

CRYPTOGRAPHY DAY 2

Course Name: RISE Program
Unit/Theme: Cybersecurity

Time Frame: 45 minutes
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 support for OT and spelling - Rulers - 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)