Code Vol. 1: Binary Bracelets

APL ARTS PARTNERS FOR LEARNING

ORGANIZATION NAME

Herschell Carrousel Factory Museum

AVAILABLE FORMATS
- ☐ Performance
- ☒ Single Workshop
- ☐ Multi-Session Residency Workshop
- ☒ Field Trip

GRADE LEVELS
- ☐ Pre-K
- ☒ K – 2nd
- ☒ 3rd – 5th
- ☐ 6th – 8th
- ☐ 9th – 12th

MAX NUMBER OF PARTICIPANTS

In-Person: 35
Virtual: 35

PROGRAM LENGTH
Single Workshop: 45 minutes
Field Trip: 90 minutes

PROGRAM DESCRIPTION

Our historic band organ runs on a unique system of perforated paper rolls that utilize binary code. Students participating in 'Binary Bracelets' learn about the capital Binary Alphabet.

CURRICULUM STANDARDS

This program supports these NYS or Next Generation Learning Standards:

- 4-PS4-3. Generate and compare multiple solutions that use patterns to transfer information.

Next Generation Science Standards:
- K-2-PS3-2. Use tools and materials provided to design and build a device that solves a specific problem or a solution to a specific problem.
- K-2-ETS1-1 Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.

New York State Learning Standards for the Arts:
- VA:Cr1.2.4. Work individually and collaboratively to set goals and create artwork that is meaningful and has purpose to the makers.
- VA:Cr2.2.4. Utilize and care for materials, tools, and equipment in a safe manner.
- VA. Cr2.1.1 Explore uses of materials and tools to create works of art or design

Contact Arts for Learning WNY for more information.
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Arts for Learning WNY

Inspiring, expand learning, and strengthen our community through engagement with the arts.

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EDUCATIONAL OBJECTIVES

- Students will understand the definitions of computers and binary code.
- Students will understand the uses and advantages of binary code.
- Students will be able to use binary code to make an initialized bracelet.

LOGISTICS/EQUIPMENT

- tables and chairs are ideal

VOCABULARY

Computer – an electronic device for storing and processing data, typically in binary form, according to instructions given to it in a variable program

Coding – Coding refers to creating computer programming code. In a more general sense, the word coding is used to refer to assigning a code or classification to something

Binary – relating to, composed of, or involving two things. a coding system using the binary digits 0 and 1 to represent a letter, digit, or other character in a computer or other electronic device

Initial – the first letter of a name or word, typically a person's name or a word forming part of a phrase

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POST-PROGRAM ACTIVITIES & RESOURCES

- Have the students decipher messages written in Binary Code.
- Have the students write messages to each other in Binary Code.

Resources: https://code.org/curriculum/course2/14/Teacher

ORGANIZATION DESCRIPTION

The Herschell Carrousel Factory Museum, operated by the Carousel Society of the Niagara Frontier, is a premier national historic site and community resource for family recreation and learning that fosters an appreciation for the unique heritage of the carousel and related industries in the Niagara Region.