.
0	No Evidence	No evidence shown.

2.3 I can create an analogy to model why structural changes to genes (mutations) located on chromosomes may affect the structure and function of an organism.

Learning Target	Descriptor	Definition
4	Proficient	I can create an analogy to model why structural changes to genes (mutations) located on chromosomes may affect the structure and function of an organism.
3	Developing	I can summarize the results of changes made to DNA base pair sequencing relating it to natural selection.
2	Basic	I can identify and summarize several types of DNA mutations.
1	Minimal	I can define mutation.
0	No Evidence	No evidence shown.

2.4 I can use a model to illustrate the structure, function and replication of DNA in the process of translating proteins.

Learning Target	Descriptor	Definition
4	Proficient	I can use a model to illustrate the structure, function and replication of DNA in the process of translating proteins.
3	Developing	I can model and summarize DNA, DNA replication and RNA transcription.
2	Basic	I can model a nucleotide and identify the nitrogen bases of DNA and RNA.
1	Minimal	I can define vocabulary related to DNA and genes.
0	No Evidence	No evidence shown.

3. Environment and Change over Time- Biological Evolution: Unity, Diversity, Natural Selection and Adaptation. (25.00%)

Learning Targets

3.1 I can analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout history on Earth.

Learning Target	Descriptor	Definition
4	Proficient	I can analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout history on Earth.



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Learning Target	Descriptor	Definition
3	Developing	I can use fossil record data to justify that extinctions are common and infer that environmental change is a major driving force of these events.
2	Basic	I can relate dating techniques, the fossil record and the law of superposition to the development of the geologic time scale.
1	Minimal	I can identify several fossil types and describe the ways in which they form.
0	No Evidence	No evidence shown.

3.2 I can give examples of how natural selection and adaptations explains how genetic variation in a population increases some individuals' probability to survive.

Learning Target	Descriptor	Definition
4	Proficient	I can give examples of how natural selection and adaptations explains how genetic variation in a population increases some individuals' probability to survive.
3	Developing	I can connect Darwin's theory of descent with modification to the mechanism of change-(natural selection).
2	Basic	I can answer the question "who was Charles Darwin?"
1	Minimal	I can define vocabulary to natural selection and evolution.
0	No Evidence	No evidence shown.

3.3 I can use mathematical representations to support explanations of how natural selection may lead to increases and decreases of specific traits in populations over time.

Learning Target	Descriptor	Definition
4	Proficient	I can use mathematical representations to support explanations of how natural selection may lead to increases and decreases of specific traits in populations over time.
3	Developing	I can use a mathematical model to define evolution as a change in allelic frequency over time.
2	Basic	I can outline the Hardy-Weinberg principle and relate it to the process of evolution and natural selection.
1	Minimal	I can define vocabulary related to natural selection and evolution.
0	No Evidence	No evidence shown.

3.4 I can apply scientific ideas to construct an explanation for the anatomical similarities and differences among modern organisms and fossil organisms to infer evolutionary relationships.

Learning Target	Descriptor	Definition
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Learning Target	Descriptor	Definition
4	Proficient	I can apply scientific ideas to construct an explanation for the anatomical similarities and differences among modern organisms and fossil organisms to infer evolutionary relationships.
3	Developing	I can define transitional fossil, recognize that archaeopteryx and Tiktaalik as being transitional fossils and conclude that they offer biological support to the theory of evolution.
2	Basic	I can cite examples of biological evolution.
1	Minimal	I can define vocabulary related to biological evolution.
0	No Evidence	No evidence shown.

3.5 I can research reliable sources to evaluate information about how technology has influenced the inheritance of desired traits.

Learning Target	Descriptor	Definition
4	Proficient	I can research reliable sources to evaluate information about how technology has influenced the inheritance of desired traits.
3	Developing	I can define and give examples of selective breeding, relate selective breeding to artificial selection, and infer that selective breeding supports the theory of biological evolution.
2	Basic	I can give examples of gene modification, animal husbandry, and gene therapy.
1	Minimal	I can define genetic modification, animal husbandry, and gene therapy.
0	No Evidence	No evidence shown.

4. Human Body Systems (25.00%)

Learning Targets

4.1 I can connect and communicate how the human muscular system and human skeletal system work together.

Learning Target	Descriptor	Definition
4	Proficient	I can connect and communicate how the human muscular system and human skeletal system work together.
3	Developing	I can discover how the skeletal system and muscular system enables the body to move by completing a journal on the previous mentioned systems from a power point presentation.
2	Basic	I can identify major muscles and bones by completing a model of the human skeletal system and by labeling a diagram of the human muscular system.
1	Minimal	I can define vocabulary related to the muscular and skeletal systems.
0	No Evidence	No evidence shown.



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4.2 I can connect and communicate how the muscular system, respiratory system, and the circulatory system work together.

Learning Target	Descriptor	Definition
4	Proficient	I can connect and communicate how the muscular system, respiratory system, and the circulatory system work together.
3	Developing	I can discover how the respiratory and circulatory systems work together by completing a journal for a power point presentation for the previous mentioned systems, by labeling a lung diagram, and by sketching a human heart showing blood circulation.
2	Basic	I can create a pulse-o-meter to indirectly observe heart rate and create a model of a human lung to demonstrate how the muscular system and the respiratory system work together.
1	Minimal	I can define vocabulary related to the respiratory and circulatory systems.
0	No Evidence	No evidence shown.

4.3 I can identify and communicate the function of the digestive system.

Learning Target	Descriptor	Definition
4	Proficient	I can identify and communicate the function of the digestive system.
3	Developing	I can discover how the digestive system works by completing a journal from a power point presentation, labeling a diagram of the digestive system, and completing a Journal of a Hamburger.
2	Basic	I can create a simple model of the digestive system.
1	Minimal	I can define vocabulary related to the digestive system.
0	No Evidence	No evidence shown.

4.4 I can relate the integumentary system to the respiratory system and circulatory system to justify how the skin and hair help to maintain homeostasis.

Learning Target	Descriptor	Definition
4	Proficient	I can relate the integumentary system to the respiratory system and circulatory system to justify how the skin and hair help to maintain homeostasis.
3	Developing	I can discover how the integumentary system functions by completing a journal from a power point presentation on the integumentary system.
2	Basic	I can create a model of the structure of the skin and explain the function of the skin and hair.
1	Minimal	I can define vocabulary related to the integumentary system.
0	No Evidence	No evidence shown.

4.5 I can identify and summarize how the four body systems that function to remove wastes from the body.



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Learning Target	Descriptor	Definition
4	Proficient	I can identify and summarize how the four body systems that function to remove wastes from the body.
3	Developing	I can discover how the body removes wastes by completing a journal from a power point presentation on the excretory system.
2	Basic	I can build a model of a filtration system and identify the major organs of the excretory system.
1	Minimal	I can define vocabulary related to excretion in the human body.
0	No Evidence	No evidence shown.

4.6 I can summarize the function of the nervous system.

Learning Target	Descriptor	Definition
4	Proficient	I can summarize the function of the nervous system.
3	Developing	I can discover how the nervous system functions, what organs are involved in nerve transmission, and what systems are involved in nerve transmission by completing a journal from a power point presentation.
2	Basic	I can participant in an activity that models how fast a nervous impulse travels through the central nervous system.
1	Minimal	I can define vocabulary related to the nervous system.
0	No Evidence	No evidence shown.

4.7 I can identify the function of the male and female reproductive system by model the sequence of events.

Learning Target	Descriptor	Definition
4	Proficient	I can identify the function of the male and female reproductive system by model the sequence of events.
3	Developing	I can summarize how the reproductive system works by completing a journal from a power point presentation.
2	Basic	I can identify and label organs of the reproductive system.
1	Minimal	I can define vocabulary related to the reproductive system.
0	No Evidence	No evidence shown.

Submitted on 2/13/2019 by Linda Krans