

Teacher's Curriculum Planning Guide

Quick Glance Schedule-Timeline

Day	Time	Content	Learning Objectives	Resources
Day 1	00:00-00:25	Bits and Bytes	SWBAT – Understand that at the microscopic level, computers use “switches” that translate into ones and zeros (called BITS) to work.	<ul style="list-style-type: none">• Day 1 - Slide 15• Teacher instruction video: Unplugged: The show. Part 2: Binary numbers – Counting (8:20) https://youtu.be/Pz7dLWvi2w0• Teacher curriculum file: unplugged-01-binary_numbers.pdf (use only the demonstration, not the worksheets).
	00:25-00:40	Ascii	SWBAT – Understand that computer languages need to be compiled or interpreted into ones and zeros for them to work on a computer.	<ul style="list-style-type: none">• Day 1 - Slide 16• Teacher instruction video: Unplugged: The show. Part 3: Binary numbers - Email (7:14) https://youtu.be/xc0stfTVE_8• Day 1 -Slide 17

Commented [KF1]: This should be an appendix

Introduction to Binary

LEARNING GOALS/OBJECTIVES:

- Students Will Be Able To (SWBAT):
 - Understand how information is stored by a computer, bits (zeros and ones)

RESOURCES /MATERIALS:

Resources for Teachers:

1. To introduce the concepts of binary – **Teacher Instructional video** – Unplugged: The show, part 2: Binary Numbers – Counting <https://youtu.be/Pz7dLWvi2w0> Teacher curriculum file: unplugged-01-binary_numbers.pdf (use only the demonstration, not the student worksheets).
2. **Teacher Instructional video** : Unplugged: the show. Part 3: Binary Numbers – Email https://youtu.be/x0stfTVE_8

Supplies needed:

1. Flashlights for conveying concept of switches (two is sufficient).
2. The cards from CSUnplugged.com teacher curriculum file: unplugged-01-binary_numbers.pdf (use only the demonstration with the dot/cards, not the student worksheets).

CLASS DESIGN/FORMAT:

1. To further get the understanding of how computers use “switches” that translate the ones and zeros use Slide 2. The background for the teacher is listed above in Resources (2)
 - a. To introduce the concepts of binary – Teacher Instructional video – Unplugged: The show, part 2: Binary Numbers – Counting <https://youtu.be/Pz7dLWvi2w0>
 - b. Teacher curriculum file: unplugged-01-binary_numbers.pdf (use only the demonstration, not the student worksheets).
2. To understand that a computer language needs to be compiled or interpreted into the ones and zeros for the code to work on a computer – refer to Slide 4 and teacher instructional video in Resources (3)
 - a. Unplugged: the show. Part 3: Binary Numbers – Email https://youtu.be/x0stfTVE_8

3. Close out the day with a couple of quick closing exercises. Have the students call out new vocabulary words for the Word Wall. You can refer to the Glossary included in Appendix D for words and definitions.