**Introduce lesson**

Teacher: Good ___________

Teacher: Welcome to Programming Basics-Intro to Programming

Teacher: Today we will be learning about programs, algorithms/pseudo-code and I will briefly touch on programming languages (that’s another lesson).

Teacher: we’ll be using your composition to take notes, if you don’t have one today be sure you have one next class, for now come get a sheet of blank paper.

Teacher: Let’s go into the lesson:

Teacher: Can anyone tell me what a Program is?

(Teacher waits for students’ response)

Teacher: Okay good, so some of you have a basic understanding of programs.

Teacher: Let me get the definition are:

What is a Program?  (A Program is:) “A computer program is a set of instructions for a computer to perform a specific task. Programs are often viewed in these categories applications, utilities or services.

“Programs are written in a programming language (next slide) then translated into machine code by a compiler and linker so that the computer can execute it directly or run it line by line (interpreted) by an interpreter program.”

Teacher: (Which will be discussed in another class).

Teacher: In order to create a program, what must we do?

(Turns to students)

Teacher: No takers?

Teacher: Well, we must first have an idea of something we want the computer to do.

Teacher: To do this, we will use an algorithm and produce pseudo-codes.

Teacher: An algorithm is what we will use to tell the computer what to do and the pseudo-codes will be used to setup the steps we will take to get there.

Teacher: Does everyone understand this?

Teacher: Before we dive into our work let’s watch a couple of YouTube videos. These videos will give you more insight on algorithms and pseudocodes.

(Teacher starts videos)  10mins
(After student watches the first video, teacher asked if there are any questions.)
(After student watches the second video, teacher asked if there are any questions.)

*This might take another 5mins.*

Teacher: Okay, let’s get to work.

(Teacher calls up a couple of students to pass handout blank paper.)
Teacher: How many of you know how to prepare and bake a cake?
(Hands go up)
Teacher: That’s great!
Teacher: Now, give me the first step in preparing a cake:
Student 1: you need a bowl.
Teacher: yes, but is that the first step?
Student 2: no, you heat the oven.
Teacher: okay, let’s try again.
Teacher: “Now, on the blank paper tell me how you would prepare and bake a cake. Step by step. Be sure that your name and today’s date is on the sheet, and title “How to prepare and bake a cake”.

Teacher lists all the information given by the students on the board.
Teacher walks around the room and assist students.

After students’ copies information (Teacher calls up a couple of students to pass handout of How to prepare and bake a cake.)
Teacher setups up demonstration using cutouts.
Teacher: this will be our do together (will explain later)
Teacher: when creating a program we first need to know what we want to make. In this case, we want to prepare and bake a cake.

Using these cutouts and the information on your handouts we will begin to prepare our cake.
(Teacher gives a list of ingredients and equipment.)
(Teacher questions students)
Teacher: using what you see here, what should we do first?
Teacher: writes this on the board.
Teacher: Now turn your paper over and write out the pseudo-code for the cake.
(When students are done or almost completed teacher have them turn on their computers and open the Alice program.)

Teacher: now we are going to do some hands-on and experiment with algorithms/pseudo-codes.

Students open Alice program and interact with the “how do you prepare a cake?” tutorial.

Teacher: When you’re done, please, turn in the sheet of paper you completed today.

Thank you and I hope you enjoyed this lesson.

Our next lesson will be on “Programming Languages”