

Lesson Plan for AP Computer Science Principles

Day 1 (90 Min)

Mrs. Jones

Objectives:

Use Micro:bits to create a simple program.

Your paragraph text

Materials:

Micro:bit (1 per student)

MakeCode website

Procedure:

Hook: Can you make a game?

Introduction to Micro:bit YouTube video

Next, pass out Micro:bits (1 per student)

Students will open the boxes and explore the parts

Students will access makecode.org/microbit and connect Micro:bit to computer

Students will choose a tutorial to complete. They will follow the instructions and make their first coding program. Once program is done, they will upload their program to Micro:bit and test it. After tutorial, they will create their own program and upload it to Micro:bit.

Students will upload their programs and then test

Evaluation:

Students will upload the programs that they made to their Micro:bits and then test and evaluate that their programs work properly. They will trade with a neighbor and explain their program and have the other person test it.

Lesson Plan for AP Computer Science Principles

Day 2 (90 min)

Mrs. Jones

Objectives:

Use Micro:bits to create data and machine learning.

Your paragraph text

Materials:

Micro:bit (1 per student)

MakeCode website

Procedure:

Hook: Can a Micro:bit learn what you want it do?

Introduction to Micro:bit YouTube video

Next, pass out Micro:bits (1 per student)

Students will open the boxes and explore the parts

Students will access makecode.org/microbit and connect Micro:bit to computer

Teacher will demonstrate how to make motions that will display on a graph

Students will choose 4 or more motions that they will 'teach' the Micro:bit

Students should do each motion at least 20 times

Once Micro:bit has learned motions, students will program what the Micro:bit should display when a certain motion is performed.

Students will upload their programs and then test

Evaluation:

Students will upload the programs that they made to their Micro:bits and then test and evaluate using the motions that they taught.