**Presentation Notes**

1. What does the ASCII acronym stand for?

ASCII stands for American Standard Code For Information Interchange

1. What is the ASCII code used for?

It is used for storing text in computers and it is also a way of communication between computers to transfer data.

1. Encoding characters (i.e. letters on the keyboard) into ASCII code numbers  
   1. What is the ASCII code for the letter “A”
      1. 65
   2. What is the ASCII code for the letter “a”
      1. 97
   3. Why are they different?
      1. Because they are different type of character since they also have different binary code assigned to then.
   4. What is the ASCII code for the space bar?
      1. 32
2. Decoding ASCII code numbers into characters and letters   
   1. What character corresponds to ASCII code 61 decimal
      1. =
   2. What character corresponds to ASCII code 8 decimal
      1. backspace
   3. Why is the character 8 not the same as ASCII code 8
      1. Because the character 8 has a different code assigned to it and it is a character not the code
   4. What is the range of non-printable characters in ASCII
      1. 0 - 31

1. How would you code the string “Hello” in ASCII?
   1. 34 72 101 108 111 34
2. How would you code the string “127” in ASCII?
   1. 049 050 055
3. What is the difference between 127 and “127”?
   1. The difference is that 127 value is backspace and 127 number is 049 050 055

**Student Questions**

1. Why do computers have to convert characters (i.e. letters on the keyboard) into numbers? Why can’t computers just use the letters directly?
   1. Because computers use 1’s and 0’s as on or off and ASCII is in hexadecimals which allows computers to read symbols.
2. How do computers communicate with people who speak different languages and use different alphabets? What is used instead of the ASCII code table?
   1. They use Unicode and hexadecimal to read symbols
3. Research online-documentation for the Python **ord()** function. Provide some sample code that demonstrates the use of the **ord()** function.
   1. The ord() function in python takes in a string and gives back the character value on the ASCII Table
   2. print(ord('A'))
4. Research online-documentation for the Python **chr()** function. Provide some sample code that demonstrates the use of the **chr()** function.
   1. The chr() function takes in a integer value and gives out the character in the ASCII Table that’s associated with that value
   2. print(chr(12456))
5. Write a Python program that uses the ord() and chr() functions to do the following:
   1. import time
   2. characterInput = ord(input('please enter one character: '))
   3. print('')
   4. time.sleep(0.5)
   5. print('the value of your character is', characterInput)
   6. print('')
   7. characterOutput = characterInput + 3
   8. characterOutput = chr(characterOutput)
   9. time.sleep(0.5)
   10. print('the new character is', characterOutput)
6. Enhance your program to add the following features:
   1. import time
   2. characterInput = str(input('please enter one character: '))
   3. if(characterInput in 'QWERTYUIOPASDFGHJKLZXCVBNMqwertyuiopasdfghjklzxcvbnm'):
   4. print('')
   5. time.sleep(1)
   6. print('continue')
   7. print('')
   8. characterInput = ord(characterInput)
   9. else:
   10. print("")
   11. time.sleep(.5)
   12. print('Warning')
   13. print('')
   14. print('\* symbol is now active becuase you have entered a symbol or number')
   15. time.sleep(2)
   16. print('')
   17. characterInput = ord(characterInput)
   18. time.sleep(0.5)
   19. print('the value of your character is', characterInput)
   20. print('')
   21. characterOutput = characterInput + 3
   22. characterOutput = chr(characterOutput)
   23. time.sleep(0.5)
   24. print('the new character is', characterOutput)