
MTEL®-Flex General Science—Application of the Principles of Science Practices in Earth and Space Science, Life Science, or Physical Science (Objective 0018)

Objective 0018: Prepare an organized, developed analysis of a topic related to key concepts in Earth and Space Science, Life Science, or Physical Science that emphasizes the application of the principles of science practices.

Objective 0018 includes the following **four** descriptive statements that you **must** address in order to demonstrate the depth of your subject matter knowledge:

1. Form a testable scientific claim that addresses a given topic.
2. Outline a specific scientific procedure to investigate the proposed claim, including identifying variables and controls.
3. Describe a possible result provided by collected data.
4. Provide reasoning of how the collected data provides evidence that supports or refutes the tested claim.

MTEL®-Flex enables you to demonstrate your functional content knowledge of the MTEL General Science test objectives through submitting materials on a topic that you select. Your submission will be evaluated on the extent to which you demonstrate the depth of your subject matter knowledge of the MTEL-Flex General Science test objective you selected during registration. **Your analysis must address all descriptive statements listed above.**

MTEL-Flex involves answering a series of prompts and writing an analysis in which you demonstrate your knowledge of the content assessed by the test objective and further elaborated by the descriptive statement(s) you have selected in relation to your stated topic.

Your responses to the prompts should be **no more than 1 single-spaced page** and your written analysis should be **no more than 3 single-spaced pages**. This instructions page does not count toward your page limits.

This template contains a [Prompt Section](#) and a [Written Analysis Section](#). Once both sections are completed, upload the template to the Pearson ePortfolio System.

For more information about the MTEL-Flex Assessment, preparing your materials for submission, and scoring of your submission, refer to the MTEL-Flex Assessment Handbook.

Prompt Section

Respond to the prompts below (**no more than 1 page, including prompts**) by typing your responses in Arial 11-point, single-spaced font, within the brackets following each prompt. Do not delete or alter the prompts. Only the first page will be evaluated. The previous page of instructions and the written analysis that follows do not count toward your page limit. Your submission cannot contain hyperlinks to any materials.

1. Indicate a content standard appropriate for fifth through eighth grade found in the *2016 Massachusetts Science and Technology/Engineering Curriculum Framework* (pp. 48–71) to develop your topic and address all four descriptive statements. Additional resources to reference might include the Science and Engineering Practices Progression Matrix found in Appendix I (pp. 98–123) and/or the Disciplinary Core Idea Progression Matrix found in Appendix III (pp. 131–143) and/or the Progression of Crosscutting Concepts Across the Grades (pp. 158–162) found in Appendix VIII.

[Standard 6.MS-LS1-2 ; SEP 1-8; DCI LS1.A: Structure and Function; CCC structure and function]

2. Describe the topic addressed.

[By using a classroom investigation, my topic will address the structure and function of cells. The investigation will surround how plant and animal cells look and function differently.]

3. List sources used to prepare submission.

[1. Urry, Lisa A, et al. Campbell Biology. 12th ed., New York, NY, Pearson, 2021.

2. Windschitl, Mark, et al. Ambitious Science Teaching. Harvard Education Press, 5 Aug. 2020.

3. Channell, Adam C., "Teacher and Parent Perspectives on Alignment to the Next Generation Science Standards Following Teacher Professional Development" (2019). Dissertations. 3536. <https://scholarworks.wmich.edu/dissertations/3536>]

Written Analysis Section

Type your analysis (**no more than 3 pages, including the prompt**) in Arial 11-point, single-spaced font, within the brackets following the prompt. If appropriate, you may include tables, charts, graphs, or other diagrams that you have prepared by inserting them into your analysis. However, the total length of your analysis, including any graphic elements, may not exceed 3 pages. The previous pages of instructions and prompts do not count toward your page limit. Your submission cannot contain hyperlinks to any materials.

Prepare an organized, developed analysis on a topic related to Objective 0018. **Your analysis must address all four descriptive statements.**

[Analysis text here; can go up to page 3 of 3....]