

Carbon is a common element in the environment. It can be found in all living things, even once they have died. The breakdown of carbon from the carbon 14 (C-14) isotope occurs at a relatively even pace each year; this number is called a half-life. The cycle of breaking down carbon 14 begins when a living object dies. The measurement of C-14 remaining in an object lets an archaeologist know approximately how long ago it ceased to live. Although the precise date of death cannot be conclusively determined most of the time, carbon 14 (or more commonly called radiocarbon dating) can help archaeologists assign an approximate age. They can do this because other living objects like trees also log a history of past environmental conditions, including the level of C-14 in the area each year. Scientists use dendrochronology and carbon 14 dating together in an equation to determine a date of death. Since this date is an approximate, it always has a plus/minus number. This plus/minus number is a standard deviation to show that any inaccuracies in measurement could throw this date off by a number of years.

### READING COMPREHENSION:

1. Suggest a title to the text.
2. Find in the text synonyms to the following words:  
fail- happen- precise- known
3. Say if the following sentences are true or false and justify your answer in both cases:
  - a. Thanks to the measurement of the remaining C-14, archeologists can guess when an object started to live.
  - b. Dendrochronology determines the object's date of death.

### GRAMMAR:

**Exercise 01: Fill in the blanks with the following affixes:** ful - un -less- re- ed- y.

1. Dad needed help to \_\_\_load the firewood.
2. A knife is use\_\_\_ when cutting meat.
3. The guide was help\_\_\_ on the hunting trip.
4. The farmer was \_\_\_happy because it did not rain.
5. The sky was cloud\_\_\_, so the sun was shining.
6. The workers had to \_\_\_think their strategy to avoid the bird's nest.
7. The big roll of string seemed end\_\_\_.
8. Mom and Dad had to \_\_\_paint the house because it was old.

**Exercise 02: Link the following sentences with these conjunctions:**

however -but - though although -despite

1. ....She is handicapped, she took part in the marathon.
2. He smoked, drank, and never took exercise.....he lived to be 90.
3. John felt sick.....he went out to work.
4. Thousands of pupils are leaving school..... there are no jobs for them.
5. ....her success, she felt dissatisfied.

**Exercise 03: Correct the mistakes in the following sentences:**

1. Don sang so badly that I had to look away not so as to laugh at him.
2. A mouse is a device used for move the cursor around a computer screen.
3. She hid the present in order that the children not to find it.
4. I lied them about the accident.
5. She said me come back later.

**Exercise 04: Complete each sentence. Use the words in brackets. Use present simple or present continuous**

1. Richard always (get up) ..... before 7.00.
2. Hurry up! The bus (wait) ..... for us!
3. Where (we, go) .....This is the wrong road!
4. My friends (not believe) .....my story.
5. Please be quiet! I (read) .....a very interesting book.
6. (like, Susan) .....horror films?

**Exercise 05: Fill in the blanks with the following words:**

H<sub>2</sub>O - bases - red - OH<sup>-</sup> - ion - blue.

Acids taste sour, are corrosive to metals, change litmus ....., and become less acidic when mixed with .....

Bases feel slippery, change litmus ....., and become less basic when mixed with acids.

Acids release H<sup>+</sup> into solution and bases release ....., If we were to mix an acid and base together, the H<sup>+</sup> ..... would combine with the OH<sup>-</sup> ion to make the molecule ....., or plain water.

The neutralization reaction of an acid with a base will always produce water and a salt.

## READING COMPREHENSION: 5.pts

Suggest a title to the text: Archaeology and Radiocarbon Dating

Find in the text synonyms to the following words:

Fail: Breakdown

Happen: Occur

Precise: Determine

Known: Common

Say if the following sentences are true or false and justify your answer in both cases:

- c. Thanks to the measurement of the remaining C-14, archeologists can guess when an object started to live. **False**
- d. Dendrochronology determines the object's date of death. **False**

## GRAMMAR:

### Exercise 01: Fill in the blanks with the following affixes:4.pts

ful - un -less- re- ed- y.

1. Dad needed help to reload the firewood.
2. A knife is used when cutting meat.
3. The guide was helpful on the hunting trip.
4. The farmer was unhappy because it did not rain.
5. The sky was cloudy, so the sun was shining.
6. The workers had to rethink their strategy to avoid the bird's nest.
7. The big roll of string seemed endless.
8. Mom and Dad had to repaint the house because it was old.

### Exercise 02: Link the following sentences with these conjunctions: 2.5 pts

however -but - though although -despite

1. **Although** she is handicapped, she took part in the marathon.
2. He smoked, drank, and never took exercise **however** he lived to be 90.
3. John felt sick **however** he went out to work.
4. Thousands of pupils are leaving school **but** there are no jobs for them.
5. **Despite** her success, she felt dissatisfied.

### Exercise 03: Correct the mistakes in the following sentences: 2.5 pts

1. Don sang so badly that I had to look away **so as to not** laugh at him.
2. A mouse is a device used **to** move the cursor around a computer screen.
3. She hid the present in order that the children **do** not to find it.
4. I lied **to** them about the accident.
5. She said **to** me come back later.

### Exercise 04: Complete each sentence. Use the words in brackets. Use present simple or present continuous 3 pts

1. Richard always **gets up** before 7.00.
2. Hurry up! The bus **is waiting** for us!
3. Where **are** we **going** this is the wrong road!
4. My friends **didn't believe** my story.
5. Please be quiet! I **'m reading** a very interesting book.
6. **Does** Susan **like** horror films?

### Exercise 05: 3 pts

Acids taste sour, are corrosive to metals, change litmus **red**, and become less acidic when mixed with **bases**.

Bases feel slippery, change litmus **blue**, and become less basic when mixed with acids.

Acids release  $H^+$  into solution and bases release **OH**. If we were to mix an acid and base together, the  $H^+$  **ion** would combine with the  $OH^-$  ion to make the molecule **H<sub>2</sub>O**, or plain water.

The neutralization reaction of an acid with a base will always produce water and a salt.