

## Codes and Ciphers: WWII Investigation

Grade Level	8
Subject	<p>Language Arts :Informational Texts</p> <p><b>2.01</b> Analyze and evaluate informational materials that are read, heard, and/or viewed by:</p> <ul style="list-style-type: none"> <li>• monitoring comprehension for understanding of what is read, heard and/or viewed.</li> <li>• recognizing the characteristics of informational materials.</li> <li>• summarizing information.</li> <li>• determining the importance and accuracy of information.</li> <li>• making connections to related topics/information.</li> <li>• drawing inferences and/or conclusions.</li> <li>• generating questions.</li> <li>• extending ideas.</li> </ul> <p><b>2.02</b> Use multiple sources of print and non-print information to explore and create research products in both written and presentational forms by:</p> <ul style="list-style-type: none"> <li>• determining purpose, audience, and context.</li> <li>• understanding the focus.</li> <li>• recognizing and/or choosing a relevant topic.</li> <li>• Recognizing and/or selecting presentational format (e.g., video, essay, interactive technology) appropriate to audience.</li> <li>• evaluating information for extraneous detail, inconsistencies, relevant facts, and organization.</li> <li>• researching and organizing information to achieve purpose.</li> <li>• using notes and/or memory aids to structure information.</li> <li>• supporting ideas with examples, definitions, analogies, and direct references to primary and secondary sources.</li> <li>• noting and/or citing sources used.</li> <li>• recognizing the use of and/or employing graphics such as charts, diagrams, and graphs to enhance the communication of information.</li> </ul>
Curriculum Objective	<p>3.01 Select and use a variety of technology tools to collect, analyze, and present information. (1)</p> <p>3.02 Select and use appropriate database features and functions to collect and organize information to solve problems in content areas and explain strategies used. (2)</p>

	<p>3.03 Modify/create and use databases to analyze, interpret, and evaluate data and report findings. (2)</p> <p>3.04 Create/modify spreadsheets to analyze and interpret information, test simple "what if..." statements, solve problems, and make decisions in content areas. (3)</p> <p>3.05 Select and use WP/DTP features/functions to develop, edit/revise, and publish documents/assignments. (4)</p> <p>3.06 Develop and use rubrics to evaluate the quality of published documents/projects for content, design, and appropriate use of resources. (4)</p> <p>3.07 Plan, design, and develop a multimedia product using data (e.g., graphs, charts, database reports) to present content information. (5)</p> <p>3.08 Create/modify and use rubrics to evaluate multimedia presentations for content, design, appropriateness for target audience, and effective and ethical use of resources. (5)</p> <p>3.09 Plan, select, evaluate, interpret and use a variety of digital resources to develop assignments/projects about North Carolina History. (6)</p> <p>3.10 Use evaluation tools to select Internet resources and information for content and usefulness in content area assignments. (6)</p>
Guiding Question	Having examined a variety of informational texts, how does the use of codes and ciphers during World War II support the elements of RAFT?
Lesson Summary	Students will apply the CRAFT principle in the analysis of a teacher-generated Censored War Letter, will practice deciphering a simple cipher used in WWII, and will create their own cipher.
Activating Strategy	<p>Challenge Envelopes:</p> <ol style="list-style-type: none"> <li>1. Break students into four teams. Provide each team with an envelope that appears to have been "delivered" from the front lines of battle.</li> <li>2. Inside each envelope is a teacher-created CENSORED WAR LETTER.</li> <li>3. Students analyze the letter and apply the elements of RAFT using the RAFT ANALYSIS SHEET.</li> </ol>
Cognitive Strategy	<p>Part I:</p> <p>Explain the basic difference between a code and a cipher.</p> <p><b>Codes</b> are letter combinations or symbols that represent words or concepts. For example, police often repeat a "10-4" over the radio to signal "affirmative or yes"</p>

**Ciphers** are messages in which letters/symbols replace the actual letters in a message.

During World War II, codebreakers broke secret messages sent by the enemy in an effort to anticipate the enemy's plan. Like wise, American military correspondence was closely monitored and messages were often coded to assure security.

Students will use three codebreaking systems to decipher and decode”

Playfair

Double Playfair

Double Transportation

Part II

*Taken from the Decoding Nazi Secrets Teacher's Guide Web Site at <http://www.pbs.org/wgbh/nova/teachers/activities/2615-decoding.html>*

1. On the board, copy the cipher and alphabet from the “operation Decode” Part 1 student handout so that the class can decode together.
2. 2. Distribute materials and follow the instructions on the student handout. Before deciphering, discuss possible strategies to break this cipher. Tell students the message is from Winston Churchill to members of Station X. If students experience difficulty use the key in ACTIVITY ANSWER to provide the letters for the word “SOMETHING”.
3. Students may work individually or in teams. Encourage them to share discoveries with the class, and as they decipher, print letters over each word in both the cryptogram and the alphabet.
4. List all successful strategies students use to help decipher.

**Transition:**

Provide students with a general background on the use of censorship and codes during WWII for security.

Announce that students will be introduced to three codes so they can crack ciphers similar to the ones the Bletchley Park codebreakers faced WWII.

	<p><b>Part III:</b></p> <p>Provide each student with access to the Decoding Nazi Secrets NOVA Online Teacher’s Resource Web site.</p> <p>Students will open the site and access “Crack the Cipher”, using three ciphers of different levels of difficulty to crack three ciphers. Crack the Ciphers at <a href="http://www.pbs.org/wgbh/nova/decoding/faceoff.html">http://www.pbs.org/wgbh/nova/decoding/faceoff.html</a></p>
Summarizing Strategy	<p>Students will access the “Create You Own Coded Message” to create a coded message and send it via the internet to a classmate, along with directions for breaking the code.</p> <p><a href="http://www.pbs.org.wgbh/nova/decoding/send.html">http://www.pbs.org.wgbh/nova/decoding/send.html</a></p>
Evaluation	<p>The student’s code will answer the question: “What purpose did codes serve during WWII? Why were codes and ciphers essential during WWII?”</p>
Resources	<p>As noted previously</p>
Credits	<p>Kerri Chewing-Palombo 8<sup>th</sup> grade Language Arts, Chestnut Grove Middle School. Marvie Cartner-8<sup>th</sup> Grade Language Arts, Chestnut Grove Middle School</p>