

MStM Science Curriculum Lesson Plan

Course: Anatomy

Grade Level: 10 - 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

A: Students can understand and apply the process and skills of scientific inquiry.

Grade Level Objective:

i. : Identify questions and concepts that guide scientific investigations.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Anatomy

Grade Level: 10 - 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

A: Students can understand and apply the process and skills of scientific inquiry.

Grade Level Objective:

ii. : Design and conduct scientific investigations.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Anatomy

Grade Level: 10 - 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

A: Students can understand and apply the process and skills of scientific inquiry.

Grade Level Objective:

iii. : Understand about scientific inquiry.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Anatomy

Grade Level: 10 - 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

A: Students can understand and apply the process and skills of scientific inquiry.

Grade Level Objective:

iv. : Use technology and mathematics to improve investigations and communications.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Anatomy

Grade Level: 10 - 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

B: Students can analyze and interpret scientific information.

Grade Level Objective:

i. : Formulate and revise scientific explanations and models using logic and evidence.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Anatomy

Grade Level: 10 - 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

B: Students can analyze and interpret scientific information.

Grade Level Objective:

ii. : Recognize and analyze alternative explanations and models.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Anatomy

Grade Level: 10 - 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

B: Students can analyze and interpret scientific information.

Grade Level Objective:

iii. : Communicate and defend a scientific argument.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Anatomy

Grade Level: 10 - 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 2: Students can understand concepts and relationships in life science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

i.: Understand and apply knowledge of the cell.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Anatomy

Grade Level: 10 - 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 2: Students can understand concepts and relationships in life science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

ii. : Understand and apply knowledge of the molecular basis of heredity.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Anatomy

Grade Level: 10 - 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 2: Students can understand concepts and relationships in life science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

iii. : Understand and apply knowledge of biological evolution.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Biology

Grade Level: 10th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

A: Students can understand and apply the process and skills of scientific inquiry.

Grade Level Objective:

i.: Identify questions and concepts that guide scientific investigations.

Instructional Strategies:

Osmosis Investigation: After a structured overview of osmosis of cells students will develop questions related to what affects osmosis. Using an egg they will perform an experiment to test their ideas. Students will need to formulate a testable hypothesis and demonstrate the logical connections between the scientific concepts guiding a hypothesis and the design of an experiment. They should demonstrate appropriate procedures, a knowledge base, and conceptual understanding of scientific investigations.

Assessment:

Formative: Peer evaluation of other groups results

Summative: Formal Lab report w/ rubric

Instructional Timeline:

Qtr. - 1

MStM Science Curriculum Lesson Plan

Course: Biology

Grade Level: 10th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

A: Students can understand and apply the process and skills of scientific inquiry.

Grade Level Objective:

ii. : Design and conduct scientific investigations.

Instructional Strategies:

Small Organism Investigation: Using a small organism of their choice (ex. cricket, triop, pill bug, mouse, fish...) students will design and conduct a scientific investigation to answer their proposed question/hypothesis.

This is very open ended giving the student a chance to demonstrate their knowledge of the scientific investigation. Designing and conducting a scientific investigation will requires the major concepts in the area being investigated, proper equipment, safety precautions, correcting methodological problems, investigations for use of technologies, clarification of ideas that guide the inquiry, and scientific knowledge obtained from sources other than the actual investigation. The investigation may also require student clarification of the question, method, controls, and variables; student organization and display of data; student revision of methods and explanations; and a public presentation of the results with a critical response from peers. Regardless of the scientific investigation performed, students must use evidence, apply logic, and construct an argument for their proposed explanations.

Assessment:

Formative: Periodic peer evaluation of their work. Teacher observation.

Summative: Formal Lab report w/ rubric. Journal

Instructional Timeline:

Qtr. - 4

MStM Science Curriculum Lesson Plan

Course: Biology

Grade Level: 10th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

A: Students can understand and apply the process and skills of scientific inquiry.

Grade Level Objective:

iii. : Understand about scientific inquiry.

Instructional Strategies:

Case Study Evaluations: Students will evaluate a wide variety of scientific investigations. Students will be able to determine that: Scientists usually inquire about how physical, living, or designed systems function. Scientists conduct investigations for a wide variety of reasons. Scientific explanations must abide by the rules of evidence, be open to possible modifications, and satisfy other criteria. Results of scientific inquiry - new knowledge and methods - emerge from different types of investigations and public communication among scientists.

Assessment:

Formative: Drill and practice

Summative: Essay and short answer

Instructional Timeline:

Qtr. - 1

MStM Science Curriculum Lesson Plan

Course: Biology

Grade Level: 10th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

A: Students can understand and apply the process and skills of scientific inquiry.

Grade Level Objective:

iv. : Use technology and mathematics to improve investigations and communications.

Instructional Strategies:

Case Study Evaluations: After studying a variety of scientific investigations students will use a variety of technologies, such as hand tools, measuring instruments, and calculators to gather sample data from different pre-set simple investigations. All gathered data will be analyzed and graphically displayed. The use of computers will also be used to collection, analysis, and display data.

The use of mathematics will be emphasized as an essential part to asking and answering questions about the natural world. It will be shown that mathematics can be used to ask questions; to gather, organize, and present data; and to structure convincing explanations.

Assessment:

Formative: Drill and practice

Summative: Graphs and short answer

Instructional Timeline:

Qtr. - 1

MStM Science Curriculum Lesson Plan

Course: Biology

Grade Level: 10th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

B: Students can analyze and interpret scientific information.

Grade Level Objective:

i.: Formulate and revise scientific explanations and models using logic and evidence.

Instructional Strategies:

Small Organism Investigation: After completing their formal report for the small organism investigation students will present their finding to a peer panel. Emphasis will be placed on data and what further investigations should take place. Student inquiries should culminate in formulating an explanation or model. Models should be physical, conceptual, and mathematical. In the process of answering the questions, the students should engage in discussions and arguments that result in the revision of their explanations. These discussions should be based on scientific knowledge, the use of logic, and evidence from their investigation.

Assessment:

Formative: Formal Lab Report

Summative: Presentation to peer panel and discussion

Instructional Timeline:

Qtr. - 4

MStM Science Curriculum Lesson Plan

Course: Biology

Grade Level: 10th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

B: Students can analyze and interpret scientific information.

Grade Level Objective:

ii. : Recognize and analyze alternative explanations and models.

Instructional Strategies:

Case Study Evaluations: Students will evaluate a wide variety of scientific investigations some of which will be over the same topic. Students will be required to compare and contrast like topics. They will need to prepare an argument by reviewing current scientific understanding, weighing the evidence, and examining the logic so as to decide which explanations and models are best. In other words, although there may be several plausible explanations, they do not all have equal weight. Students should be able to use scientific criteria to find the preferred explanations.

Assessment:

Formative: Drill and Practice

Summative: Essay and discussion

Instructional Timeline:

Qtr. - 1

MStM Science Curriculum Lesson Plan

Course: Biology

Grade Level: 10th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

B: Students can analyze and interpret scientific information.

Grade Level Objective:

iii. : Communicate and defend a scientific argument.

Instructional Strategies:

Scientific Panel Presentation: Students will have the choice between the following:

- Use knowledge of genetics to produce a pedigree for two dogs and a punnet square to determine the chances that the dog's offspring will exhibit a specific genetic disease. Make a recommendation based on your evidence regarding the benefits and risks of mating these two pets.
- Describe how bacterial and viral infectious diseases are transmitted, and explain the roles of sanitation, vaccination and antibiotic medications in the prevention and treatment of infectious diseases.

Students will need to communicate their findings to a panel of their peers. This will require a student to develop the abilities associated with accurate and effective communication. The presentation will include writing and following procedures, expressing concepts, reviewing information, summarizing data, using language appropriately, developing diagrams and charts, explaining statistical analysis, speaking clearly and logically, constructing a reasoned argument, and responding appropriately to critical comments.

Assessment:

Formative: Teacher review and observation

Summative: Presentation and project

Instructional Timeline:

Qtr. - 3

MStM Science Curriculum Lesson Plan

Course: Biology

Grade Level: 10th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 2: Students can understand concepts and relationships in life science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

i.: Understand and apply knowledge of the cell.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Biology

Grade Level: 10th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 2: Students can understand concepts and relationships in life science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

ii. : Understand and apply knowledge of the molecular basis of heredity.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Biology

Grade Level: 10th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 2: Students can understand concepts and relationships in life science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

iii. : Understand and apply knowledge of biological evolution.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Biology

Grade Level: 10th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 2: Students can understand concepts and relationships in life science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

iv. : Understand and apply knowledge of inter-dependence of organisms.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Biology

Grade Level: 10th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 2: Students can understand concepts and relationships in life science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

v. : Understand and apply knowledge of matter, energy, and organization in living systems.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Biology

Grade Level: 10th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 2: Students can understand concepts and relationships in life science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

vi. : Understand and apply knowledge of the behavior of organisms.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Biology

Grade Level: 10th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 3: Students can understand concepts and relationships in Earth/Space science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

i.: Understand and apply knowledge of energy in the earth system.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Biology

Grade Level: 10th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 3: Students can understand concepts and relationships in Earth/Space science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

ii. : Understand and apply knowledge of Geochemical cycles.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Biology

Grade Level: 10th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 3: Students can understand concepts and relationships in Earth/Space science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

iii. : Understand and apply knowledge of energy in the origin and evolution of the earth system.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Biology

Grade Level: 10th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 3: Students can understand concepts and relationships in Earth/Space science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

iv. : Understand and apply knowledge of origin and evolution of the universe.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Biology

Grade Level: 10th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 4: Students can understand concepts and relationships in physical science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

i.: Understand and apply knowledge of the structure of atoms.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Biology

Grade Level: 10th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 4: Students can understand concepts and relationships in physical science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

ii. : Understand and apply knowledge of the structure and properties of matter.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Biology

Grade Level: 10th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 4: Students can understand concepts and relationships in physical science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

iii. : Understand and apply knowledge of the structure of chemical reactions.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Biology

Grade Level: 10th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 4: Students can understand concepts and relationships in physical science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

iv. : Understand and apply knowledge of interactions of energy and matter.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Chemistry

Grade Level: 11th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

A: Students can understand and apply the process and skills of scientific inquiry.

Grade Level Objective:

i.: Identify questions and concepts that guide scientific investigations.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Chemistry

Grade Level: 11th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

A: Students can understand and apply the process and skills of scientific inquiry.

Grade Level Objective:

ii. : Design and conduct scientific investigations.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Chemistry

Grade Level: 11th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

A: Students can understand and apply the process and skills of scientific inquiry.

Grade Level Objective:

iii. : Understand about scientific inquiry.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Chemistry

Grade Level: 11th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

A: Students can understand and apply the process and skills of scientific inquiry.

Grade Level Objective:

iv. : Use technology and mathematics to improve investigations and communications.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Chemistry

Grade Level: 11th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

B: Students can analyze and interpret scientific information.

Grade Level Objective:

i.: Formulate and revise scientific explanations and models using logic and evidence.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Chemistry

Grade Level: 11th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

B: Students can analyze and interpret scientific information.

Grade Level Objective:

ii. : Recognize and analyze alternative explanations and models.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Chemistry

Grade Level: 11th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

B: Students can analyze and interpret scientific information.

Grade Level Objective:

iii. : Communicate and defend a scientific argument.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Chemistry

Grade Level: 11th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 4: Students can understand concepts and relationships in physical science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

i.: Understand and apply knowledge of the structure of atoms.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Chemistry

Grade Level: 11th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 4: Students can understand concepts and relationships in physical science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

ii. : Understand and apply knowledge of the structure and properties of matter.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Chemistry

Grade Level: 11th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 4: Students can understand concepts and relationships in physical science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

iii. : Understand and apply knowledge of the structure of chemical reactions.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Chemistry

Grade Level: 11th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 4: Students can understand concepts and relationships in physical science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

iv. : Understand and apply knowledge of conservation of energy and increase in disorder.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Chemistry

Grade Level: 11th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 4: Students can understand concepts and relationships in physical science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

v. : Understand and apply knowledge of interactions of energy and matter.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Ecology

Grade Level: 10 - 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

A: Students can understand and apply the process and skills of scientific inquiry.

Grade Level Objective:

i. : Identify questions and concepts that guide scientific investigations.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Ecology

Grade Level: 10 - 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

A: Students can understand and apply the process and skills of scientific inquiry.

Grade Level Objective:

ii. : Design and conduct scientific investigations.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Ecology

Grade Level: 10 - 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

A: Students can understand and apply the process and skills of scientific inquiry.

Grade Level Objective:

iii. : Understand about scientific inquiry.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Ecology

Grade Level: 10 - 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

A: Students can understand and apply the process and skills of scientific inquiry.

Grade Level Objective:

iv. : Use technology and mathematics to improve investigations and communications.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Ecology

Grade Level: 10 - 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

B: Students can analyze and interpret scientific information.

Grade Level Objective:

i. : Formulate and revise scientific explanations and models using logic and evidence.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Ecology

Grade Level: 10 - 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

B: Students can analyze and interpret scientific information.

Grade Level Objective:

ii. : Recognize and analyze alternative explanations and models.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Ecology

Grade Level: 10 - 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.
B: Students can analyze and interpret scientific information.

Grade Level Objective:

iii. : Communicate and defend a scientific argument.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Ecology

Grade Level: 10 - 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 2: Students can understand concepts and relationships in life science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

i.: Understand and apply knowledge of the molecular basis of heredity.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Ecology

Grade Level: 10 - 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 2: Students can understand concepts and relationships in life science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

ii. : Understand and apply knowledge of biological evolution.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Ecology

Grade Level: 10 - 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 2: Students can understand concepts and relationships in life science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

iii. : Understand and apply knowledge of inter-dependence of organisms.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Ecology

Grade Level: 10 - 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 2: Students can understand concepts and relationships in life science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

iv. : Understand and apply knowledge of matter, energy, and organization in living systems.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Ecology

Grade Level: 10 - 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 2: Students can understand concepts and relationships in life science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

v. : Understand and apply knowledge of the behavior of organisms.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Ecology

Grade Level: 10 - 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 3: Students can understand concepts and relationships in Earth/Space science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

i.: Understand and apply knowledge of energy in the earth system.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Ecology

Grade Level: 10 - 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 3: Students can understand concepts and relationships in Earth/Space science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

ii. : Understand and apply knowledge of Geochemical cycles.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Ecology

Grade Level: 10 - 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 3: Students can understand concepts and relationships in Earth/Space science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

iii. : Understand and apply knowledge of energy in the origin and evolution of the earth system.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Physics

Grade Level: 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

A: Students can understand and apply the process and skills of scientific inquiry.

Grade Level Objective:

i.: Identify questions and concepts that guide scientific investigations.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Physics

Grade Level: 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

A: Students can understand and apply the process and skills of scientific inquiry.

Grade Level Objective:

ii. : Design and conduct scientific investigations.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Physics

Grade Level: 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

A: Students can understand and apply the process and skills of scientific inquiry.

Grade Level Objective:

iii. : Understand about scientific inquiry.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Physics

Grade Level: 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

A: Students can understand and apply the process and skills of scientific inquiry.

Grade Level Objective:

iv. : Use technology and mathematics to improve investigations and communications.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Physics

Grade Level: 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

B: Students can analyze and interpret scientific information.

Grade Level Objective:

i. : Formulate and revise scientific explanations and models using logic and evidence.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Physics

Grade Level: 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

B: Students can analyze and interpret scientific information.

Grade Level Objective:

ii. : Recognize and analyze alternative explanations and models.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Physics

Grade Level: 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 1: Students can understand and apply skills used in scientific inquiry.

B: Students can analyze and interpret scientific information.

Grade Level Objective:

iii. : Communicate and defend a scientific argument.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Physics

Grade Level: 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 3: Students can understand concepts and relationships in Earth/Space science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

i.: Understand and apply knowledge of energy in the earth system.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Physics

Grade Level: 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 3: Students can understand concepts and relationships in Earth/Space science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

ii. : Understand and apply knowledge of energy in the origin and evolution of the earth system.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Physics

Grade Level: 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 3: Students can understand concepts and relationships in Earth/Space science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

iii. : Understand and apply knowledge of origin and evolution of the universe.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Physics

Grade Level: 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 4: Students can understand concepts and relationships in physical science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

i.: Understand and apply knowledge of motion of forces.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Physics

Grade Level: 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 4: Students can understand concepts and relationships in physical science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

ii. : Understand and apply knowledge of conservation of energy and increase in disorder.

Instructional Strategies:

Assessment:

Instructional Timeline:

MStM Science Curriculum Lesson Plan

Course: Physics

Grade Level: 12th

Teacher: N. Connor

Science Standard/Benchmark:

Standard 4: Students can understand concepts and relationships in physical science.

A: Students can make inferences and predictions from data.

B: Students can analyze scientific investigations.

C: Students can analyze and evaluate the adequacy and accuracy of information.

Grade Level Objective:

iii. : Understand and apply knowledge of interactions of energy and matter.

Instructional Strategies:

Assessment:

Instructional Timeline: