

**DOBBS FERRY MIDDLE SCHOOL**  
Dobbs Ferry, New York 10522

**COURSE OUTLINE**

**SUBJECT: STEM 7**

**GRADE: 7**

**COURSE DESCRIPTION:**

The STEM 7 curriculum is an introductory creative computing experience using the Scratch programming language. These activities are designed to support familiarity and increasing fluency with computational creativity and computational thinking.

**Anticipated student outcomes:**

**Grade 7 – STEM 7** (*meets every other day for a semester*)

*By the end of the two quarters, students will have been offered opportunities to engage in:*

- Designing and making, not just listening, observing, and using.
- Activities that are personally meaningful and relevant.
- Interactions with others as audience, coaches, and co-creators.
- Review their creative practices.

**Key Concepts Taught by this Course –**

**Computational Thinking Concepts**

- Sequence
- Loops
- Parallelism
- Events
- Conditionals
- Operators
- Data

**Computational Thinking Practices**

- Experimenting and iterating
- Testing and debugging
- Reusing and remixing
- Events
- Abstracting and modularizing

**Materials required or used:**

**7th Grade STEM**

- Chromebook
- Graph paper spiral notebook
- Pencils and a manual sharpener
- Calculator
- Colored Pencils

**Criteria for grading:**

Grades will be based on the following:

- In-class activities
- Class participation
- Assessments
- Homework
- Online performance