



LEARNING SKILLS

2022 – 2023



EXPLORE

1. **Establish Meaning:** Use prior and new knowledge and tools to understand what is happening or being said.
2. **Ask Questions:** Compose questions based on observations, readings, or problems.
3. **Investigate:** Use multiple methods to inquire, gather information, and establish context.



ANALYZE

4. **Interpret:** Use sources, data, or computations to extract meaning.
5. **Identify Patterns:** Find similarities and draw connections among events, ideas, and representations.
6. **Be Creative:** Create solutions, new ideas, and new methods.



REASON

7. **Assess Arguments:** Evaluate arguments, points of view, and positions with attention to evidence and reasoning.
8. **Take a Position:** Develop your own position. Support it with appropriate evidence and reasons and defend it from the criticism of others.
9. **Reflect:** Reflect upon actions and experiences, recognize strengths and shortcomings, and identify ways to improve.



COMMUNICATE

10. **Collaborate:** Participate in group work, and give and receive peer feedback.
11. **Compose:** Design and produce works that connect ideas and demonstrate knowledge. Revise work to make it better.
12. **Share:** Connect with the audience and communicate work clearly.



EXPLORE

Establish Meaning

Use prior and new knowledge and tools to understand what is happening or being said.

EXAMPLE PROMPTS

- What inferences can you draw from your review of the material?
- Describe the connection between objects, theories, or concepts.
- What conclusions can you make between the material and personal experience?
- How does your research support the main point or discipline-specific concept?

RELEVANT VOCABULARY

- Define
- Summarize
- Annotate
- Recognize
- Identify
- Explain
- Apply
- Make observations
- Analyze



EVIDENCE
STATEMENTS



EXPLORE

Ask Questions

Compose questions based on observations, readings, or problems.

EXAMPLE PROMPTS

- What questions do you have about the content, material, or resource that address the main point?
- What observations can you make from a text, source, or object? What does that tell you about major themes?
- Describe the validity of narratives, perspectives, sources, and observations.
- What are you still wondering or curious about?
- Can any of your questions be tested as a basis for research? How do you know?
- What are the advantages and disadvantages of using certain solution paths?

RELEVANT VOCABULARY

- Develop
- Generate
- Record
- Produce
- Distinguish
- Determine
- Consider



EVIDENCE
STATEMENTS



Investigate

Use multiple methods to inquire, gather information, and establish context.

EXAMPLE PROMPTS

- What quality sources are you using for research? How do you know they are reliable and high-quality?
- Are you using multiple sources with different points of view? How are you integrating that into final artifacts?
- Describe the appropriate materials or equipment for a specific resource or experiment. Which ones will produce more accurate results? How do you know?
- What design or process will you use for research or data collection?
- How can you break down a multi-step problem into smaller pieces to determine a solution?
- Describe how you can apply a solution path or research statement in your everyday life.

RELEVANT VOCABULARY

- Identify
- Select
- Conduct
- Determine
- Apply
- Research
- Synthesize
- Use in context



EVIDENCE
STATEMENTS

Interpret

Use sources, data, or computations to extract meaning.

EXAMPLE PROMPTS

- How are you approaching your analysis? What methods work well for a specific scenario?
- What evidence can be found in a text or source? How does it support a specific conclusion?
- Explain a pattern of causes across multiple sources.
- How will you display data visually and appropriately?
- Identify relationships between representations for a given situation or context.
- Determine and describe the reasonableness of results, representations, or conclusions.

RELEVANT VOCABULARY

- Analysis
- Evidence
- Physical or abstract models
- Sources
- Cause
- Representations
- Reasonableness
- Solve
- Comprehend



**EVIDENCE
STATEMENTS**

Identify Patterns

Find similarities and draw connections among events, ideas, and representations.

EXAMPLE PROMPTS

- What traits or attributes are unique to a given genre? How do you know? How might this differ across time periods?
- Compare and contrast multiple and diverse sources on a given topic. Organize based on events, ideas, or dynamics.
- Explain the relationship between differing views on a topic in a concise way.
- Is a given scenario correlation or causation? How do you know?
- How can you manipulate variables to illustrate a direct or inverse relationship? Predict the correlation between variables.
- What do you notice about a text, problem set, or source? Describe any repetition and create a generalization based on evidence.

RELEVANT VOCABULARY

- Recognize
- Compare and contrast
- Cause and effect
- Causation and correlation
- Direct or inverse relationship
- Repetition
- Correlation
- Patterns



EVIDENCE
STATEMENTS

Be Creative

Create solutions, new ideas, and new methods.

EXAMPLE PROMPTS

- Describe or show your unique voice and perspective.
- What feedback, input, or suggestions will you use to develop a new idea or approach?
- Identify a problem and offer a new solution.
- How can the engineering design process support a path to a solution for a given scenario or problem?
- Apply inductive and deductive approaches to research solutions to a problem.
- How can you use functions to describe coherence in algebraic manipulations?
- Describe the difference between inspiration and plagiarism. How does that impact the creative process?

RELEVANT VOCABULARY

- Problem and solution
- Voice
- Perspective
- Inspiration
- Plagiarism
- Development of ideas



EVIDENCE
STATEMENTS

Assess Arguments

Evaluate arguments, points of view, and positions with attention to evidence and reasoning.

EXAMPLE PROMPTS

- Recognize point of view and the role of context in an argument.
- How does bias or motive affect an argument, scientific conclusion, or mathematical claim?
- What parts of the argument are strong? Which parts are weak? How do you know? Provide examples of each.
- How does specific evidence support the key points of an argument? How do you know?
- What scientific evidence is available to support the claim? How do you know it is a reliable source?
- Describe the limitations of data and design experiments to support a claim.
- Describe the reasonableness and effectiveness of a mathematical argument. Use proper mathematical notation to support.

RELEVANT VOCABULARY

- Point of view
- Bias or motive
- Context
- Critique
- Claim
- Reasonableness
- Accuracy or legitimacy



EVIDENCE
STATEMENTS

Take a Position

Develop your own position. Support it with appropriate evidence and reasons and defend it from the criticism of others.

EXAMPLE PROMPTS

- Make a claim. What evidence do you have to support it? What is the counterargument of your position?
- What opposing evidence is there for each perspective in an argument? Cite your sources.
- Apply claim, evidence, and reasoning (CER) to support or defend a position.
- Describe and justify the position or reasoning for a claim or mathematical reasoning. Use correct notation or citing.
- How can you build on the viable arguments of others to refine your approach or position?
- Identify and support choices for algorithms and formulas based on a given context.

RELEVANT VOCABULARY

- Justify
- Argument
- Counterargument
- Claim, evidence, and reasoning (CER)
- Defend
- Evidence



**EVIDENCE
STATEMENTS**

Reflect

Reflect upon actions and experiences, recognize strengths and shortcomings, and identify ways to improve.

EXAMPLE PROMPTS

- In what ways does the world around you influence your own personal thinking and decision making?
- Develop a plan and demonstrate change in work, behavior, or interactions based on reflection.
- How do your personal words and actions affect those around you? What are your own strengths and areas for improvement?
- Monitor and document your own progress. Determine shortcomings and make a plan to address them.
- What questions do you have about a given topic, claim, or resource?
- What are the benefits of understanding a strategy that is different from your own? Provide an example in a given subject or topic.
- Reflect on mistakes or misconceptions to improve your understanding.

RELEVANT VOCABULARY

- Develop a plan
- Influence
- Consequences or effect
- Effectiveness
- Adapt
- Monitor progress
- Set goals



**EVIDENCE
STATEMENTS**



COMMUNICATE

Collaborate

Participate in group work, and give and receive peer feedback.

EXAMPLE PROMPTS

- Practice and demonstrate techniques of effective peer review.
- How can you build on the ideas of others to better your own work and theirs?
- Use active listening skills to produce creative work within a group.
- Incorporate feedback from others to address areas of improvements and strengthen your work, solution, or claim.
- Provide feedback to others constructively so that it supports their learning.
- How can you serve as an instructional resource to your peers?

RELEVANT VOCABULARY

- Peer review
- Feedback
- Constructive
- Active listening
- Resource
- Comment
- Question



EVIDENCE
STATEMENTS



COMMUNICATE

Compose

Design and produce works that connect ideas and demonstrate knowledge.

Revise work to make it better.

EXAMPLE PROMPTS

- Recognize and use correct conventions, writing, and notational expectations for a given scenario.
- How can you connect ideas or works in an organized way to demonstrate understanding? (e.g. research paper, lab report, problem set, etc.)
- Collaborate, share, and refine ideas with minimal support.
- What design or processes will you use for research or data collection?
- What strategies will you use to create a final version of your work? (e.g. outline, brainstorming, evidence-based sources, etc)
- Keep detailed, organized, and accurate records of data and observations.
- Distinguish between correct or flawed logic or reasoning. Describe why it is correct or flawed.
- Make plausible conjectures based on anecdotal and data driven evidence.

RELEVANT VOCABULARY

- Revise and refine
- Express
- Create
- Connect ideas
- Conjectures or conclusions



EVIDENCE
STATEMENTS





COMMUNICATE

Share

Connect with the audience and communicate work clearly.

EXAMPLE PROMPTS

- Create works that are readable and understandable. Choose an appropriate venue for sharing your work.
- How will specific feedback refine your work? What concrete or abstract revisions need to be made?
- Report experimental or mathematical conclusions supported by data analysis. Discuss and communicate findings.
- Present and explain ideas, reasoning, and representations used in the solution process. What other visual or written representations can you use to present findings.

RELEVANT VOCABULARY

- Create
- Venues
- Audience
- Accessibility
- Concrete or abstract revisions
- Tools
- Communicate



EVIDENCE
STATEMENTS

Background to Consider While Planning

COURSE:

JOURNEY:

QUEST/ACTIVITY:

EVIDENCE OF CONTENT LEARNING:

EVIDENCE OF SKILL:

FOCUS SKILL:

FOCUS SKILL GUIDANCE: