Teacher Pre-observation form and conference

1A. What student learning outcomes/objectives and CCS learning outcomes are the focuses of the lesson? Include what data informed this (these) outcome/objective(s).

Class Objectives
- Students will understand the concept of scripting by reading the assigned work and extrapolating the key ideas.
- The students will apply their knowledge of command line functions and scripts by creating them and performing the experiment.
- Students will create their own scripts by synthesizing the information from past lessons and constructing their scripts in Google Docs.

CCSS Objectives
- ELA-L.RST.11-12.3: Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
- ELA-L..RST.11-12.9: Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

This lesson will have students learning the new concept of scripting, while practicing topics already introduced such as network connectivity and using the command line. This is an objective that is necessary for the college level course. In addition, students will be synthesizing information and combining topics. This may be a difficult task for some, and I am prepared to help them make the connections. It is likely that all of the students will not finish creating the scripts before the end of class, and that is okay. Students will be able to revisit their scripts in the next class to revise and make changes. Based on the initial input from today, I can group students and help them complete this assignment so that they better understand the topic.

1B. Briefly describe the students in your class including those with special needs. How will you differentiate instruction for individuals or groups in your class to meet lesson objectives?

The class consists of 19 students who have a range of abilities and needs. The class structure is essentially "flipped" which allows me to work with small groups of students to help them in the specific ways that they need help. Students are broken into small groups for the class, for some, working with others similar to them, and for others, working with students who are different. By working together and by getting targeted help from me, my goal is to keep all students on task and meeting the class objectives. Below are some descriptions of the groups of students in my class.

The first group of students those who show a strong interest in Computer Science and Technology, but struggle with some of the time-management details. In this group I would classify Andre, Andrew and Riaz. Both Andre and Andrew have 504 plans for ADHD, with Andrew's plan specifying breaks and both requiring refocusing. Riaz is not classified currently, but exhibits similar behavior. These students do really well during the experiment part of the class, but struggle more on the independent reading and response. One of the strategies that I use in class is to monitor their progress while they are working (through actively learn and through classroom observation). I use this to help prompt students and bring them back to task. This is a strategy I use with all students, but is particularly helpful with these three.

Additionally, I have a few students who struggle with attention issues that do not show a strong interest in technology. These include Fernando, Angel and Christian. Fernando has an IEP for his reading comprehension skills, which are weak. However, his lack of interest in the subject makes it more difficult to keep him on task. Angel and Christian also struggle with attention, and with the lack of structure in the class and their ability to take breaks. I am working with the students to give them individual attention to help them be successful.

Another group of students is students who have deficits in their reading and writing skills. This includes Justin Goncalves and Joe Carr. I have found that these students take a little longer with their Actively Learn assignments, and sometimes may need to be prompted to re-do a question (for example, they will only answer the first part of the question, or the question is incomplete). However, once prompted, they are able to re-do the questions and answer sufficiently. The asynchronous nature of the class allows them to work on their own pace, and since many other students will also be asked to revise, they are not singled out because of their processing skills.

Most of the other students in the class are hard-working, high achieving students who are working at pace. While there are some students who are quite confident of their work, the class in general sometimes struggles from "imposter syndrome" and struggling to understand that they know more than they do. I am working with the class to build confidence through different exercises in addition to learning the content needed to be successful.

1C. How does this lesson align within the current unit of study/across other units?

They are currently learning about connecting to network resources through the command line interface of Windows PE. In past lessons they have learned how to connect, and they will use this information to create automated scripts that connect to the network. This is one of the learning objectives of the Operating Systems course. This is one of the final lessons using the Windows command line. Students will use the command line in other projects this year in other courses (they have already used it to connect to gitHub for their web projects), and they will take a course next year at Queensborough Community College in networking. The goal of the lesson is not just how to create an automated network script, but how to feel more confident in the command line, networks, and scripting. All of which they will see again in this program.

1D. What instructional materials, including technology, will you employ to meet the learning outcomes/objectives of this lesson?

The class is broken into two components. Some students will complete the experiment first, while others will complete the reading assignment first. We usually split at the bell since it is a double period.

In the experiment session, the QCC experiments have been broken down into a set of directions that can be followed by students on their Windows PE workstations. The students receive the instructions in a Google Doc. They work in pairs or groups of three to complete the step by step instructions, answering a few questions in their Google Doc as they complete the assignment. Experiments are graded by the students Google Doc responses as well as their participation in class. Students will ask clarification questions as they complete the experiment and I will monitor their progress to keep them on task.

During the reading assignment, students are given an assignment in ActivelyLearn. The readings are based off of the information from the college, as well as other sources that I think my be beneficial to students for the topic. Sometimes the "readings" will also include videos that the students are expected to view. After the text given, the students are required to answer a few questions in actively learn (around 4). The reading itself is not long (usually less than two pages), but because it is technical, it can sometimes be dense. The questions are helpful to me as I can see who is getting the concepts and who is struggling. The ActivelyLearn reading is an "individual" activity, but I often find that students will help each other out after the first attempt to try to make sure everyone is understanding. Additionally, sometimes I can check the students answers as their going, which allows

them to revise their work and rethink it while they are still in class.

1E. How do your instructional strategies, including student grouping, promote higher levels of thinking and student engagement?

Students were paired for this unit for multiple reasons. The first is that computing is a highly collaborative field, and students need to learn communication skills. For this unit, I paired students with other students whom they have not previously worked with, but who I felt had a similar approach to the class. This allows students to work with someone who they may not have been comfortable with before, but I tried to ease the stress, by not putting students who I felt would clash together. At this point, most students have been working with their group for a few weeks and are now quite comfortable.
The students work at different paces, and on different things in the classroom. This allows everyone to be an "expert" at some time. For example, a student who is slightly slower paced, but can still finish the experiment in the first period, is seen as an expert to the student who is faster paced, but doesn't get to the experiment until the second period. I have seen this lead to a collaboration in between groups as they help each other out in the areas or questions that might be more difficult. By explaining the concepts, the students understand them better, and additionally, I often find that students can explain difficult concepts better than me, because they understand the lack of background knowledge first-hand, and won't use terminology that may be confusing.
In general the class is informal but busy, and students are able to get the help they need from me, other students, or other resources (like the internet) throughout the class.

1F. How do you plan to assess student achievement? Include how your assessment(s) will be a tool for future instruction.

Students are completing multiple assignments and will be assessed in a variety of ways.
In the experiment, students are primarily assessed through observation, as well as their written responses to the questions in the Google Doc. As I observe during class, I can see which students are struggling, and which are moving through the assignment with ease. I will use that information in class to help students who are struggling and to push students who are drifting off task. After class I will review the Google Doc to see if there were any misconceptions in the lesson that I missed through observation. I will use these to help guide the class next period.
For the reading, students are primarily assessed through ActivelyLearn.
Students are reading the text and filling out a few questions as they go. I usually try to start this assessment in class, as I find that often students' first response is not clear enough or is pulling the wrong information. I am able to let them know to go back and retry, so that they can revise their answer in class while the items are fresh in their mind. This allows them to leave class with a solid foundation of the knowledge.
Finally students will need to synthesize the information from the last few experiments into a script which they will first write in a Google Doc. This will allow me to help them correct their mistakes before typing it in directly on the computer. The scripts will be typed into the computer next class and run. Students who struggle to write the scripts in the Google Doc. Will receive extra assistance, while those who have written correct scripts will be able to move forward and copy them onto the PE computers.

Lesson Plan and Pre-observation Artifacts

Please upload Lesson Plan and Pre-observation Artifacts below.

Name	Upload Date	Upload User	File			
Artifacts						
Lesson Plan	01/09/2018	DiFede, Kuri	edit			
Script Assignment	01/09/2018	DiFede, Kuri	edit			
Reading	01/09/2018	DiFede, Kuri	edit			
Experiment	01/09/2018	DiFede, Kuri	edit			