UCHICAGO STEM EDUCATION

CryptoClub Afterschool and Online: Broad Implementation

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CryptoClub Project

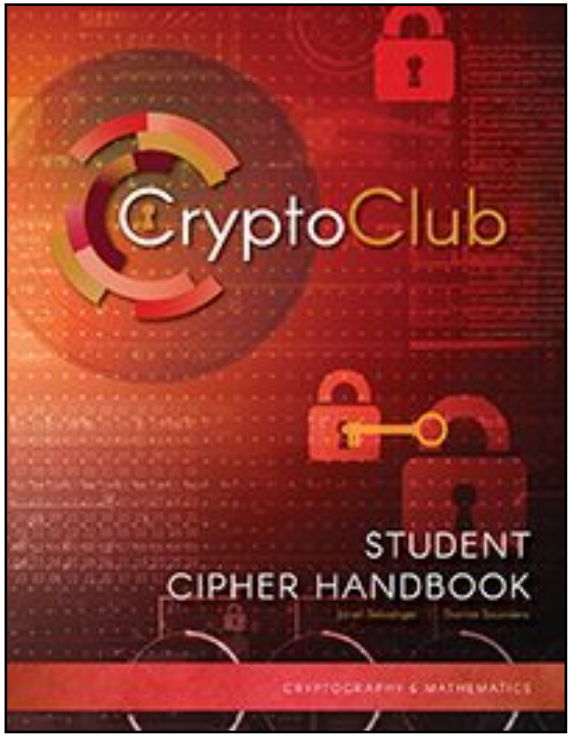
- Project began in 2001 - Various NSF funding followed.
  - I-CORPs
  - ITEST
  - DRK-12
  - Informal Science Education (ISE)

- Funded the development of curricular materials and the CryptoClub Website

In a CryptoClub…

…middle grade students make and break secret codes.

Print Materials

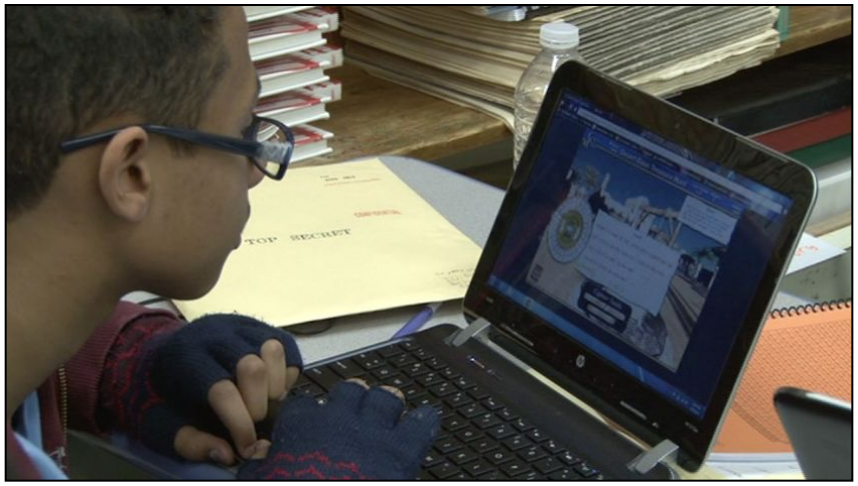


Student Cipher Handbook

Leader Manual

Published by Kendall Hunt

cryptoclub.org



Provides youth with additional opportunities to learn and practice cryptography.

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NSF AISL Broad Implementation

GOALS	OBJECTIVES
Increase participation	Establish trainer network (NGCP)
Increase learning	Create webinars for trainers & leaders
Become sustainable	Develop online training modules
	Launch digital badging system
	Create daily message challenges
	Design and launch online game

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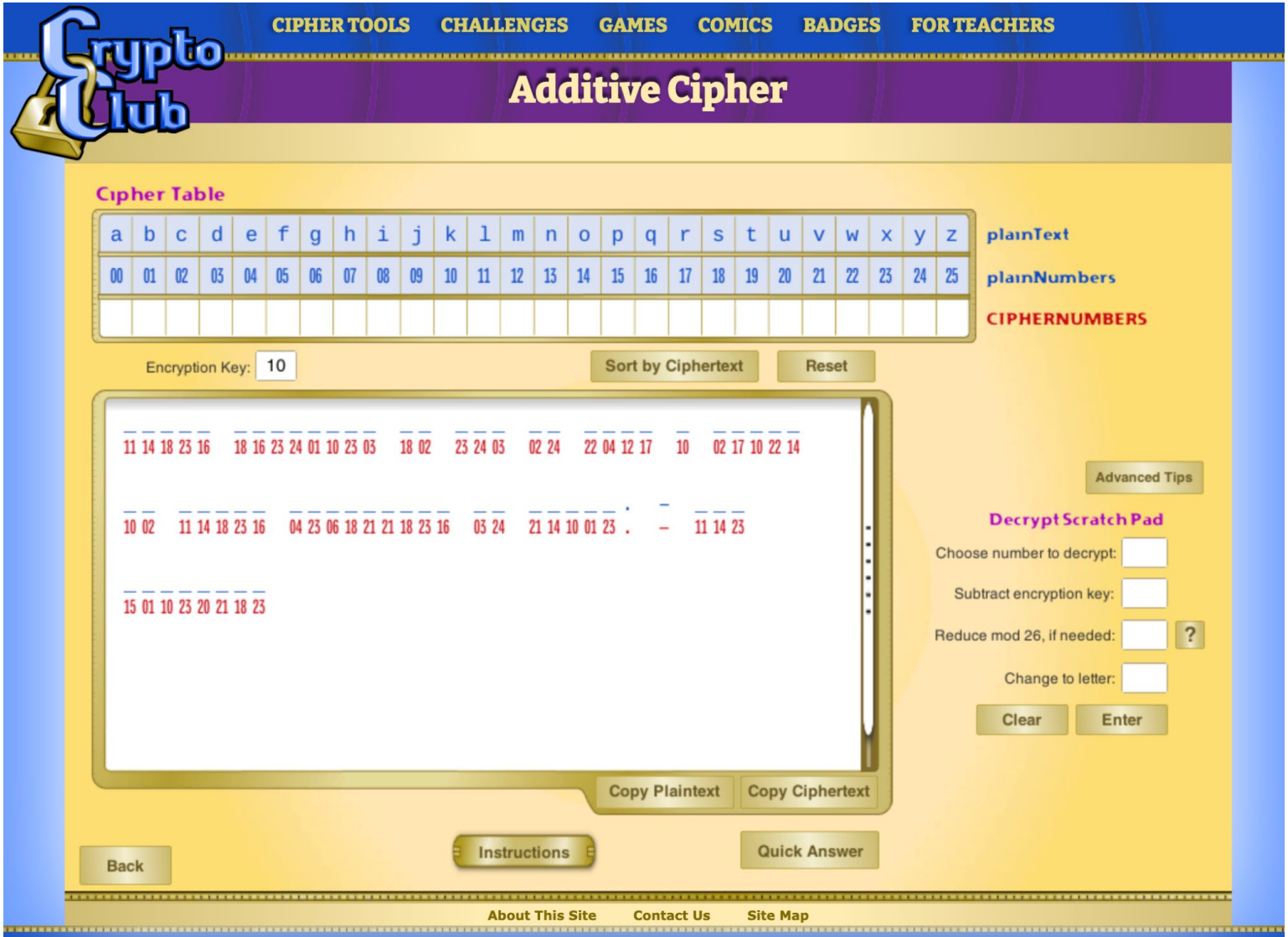
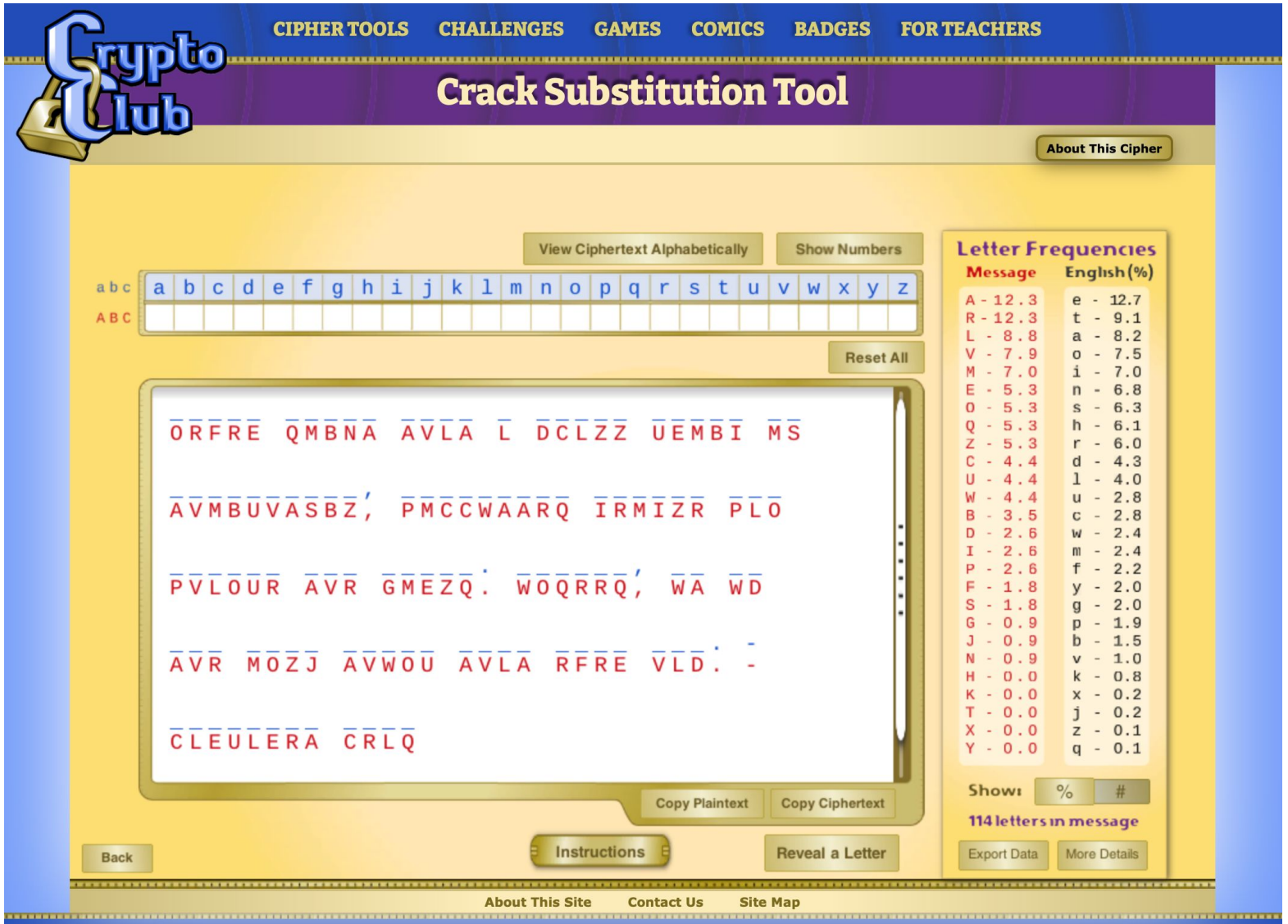
cryptoclub.org

Cipher Tools

Cipher Tools



Cipher Tools

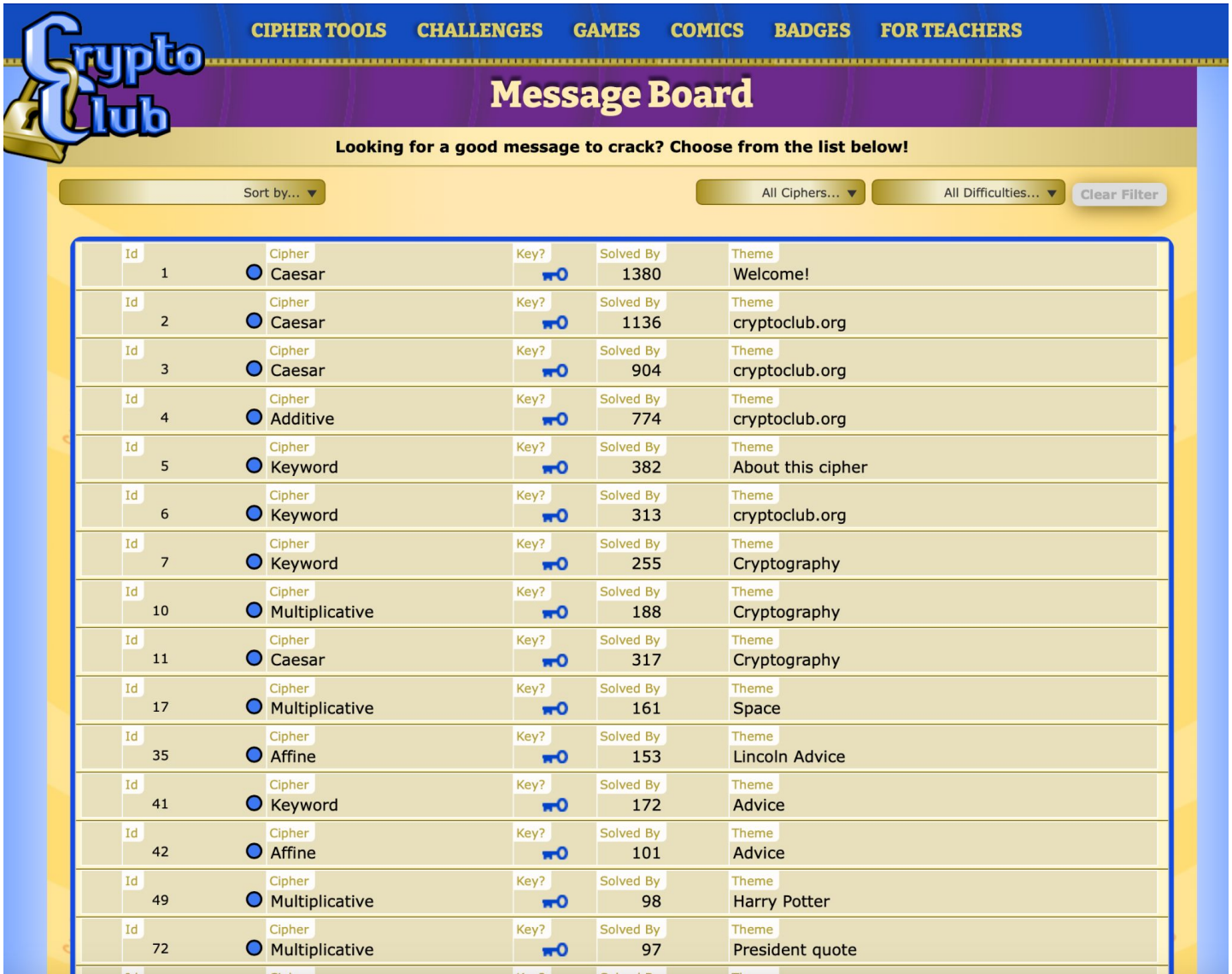


Adventure Games

Challenges

CIPHER TOOLS
CHALLENGES
GAMES
COMICS
BADGES
FOR TEACHERS
Crypto Challenges
Leaderboard
Crack mysterious messages, submit jokes for others to decrypt, and access secret messages within your private groups.
Take a Crack at Today's Message!
Today's Message
Message Board
Famous quotes, words of wisdom, and more. You just need to decrypt them! The keys are revealed.
Daily Messages
A collection of the daily messages from the past year. The keys are not revealed, so they are more challenging.
Joke Board
Why did the chicken decrypt the code? To get the joke, of course! Decrypt jokes, then encrypt and submit your own favorites. The keys are revealed.
Your Groups
Decrypt messages from your private message boards. You must first Join a Group.
About This Site
Contact Us
Site Map

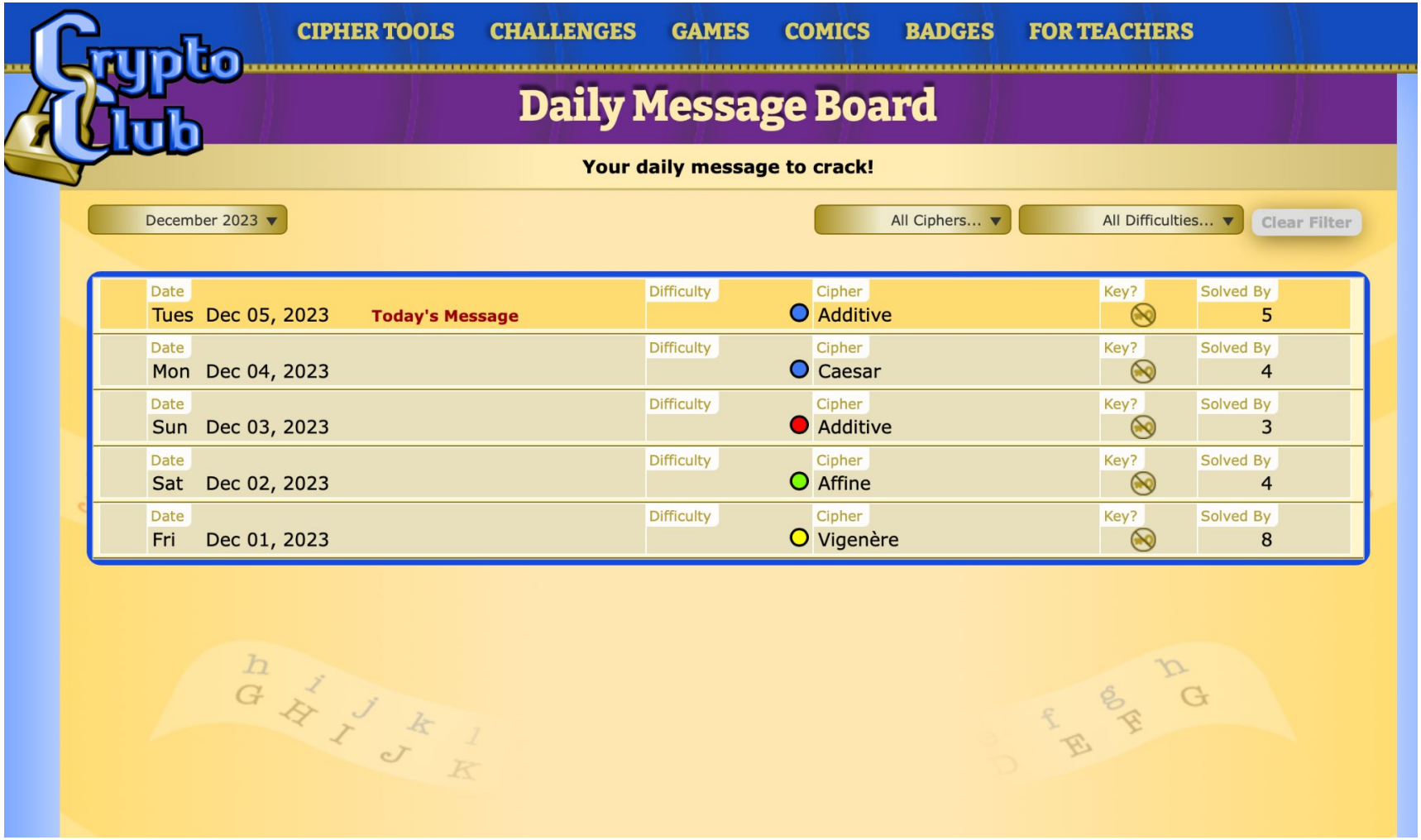
Challenges: Message Board



Id	Cipher	Key?	Solved By	Theme
1	Caesar		1380	Welcome!
2	Caesar		1136	cryptoclub.org
3	Caesar		904	cryptoclub.org
4	Additive		774	cryptoclub.org
5	Keyword		382	About this cipher
6	Keyword		313	cryptoclub.org
7	Keyword		255	Cryptography
10	Multiplicative		188	Cryptography
11	Caesar		317	Cryptography
17	Multiplicative		161	Space
35	Affine		153	Lincoln Advice
41	Keyword		172	Advice
42	Affine		101	Advice
49	Multiplicative		98	Harry Potter
72	Multiplicative		97	President quote

Challenges: Joke Board

New: Daily Messages



New: Badging System

New: Digital Game

Coming Soon: CryptoClub App

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Research Findings

- Mainly youth accessing website.
- Increase website usage leads to increased interest in cryptography.
- Users want:
  - More games.
  - More in-depth tutorials about how to encrypt, decrypt, crack.
  - More ciphers.
  - Extension of content into other STEM areas such as coding.

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Questions, Dilemmas, Next Steps

- Appropriate balance of exploration vs. instruction on the website.
- Increasing usage of website.
- How to keep content current and engaging with the end of project funding.
- Future collaborations and funding opportunities.