Week 2.1
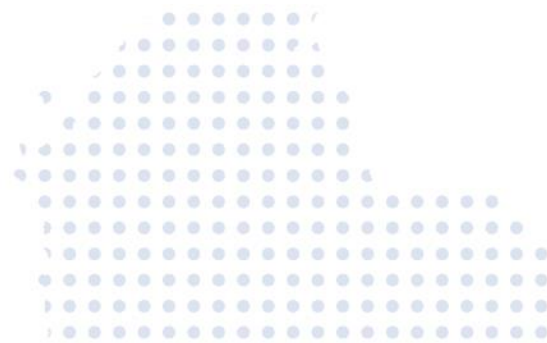# Asynchronous Session

Vocabulary Skills: Parts of Speech

Activity 1

What do you know about "Python Random Module"?

You are about to read about the Python Random Module. Before you do that, try to answer the following questions.

1. Does the module allow you to control the types of random numbers that you create?

   _____ Yes, it does.

   _____ No, it does not.

2. Does the module allow the evaluation of machine learning algorithms?

   _____ Yes, it does.

   _____ No, it does not.

3. What tasks can the random module perform? Select all the possible answers.

   a. _____ Producing games

   b. _____ Randomizing lists

   c. _____ Choosing elements from a list

   d. _____ Generating secure passwords

   e. _____ Generating secret urls

   f. _____ Producing test datasets.

Activity 2

Part 1.

Now, read the glossary below retrieved from this webpage:

https://www.w3schools.com/python/module_random.asp .

PYTHON RANDOM MODULE

Python has a built-in module that you can use to make random numbers. The random module has a set of methods:

Method	Description
1 seed()	Initialize the random number generator
2 getstate()	Returns the current internal state of the random number generator
3 setstate()	Restores the internal state of the random number generator
4 getrandbits()	Returns a number representing the random bits
5 randrange()	Returns a random number between the given range
6 randint()	Returns a random number between the given range
7 choice()	Returns a random element from the given sequence
8 choices()	Returns a list with a random selection from the given sequence
9 shuffle()	Takes a sequence and returns the sequence in a random order
10 sample()	Returns a given sample of a sequence
11 random()	Returns a random float number between 0 and 1
12 uniform()	Returns a random float number between two given parameters
13 triangular()	Returns a random float number between two given parameters, you can also set a mode parameter to specify the midpoint between the two other parameters
14 betavariate()	Returns a random float number between 0 and 1 based on the Beta distribution (used in statistics)
15 expovariate()	Returns a random float number based on the Exponential distribution (used in statistics)
16 gammavariate()	Returns a random float number based on the Gamma distribution (used in statistics)
17 gauss()	Returns a random float number based on the Gaussian distribution (used in probability theories)
18 lognormvariate()	Returns a random float number based on a log-normal distribution (used in probability theories)

19 normalvariate()	Returns a random float number based on the normal distribution (used in probability theories)
20 vonmisesvariate()	Returns a random float number based on the von Mises distribution (used in directional statistics)
21 paretovariate()	Returns a random float number based on the Pareto distribution (used in probability theories)
22 weibullvariate()	Returns a random float number based on the Weibull distribution (used in statistics)

Part 2. Vocabulary

a. Based on the information from the glossary, match the words with their definitions.

WORD

a. return (v) _____

b. float (adj) _____

c. random (adj) _____

d. range (n) _____

e. restore (v) _____

DEFINITION

1. Arbitrary or unpredictable. Also nonspecific, incoherent, poorly organized, loser, and so on.

2. To copy accidentally lost or deleted files to their normal location

3. To give back the result of the execution of a statement, method, or function.

4. A number with a fractional or decimal part, e.g. 34.67. Also known as a real number.

5. A sequence of values

b. Complete the sentences with the correct words from the box.

sample	mode	state	set

1) To establish, determine, and estimate are synonyms of the verb to _____.

2) _____ is a part or subgroup of a population that represents the characteristics of the entire population being studied.

3) The most commonly occurring quantity or value is called _____.

4) The condition at a particular time is known as _____.

Part 3. Parts of Speech

a. Identify the most repeated parts of speech in the text.
   1. Verbs: _____
   2. Nouns: _____
   3. Adjectives: _____
   4. Prepositions: _____
   5. Conjunction: _____
   6. Pronoun: _____

a. Identify the parts of speech of the following description: *Takes a sequence and return it in a random order*.
   1. Takes _____
   2. A _____
   3. Sequence _____
   4. And _____
   5. Returns _____
   6. it _____
   7. In _____
   8. A _____
   9. Random _____
   10. Order _____

Self-Assessment

Rate yourself by selecting YES, NO, NEED TO PRACTICE next to each sentence.

		YES	NO	NEED TO PRACTICE
1.	I understand the definition of *parts of speech.*			
2.	I know all parts of speech and the differences among them.			
3.	I can identify the different parts of speech in a sentence.			
4.	I understand the meaning of the different methods in a random module.			

Activity 1

What do you know about "Python Random Module"?

Answer the following questions.

1. Does the module allow you to control the types of random numbers that you create?

    <u>X</u> Yes, it does.

    _____ No, it does not.

2. Does the module allow the evaluation of machine learning algorithms?

    <u>X</u> Yes, it does.

    _____ No, it does not.

3. What tasks can the random module perform? Select all the possible answers.

    a. <u>X</u> Producing games

    b. <u>X</u> Randomizing lists

    c. <u>X</u> Choosing elements from a list

    d. _____ Generating secure passwords

    e. _____ Generating secret urls

    f. <u>X</u> Producing test datasets.

Activity 2

Part 2. Vocabulary

a. Based on the information from the text match the words with their definitions.

WORD		DEFINITION
a. return (v) <u>3</u>	1.	Arbitrary or unpredictable. Also nonspecific, incoherent, poorly

organized, loser, and so on.

b. float (adj) <u>4</u>

c. random (adj) <u>1</u>

d. range (n) <u>5</u>

e. restore (v) <u>2</u>

2. To copy accidentally lost or deleted files to their normal location

3. To give back the result of the execution of a statement, method, or function.

4. A number with a fractional or decimal part, e.g. 34.67. Also known as a real number.

5. A sequence of values

b. Complete the sentences with the correct words from the box.

sample	mode	state	set

1) To establish, determine, and estimate are synonyms of the verb to <u>set</u>.
2) <u>Sample</u> is a part or subgroup of a population that represents the characteristics of the entire population being studied.
3) The most commonly occurring quantity or value is called <u>mode</u>.
4) The condition at a particular time is known as <u>state</u>.

Part 3. Parts of Speech

a. Identify the most repeated parts of speech in the text.
1) Verbs: <u>return</u>
2) Nouns: <u>number</u>
3) Adjectives: <u>random</u>
4) Prepositions: <u>in</u>
5) Conjunction: <u>and</u>
6) Pronoun: <u>you</u>

b. Identify the parts of speech of the following description: *Takes a sequence and returns it in a random order.*
1. Takes <u>verb</u>
2. A <u>article</u>
3. Sequence <u>noun</u>
4. And <u>conjunction</u>
5. Returns <u>verb</u>
6. It <u>pronoun</u>
7. In <u>preposition</u>

8. A article
9. Random adjective
10. Order noun