

la luna, Descubrió las 4 lunas de
Júpiter, notó los anillos de saturno.

9. How is Galileo known in our days? Why?

Como el padre de la Ciencia Moderna.

10. Who was Anton van Leeuwenhoek? What did he do?

Fue un holandés fabricante de lentes.

Hizo un microscopio simple.

11. How has the invention of the telescope and the microscope helped modern science?

Que ayudaría a hacer mejores instrumentos.

12. On what those the usefulness of the instruments depend?

De las personas que las utilizan.

EXERCISE VI

Write a summary of the reading in Spanish.

GALILEO GALILEI

(1) Scholars the world over came to respect Galileo Galilei as a giant of astronomy. He was Italian, born in 1564. He had great fun punching holes in widely held scientific beliefs that had not been tested by experiment. For instance, some professors argued that since air does not fall it must be weightless. Galileo compressed air into a leather flask and weighed it. Then he emptied the flask and weighed it again. Since it was lighter than before, he proved that air has weight.

(2) Aristotle had taught that objects fall ^{más rápido de acuerdo a su peso} faster according to their weight. Galileo reasoned that if they were all of the same material, weight wouldn't matter. He tested this by dropping large and small objects of the same material from a high tower. His students, waiting below, saw the objects hit the ground at about the same time.

(3) In 1609 Galileo heard of the invention, in Holland, of a "spyglass," with which distant objects could be seen as ^{como aunque ellos} though they were nearby. He made

sin embargo

himself one of these instruments—a refracting telescope— and began observing the Sun, Moon, and planets. He published a book, *The Starry Messenger*, telling of the wonder of seeing for the first time things which had been invisible to the ^{simple vista} naked eye. Tradition said that the heavenly bodies were ^{Cuerpos} smooth, unblemished spheres of perfection but Galileo's telescope showed mountains, valleys, and craters on the Moon. When he studied the hazy band known as the Milky Way, he discovered that it was made of countless individual stars. Later, Galileo saw the phases of Venus as positive proof that the Sun formed the center of the planetary system.

(4) Although his discoveries made Galileo known all over Europe, some scholars refused to believe in them. A few refused even to look through the telescope. They still clung to the old ideas of Aristotle and Ptolemy. Church officials warned Galileo not to support the Copernican view that Earth moves around the Sun as the other planets do. For years, he remained silent on this matter.

(5) In 1632 he published a book attacking all arguments against Earth's motion. The Pope turned the matter over to the Roman Inquisition. The next

year, Galileo was tried in Rome and forced to deny that Earth moves and that "the Sun is the center of the World." He was kept under house arrest for his few remaining years. By 1637 Galileo had gone blind. But meanwhile, he had written his greatest scientific book on mechanics and motion. This book is known today as *Two New Sciences*.

EXERCISE I

You can understand many of the words in this reading because they are similar to Spanish. Look for them and write them down.

- | | |
|-----------|-----------|
| 1. _____ | 11. _____ |
| 2. _____ | 12. _____ |
| 3. _____ | 13. _____ |
| 4. _____ | 14. _____ |
| 5. _____ | 15. _____ |
| 6. _____ | 16. _____ |
| 7. _____ | 17. _____ |
| 8. _____ | 18. _____ |
| 9. _____ | 19. _____ |
| 10. _____ | 20. _____ |

EXERCISE II

Be sure that you know the meaning of the following words which were used in this article.

- | | |
|-------------------------|------------------------------|
| 1. Scholars | <u>Estudioso</u> |
| 2. weight | <u>peso</u> |
| 3. refracting telescope | <u>Telescopio refractivo</u> |
| 4. heavenly bodies | <u>corpos celestes</u> |
| 5. Milky Way | <u>via lactea</u> |
| 6. stars | <u>estrellas</u> |
| 7. phases | <u>Fases</u> |
| 8. planetary system | <u>sistema planetario</u> |
| 9. motion | <u>movimiento</u> |
| 10. invention | <u>invención</u> |
| 11. weightless | <u>sin peso</u> |
| 12. compressed | |

EXERCISE III

Make a list of the words that are unknown to you and find their meaning.

- | | |
|--|----------------------------|
| 1. <u>arguments against Earth's motion</u> | 11. <u>The Pope turned</u> |
| 2. <u>the matter over to the</u> | 12. <u>The</u> |

- | | |
|-----------|-----------|
| 3. _____ | 13. _____ |
| 4. _____ | 14. _____ |
| 5. _____ | 15. _____ |
| 6. _____ | 16. _____ |
| 7. _____ | 17. _____ |
| 8. _____ | 18. _____ |
| 9. _____ | 19. _____ |
| 10. _____ | 20. _____ |

EXERCISE IV

Translate the following phrases.

- | | |
|---|---|
| 1. He had great fun punching holes. | <u>El se divertía haciendo agujeros.</u> |
| 2. ... in widely held scientific beliefs. | <u>En tener ampliamente influencias científicas</u> |
| 3. Tested by experiment. | <u>Pruebas para experimentos</u> |
| 4. For instance... | <u>Por ejemplo:</u> |
| 5. Since air does not fall... | <u>Si el aire no se caía</u> |
| 6. ...weight wouldn't matter. | <u>El peso no importaría</u> |

7. ... as though they were nearby.
con el cual objetos distantes podían verse.
8. ... things which had been invisible to the naked eye.
Casas que habían sido invisibles para la simple vista del humano.
9. ... smooth, unblemished spheres of perfection.
rasposas esferas de la perfección.
10. the hazy band known as the Milky Way.
brumosa banda conocida como vía lactea.
11. ...countless individual stars.
incontables estrellas individuales
12. They still clung to the old ideas.
Ellos aún creían en las viejas ideas.
13. ...turned the matter over...
cedió este material.
14. ...kept under house arrest.
Estuvo en arresto.
15. But meanwhile...
Peró en ese tiempo.

EXERCISE V

Identify the paragraphs in which you find the following ideas.

1. Galileo no estaba de acuerdo con los científicos de su tiempo por no apoyar sus teorías con experimentos. ()
2. Galileo publicó un libro atacando la posición de que la tierra no se movía. ()
3. Los descubrimientos de Galileo le dieron fama en toda Europa. ()
4. Había personas que decían que el aire no pesaba. ()
5. Galileo efectuó experimentos que contradecían la teoría de Aristóteles en relación a la velocidad con que caen los objetos. ()
6. Galileo hablaba en su libro de la maravilla que era poder ver cosas hasta entonces vedadas para el ojo humano. ()
7. Galileo fue procesado y obligado a negar que la tierra tuviera movimiento. ()
8. Galileo quedó ciego. ()
9. Había gente que seguía aferrada a las ideas de Aristóteles y Tolomeo. ()
10. No hay diferencia en la velocidad y/o tiempo en que caen 2 objetos hechos del mismo material. ()

EXERCISE VI

Answer the following questions in Spanish.

1. What kind of work did Galileo have?

2. What did Galileo do to refute the theory that air was weightless?

3. What was Aristotle's theory about the speed with which objects fall?

4. What was Galileo's theory about the same -- matter?

5. What could be seen with a "spyglass"?

6. What did Galileo say in his book "The Starry Messenger"?

7. What did tradition say about heavenly bodies?

8. Why did Galileo remain silent for many years?

9. In 1632 Galileo published a book, what was the main topic?

10. What happened after the publishing of this book?

EXERCISE VII

Write a short summary of each paragraph.

1. _____

2. _____

3. _____

4. _____

5.

EXERCISE VIII

Read the following pairs of words and decide if the words in each pair have the same or opposite meaning.

- | | | | | |
|-----|----------|--------------|---|---|
| 1. | agree | argue | S | ⊙ |
| 2. | empty | full | S | ⊙ |
| 3. | visible | clear | Ⓢ | 0 |
| 4. | smooth | plain | Ⓢ | 0 |
| 5. | positive | questionable | S | ⊙ |
| 6. | cling | stick | Ⓢ | 0 |
| 7. | refuse | reject | Ⓢ | 0 |
| 8. | lighter | heavier | S | ⊙ |
| 9. | forced | compelled | Ⓢ | 0 |
| 10. | hazy | cloudy | Ⓢ | 0 |
| 11. | distant | near | S | ⊙ |
| 12. | below | above | S | ⊙ |
| 13. | fast | slow | S | ⊙ |
| 14. | positive | definitive | Ⓢ | 0 |
| 15. | silent | mute | Ⓢ | 0 |

4to. SEMESTRE INGLÉS UNIDAD 6

INTRODUCCIÓN:

Es importante señalar la diferencia que existe entre hacer la traducción de un texto y la comprensión del mismo, pues hacer una traducción sin comprenderla no tiene sentido. Recuerda que lo que se pretende es que comprendas lo que lees y en un momento dado sepas aplicarlo.

OBJETIVOS:

1. Analizar el contenido de un texto en Inglés.
2. Identificar vocabulario técnico en un texto en Inglés.
3. Localizar en textos en Inglés información requerida en Español.
4. Demostrar el conocimiento del vocabulario técnico aprendido.
5. Expresar en Español información requerida en Inglés.