ASSURE UNIT PLAN
Analyze Learners, Standards, Select Media and Materials, Utilize Media and Materials, Evaluate and Revise

Day 4
Lesson 3: Introduction To Programming

Analyze Learners: High School (9 grade) Students. Mental, Social, Physical, and Social.
Current Knowledge, Prerequisites, and Notes about Learner Attitudes: Students are eager, competitive with projects and ready to work. This lesson is an extension to infuse technology. Based on the technology-use surveys, 90% of the class have used MSWord, PowerPoint, and Paint software, 66% have internet-based technology access at home. Teacher will work individually with students of various disabilities (ELL, ESOL, and Autistic students, etc.) who did not comprehend the lesson. These students were shown pictures, reread information for context clues.

Objectives: After viewing this presentation, six grade students will be given a task to create a pseudocode, creating a drawing using the steps of the pseudocode providing 100% accuracy.

Standards: SP.PK12.US.3.5; CT.L2-01; NETS

Daily Lesson
Introduce and advise the students regarding the purpose of the unit, how it is organized and will be presented.

Critical Thinking:
To stimulate students thinking this process will be given in the form of questioning:

What is a Program?
Teacher explains and give examples of a program.
What is an Algorithm?
Teacher explains and give examples of Algorithm/Pseudo-code using YouTube videos.

1. What is an algorithm and why should you care?
https://www.khanacademy.org/computing/computer-science/algorithms/intro-to-algorithms/v/what-are-algorithms by Khan Academy;

Select Media and Materials: Computer for Presenter, Computers for Students, LCD Projector, Smartboard, Interactive Whiteboard, Microsoft Office, iPad, writing tools, paper, flashcards, Internet access, Videos online.

Utilize Media and Materials:
Activity 1: How to prepare and bake a cake
Steps for writing a simple program, how to use Algorithm/pseudocodes

**Example directed/guided by teacher**
Example: How to prepare and bake a cake. *Handouts*
Teacher asks the students “how do you prepare a cake?”
Teacher writes answers on the board.
Teacher have students write in notebooks or blank sheet of paper.
Teacher uses cutouts for ingredients and demonstrates step by step.
Teacher gives handouts for directions on how to prepare and bake a cake.
Teacher shows an example of how Alice World video of how to prepare and bake a cake.

**Procedures:**
1. Using the ingredients, students put the ingredients in sequential order.
   Ingredients: eggs, salt, milk or lactose free milk, flour, butter or margarine, spice, water, mixing bowl, spoon, frosting, (optional: bananas, strawberries, fruits), sugar or substitute sweetener, timer, oven, baking pan, gloves or mitt.
2. **How will your cake look before and after?** Using notebooks/blank paper students will create a diagram of the sequences of events.

**Require Learner Participation:**
Students copy list from board and write in notebooks or blank sheet of paper.
Students draw a picture of their finished product
*After performing activity one, students will be given a challenge problem to solve.*

**Challenge**
*Activity 2:* Students will place the objects listed below in sequential order. Complete the scene
Students begin:
1. By putting the information in order first.
2. Drawing the picture; using shapes, e.g. squares, triangles, etc.
Scene List: Boat, ocean (sea), sand or beach, sail, flag, 2 trees, building, sun

**Evaluate and Revise:**