Unit 11: English Syllable

1 INTRODUCTION
The identification, description and use of the English phoneme in a group is the concern of syllable.

2 OBJECTIVES
By the end of this Unit, learners will be able to:

a. define and identify the following parts of a syllable:
   - Peak (nucleus, rhythm or free syllable)
   - Onset (Pre-initial, initial, post-initial or open syllable)
   - Coda (Pre-final, final, post-final: 1 & 2, or close syllable)
   - Consonant clusters
b. explain the strength of an English syllable
c. explain the weak syllables
d. explain what makes the strong syllable strong
e. define Phonotactics
f. identify most of the possible combinations of the English Phonemes
g. explain the maximum onsets principle.

3.1 PEAK (NUCLEUS, RHYTHM AND FREE SYLLABLE)
A syllable is defined by the *Oxford Advanced Learners Dictionary of Current English* as: any of the units into which a word is divided, containing a vowel sound and usually one or more sounds. From this axis, we can progress to say that, a syllable, essentially, is a division of a word that contains at least a vowel sound; this division is often marked by . (the sign of a full stop or period) and mediated by phonetic considerations. Phonetically, this unit of a word division is usually marked by higher amplitude or intensity (loudness), longer duration, and a change in fundamental frequency (pitch). This is why the term the peak has been used to name this unit of the syllable. Because it is the most essential part of a syllable, the term nucleus is often used to name it as well. Also, because in identifying the number of syllables of a word, it often possible to tap the number of beats one can count of the word, the term rhythm is used to name this part of the unit of a syllable.

Some examples of such one-vowel syllables in English are: or, ore and are /ɔ: ɔ: ɑ:/ respectively. Because this type of syllable does not have any other sound at its beginning nor end, or because it is preceded and succeeded by silence, it is also referred to as free, open or simple syllable. Please, note that the word division into units we refer to here is phonetically mediated and not morphologically such as: suffix, infix and prefix.

3.2 ONSET (PRE-INITIAL, INITIAL AND POST-INITIAL)
However, if a syllable is started or preceded by a consonant, i.e. a consonant comes before the mandatory vowel, the consonant at this initial position is named the onset. Sometimes, the onset may be made up of consonant clusters of as many as three consonants (for instance in English). In such an instance, the first of such is called the pre-initial consonant”, the second, “initial consonant” and the third, “final consonant”.
This can be illustrated with the word “stray” /strei/; where the peak, /ei/ is preceded by an onset of three consonants made of /s t r/. Thus, /s/ is pre-initial, /t/ is the initial and /r/ is the final onset.

3.3 CODA (PRE-FINAL, FINAL, POST-FINAL: 1 & 2, OR CLOSE SYLLABLE)
However, just as the peak of a syllable can be free or preceded by an onset, it can equally be succeeded by as many as a cluster of four consonants. These consonants that appear at the final position of the peak is called the coda. The first of them is the pre-final, the second final, the third, post final 1, and the last, post final 2. But note that if the syllable has just one coda, the consonant is the final consonant. Let me illustrate this using “prompts” /prɒmptz/ as an example. The word has a coda of four consonants namely: /m p t z/; where: /m/ is pre-final, /p/ final /t/ post final 1 and /z/ post final 2.

Note that when a syllable has a coda, it is called a close syllable; (e.g. kin) however, if a syllable does not have an onset, it is said to be an open syllable (e.g. in), which has a zero onset. When a syllable does not have a coda, it is a syllable with zero coda (e.g. pay /peɪ/; if it has neither an onset nor a coda, it is said to be a syllable with zero onset and zero coda; it is, therefore, a free or simple syllable (e.g. woo /uː/). But when a syllable has both an onset and a coda of any number, the syllable is said to be a complex syllable.

The tree diagram.

where brackets:
1. aa = simple or free syllable (zero onset and zero coda)
2. bb = syllable with onset but zero coda
3. cc = close syllable with zero onset
4. dd = syllable with encased in an onset and coda (complex syllable) and
5. two words, spray and prompts, have illustrated the diagram as it is rare to have a word that fulfils all the obligations.

3.4 THE WEAK SYLLABLES
In English, some syllables of most multi-syllabic words do not often receive emphasis, so are not accompanied by some kind of “loudness” that is relative to the other syllables in the same utterance or word. Acoustically speaking, such de-emphasised syllables experience relative reduction in the movements of the vocal folds, which often leads to reduced FO, intensity and duration. The phonological consequence of this is, this type of syllable is produced with some silence, little or no emphasis and sometimes totally
swallowed or skipped. Such syllables that have these characteristics are called the weak syllables.

Some cues are there to identify such weak syllables in an utterance. The most common one is that the peak or the vowel of the syllable is almost always short, i.e., the peaks are made of the short vowel sounds such as: /ɪ ɛ əʊ aʊ ʌ ə/, which signal the occurrence of a weak syllable. In addition, such a weak syllable with a short peak is usually an open syllable, which does not have a coda. Sometimes when it has, the coda is just the final element - one consonant coda. An example is car.di.nal transcribed as /kɑː.dɪ.nəl/ or /kɑː.dɪ.nl/ of three syllables - /kɑː/, /dɪ/ and /nəl/. In the second transcription, the final syllable has a syllabic consonant /l/ as its peak giving /nl/, thereby, completely eliding the schwa sound /ə/ that ought to be the peak. Here, it is possible to swallow /ə/ because it is a weak vowel, indeed, the weakest of all the vowel sounds. In the instance above, the penultimate syllable, /dɪ/, is equally made of a weak vowel.

3.5 THE STRONG SYLLABLES

If the other vowel sounds constitute the peak of a syllable, such syllables are regarded as strong syllables. These vowels we have in mind are: /i: ɑ: ɔ: u: ɜ:/ and all the diphthongs/triphthongs. They are all long sounds, which, therefore, contradict one of the factors that make a weak syllable. One other factor that determines the weight of the syllable is the number of consonants that serves as the coda of the syllable. When a consonant cluster of two or three is the coda of a syllable, this syllable is a strong syllable. Examples: (a) car.di.nal /kɑː.dɪ.nəl/ (b) sa.dist /sə.dɪst/, which illustrate factors one and two that determine a strong syllable. In (a), the first syllable, kɑː, is strong because of the long coda; while the two syllables of (b) are strong in: /sə/ and /dɪst/. /sə/ is strong by virtue of the long vowel, /eɪ/, that makes the peak, and /dɪst/ though has a peak of short vowel, but is bounded at the right by two consonants, /s/ and /t/.

3.6 THE PHONOTACTICS OF ENGLISH

The study of all the possible combinations of the phonemes of a language in order to write an acceptable unit larger than the phoneme is called Phonotactics.

There are a number of tables that present all the English phonemes with all the possible sequences, i.e. all the possible ways the English syllables can combine to make acceptable units.

Some phonologists present 23 consonants at the initial-onset position that can combine with almost all the vowels including the diphthongs to form a CV syllable (one consonant initial onset and a peak). Only /ʒ/ rarely occurs as an onset at the initial position; while /ŋ/ does not occur at all.

The following onset clusters, with a large number of vowels, are possible in English:

- s + : l j w p t k m n f;
- p, b, f (each) + : l r j;
- t, d, θ (each) + : r j w;
- k, q (each) + : l r j w;
- m, n, l, v, h (each) + : j;
- ʃ + : r

Examples of the above sequences of clusters at the onset position are: sl-, pl-, tr-, kl-, mj- and ʃr- in: sla(p), pli(ght), try, clea(n), mew and shri(nk).
The entire possible syllables in English are with a sequence of three consonant onsets (initial cluster of CCCV). In such English clusters, /s/ must be the first essential consonant or the pre-initial element of the onsets; next are the three voiceless plosives: /p t k/ to be followed by any of: /l r j w/. Examples of such syllable clusters are: sprit-, str- and skj- in the words such as: Spri(te), stri(ke) and skew.

where: + : means: can form a sequence with one of

There are other acceptable sequences at the final position of a syllable in English. Such sequences are VC (peak+final consonant) e.g. a and l in all; VCC (peak+pre-final and final consonants, e.g. η and k as in sink. There are other acceptable sequences of longer clusters such as VCCC (peak+pre-final, final and post final consonants), e.g. e and kst in text; and even: VCCCC (peak+ pre-final, final and post final 1 and post final 2 consonants) as in e and ksts as in texts.

3.7 ENGLISH SYLLABLE DIVISION

An English word is divisible into syllables. This may look simple, but indeed, it is a difficult task not only for the users of English as a second language, but also for the native speakers even with the intuitive knowledge of his language.

It has been advised that dividing a word into syllables is by no means arbitrary in English; certain guidelines have to be followed when we want to divide into syllables. One of such guidelines is what is referred to as the Maximum Onsets Principle (MOP).

The principle, according to Roach (2000: 77-78): where two syllables are to be divided, any consonants between them should be attached to the right-hand syllable, not to the last, as far as possible (p. 78).

This means that, where there are two syllable of an utterance, a word or short utterance, any or all the consonants that appear between the two syllabic peaks, i.e. the vowels, must be made the component element(s) of the peak/vowel that stands at the right hand of the syllable.

"Extra" is a word of two syllables, which looks simple and ordinary; but difficulty arises if we make an attempt to divide it into two syllables. Is it as:

- ekstra,
- ek.stra,
- eks.tra,
- ekst.ra or
- ekstr.a?

If we were to apply MOP, we have a division such as ekstra or ek.stra. While the latter option is correct, the former is incorrect. This means that to recognise a syllable boundary some other principles are at work in conjunction with MOP. Some of these are:

- the onset of a syllable must be permissible in English,
- a division is sometimes created such that the strong vowel attracts the consonant,
- two consonants between vowels can be split into two such that the left one serves as the coda of one syllable and the other, the onset of the other syllable.
4 EXERCISES
a. What are consonant clusters?
b. Explain what is meant by strength in English syllables
b. Give three examples of weak syllables
a. Give three examples strong syllables
b. Define Phonotactics
c. Give three examples to illustrate the Phonotactics of English
d. Identify most of the possible combinations of the English Phonemes
e. Using the maximum onsets principle, divide these words into their appropriate syllables: (a) asking (b) fellow and (c) teacher.