CRYPTOGRAPHY DAY 2

Course Name: RISE Program Time Frame: 45 minutes

Unit/Theme: Cybersecurity Grade Level: 5

CONTENT AND SKILLS

Learning Objectives:

• By the end of this lesson students will be able to understand that all sorts of people are cryptographers and there were many different devices created for messaging.

Essential Questions (optional):

•

Students I can statements . . .

- I can encode a message correctly.
- I can correctly decode a message created by a peer.
- I can explain why cryptography is important.

How will you meet the needs of SWD and ELL/MLL students? How will you make sure this lesson is culturally responsive?

- 1. 1:1 support for OT and spelling
- 2. Rulers
- 3. Glue sticks (can move glued items easier)

Content Standards

List all standards and how learners will meet the standard

 Next Generation Mathematics Learning Standards: Make sense of a problem and persevere in solving them.

NYS Computer Science and Digital Fluency Standards

List all standards and how learners will meet the standard

- 4-6.CY.4: Model and explain the purpose of simple cryptographic methods
- 2-3.IC.1: Identify and analyze how computing has changed the way people live and work
- 4-6.IC.7: Identify a diverse range of role models in computer science

CASEL COMPETENCIES and/or NYS SEL BENCHMARKS

- 1A.2C
- 3B.2A

INSTRUCTIONAL PLAN





List the steps of the lesson, including instructions for the students.

- After the last lesson where students created their own message, the students, working
 with an adult as a support, if needed, they will get the correct symbols to encode their
 message on their worksheet and affix them in the correct order. 4-6.CY.4
- After completing the encoding, students will switch papers with another student and have them try to decode the message. 4-6.CY.4
- In preparation for the next lesson, this lesson will conclude with a discussion about encoding and decoding messages and why certain information needs to be encrypted. 4-6.CY.4 & 4 2-3.IC.1
- Students will learn about different cryptographers and the roles they've played in the development of the field. (SWAY) 4-6.IC.7 & 2-3.IC.1

ASSESSMENT(S) / PROJECTS / PRODUCTS

Student created and decoded messages

INSTRUCTIONAL TECHNOLOGY INTEGRATION

 Sway of role models from the various fields of cryptography and how they helped develop the field. The models represent different genders and races.

MATERIALS / RESOURCES

- Worksheets- their messages they created
- Pencils
- Sway
- Smart Board
- Glue sticks
- Symbol pages (one for each student)



