

Compass Homeschool Enrichment LLC

Cracking Codes: Cryptology for Kids

Dates: January 15- March 12, 2014 (8 weeks)

Instructor: Sarah Hogue

Objective: Students will learn the language of spies and secret agents in this children's cryptology class. Cryptology is the science of secret writing which uses math and reasoning such as number patterns, sequences, and symbols to create and decode mystery alphabets. Each week students will learn one or more ciphers and will practice using them to write coded messages to each other and to decode class examples. Code systems used in Quarter 3 will include the Navajo Code, the scytale, and various transposition and substitution ciphers. This class is not a repeat of cryptology classes from Fall 2013 and may be taken without prerequisites.

Preliminary Course Outline

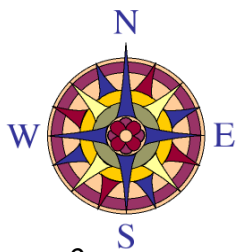
<u>Week</u>	<u>Theme/Topic</u>
1.	Navajo Code Talkers <ul style="list-style-type: none">• History of the Naval Program• Entire Dictionary• Decoding Based on Subsection of Dictionary
2	The Scytale <ul style="list-style-type: none">• Creating the Message• Decoding
3.	Transposition Ciphers <ul style="list-style-type: none">• Review of Reversal Ciphers• Rail Fence Ciphers• Adding Nulls To Produce Groups of Four
4.	Transposition Ciphers <ul style="list-style-type: none">• Other Rail Fence Ciphers• Develop Your Own Rail Fence Cipher
5.	Crayon Cover <ul style="list-style-type: none">• Posterboard, Pencils, Crayons• Combine With Number Cipher

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6. Decoding Student Messages
 - Use Keys to Decode Student and Teacher Messages

7. Cracking the Code
 - Scrambled Alphabet or Symbol Ciphers
 - Keys Written in Invisible Ink
 - Embedded Messages (e.g., on the diagonal or every third letter)

8. Cracking the Code
 - Caesar Cipher Versus Keyword Ciphers
 - Using Frequency Charts to Determine Type
 - Vertical Columns

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