



WAYNE STATE UNIVERSITY

STEM Day Lesson Plan

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Title: Code Combat

Subject Area: Computer Science/Coding

Learning Activity Description: Students will be getting STEM experience through coding with Code Combat. After a brief introduction and registration, students will use code to complete various levels of a computer game.

Lesson Activity Objective: Introduce students to computer science concepts such as basic syntax, algorithms, variables, and loops.

Lesson Activity Outcomes:

1. Develop an interest in STEM and STEM learning activities.
2. Develop a capacity to productively engage in STEM learning activities.
3. Come to value the goals of STEM and STEM learning activities.

Materials/Supplies Listed: Computers, Code Combat software (website), Headphones?

Teacher Procedures:

1. Overview of computer science- 5 minute video “Computer Science is Changing Everything” (YouTube)
2. Students individually register for Code Combat
3. Quick Demo
4. Individual student practice
5. Students attempt to beat levels (Teacher circles room to help)
6. Students who finish early can advance to next levels

Preparation Time for Learning Activity: 5 minutes to register student “Code Combat” account

Room set-up: Wifi connection necessary, projector for opening video and demo

Group Strategies (example, group size, expected time for groups, etc.):

Independent or work with partner

Student Products/Artifacts/work pages: Access course manager to see progress of all students

Assessment Criteria/Rubric: The program automatically checks to make sure code is properly formatted and course objective are completed. Course Manager will see and provide evidence of student learning.

Closing/Transition to next activity: Remind students that STEM education creates critical thinkers, increases science literacy, and enables the next generation of innovators.