

## Integrating Cybersecurity into Social Studies Curriculum

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### Overview

#### Introduction

- Show statistics from 2013 Norton Report on the frequency of cyber crime in the world.
- 63% of cybercrime victims are mobile device and/or social network users.

#### Unit Details

- Day 1-2: Intro to cyber security
- Day 3: Encryption and the Caesar Cipher
- Day 4: Security Empire
- Day 5: Encryption and WWII

#### Standards

- 7.2.5 Define, compare and contrast citizenship and the roles of citizens in government.
- 7.4.3 Trace the development and change over time of the economic systems.

### Problem Statement

To integrate cybersecurity into the 7<sup>th</sup> Grade World Geography curriculum by increasing awareness of cyber crime today and the significance of information security during WWII.

#### UMBC's Security Empire

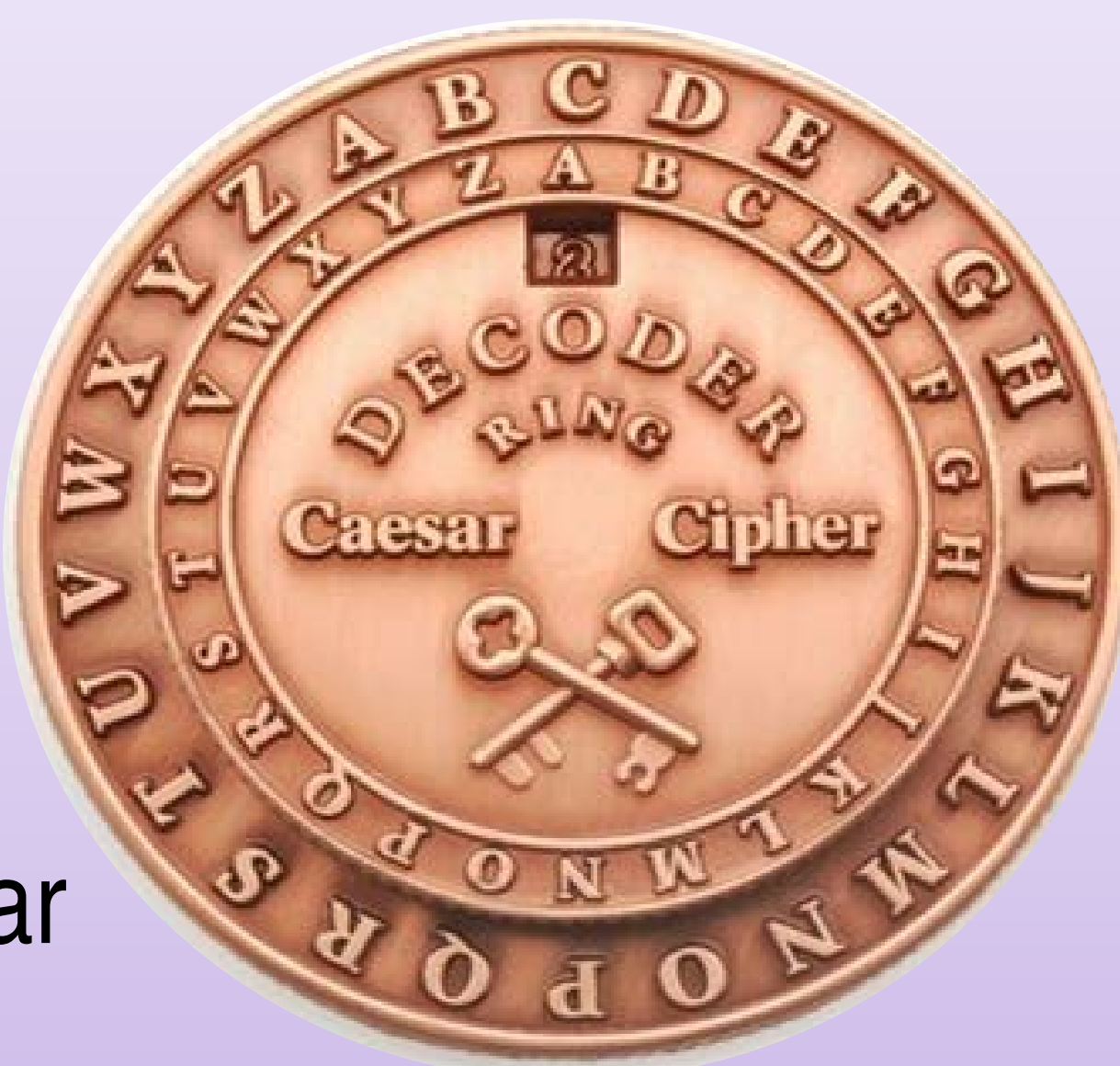
- The game's objective is to build green energy units by purchasing parts in a marketplace while securing the cyber network.
- Teaches students the importance of security in a market economy setting by punishing students, who do not purchase anti-virus software, with malware.



<http://securityempire.cs.umbc.edu/stable/client/register.html>

#### Caesar Cipher

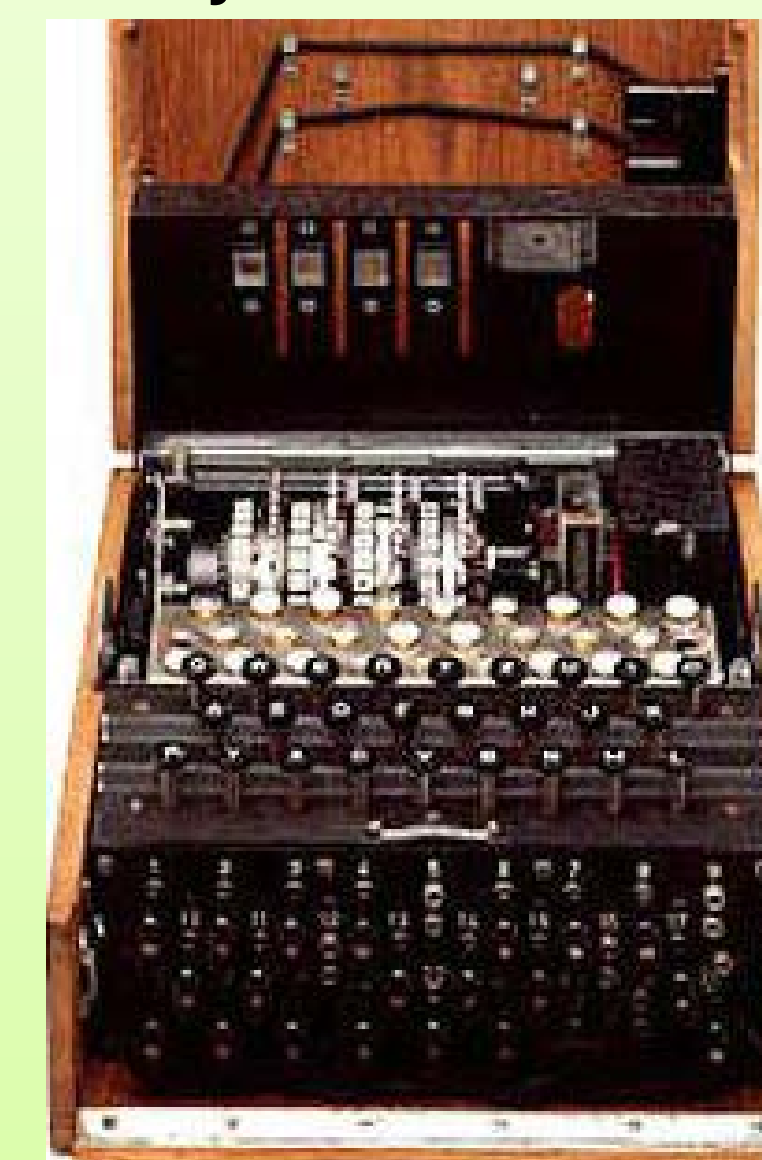
- Introduce the historical impact of the Caesar Cipher.
- Students in small groups will given an encrypted message which they must decrypt.
- Each group will have part of a larger message that will appear once all groups have decrypted their message.



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#### WWII and Encryption

- Students will see the importance of the German Enigma and the Navajo Talkers during WWII.
- Students will use an online version of the enigma provided by the CIA to decrypt messages in small groups in different ciphers.



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