

Middle School G/T Research Essential Curriculum

UNIT I: Exploring the Essentials of Research

Standard 1. The student will identify the purposes for conducting research.

Outcomes - The student will be able to:

- a. Identify familiar examples of research.
- b. Differentiate among the varying purposes for research in different fields. (*)

Standard 2. The student will distinguish between primary and secondary research.

Outcomes - The student will be able to:

- a. Identify examples of primary research.
- b. Identify examples of secondary research.
- c. Use primary and secondary sources to answer a teacher-selected research question.

UNIT II: Exploring Primary Research Designs

Standard 1. The student will define and apply the characteristics of an issue.

Outcomes – The student will be able to:

- a. Identify issues facing students and/or a community.
- b. Identify the stakeholder groups and their positions on the issue.
- c. Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text. (*Common Core ELA RII*)

Standard 2. The student will explore the primary research process and the four corresponding research designs.

Outcomes - The student will be able to:

- a. Identify the steps of the primary research process within a sample study. (*)
- b. Recognize an appropriate research design for a given research question. (*)
- c. Recognize an appropriate sample selection for surveying.

Standard 3. The student will define and utilize the key components of descriptive research.

Outcomes - The student will be able to:

- a. Identify real-world examples of descriptive research.
- b. Select an appropriate measurement tool, such as a questionnaire or an observation.
- c. Determine an appropriate sample selection for surveying.
- d. Analyze numerical descriptive data by determining the frequency, median, mode, and mean.
- e. Analyze nominal descriptive data using chi-square.
- f. Utilize effective interviewing techniques.

(*) = Core objectives for students who are conducting research investigations.
G/T Research Class (Course 6945), Updated 2013

- g. Summarize qualitative data and draw conclusions.

Standard 4.The student will define and utilize the key components of correlational research.

Outcomes - The student will be able to:

- a. Explain the relationship between multiple independent variables.
- b. Calculate the correlational coefficient for a set of data.

Standard 5.The student will define and utilize the key components of historical research.

Outcomes - The student will be able to:

- a. Develop a historical research question.
- b. Analyze primary source documents and select appropriate evidence to support an answer/claim to a historical research question.
- c. Utilize the tools of the historian.
- d. Assess the validity of information using triangulation of data.

Standard 6.The student will define and utilize the key components of experimental research.

Outcomes - The student will be able to:

- a. Identify independent and dependent variables, as well as constants and explain their role in experimental research.
- b. Explain how to design a controlled experiment.
- c. Analyze and chart data.
- d. Calculate t-test values.
- e. Identify potential sources of error.

UNIT III: Conducting Secondary Research

Standard 1.The student will conduct sustained research based on focused questions, demonstrating understanding of a self-selected topic. (based upon *Common Core ELA W7*)

Outcomes - The student will be able to:

- a. Identify an area of interest. (*)
- b. Examine creative problem-solving strategies. (*)
- c. Gather relevant information from multiple print and digital sources, assessing the credibility and accuracy of each source and integrating the information while avoiding plagiarism. (*Common Core ELA W8*)
- d. Create a preliminary Works Cited page. (*)
- e. Organize and record information obtained from secondary research.
- f. Develop a working thesis by narrowing the focus of the topic. (*)
- g. Determine central ideas or themes of a text and analyze their development, summarizing the key supporting details and ideas. (*Common Core ELA RI2*) (*)
- h. Develop and maintain a portfolio and management plan. (*)

Standard 2.The student will draw evidence from literary or informational texts to support analysis, reflection, and research on the self-selected topic. (*Common Core ELA W9*)

Outcomes - The student will be able to:

- a. Construct a written analysis of the information obtained. (*)
- b. Construct a reflection on the secondary research process.

UNIT IV: Conducting Primary Research

Standard 1.The student will conduct primary research on the previously self-selected topic.

Outcomes - The student will be able to:

- a. Re-examine the secondary research findings. (*)
- b. Identify a research question and develop an investigation assumption. (*)
- c. Select and implement an appropriate research design. (*)
- d. Create a primary resource measurement tool to collect data. (*)
- e. Triangulate data to ensure the validity of acquired data. (*)
- f. Collect and analyze data. (*)
- g. Document research findings in an abstract. (*)
- h. Maintain a portfolio and management plan. (*)

UNIT V: Putting Research into Action

Standard 1.The student will identify the key components in a teacher-selected research investigation.

Outcomes - The student will be able to:

- a. Identify the need or problem.
- b. Identify the primary and secondary research conducted.
- c. Examine how the research findings guided the development of a solution to the problem.

Standard 2.The student will develop a plan of action based upon original research findings on the previously self-selected topic.

Outcomes - The student will be able to:

- a. Review the identified, original need or problem. (*)
- b. Revisit original primary and secondary research findings. (*)
- c. Use the research findings to determine the most appropriate and original solution to the identified need or problem. (*)
- d. Develop the original product or solution. (*)
- e. Identify the appropriate audience. (*)
- f. Revise the action plan based upon feedback from professionals in the field. (*)
- g. Maintain a portfolio and management plan. (*)

Standard 3. The student will implement the original product or solution and to present its significance to an authentic and appropriate audience such that listeners can follow the line of reasoning. (based upon *Common Core ELA SL4*)

Outcomes - The student will be able to:

- a. Develop an instrument for audience feedback. (*)
- b. Make strategic use of digital media and visual displays of data to present the original product or solution and to communicate research findings. (based upon *Common Core SL5*) (*)
- c. Implement the original product or solution. (*)
- d. Write a reflection on the original product or solution. (*)