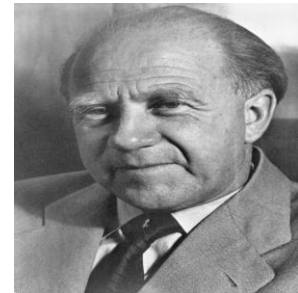


<https://www.britannica.com/biography/Werner-Heisenberg>



Unit 1 3rd English

READING PASSAGE

Werner Heisenberg

Werner Heisenberg, in full **Werner Karl Heisenberg**, was born December 5, 1901, Würzburg, Germany—and died February 1, 1976, Munich, West Germany, was German physicist and philosopher who discovered (1925) a way to formulate quantum mechanics in terms of matrices. For that discovery, he was awarded the Nobel Prize for Physics for 1932. In 1927 he published his uncertainty principle, upon which he built his philosophy and for which he is best known. He also made important contributions to the theories of the hydrodynamics of turbulent flows, the atomic nucleus, ferromagnetism, cosmic rays, and subatomic particles, and he was instrumental in planning the first West German nuclear reactor at Karlsruhe, together with a research reactor in Munich, in 1957. Considerable controversy surrounds his work on atomic research during World War II.

FAROUK-LADJAILIA

GRAMMAR

I-comparison:

1/Comparative : Comparing two things .

Superlative : Compare more than two

Monosyllabic adjectives for comparison		
Without addition As same adjective as	Comparative Addition: er	Superlative Addition: est
As fast as	Faster than	The fastest
As big as	Bigger than	The biggest
As heavy as	Heavier than	The heaviest

Adjectives with two or more syllables for comparison		
Without addition As same adjective as	Comparative Addition: more.....than	Superlative Addition: the most
As modern as	More modern than	The most modern
As common as	More common than	The most common
As beautiful as	More beautiful than	The most beautiful
As important as	More important than	The most important

2/Irregular Adjectives:

Adjectives	Examples
good	Sara is the best girl at school
well	Fruit is better than sweets
bad	He is the worst driver I've ever seen
A little	Food is less important than water
Much-many	Water is the most important thing in life
far	My house is the furthest one
old	Bader is my elder brother

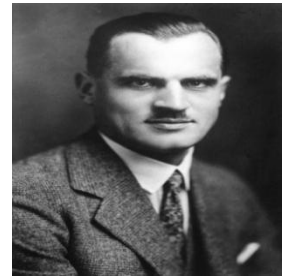
II-Frequently used words:

word	In arabic	Word	In arabic	word	In arabic	word	In arabic
By and by	قريبا	By no means	مطلقا	By the way	بالمناسبة	Come out	يخرج
By all means	طبعاً	By heart	عن ظهر قلب	Come	يأتي	Come up	يصعد
By chance	بالصدفة	By any means	بأية وسيلة	Come in	يدخل	Come down	ينزل

III-Meanings of words in Arabic:

Words	In Arabic	Words	In Arabic	Words	In Arabic
However	على اية حال	Soever	أيا كان	Wherever	حيثما
Whatever	مهما كان	Whatsoever	مطلقا	Whenever	كلما

<https://www.britannica.com/biography/Arthur-Holly-Compton>



Unit 2 3rd English

READING PASSAGE

Arthur Holly Compton

Arthur Holly Compton, was born September 10, 1892, Wooster, Ohio, U.S.— and died March 15, 1962, Berkeley, California, was American physicist and joint winner, with C.T.R. Wilson of England, of the Nobel Prize for Physics in 1927 for his discovery and explanation of the change in the wavelength of X-rays when they collide with electrons in metals. This so-called Compton effect is caused by the transfer of energy from a photon to an electron. Its discovery in 1922 confirmed the dual nature of electromagnetic radiation as both a wave and a particle.

GRAMMAR

I-Question words :

Question mark	Examples
Who : to ask about the person	Who wrote the lesson ? = Ali wrote the lesson
Whose : To ask about ownership of something	Whose book is it? It's my book
Where : To ask about the location	Where did you go yesterday? = I went to luxor yesterday
When : To ask about the time	When did you go to luxor? = I went to luxor yesterday
What : To ask about the subject and the object	What did he do? = He studied English. What's your name? = My name is Ali
Which : Used for preference and discrimination	Which do you prefer: football or tennis? = I prefer tennis than football
Why : To ask about the reasons	Why didn't you go to school yesterday? = I didn't go to school yesterday because I was ill.

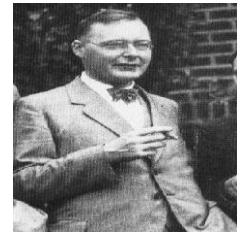
II- Use the verb gone (go يذهب):

word	In arabic	word	In arabic	word	In arabic	word	In arabic
Go on	يستمر	Go in	يغيب	Go back	يرجع	Go after	يلحق
Go by	يمضي	Go out	يخرج	Go away	يغادر	Go ahead	يبدأ
Go up	يرتفع	Go off	ينطلق	Go past	يتجاوز	Go through	يجتاز

III-Pronunciation:

Definition	Example
The two letters gh are not pronounced if the letter I came before them	Night, Right, Fight, High, Flight, Light, Sight.
The letter W is not pronounced if the letter r comes after it	Write, Wrestle, Wrap, Wrong, Writer.
The letter h is not pronounced if it is preceded by the letter m at the end of the word	Climb, Comb, Crumb, Lamb, Limb, Numb.

https://en.wikipedia.org/wiki/Hans_Kramers



Unit 3 3rd English

READING PASSAGE

Hendrik Kramers

Hendrik Anthony "Hans" Kramers was born 17 December 1894 – and died 24 April 1952, was a Dutch physicist who worked with Niels Bohr to understand how electromagnetic waves interact with matter and made important contributions to quantum mechanics and statistical physics. Hans Kramers was born on 17 December 1894 in Rotterdam, the son of Hendrik Kramers, a physician, and Jeanne Susanne Breukelman. In 1912 Hans finished secondary education (HBS) in Rotterdam, and studied mathematics and physics at the University of Leiden, where he obtained a master's degree in 1916. Kramers wanted to obtain foreign experience during his doctoral research, but his first choice of supervisor, Max Born in Göttingen, was not reachable because of the First World War. Because Denmark was neutral in this war, as was the Netherlands, he travelled (by ship, overland was impossible) to Copenhagen, where he visited unannounced the then still relatively unknown Niels Bohr. Bohr took him on as a Ph.D. candidate and Kramers prepared his dissertation under Bohr's direction. Although Kramers did most of his doctoral research (on intensities of atomic transitions) in Copenhagen, he obtained his formal Ph.D. under Ehrenfest in Leiden, on 8 May 1919. Kramers enjoyed music, and played cello and piano.

GRAMMAR

I-Definition of passive voice :

- We put the full object at the beginning of the sentence and do not mention the subject unless it is necessary.
- We put “ **is** “ for the singular and “ **are** “ for the plural of **the present simple**.
- We put “ **was** “ for the singular and “ **were** “ for the plural of **the past simple**.
- put “ **be** “ after: **to, shall, should, must, may, might, will, would, can, could.**
- put “ **been** “ after: **have, has, had.**
- put “ **being** “ after: **am, is, are, was, were.**
- Converts : “ **Have** “ to “ **Has** “ and “ **are** “ to “ **is** “ and “ **were** “ to “ **was** “.

If the infinitive is singular, and vice versa, if the object is plural

Examples:

Active voice	Passive voice
I write my homework everyday	My homework is written everyday
The man will build a big house next year	A big house will be build next year
Students should respect teachers	Teachers should be respected
Huda has finished the exams	The exams have been finished
We have finished the English exam	The English exam has been finished
We are studying English now	English is being studied now
We are playing many sports in the club	Many sports are being played in the club

II-Meanings of words in Arabic:

Words	In Arabic	Words	In Arabic
Dot	نقطة	Bot	الي
Lot	كثير	Rot	تعفن
Hot	ساخن	Cot	سرير الطفل
Pot	وعاء	Not	ليس

III-Pronunciation:

Definition	Example

FAROUK-LADJAILIA

The letter <u>K</u> is not pronounced if it comes at the beginning of the word and comes after it the letter <u>n</u>	Knife, Knight, Know, Knowledge, Knee, Knock.
The letter <u>C</u> is pronounced <u>K</u> if not followed by one of the following letters <u>Y, E, I</u>	Clock, Clap, Car, Cry, Cat.
The letter <u>C</u> is not pronounced <u>S</u> unless one of these letters <u>y, I, e</u> comes after it and others are pronounced <u>k</u>	Center, City, Mercy.