

## ES: MHS Environmental Science Skills Tracker

Name:

Term: Winter Spring

### Core Learning Targets: Science Inquiry:

**SI.1** Can develop a question AND hypothesis, along with supporting background observations and research, that can be answered through a scientific investigation (SC.CM.SI.01)

Key Vocabulary: independent and dependent variables  
hypothesis

Assessment: Project: Inquiry Lab write-up  
Other: Other Lab write-up

Assessment Scores				
				5. Extends concepts
				4. Concept mastery
				3. Concept understanding
				2. Knows key vocabulary
				1. Some knowledge
1	2	3	4	Trials

**SI.2** Can design a controlled experiment to test a hypothesis and answer an experimental question (SC.CM.SI.02)

Support Skills: writing a step-by-step procedure

Key Vocabulary: controlled experiment  
variable, values, constant variables

Assessment: Project: Inquiry Lab write-up  
Other: Other Lab write-up

Assessment Scores				
				5. Extends concepts
				4. Concept mastery
				3. Concept understanding
				2. Knows key vocabulary
				1. Some knowledge
1	2	3	4	Trials

**SI.3** Can collect, organize and present data in ways that support analysis and interpretation (SC.CM.SI.03)

Support Skills: designing data tables  
measuring accurately  
graphing data appropriately: hi-mean-lo; bar; line; pie chart

Key Vocabulary: mean, median, mode  
outliers

Assessment: Project: Inquiry Lab write-up  
Other: Other Lab write-up

Assessment Scores				
				5. Extends concepts
				4. Concept mastery
				3. Concept understanding
				2. Knows key vocabulary
				1. Some knowledge
1	2	3	4	Trials

**SI.4** Can summarize and analyze data, and propose scientific explanations based on evidence (SC.CM.SI.04)

Support Skills: analyzing graphs; summarizing  
identifying limitations and/or errors in experimental procedures

Key Vocabulary: positive correlation (direct relationship)  
negative correlation (inverse relationship)

Assessment: Project: Inquiry Lab write-up  
Other: Other Lab write-up

Assessment Scores				
				5. Extends concepts
				4. Concept mastery
				3. Concept understanding
				2. Knows key vocabulary
				1. Some knowledge
1	2	3	4	Trials

### Core Learning Targets: Content Standards

**ES.1** Can explain how matter and energy are cycled through natural systems. (H.2L.1; H.2E.1)

Key Vocabulary: water cycle, watershed, aquifer  
carbon cycle, nitrogen cycle, phosphorous cycle, sinks  
photosynthesis, respiration, combustion,  
food chain, food web, trophic level, energy pyramid, bioaccumulation

Assessment: Project:  
Other: 3-week assessment; midterm

Assessment Scores				
				5. Extends concepts
				4. Concept mastery
				3. Concept understanding
				2. Knows key vocabulary
				1. Some knowledge
1	2	3	4	Trials

**ES.2** Can explain how ecosystems change in response to disturbances and interactions by analyzing the relationships among biotic and abiotic factors in ecosystems. (H.2L.2)

Key Vocabulary: organism, species, population, community,  
ecosystem, biome, biosphere, geosphere  
biotic / abiotic factors  
adaptations: physical/behavioral  
habitat, niche  
producer, autotroph; consumer, heterotroph  
herbivore, carnivore, omnivore, scavenger, decomposer  
exotic / invasive species, biodiversity, extinction,  
disturbance, succession, climax community

Assessment: Project:  
Other: 3-week assessment; midterm midterm assessment

Assessment Scores				
				5. Extends concepts
				4. Concept mastery
				3. Concept understanding
				2. Knows key vocabulary
				1. Some knowledge
1	2	3	4	Trials

**Core Learning Targets: Content Standards cont...**

**ES.3** Evaluate the impact of human activities on environmental quality and sustainability of Earth systems. Describe how environmental factors influence resource management. (H.2E.4)

Key Vocabulary: over population, carrying capacity, limiting resources  
consumption crisis, renewable / nonrenewable resources  
threatened / endangered species  
point / nonpoint pollution  
commons, sustainability

Assessment: Project:  
Other: 9-week assessment; final assessment

Assessment Scores				
				5. Extends concepts
				4. Concept mastery
				3. Concept understanding
				2. Knows key vocabulary
				1. Some knowledge
1	2	3	4	Trials

**Other Skills: Career Related Learning Standards**

**CRLS.1** Personal Management: Exhibit behavior appropriate to work place

Identify tasks that need to be done and initiate action to complete the tasks.  
Plan, organize, and complete projects and assigned tasks on time, meeting agreed upon standards of quality.  
Take responsibility for decisions and actions and anticipate consequences of decisions and actions.  
Maintain regular attendance and be on time. Maintain appropriate interactions with colleagues.  
Assessment: Personal reflection; teacher and colleague observations

Assessment Scores				
				3. Exceeds standards
				2. Meets standard
				1. Below standard
3w	6w	9w	12	Weeks

**CRLS.2** Problem Solving: Apply decision-making and problem solving techniques

Identify problems and locate information that may lead to solutions.  
Identify alternatives to solve problems. Assess the consequences of the alternatives.  
Select and explain a proposed solution and course of action.  
Develop a plan to implement the selected course of action.  
Assess results and take corrective action.  
Assessment: Personal reflection; teacher and colleague observations

Assessment Scores				
				3. Exceeds standards
				2. Meets standard
				1. Below standard
3w	6w	9w	12	Weeks

**CRLS.3** Communication: Demonstrate principles and skills of effective communication to give and receive information: listening, reading, speaking, writing and using media.

Locate, process, and convey information using traditional and technological tools.  
Listen attentively and summarize key elements of verbal and non-verbal communication.  
Give and receive feedback in a positive manner.  
Read technical/instructional materials for information and apply to specific tasks.  
Write clearly and accurately.  
Speak clearly, accurately, and in a manner appropriate for the intended audience  
Assessment: Personal reflection; teacher and colleague observations

Assessment Scores				
				3. Exceeds standards
				2. Meets standard
				1. Below standard
3w	6w	9w	12	Weeks

**CRLS.4** Teamwork: Demonstrate effective teamwork

Demonstrate skills that improve team effectiveness:  
negotiation, compromise, consensus building, conflict management,  
shared decision- making and goal-setting

Assessment: Personal reflection; teacher and colleague observations

Assessment Scores				
				3. Exceeds standards
				2. Meets standard
				1. Below standard
3w	6w	9w	12	Weeks

**Other Skills: Essential Skills**

**ES.1** Read and comprehend a variety of text

Application: Text: **Glencoe: Physical Science with Earth Science**  
Handouts, Worksheets  
Lab Instructions  
Internet Research

Assessment: Personal reflection; teacher and colleague observations

Assessment Scores				
				3. Exceeds standards
				2. Meets standard
				1. Below standard
3w	6w	9w	12	Weeks

**ES.2** Write clearly and accurately

Application: Inquiry Lab  
FOODs, WUPs, Lab write ups, GYROs  
Class assignments  
Personal projects

Assessment: Personal reflection; teacher and colleague observations

Assessment Scores				
				3. Exceeds standards
				2. Meets standard
				1. Below standard
3w	6w	9w	12	Weeks

**ES.3** Apply mathematics in a variety settings

Application: Measure accurately: length (cm), temp (°C), mass (g), volume (ml)  
Design data tables to organize measurements  
Calculate accurately: density (g/ml), mean, percent difference  
Analyze accurately: median, mode, outliers  
Graphing data appropriately: bar, line, pie chart, hi-mean-lo;

Assessment: Personal reflection; teacher and colleague observations

Assessment Scores				
				3. Exceeds standards
				2. Meets standard
				1. Below standard
3w	6w	9w	12	Weeks