Teacher: Steve Sabaugh

Unit Plan: UNIX and 'UNIX-like' Operating Systems

Grade and Content: AP Computer Science Principles

Date: Day 3

Lesson: Bell Labs Innovations II

Overall Goal/Objective of Lesson (one sentence)**:** A lesson that introduces students to some of Bell Labs' most important inventions, with the focus being on the UNIX Operating System and the C Programming Language, and their enormous impact on technology today.

Content Objectives (nouns) -Students will have an understanding of the enormous magnitude of influence on today's world that came out of one place during the 20th century -Students will appreciate some of the stories behind their favorite technology -Students will have a humanistic aspect of their computer science pedagogy and knowledge base	**Assessments**
Skill Objectives (verbs/Common Core Standards) - Students will be able to demonstrate ability to research and write a 2-3 page paper on a Bell Labs innovation of their choosing and its impact on the world today - Students will be able to identify and explain 2 Bell Lab inventions that influenced modern computer technology - 9-12.IC.7 Investigate the use of computer science in multiple fields	**Assessments** Summative- Student will research either one of the Bell Lab innovations discussed in class or another of their choosing and write a 2-3 page report

Materials
BellLabs slide deck (starting with slide 24)
Teacher's Laptop and projector

Student's Resource folder
Journal
Pen/Pencil

Sequence of Lesson Plan

15 minutes 15 minutes 5 minutes 6 minutes	**Mini-Lesson** *What information is essential for the student to know before beginning and will this skill be communicated? How will you be demonstrating this skill? Identify strategies to be used to determine if students have learned the objectives. The teacher models the process to be followed and makes connections to previous instruction. The teacher checks for student understanding. The teacher's explanation should be clear. Questions and tasks are higher order and have multiple possible answers.* 1. **<u>Continuation from previous day:</u>** We will also discuss briefly the assessment research paper due at the end of the unit. 2. **<u>Personality Spotlight:</u>** Profile on the person who literally wrote the book on the C Programming Language, UNIX chronicler, co-creator of the AWK language, which we'll study in this unit, and long-time employee at Bell Labs, Brian Kernighan. We will watch a short video about working at Bell Labs and the development of UNIX 3. **<u>Mini-Lesson:</u>** We will discuss UNIX and C briefly but most of this will come in the upcoming days 4. **<u>Video Presentation:</u>** We'll conclude our history of Bell Labs history of innovation lesson with a music video produced in the 1980's by Lucent Technologies (Bell Labs owner at the time) covering all the inventions we talked about and then some for review.	**Plans for Differentiation/ Culturally Responsive Instruction** -Mini-Lesson notes are completed in guided notes format, therefore being easier to copy and comprehend -Material is presented in clear and easy-to-follow format -Slide decks will be provided to the students -Students will have a better chance of retaining their new knowledge with this catchy song

4 minutes	**Closure** *What method of review/assessment will be used to complete the lesson? Students will have an opportunity for reflection, sense-making, and closure. Teacher cites multiple approaches for those students who experience difficulties. The teacher conveys that the lesson is not "done" until all students understand or can demonstrate the skill.* 1. **<u>Share-Out:</u>** Teacher will ask students to review what they have learned in the last 2 lessons. Any surprises?	**Plans for Differentiation/ Culturally Responsive Instruction** -Closure allows students to communicate with each other.