NIVEL DE APTITUD DE INGLÉS

CARTILLA 2019

TODAS LAS CARRERAS

A LOS ESTUDIANTES

La "lingua franca" del mundo globalizado es el idioma inglés. Sabemos que para poder acceder a la información actualizada técnico-científica es un requisito necesario aprender a emplear las distintas estrategias para poder leer un texto en inglés y comprenderlo. De las cuatro macro habilidades que son el objetivo de la enseñanza de una lengua extranjera: reading (lectura), writing (escritura), listening (escucha) y speaking (habla), ustedes van a aprender solamente la primera.

Mediante las distintas estrategias planteadas en las clases teórico-prácticas, lograremos no solo descifrar el significado y la función de las palabras, sino la comprensión de estas en contexto mediante los procesos cognitivos. Según la definición de Cubo de Severino, L. en su libro: Leo pero no comprendo. Estrategias de comprensión lectora (Facultad de Filosofía y Letras, Universidad Nacional de Cuyo), "estrategias son procesos flexibles orientados a una meta, que operan en varios niveles al mismo tiempo que interactúan entre sí en distintos momentos del procesamiento".

- En esta cartilla se trabajará con:
- Referencias contextuales
- Conectores
- Reconocimiento de idea principal en un párrafo
- Lectura global de un texto
- Ejercicios de verdadero/falso
- Ejercicios de reconocimiento de la función gramatical de distintas palabras
- Utilización del diccionario
- Ejercicios de comprensión lectora: responder preguntas sobre un texto
- Empleo de los apéndices y sinopsis gramatical
- Traducción

La parte práctica de la cartilla está distribuida de la siguiente manera

CONTENIDOS

UNIDAD I

Revisión de: Formación de palabras. Prefijos y sufijos: significados específicos en sustantivos, adjetivos y verbos - Frases nominales (identificación del núcleo) - Tiempos verbales simples y compuestos. Caso Posesivo - Pronombres personales, objetivos, posesivos, recíprocos - Adjetivos en grado comparativo y superlativo.

- Técnicas de comprensión de texto: skimming, scanning, activación de esquemas léxicos
- Importancia de la puntuación.
- Manejo del diccionario bilingüe.
- Análisis de estos temas en textos auténticos obtenidos de revistas y otro material sobre las áreas específicas en inglés.

UNIDAD II

Revisión de: Verbos modales (construcciones simples). Voz pasiva (todos los tiempos verbales). Oraciones condicionales de tipo 0, I y II

- Análisis de los elementos que acompañan al texto como parte relevante de la comprensión lectora: fotografías, infografías, gráficos, tablas, formatos, tipografía y otros elementos indicativos textuales. Su importancia.
- Análisis de estos temas en textos auténticos obtenidos de revistas y otro material sobre las áreas específicas en inglés.

UNIDAD III

Oraciones condicionales (condiciones hipotéticas) tipo III - Conectores: Conjunciones coordinantes y subordinantes - Pronombres relativos

- Cohesión y coherencia.
- Relaciones ínter textuales
- Referencia Anafórica/ Catafórica.

- Análisis de estos temas en textos auténticos obtenidos de revistas y otro material sobre las áreas específicas en inglés.

UNIDAD IV

Adjetivos compuestos - Verbos preposicionales – Verbos modales (construcciones compuestas) - Forma “ing” en sus distintos usos – Infinitivo simple y compuesto

- Ideas principales, secundarias y accesorias en el párrafo.
- Análisis de estos temas en textos auténticos obtenidos de revistas y otro material sobre las áreas específicas en inglés.

MODALIDAD DE CURSADO Y REQUISITOS

Existen tres modalidades de cursado/aprobación de la materia: promoción, regularidad y libre.

Promoción

Todos los alumnos pueden acceder a la promoción y deben cumplir con los siguientes requisitos:

- ✓ Tener un mínimo de 75 % de asistencia.
- ✓ Aprobar 2 parciales, o sus respectivos recuperatorios, con un promedio mínimo de 7 (siete) puntos.
- ✓ Presentar 2 trabajos prácticos.

Nota: Si el alumno cumple con todos estos requisitos habrá terminado la materia como alumno promocionado, es decir, no debe rendir examen final.

Regularidad

Con esta modalidad, los alumnos deben cumplir con los siguientes requisitos:

- ✓ Tener un mínimo de 75g % de asistencia.
- ✓ Aprobar 2 parciales, o sus respectivos recuperatorios, con una nota de entre 4 (cuatro) y 6 (seis) puntos en cada uno.
- ✓ Presentar 2 trabajos prácticos.
- ✓ Aprobar un examen final con una nota mínima de 4 (cuatro) puntos (60 %).

Alumno libre

El alumno que decida no cursar la materia podrá rendirla como alumno libre con lo cual no debe cumplir ningún requisito, solo aprobar el examen final con una nota mínima de 4 (cuatro) puntos (60 %).

La siguiente tabla resume estos requisitos.

	Promocional	**Regular**	**Libre**
Asistencia	75 %	75 %	NO
Parciales *Recuperatorio*	2, promedio mínimo 7. 2	2, nota de entre 4 y 6. 2	NO
Prácticos	2	2	NO
Examen final	NO	SÍ	SÍ

TEXTOS PARA ALIMENTOS

TEXTO 1

SMARTNESS IN PACKAGING

Actividad de pre-lectura – Responda las siguientes preguntas en español

1. What is the role of packaging in food industry?

2. How can packaging be smart?

3. Write a list of things that a customer might like a food package could do.

b) Lea el texto y realice las siguientes actividades

Smartness in packaging is a broad term that covers a number of functionalities, depending on the product being packaged, including food, beverages, pharmaceutical, household products etc. Examples of smartness would be in packages that:

- retain integrity and actively prevent food spoilage (shelf-life);
- enhance product attributes (e.g. look, taste, flavour, aroma etc);
- respond actively to changes in product or package environment;
- communicate product information, product history or condition to user;
- assist with opening and indicate seal integrity;
- confirm product authenticity and act to counter theft.

There is an important distinction between package functions that are smart/intelligent, and those that become active in response to a triggering event, for example, filling, exposure to UV, release of pressure etc and then continue until the process is **exhausted**. Some smart packaging already exists **commercially** and many other active and intelligent concepts are under development. A good example of active packaging is the highly successful foam-producing "widget" in a metal can of beer. Another is the oxygen scavenging MAR technology. Other examples of smart packaging include:

Active	**Intelligent**
• oxygen scavenging;	* time-temperature history;
• anti-microbial;	* microbial growth indicators;
• ethylene scavenging;	* light protection;
• heating/cooling;	* physical shock indicators,
• odour and flavour absorbing/releasing;	* leakage, microbial spoilage
• moisture absorbing.	indicators.

Active food packaging systems using oxygen scavenging and anti-microbial technologies have the potential to extend the shelf-life of **perishable** foods while at the same time improving their quality by reducing the need for additives and preservatives. In intelligent packaging, the package function switches on and off in response to changing external/internal conditions, and can include a **communication** to the customer or end user as to the status of the product. A simple definition of intelligent packaging is "a packaging which senses and informs". Intelligent labelling and printing, for example, will be capable of communicating directly to the customer via thin film devices providing sound and visual information, either in response to touch, motion or some other means of scanning or activation.

2) Responda las siguientes preguntas en español

1. What types of products need packaging?

2. What is the purpose of smart packaging?

3. How do the active and intelligent packaging systems differ?

4. What are the benefits of using oxygen scavenging and anti-microbial packaging?

5. How can intelligent labeling communicate to the customer?

6. Where do you see the advantages or disadvantages of smart packaging?

3) Ordenar cronológicamente los siguientes temas (según aparecen en el texto):

a) Smartness in packaging b) Active food packaging

c) Intelligent packaging d) Classification of smart packaging

1._____ 2 _____ 3 _____ 4 _____

Vocabulario. 4) Traducir las siguientes expresiones:

a) the product being packed _____

b) oxygen scavenging _____ _____

c) enhancement of product attribute _____

d) foam-producing widget _____

d) the shelf-life of perishable food _____ _____

e) thin film devices providing visual information_____ _____

e) stringent requirement _____

5) Completar el siguiente cuadro.

Noun	**Verb**	**Adjective/ Adverb**
comunicación	_____	_____
_____	_____	comercial
_____	_____	perecedero
_____	agotar/terminar	_____

TEXTO 2

ANTIOXIDANTS IN FOOD

a) Actividad de pre-lectura – Responda las siguientes preguntas en español

1. What is the role of antioxidants?

2. What are the main sources of antioxidants?

b) Lea el texto y realice las siguientes actividades

Free radicals created by oxidation are known to cause many diseases and can wreak havoc on your body. You would have noticed oxidation when a slice of apple turns brown. But you cannot see the damage that is happening within your body. Antioxidants work at scouring away these free radicals and thereby leading to improved health. The cells of our body need oxygen for metabolism. But when there are excessive oxygen molecules and other free radicals that are formed due to other cellular reactions, they cause infinite damage to the body. These unstable oxygen molecules are

referred to as free radicals and they are cited as an important cause for most chronic diseases. These free radicals are highly reactive chemical substances that travel throughout the body and wreak havoc on the cells. We are also exposed to free radicals in the atmosphere. Free radicals are known to cause cells to mutate and die. They have a role in the development of cancerous cells. The process of aging is said to be a result of free radical damage.

Antioxidants work as scavengers of free radicals. When your body has insufficient antioxidants, it can lead to significant damage and disease. Boosting your body's defense mechanism with adequate amounts of natural antioxidants and antioxidant supplements can boost body resilience and reduce chances of disease. Antioxidants can aid in controlling high blood pressure. Vitamin E is a powerful antioxidant that can stop the oxidation of LDL or bad cholesterol. Antioxidants are known to reduce the chances of stomach or bladder cancer. Minerals such as selenium, copper, manganese and zinc provide antioxidant properties when they are combined with certain enzymes. Foods rich in natural antioxidants are: tomatoes, broccoli, cauliflower. Vegetables and fruits that have a rich colour are high in phytonutrients and they are the best antioxidants such as blueberries, spinach, carrots, raspberries, cranberries, blackberries, apricots, plums, grapes, mangoes. Vegetable oils such as olive oil, soybean oil, safflower oil and whole grains (brown 32 rice and soybean) also provide natural antioxidants, including garlic, onion, salmon, tuna and wheat germ as well. Antioxidant activity of flavonoids has been studied since the 1040s and it is undisputed. With the immense volume of research being released every year regarding the effects of radical oxygen species on human health, the role of flavonoid antioxidants cannot be ignored. The two leading causes of mortality in the U.S. cancer and cardiovascular diseases, can be significantly impacted by the ingestion of antioxidants including flavonoid –rich foods. Green tea, onion, apples, grapes, Ginko are just a few of the many thousands of plants that contain flavonoid antioxidants. There is enough research today to make some conclusions about the clinical use of flavonoids and to warrant their use in the prevention and treatment of cancer, cardiovascular diseases, inflammatory conditions, periodontal disease or macular degeneration.

b) Responda las siguientes preguntas en español.

1. What are free radicals?
2. What is the effect of free radicals on the human body?
3. How do free radicals function?
4. How do antioxidants function?
5. Which foods are excellent sources of antioxidants?
6. Why are flavonoids important?

c) Traducir las siguientes expresiones.

a) scavengers of free radicals _____

b) to wreak havoc _____

c) boosting your body's defense mechanism _____

d) work at scouring away _____

e) periodontal disease _____

f) research being released every year____ _____

g) high in phytonutrients _____

d) Extraer del texto ejemplos de:

FRUTAS	VERDURAS	ENFERMEDADES

TEXTO 3

Lea el texto y responda en español las siguientes preguntas:

1. What is a synonym of food coloring? What effect does it have on food or drink?
2. What forms do they come in?
3. What kind of non-food applications does food coloring have?
4. What can sometimes be the aim of adding color to food such as glacé cherries or ketchup?
5. What are some of the reasons color additives are used?
6. What is the difference between FD&C numbers in the United States and E numbers in the European Union?
7. Does the United States FDA certify natural colors?
8. How are FDA's permitted colors classified as?

Food Coloring

Food coloring, or color additive, is any dye, pigment or substance that imparts color when it is added to food or drink. They come in many forms consisting of liquids, powders, gels and pastes. Food coloring is used both in commercial food production and in domestic cooking. Due to its safety and general availability, food coloring is also used in a variety of non-food applications including cosmetics, pharmaceuticals, home craft projects and medical devices.

Purpose of food coloring

People associate certain colors with certain flavors, and the color of food can influence the perceived flavor in anything from candy to wine. Sometimes the aim is to simulate a color that is perceived by the consumer as natural, such as adding red coloring to glacé cherries (which would otherwise be beige), but sometimes it is for effect, like the green ketchup that Heinz launched in 1999. Color additives are used in foods for many reasons including

- offset color loss due to exposure to light, air, temperature extremes, moisture and storage conditions
- correct natural variations in color
- enhance colors that occur naturally
- provide color to colorless and "fun" foods

Color additives are recognized as an important part of many foods we eat.

Food colorings are tested for safety by various bodies around the world and sometimes different bodies have different views on food color safety. In the United States, FD&C numbers (which indicate that the FDA has approved the colorant for use in foods, drugs and cosmetics) are given to approved synthetic food dyes that do not exist in nature, while in the European Union, E numbers are used for all additives, both synthetic and natural, that are approved in food applications. The food colors are known by E numbers that begin with a 1, such as E100 (turmeric) or E161b (lutein). Most other countries have their own regulations and list of food colors which can be used in various applications, including maximum daily intake limits.

Natural colors are not required to be certified by a number of regulatory bodies throughout the world, including the United States FDA. The FDA lists "color additives exempt from certification" for food in subpart A of the Code of Federal Regulations - Title 21 Part 73. However, this list

contains substances which may have synthetic origins. FDA's permitted colors are classified as subject to certification or exempt from certification, both of which are subject to rigorous safety standards prior to their approval and listing for use in foods.

TEXTO 4

New Biodegradable Plastic Packaging

1. **Conteste las siguientes preguntas sobre el texto 'New Biodegradable Plastic Packaging'**
1. What has the 'fruitplastic' been made of?
2. How much is bio-degradable plastic forecast to grow?
3. Which bio-degradable plastic is available in the west?
4. How much does it cost?
5. Which are the main advantages of this newly designed biodegradable plastic?
6. How long would to take to Fruitplastic to biodegrade?
7. What concept is Fruitplastic based on?
8. What happens to Fruitplastic if it is not exposed to soil and weather?

Researchers in Malaysia Said They Have Developed a Biodegradable Plastic Packaging From Tropical Fruit Skins That is Durable and Economic to Produce

The Fruitplast product has been pioneered at the University Sain Malaysia (USM) and made from the skins of tropical fruits.

Team leader professor Hanafi Ismail said the idea to produce plastic from fruit waste came about because of the perceived potential for bio-degradable plastic which is forecast to grow by up to 30 per cent a year.

"Commercial bio-degradable plastic such as polylactic acid (PLA) and polycaprolacton (PCL) that are available in the West are at least eight times as expensive as the petroleum-based, non-biodegradable plastic such as polyethylene (PE) and polypropylene (PP)," said the professor. "We have developed a study to produce bio-degradable plastic using waste products from fruits to reduce costs but which can compete with the quality of the commercial plastics that are currently available in the market."

Fruitplast is estimated to be 10 per cent cheaper than the petroleum-based commercial plastics (PE, PP) and is able to biodegrade within three to six months, said the team.

"This innovation also has huge commercial prospects not only in Malaysia but also world-wide because it is based on the concept of sustainability, it is cheap and excellent for the packaging industry," added Hanafi. "The durability of the plastic also has met the standards that have been determined and if it is not exposed to the elements (soil and weather), Fruitplast can remain in its original condition for up to two years."

The university, which funded the project, said Fruitplast won a Gold medal at the International Invention, Innovation and Technology Exhibition (ITEX) 2010, held in Kuala Lumpur recently.

TEXTOS PARA INGENIERÍA INDUSTRIAL

TEXTO 1

Design and Process Platform Characterization Methodology

INTRODUCTION

Quality is ultimately defined by customers. There is significant literature available on how to	1
measure quality and value as perceived by customers. In virtually every analysis, a major	-
component of customer satisfaction is based on the ability of the company to provide a	-
competitively priced product into which quality is designed, built, marketed, and maintained.	-
A company-wide system for achieving that objective must be developed and deployed. This	5
chapter outlines a complete design and process platform characterization methodology and	-
the system for deployment. The underlying principle of this methodology is to provide a	-
vehicle that starts with identification of customer requirements and ends only when the	-
product has been delivered to a customer who is thoroughly delighted. This chapter is based	-
on an actual corporate deployment. This provides clear evidence that the methodology	10
works. It also demonstrates that this methodology is a critical part of strategic management	-
that will dependably produce superior profits through satisfied customers. The elements of	-
design and process platform characterization methodology and system include:	-
• Product development	-
• Design characterization	15
• Process platform development	-
• Design and process platform characterization methodology	-
• Linkage of product design and process platform	-
• Deployment process	-
Each of these will be discussed in detail in subsequent sections.	20

Salvendy, G. (ed) (2001) Handbook of Industrial Engineering. Chapter 75 (p.1976) Design and Process Platform Characterization Methodology. Introduction

1) **Una las siguientes palabras o frases con el significado correspondiente de acuerdo al texto:**

1. en última instancia	a. critical
2. bibliografía	b. ultimately
3. un sistema que involucre a toda la empresa	c. underlying
4. hay	d. dependably
5. crucial	e. there is
6. de manera confiable	f. a company-wide system
7. subyacente (que fundamenta)	g. literature

2) **Complete las siguientes oraciones con una o dos palabras, de acuerdo al texto.**

a) en última instancia la calidad la define……(1ra oración del texto)

b) Hay mucha …… sobre cómo medir la cualidad desde el punto de vista del ……. (2da oración)

c) Este capítulo……..una metodología completa de caracterización de plataforma de proceso y diseño. (5ta oración)

3) Busca las siguientes palabras en el texto y subraya el significado correcto de acuerdo a la forma de la palabra y al contexto.

a) (línea 1) defined: definieron / definimos /definido / definiendo

b) (línea 5) developed: desarrollado / desarrolla / desarrollaron / desarrollará

c) (línea 7) has: ha / había / tiene / tenemos

d) (línea 5) outlines: líneas afuera / contornos /resume

e) (línea 9) actual: real / actual

4) Verdadero o Falso

Lea las siguientes oraciones. Determine si son verdaderas o falsas. Justifique las oraciones que considere falsas.

a) Las empresas miden y evalúan la calidad de un producto según su propia mirada.

b) La calidad de un producto no es casual, sino, por el contrario, es algo que se diseña, se construye, se comercializa y se mantiene en el producto.

c) De acuerdo a este autor, la búsqueda de la calidad comienza con la identificación de los requerimientos del cliente.

e) El principio subyacente de esta metodología es proveer un automóvil a la empresa.

f) Este capítulo se basa en un despliegue corporativo actual.

5) Opción múltiple. Elige la opción correcta de acuerdo al texto.

Los elementos de metodología y sistema de caracterización de plataforma de proceso y diseño incluyen:

- productos desarrollados / desarrollo de productos
- caracterización de diseño / diseño de caracterización
- desarrollo de proceso de plataforma / desarrollo de plataforma de proceso

TEXTO 2

Mass production Escrito por William K. Holstein, Morris Tanenbaum

Recuperado de https://www.britannica.com/technology/mass-production

Lea el texto 'Mass production' y realice las siguientes actividades

1) Ordene el siguiente párrafo, siguiendo el párrafo en inglés ubicado más abajo.

partes a la fabricación de bienes. Tales procesos de fabricación logran tasas altas de producción a bajo
humanas y (2) el uso de herramientas, maquinaria y otros equipamientos, generalmente automatizados,
en la producción de productos y partes estándares, intercambiables. El uso de métodos modernos de
producción en masa se basan en dos principios generales. (1) la división y especialización de las tareas
costo por unidad, con costos menores previstos a medida que sube el volumen. Los métodos de
disponibles que la población mundial más grande en la historia experimenta el estándar de vida más alto.
Producción en masa, aplicación de principios de especialización, división de tareas, y estandarización de
producción masiva ha traído tales mejoras en el costo, calidad, cantidad y variedad de los bienes

Mass production, application of the principles of specialization, division of labour, and standardization of parts to the manufacture of goods. Such manufacturing processes attain high rates of output at low unit cost, with lower costs expected as volume rises. Mass production methods are based on two general principles: (1) the division and specialization of human labour and (2) the use of tools, machinery, and other equipment, usually automated, in the production of standard, interchangeable parts and products. The use of modern methods of mass production has brought such improvements in the cost, quality, quantity, and variety of goods available that the largest global population in history is now sustained at the highest general standard of living.

2) Una las siguientes preguntas en inglés con las preguntas correspondientes en español.

a) What do such manufacturing processes attain at low unit cost?

b) Which manufacturing processes attain high rates of output at low unit cost?

c) Which types of production methods are based on two principles?

d) What are these types of production methods based on?

1) ¿Qué tipos de métodos de producción se basan en dos principios?

2) ¿Qué logran estos procesos de fabricación a bajo costo por unidad?

3) ¿En qué principios se basan estos tipos de métodos de producción?

4) ¿Qué procesos de fabricación logran tasas altas de producción a bajo costo por unidad?

TEXTO 3

The Industrial Revolution And Early Developments

Escrito por William K. Holstein, Morris Tanenbaum

Recuperado de https://www.britannica.com/technology/mass-production

The principle of the division of labour and the resulting specialization of skills can be found in many human activities, and there are records of its application to manufacturing in ancient Greece. The first unmistakable examples of manufacturing operations carefully designed to reduce production costs by specialized labour and the use of machines appeared in the 18th century in England. They were signaled by five important inventions in the textile industry: (1) John Kay's flying shuttle in 1733; (2) Edmund Cartwright's power loom in 1785; (3) James Hargreaves's spinning jenny in 1764; (4) Richard Arkwright's water frame in 1769; and (5) Samuel Crompton's spinning mule in 1779. The last three inventions improved the speed and quality of thread-spinning operations.

A sixth invention, the steam engine, perfected by James Watt, was the key to further rapid development. After making major improvements in steam engine design in 1765, Watt continued his development and refinement of the engine until, in 1785, he successfully used one in a cotton mill. Once human, animal, and water power could be replaced with a reliable low-cost source of motive energy, the Industrial Revolution was clearly established, and the subsequent centuries would witness invention and innovation the likes of which could never have been imagined.

Vocabulario

Spinning Jenny: hiladora Jenny

flying shuttle: lanzadera volante

loom: telar

spinning mule: mula de hilar

1) Encuentra y subraya en el texto las siguientes palabras o frases. Escribe la letra correspondiente al lado de cada palabra o frase:

a) pueden ser

b) hay registros

c) exitosamente

d) operaciones de hilado

e) fuente de energía motriz confiable de bajo costo

f) establecida

2) ¿Qué palabras o frases del texto consideras que se relacionan al tema principal 'La Revolución Industrial y sus primeros desarrollos'?

3) Conteste las siguientes preguntas en español

a) How many and which important inventions signaled the beginning of the Industrial Revolution?
b) In which century were the flying shuttle, the loom, the spinning Jenny, the water frame and the sinning mule invented?
c) Which inventions improved the speed and quality of thread-spinning operations?
d) In which machine did James Watt successfully use a steam engine in 1785?
e) When was the Industrial Revolution established?

TEXTO 4

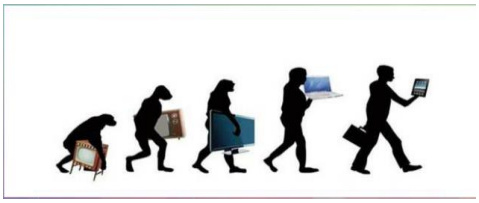
PLANNED OBSOLESCENCE

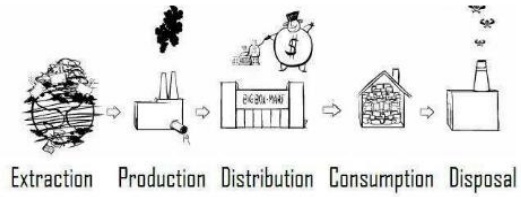
1) Actividad de pre-lectura –Presta atención a las siguientes imágenes y responde:

a) ¿Qué observas? ¿Qué tienen en común las imágenes?

Busca elementos e ideas recurrentes (que se repitan)

Toma nota de tus observaciones, para luego comentarlas con tus compañeros.





b) ¿Qué idea general ve representada en las imágenes?

c) ¿Cuál será el tema principal del texto?

d) ¿Con cuál de las siguientes palabras asociarías la palabra 'obsolescencia'?

- Obscuro
- Obsceno
- Obsoleto
- Obstáculo
- Obstinado

e) A partir de todo lo que has trabajado hasta ahora, ¿qué palabras crees que vas a encontrar en el texto?

Actividades de lecto-comprensión

a) Busca las palabras y frases del **cuadro 1** en el texto, tradúcelas al español.

version	
specific life span	
components/parts	
Quality materials	
manufacture	
convince	
planned obsolescence	
quality product	
headphones and computers	

PLANNED OBSOLESCENCE

http://www.technologystudent.com/prddes1/plannedob1.html

Planned obsolescence is when a product is deliberately designed to have a specific life span. This is usually a shortened life span. The product is made to **last long enough** to develop a customer's need. The product is also built to convince the customer that the product is a quality product, even though it eventually needs replacing. In this way, when the product fails, the customer will want to buy another, up- to- date version.

Take for example a washing machine. Planned obsolescence means that the washing machine is designed to last about two years, before it breaks down outside the guarantee time. Most of the components/parts are manufactured from quality materials with the exception of some vital parts. Two years after purchase, the washing machine will only need minor inexpensive repairs. However, between 4 to 5 years the vital parts begin to ***wear out*** and a replacement machine is required. For planned obsolescence to **work**, the customer must feel that **he/she has had value for money**. Furthermore, he/she must have enough confidence in the manufacturer/company, to replace the original washing machine with the modern equivalent machine, from the same manufacturer.

Planned obsolescence is sometimes designed into a product ***in order to*** encourage the customer to buy the next upgrade. A good example of this is a mobile phone. Mobile phones are often designed with only current technology in mind, despite the manufacturers' knowledge of future technological developments. For instance, a mobile phone may have USB connections that fit current products, such as headphones and computers. This means that the phone is not future proof. The manufacturer may already be working on updated phones that connect using different sizes of USB ports/connections. (...)

Glosario

last long enough (línea 2): durar lo suficiente

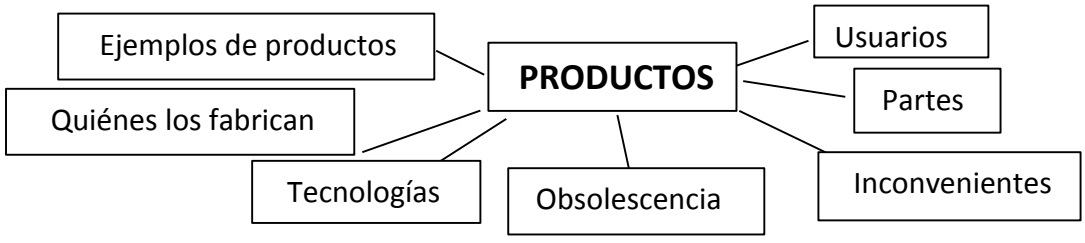
wear out (línea 11): gastarse / andar mal

he/she has had value for money (línea 12): ha gastado bien su dinero

work (línea 12): funcionar

in order to (línea 15): para

1) **Completa el siguiente cuadro con palabras que encuentres en el texto y que relaciones con las palabras en cada burbuja. Usa palabras en español.**



2) **Repasa la teoría sobre voz pasiva. Completa el siguiente cuadro con los títulos correspondientes y con los ejemplos, sacados del texto, que hay debajo del cuadro. Puedes copiar los ejemplos en inglés o en español**.

Sujeto + verbo(s) + …..	Sujeto + be (aux) + participio pasado + …

a) . ...the product fails,...

b) The product is made to **last long enough** to develop a customer's need. **(durar lo suficiente)**

c) ...it breaks down outside the guarantee time.

d) Most of the parts are manufactured from quality materials...

e) … the vital parts begin to ***wear out (desgastarse)***…

f) The product is built to convince the customer that it is a quality product,

3) Relación causa / efecto

3.1) En este ejercicio verás seis secuencias de acciones. En cada secuencia, una acción sucede primero que la otra, de alguna manera, una acción es consecuencia de la otra. Pero no todas las secuencias están en el orden correcto. Ve nuevamente al texto y busca las acciones detalladas en las secuencias. En cada una decide si el orden dado es el correcto, o no.

1	el producto necesita ser reemplazado	el cliente se convence de que es un producto de calidad
2	el cliente quiere comprar uno nuevo	el producto falla
3	un lavarropas dura dos años	el lavarropas se rompe
4	el lavarropas necesita arreglos sencillos	compra de primer lavarropas
5	la obsolescencia programada funciona	el cliente siente que ha gastado bien su dinero
6	el cliente reemplaza el lavarropas original por uno moderno, del mismo fabricante.	el cliente tiene confianza en el fabricante.

3.2) En las siguientes oraciones, además de haber secuencia de acciones, hay una palabra o frase que contribuye a la idea de secuencia de las acciones. En cada oración, marca la palabra o frase que contribuye a la idea de que una acción ocurre después de otra.

In this way, when the product fails, the customer will want to buy another, up- to- date version.
Planned obsolescence means that the washing machine is designed to last about two years, before it breaks down outside the guarantee time.
Two years after purchase, the washing machine will only need minor inexpensive repairs.
Planned obsolescence is sometimes designed into a product in order to encourage the customer to buy the next upgrade.

4) Busca la información en el texto y completa las oraciones o contesta las preguntas en español.

a) La mayoría de las partes han sido construidas con materiales de primera calidad, excepto ……..

b) Un producto se diseña con obsolescencia programada para: (elige la opción correcta)
   a) alentar al cliente a comprar un nuevo modelo del mismo producto
   b) desalentar al cliente a comprar algo de la misma marca
   c) que falle antes de que termine su garantía

d) Escribe un párrafo de aproximadamente 60 palabras (más o menos 6 oraciones) en el que relates una situación que te sea familiar en la que hayas visto un producto cumplir las etapas de la obsolescencia programada.

TEXTOS PARA ING. INFORMÁTICA Y LICENCIATURA EN SISTEMAS

TEXTO 1

General Features of Operating Systems

An operating system is a master control program which[1] controls the functions of the computer system as a whole and the running of application programs. All computers do not use the same operating systems. It is therefore important to assess the operating system used on a particular model before initial commitment because some software is only designed to run under the control of specific operating systems. Some operating systems are adopted as 'industry standards' and these[2] are the ones[3] which should be evaluated because they[4] normally have a good software base. The reason for this[5] is that software houses are willing to expand resources on the development of application packages for machines functioning under the control of an operating system which is widely used. The cost of software is likely to be lower in such circumstances as the development costs are spread over a greater number of users, both actual and potential.

Mainframe computers usually process several application programs concurrently, switching from one to the other, for the purpose of increasing processing productivity. This is known as multiprogrammning (multi-tasking in the context of microcomputers), which requires a powerful operating system incorporating work scheduling facilities to control the switching between programs. This[6] entails reading in data for one program while the processor is performing computations on another[7] and printing out results on yet another. (…)

A. ¿A qué palabra, frase o idea hacen referencias los términos subrayados en el texto?

1. which: _____

2. these: _____

3. the ones: _____

4. they: _____

5. this: _____

6. this: _____

7. another: _____

B. Diga si las siguientes oraciones son verdaderas (V) o falsas (F). Corrija las falsas.

1. Todas las computadoras utilizan los mismos sistemas operativos. _____

2. Es necesario evaluar el sistema operativo ya que algunos software pueden ejecutarse solo con determinados sistemas operativos. _____

3. Los sistemas operativos que se deben evaluar son los que se adoptan como estándares de la industria. _____

4. El costo del software es mayor cuando los costos de desarrollo se reparten en mayores cantidades de usuarios. _____

C. Traduzca el segundo párrafo

TEXTO 2

A. Antes de leer el siguiente texto, una cada palabra con su definición.

1. hardware	a. the set of software that controls a computer system
2. central processing unit (CPU)	b. the amount of memory needed to store one character (8-16 bits)
3. bus	c. a computer element that gives information in a visual form, as on a screen
4. keyboard	d. the physical components of a computer system
5. output	e. the smallest unit of memory or data stored in memory
6. software	f. a set of keys as on a computer terminal
7. operating system	g. a visual symbol on the screen which represents a command
8. input	h. a microscopic circuitry that is the main information processor
9. display	i. the information put into a data processing system
10. icon	j. a flat cable with many parallel wires that connects computer components
11. bits	k. the information produced by a computer from a specific input
12. byte	l. data, programs, etc. that run the computer.

B. De acuerdo con el vocabulario trabajado infiera el tema o los temas a tratar en el texto dado.

_____

_____

_____

_____

The physical computer and its components are known as hardware. Computer hardware includes the memory that stores data **and**[1] program instructions; the central processing unit (CPU) that carries out program instructions; the bus that connects the various computer components; the input devices, **such as**[2] a keyboard **or**[3] mouse , that allow the user to communicate with the computer; the output devices, such as printers and video display monitors, that enable the computer to present information to the user; and buses (hardware lines or wires) that connect these and other computer components. The programs that run the computer are called software. Software generally is designed to perform a particular type of task—**for example**[4], to control the arm of a robot to weld a car's body, to write a letter, to display and modify a photograph, or to direct the general operation of the computer.

When a computer is turned on it searches for instructions in its memory. These instructions tell the computer how to start up. Usually, one of the first sets of these instructions is a special program called the operating system, which is the software that makes the computer work. It prompts the user (or other machines) for input and commands, reports the results of these commands and other operations, stores and manages data, and controls the sequence of the software and hardware actions. When the user requests that a program run, the operating system loads the program in the computer's memory and runs the program. Popular operating systems, such as Microsoft Windows and the Macintosh system (Mac OS), have graphical user interfaces (GUIs)—that use tiny pictures, or icons, to represent various files and commands. To access these files or commands, the user clicks the mouse

on the icon or presses a combination of keys on the keyboard. Some operating systems allow the user to carry out these tasks via voice, touch, or other input methods.

To process information electronically, data are stored in a computer in the form of binary digits, or bits, each having two possible representations (0 or 1). If a second bit is added to a single bit of information, the number of representations is doubled, resulting in four possible combinations: 00, 01, 10, or 11. A third bit added to this two-bit representation again doubles the number of combinations, resulting in eight possibilities: 000, 001, 010, 011, 100, 101, 110, or 111. Each time a bit is added, the number of possible patterns is doubled. Eight bits is called a byte; a byte has 256 possible combinations of 0s and 1s.

C. Proponga un título para el texto.

_____

D. En el siguiente cuadro aparecen conectores mencionados en el texto. Complételo indicando la relación lógica que expresan (p. ej. contraste, adición, etc.) y proponiendo una traducción.

Conector	Relación lógica	Traducción
1. and		
2. such as		
3. or		
4. for example		

E. Traduzca el segundo párrafo.

TEXTO 3

Quantum computers move closer to reality, thanks to highly enriched and highly purified silicon

Date: June 7, 2012
Source: Simon Fraser University
Summary: Scientists have made the next step towards making quantum computing a reality -- through the unique properties of highly enriched and highly purified silicon.

The quantum computer is a futuristic machine that could operate at speeds even more mind-boggling than the world's fastest super-computers.

Research involving physicist Mike Thewalt of Simon Fraser University offers a new step towards making quantum computing a reality, through the unique properties of highly enriched and highly purified silicon.

Quantum computers right now exist pretty much in physicists' concepts, and theoretical research. There are some basic quantum computers in existence, but nobody yet can build a truly *practical* **one**[1] -- or really knows how.

Such computers will harness the powers of atoms and sub-atomic particles (ions, photons, electrons) to perform memory and processing tasks, thanks to strange sub-atomic properties.

What Thewalt and colleagues at Oxford University and in Germany have found is that their special silicon allows processes to take place and be observed in a solid state that scientists used to think required a near-perfect vacuum.

And, using this ^{28}Si **they**[2] have extended to three minutes -- from a matter of seconds -- the time in which scientists can manipulate, observe and measure the processes.

"It's by far a record in solid-state systems," Thewalt says. "If you'd asked people a few years ago if **this**[3] was possible, **they**'d[4] have said no. It opens new ways of using solid-state semi-conductors such as silicon as a base for quantum computing.

"You can start to do things that people thought you could only do in a vacuum. What we have found, and what wasn't anticipated, are the sharp spectral lines (optical qualities) in the 28Silicon we have been testing. It's so pure, and so perfect. There's no other material like it."

But the world is still a long way from practical quantum computers, he notes.

Quantum computing is a concept that challenges everything we know or understand about today's computers.

Your desktop or laptop computer processes "bits" of information. The bit is a fundamental unit of information, seen by your computer has having a value of either "1" or "0."

That last paragraph, when written in *Word*, contains 181 characters including spaces. In your home computer, that simple paragraph is processed as a string of some 1,448 "1"s and "0"s.

But in the quantum computer, the "quantum bit" (also known as a "qubit") can be both a "1" and a "0" -- and all values between 0 and 1 -- *at the same time*.

Says Thewalt: "A classical 1/0 bit can be thought of as a person being either at the North or South Pole, whereas a qubit can be anywhere on the surface of the globe – **its**[5] actual state is described by two parameters similar to latitude and longitude."

Make a practical quantum computer with enough qubits available and it could complete in minutes calculations that would take today's super-computers years, and your laptop perhaps millions of years.

The work by Thewalt and his fellow researchers opens up yet another avenue of research and application that may, in time, lead to practical breakthroughs in quantum computing.

A. ¿A qué palabra, frase o idea hacen referencia los términos del texto resaltados en negrita?

1. one: _____

2. they: _____

3. this: _____

4. they: _____

5. its: _____

B. Responda las siguientes preguntas en español.

1. How have scientists made the next step towards making quantum computing a reality?
2. What could the quantum computer operate?
3. Can somebody build a truly practical quantum computer?
4. What have Thewalt and colleagues at Oxford University found?
5. How long have they extended the time to manipulate, observe and measure the processes?
6. What is it used as a base for quantum computing?
7. Which element have they been testing?
8. What is a bit?
9. What values can a qubit be?
10. What could a practical quantum computer with enough qubits do?

TEXTO 4

1. Lea el siguiente texto y realice las actividades.

Computer programming[1] (often shortened to programming) is the comprehensive process that leads from an original formulation of a computing[2] problem to executable programs. It involves activities such as analysis, understanding, and generically solving[3] such problems resulting in an algorithm, verification of requirements of the algorithm including its correctness and its resource consumption, implementation (or coding) of the algorithm in a target programming[6] language, testing, debugging, and maintaining the source code, implementation of the build system and management of derived artifacts such as machine code of computer programs. The algorithm is often only represented in human-parseable form and reasoned about using logic. Source code is written in one or more programming languages (such as C++, C#, Java, Python, Smalltalk, JavaScript, etc.). The purpose of programming is to find a sequence of instructions that will automate performing a specific task or solve a given problem. The process of programming thus often requires expertise in many different subjects, including knowledge of the application domain, specialized algorithms and formal logic.

Within software engineering, programming (the implementation) is regarded as one phase in a software development process.

2. Complete el siguiente cuadro con la información que falta de acuerdo a cómo están usados los términos en el texto. El primero está hecho a modo de ejemplo.

Forma ing	Categoría gramatical	Traducción
1. programming	sustantivo	programación
2. computing	adjetivo	
3. solving		
4.		dan como resultado
5.		incluidos
6. programming		

3. Traduzca las siguientes frases nominales extraídas del texto.

a. target programming language _____

b. machine code of computer programs _____

c. human-parseable form _____

d. many different subjects _____

4. Responda las siguientes preguntas en español.

1. What is computer programming?

2. What does it involve?

3. How is algorithm represented?

4. Which are the programming languages mentioned in the text?

5. Which is the purpose of programming?

6. How is programming considered within software engineering?

TEXTOS PARA ING. QUÍMICA Y CONVENIO

TEXTO 1

Lea el texto y responda las siguientes preguntas en español:

1. What kind of compound is silicon dioxide and how is it also known as?

2. What has silica been known for since ancient times?

3. In which form is silica most commonly found?

4. Mention three forms in which silica is manufactured.

5. What is silica primarily used in?

6. How is it used in telecommunications?

7. What are the uses of silica in food production?

8. How are silica films used in Microelectronics?

9. Why is silica used in the extraction of DNA and RNA?

10. Why is silica used in cosmetics?

The chemical compound silicon dioxide, also known as silica (from the Latin silex), is an oxide of silicon with the chemical formula SiO2. It has been known for its hardness since ancient times. Silica is most commonly found in nature as sand or quartz, as well as in the cell walls of diatoms. Silica is manufactured in several forms including fused quartz, crystal, fumed silica (or pyrogenic silica), colloidal silica, silica gel, and aerogel. Silica is used primarily in the production of glass for windows, drinking glasses, beverage bottles, and many other uses. The majority of optical fibers for telecommunications are also made from silica. It is a primary raw material for many White ware ceramics such as earthenware, stoneware, porcelain, as well as industrial Portland cement. Silica is a common additive in the production of foods, where it is used primarily as a flow agent in powdered foods, or to absorb water in hygroscopic applications. It is the primary component of diatomaceous earth which has many uses ranging from filtration to insect control. It is also the primary component of rice husk ash which is used, for example, in filtration and cement manufacturing. Thin films of silica grown on silicon wafers via thermal oxidation methods can be quite beneficial in microelectronics, where they act as electric insulators with high chemical stability. In electrical applications, it can protect the silicon, store charge, block current, and even act as a controlled pathway to limit current flow. A silica-based aerogel was used in the Stardust spacecraft to collect extraterrestrial particles. Silica is also used in the extraction of DNA and RNA due to its ability to bind to the nucleic acids under the presence of chaotropes. As hydrophobic silica it is used as a defoamer component. In hydrated form, it is used in toothpaste as a hard abrasive to remove tooth plaque. In its capacity as a refractory, it is useful in fiber form as a high-temperature thermal protection fabric. In cosmetics, it is useful for its light-diffusing properties and natural absorbency. Colloidal silica is used as a wine and juice fining agent. In pharmaceutical products, silica aids powder flow when tablets are formed. It is also used as a thermal enhancement compound in ground source heat pump industry.

TEXTO 2

Flash point

Lea el siguiente texto y realice las siguientes actividades.

The **flash point** of a volatile material is the lowest temperature at which it can vaporize to form an ignitable mixture in air. Measuring a flash point requires an ignition source. At the flash point, the vapor may cease to burn when the source of ignition is removed.

The flash point is not to be confused with the autoignition temperature, which does not require an ignition source, or the fire point, the temperature at which the vapor continues to burn after being ignited. Neither the flash point nor the fire point is dependent on the temperature of the ignition source, which is much higher.

The flash point is often used as a descriptive characteristic of liquid fuel, and it is also used to help characterize the fire hazards of liquids. “Flash point” refers to both flammable liquids and combustible liquids. There are various standards for defining each term. Liquids with a flash point less than 60.5 or 37.8 °C (140.9 or 100.0 °F) — depending upon the standard being applied — are considered flammable, while liquids with a flash point above those temperatures are considered combustible.

Mechanism

Every liquid has a vapor pressure, which is a function of that liquid's temperature. As the temperature increases, the vapor pressure increases. As the vapor pressure increases, the concentration of vapor of the flammable liquid in the air increases. Hence, temperature determines the concentration of vapor of the flammable liquid in the air.

A certain concentration of vapor in the air is necessary to sustain combustion, and that concentration is different for each flammable liquid. The flash point of a flammable liquid is the lowest temperature at which there will be enough flammable vapor to ignite when an ignition source is applied.

1) Busque y subraye en el texto las palabras o frases que tienen el siguiente significado en español

a) ni….. ni…..
b) la temperatura más baja
c) puede cesar
d) hay
e) la cual
f) dependiendo de
g) mientras
h) por consiguiente
i) habrá

2) Escriba las siguientes palabras a lado de cada explicación. Uno de los términos está de más.

temperatura de autoignición – punto de inflamabilidad (flash point) – fuente de ignición – punto de ignición (fire point) – presión de vapor

a) al igual que el punto de inflamabilidad, no depende de la temperatura de la fuente de ignición: ……..
b) aumenta a medida que aumenta la temperatura ……..……..
c) no requiere una fuente o un punto de ignición ……..
d) la temperatura más baja en la cual un material volátil se puede evaporar para formar una mezcla inflamable en el aire ……..

3) En cada par de oraciones siguientes, ¿Cuál de las dos opciones es la correcta?

a) Los líquidos con un punto de inflamabilidad superior a 60.5 o 37.8°C (dependiendo del estándar aplicado) son considerados inflamables, mientras los líquidos con un punto de inflamabilidad inferior a esas temperaturas son considerados combustibles.

b) Los líquidos con un punto de inflamabilidad superior a 60.5 o 37.8 °C (dependiendo del estándar aplicado) son considerados combustibles, mientras los líquidos con un punto de inflamabilidad inferior a esas temperaturas son considerados inflamables.

a) A medida que la presión de vapor aumenta, la concentración de vapor del líquido inflamable en el aire aumenta.

b) A medida que la concentración de vapor del líquido inflamable en el aire aumenta, la presión de vapor aumenta.

a) El punto de inflamabilidad de un líquido inflamable es la temperatura más baja en la cual habrá suficiente gas inflamable para encenderse cuando se aplica una fuente de ignición.

b) El punto de inflamabilidad de un líquido inflamable es la temperatura más baja en la cual habrá suficiente gas inflamable para apagarse cuando se aplica una fuente de ignición.

TEXTO 3

Lea el siguiente texto y conteste las preguntas en español.

Uniformity of heating with precise temperature control is important to many industries. Nowhere is it more important than in the chemical industry where uniformity and control correlate directly with improved quality, higher yields and lower costs. IMS enables microwaves to deliver huge benefits to the chemical processing industry. Both Planar Drying Systems and Cylindrical Heating Systems create uniform energy distribution throughout an exposure region, providing the following benefits:

- Uniformity of temperature means better yields, more consistent quality
- Precise temperature control, via instantaneously variable power control, allows the process to run at the exact temperature required without fluctuations up and down, which are common in conventional systems as they overshoot and undershoot the preset temperature.
- High energy density enables material to be heated quickly in a very short exposure region utilizing minimal floor space in the plant while dramatically reducing production time.

Microwave heating is up to 50% more efficient than heating by conventional methods.

Planar Drying Systems are used to dry or cure web-like materials or beds of conveyed materials. Examples of such products are composites, catalysts, coatings, inks and adhesives. The benefits of using Planar Drying Systems are demonstrated in the following example:

IMS was contracted by a foam manufacturer to provide total microwave drying of continuously poured hydrophilic polyurethane foam to a final moisture of less than 2%. The Planar Drying System needed to overcome the difficulties of conventionally drying absorbent foam, including slow drying speeds, a long dryer footprint, inefficient use of and lack of control over fossil fuel-based ovens, and off-quality issues due to skinning, blistering, scorching, and discoloration. IMS installed a 100 kW, 915 MHz Planar Drying System. Its use resulted in a 250% increase in drying speed.

a. Why is uniformity of heating with precise temperature control so important in the chemical industry?
b. What does IMS enable?
c. Which are the systems that create uniform energy distribution throughout an exposure region?
d. Could you compare Microwave heating and heating by conventional methods?

e. What are Planar Drying Systems used for?

f. Who was IMS contracted by?

TEXTO 4

Lea el siguiente texto y realice las siguientes actividades.

Polymers

A polymer is a large molecule, or macromolecule, composed of many repeated subunits. Because of their broad range of properties, both synthetic and natural polymers play an essential and ubiquitous role in everyday life. Polymers range from familiar synthetic plastics such as polystyrene to natural biopolymers such as DNA and proteins that are fundamental to biological structure and function. Polymers, both natural and synthetic, are created via polymerization of many small molecules, known as monomers. Their consequently large molecular mass relative to small molecule compounds produces unique physical properties, including toughness, viscoelasticity, and a tendency to form glasses and semicrystalline structures rather than crystals.

The term "polymer" derives from the ancient Greek word πολύς (polus, meaning "many, much") and μέρος (meros, meaning "parts"), and refers to a molecule whose structure is composed of multiple repeating units, from which a characteristic of high relative molecular mass and associated properties originates. The units composing polymers derive, actually or conceptually, from molecules of low relative molecular mass. The term was coined in 1833 by Jöns Jacob Berzelius, though with a definition different from the modern IUPAC definition. The modern concept of polymers as covalently bonded macromolecular structures was proposed in 1920 by Hermann Staudinger, who spent the next decade finding experimental evidence for this hypothesis.

1. Busque y subraye en el texto las palabras o frases que tienen el siguiente significado en español

a. **grande**
b. **debido a**
c. **tanto …como**
d. **tal como**
e. **ubicuo**
f. conocidas como
g. mediante
h. más que
i. cuyo

2. **Extraiga del texto la siguiente información**:
   a) dos tipos o clases de polímeros: ……
   b) un ejemplo de plástico sintético: ……..
   c) dos ejemplos de biopolímeros: ……..
   d) nombre de las moléculas que forman los polímeros: ……
   e) propiedades físicas de los polímeros: ……

3. Verdadero o falso. Escriba V o F a la derecha de cada una de las siguientes oraciones según las considere verdaderas o falsas, respectivamente. Explique en caso de considerarlas falsas.

a) Los polímeros son moléculas largas, compuestas de muchas subunidades repetidas.
b) Los polímeros tienen una amplia gama de propiedades.
c) La masa molecular pequeña de los polímeros produce propiedades físicas únicas.
d) Las unidades que forman los polímeros derivan de moléculas de masa molecular relativamente baja.
e) La definición actual de polímero se acuñó en 1833.

TEXTOS PARA ING. DE MINAS Y AFINES

TEXTO 1

BASICS OF AN OPEN PIT MINE

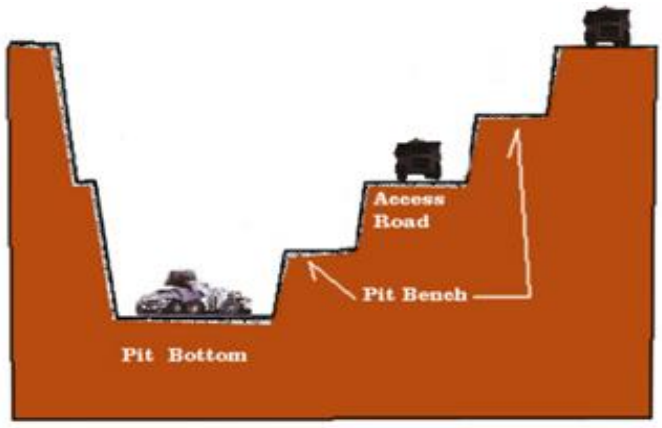


Fig. 1

Fig. 1, shows an illustration of an Open Pit Surface Mine. An open pit mine is "an excavation or cut made at the surface of the ground for the purpose of extracting ore and which is open to the surface for the duration of the mine's life." To expose and mine the ore, it is generally necessary to excavate and relocate large quantities of waste rock. The main objective in any commercial mining operation is the exploitation of the mineral deposit at the lowest possible cost with a view of maximizing profits. The selection of physical design parameters and the scheduling of the ore and waste extraction program are complex engineering decisions of enormous economic significance. The planning of an open pit mine is, therefore, basically an exercise in economics, constrained by certain geologic and mining engineering aspects.

A bench may be defined as a ledge that forms a single level of operation above which mineral or waste materials are mined back to a bench face. The mineral or waste is removed in successive layers, each of which is a bench. Several benches may be in operation simultaneously in different parts of, and at different elevations in the open pit mine.

Open pit mines can be used in coal mining, and they are used extensively in "hard rock" mining for ores such as metal ores, copper, gold, iron, aluminum, and many minerals. In a open pit coal mine, the pit bottom would be the bottom mined coal seam elevation, since it is usually feasible to extract multiple seams when surface mining coal. In a hard rock mine, the bottom of the pit would be the lowest level (elevation) that mining would be conducted on the ore being mined.

Planning must account for both environmental protection, beginning as early as the initial exploration, and for reclamation. It is critical that planning alleviate or mitigate potential impacts of mining for two key reasons: (1) the cost of environmental protection is minimized by incorporating it into the initial design, rather than performing remedial measures to compensate for design deficiencies, and (2) negative publicity or poor public relations may have severe economic consequences. From the start of the planning process, adequate consideration must be given to regulatory affairs. The cost of compliance may be significantly reduced when taken into account in the design or planning process, in a proactive manner, rather than being addressed on an ad hoc basis as problems develop or enforcement actions occur.

1. ENCUENTRE EN EL TEXTO UNA PALABRA O EXPRESIÓN CUYO SIGNIFICADO SEA…

a. ……: un gran agujero en el suelo del cual se obtienen rocas y minerales por excavación

b. ……: el suelo sobre y por debajo de la superficie de la tierra

c. ……: roca o tierra de la cual se puede obtener un mineral.

d. ……: capa de mineral que queda en el suelo a través de un proceso natural

e. ……: borde saliente y rocoso en una montaña o precipicio.

2. LEA EL TEXTO Y ENCUENTRE:

a. A definition for “open pit mine.

b. What is necessary to expose and mine the ore.

c. The main objective in any commercial mining operation.

d. What the planning of an open pit mine is constrained by.

e. A definition for “bench”.

f. Three metals that are mined in open pit mines.

g. How the cost of environmental protection is minimized.

3. REFERENCIA CONTEXTUAL: (INDIQUE A QUÉ O QUIÉN HACE/N TREFERENCIA LA O LAS PALABRAS EN NEGRITAS)

Paragraph 2

(above) **which** refers to ……..

each of which refers to ……

Paragraph 3

they (are used extensively) refers to ……

Paragraph 4

(by incorporating) **it** refers to ……

TEXTO 2

HYDRAULIC FRACTURING

Hydraulic fracturing is the fracturing of rock by a pressurized liquid. Some hydraulic fractures form naturally—certain veins or dikes are examples. Induced hydraulic fracturing or hydrofracturing, commonly known as fracking, is a technique in which typically water is mixed with sand and chemicals, and the mixture is injected at high pressure into a wellbore to create small fractures (typically less than 1mm), along which fluids such as gas, petroleum, uranium-bearing solution, and brine water may migrate to the well. Hydraulic pressure is removed from the well, and then small grains of proppant* (sand or aluminium oxide) hold these fractures open once the rock achieves equilibrium. The technique is very common in wells for shale gas, tight gas, tight oil, and coal seam gas and hard rock wells. This well stimulation is only conducted once in the life of the well and

greatly enhances fluid removal and well productivity. A different technique where only acid is injected is referred to as acidizing.

The first experimental use of hydraulic fracturing was in 1947, and the first commercially successful applications were in 1949. As of 2010, it was estimated that 60% of all new oil and gas wells worldwide were being hydraulically fractured. As of 2012, 2.5 million hydraulic fracturing jobs have been performed on oil and gas wells worldwide, more than one million of them in the United States. Uranium Energy Corporation is planning to use hydraulic fracturing to mine uranium. Fracking for uranium involves injecting oxygenated water (to increase solubility) to dissolve the uranium, then pumping the solution back up to the surface.

Proponents of hydraulic fracturing point to the economic benefits from the vast amounts of formerly inaccessible hydrocarbons the process can extract. Opponents point to potential environmental impacts, including contamination of ground water, depletion of fresh water, risks to air quality, noise pollution, the migration of gases and hydraulic fracturing chemicals to the surface, surface contamination from spills and flow-back, and the health effects of these. For these reasons hydraulic fracturing has come under international scrutiny, with some countries suspending or banning it. However, some of those countries, including most notably the United Kingdom, have recently lifted their bans, choosing to focus on regulations instead of outright prohibition.

Uses

The technique of hydraulic fracturing is used to increase the rate at which fluids, such as petroleum, water, or natural gas can be recovered from subterranean natural reservoirs. Reservoirs are typically porous sandstones, limestone or dolomite rocks, but also include "unconventional reservoirs" such as shale rock or coal beds. Hydraulic fracturing enables the production of natural gas and oil from rock formations deep below the earth's surface (generally 5,000–20,000 feet (1,500–6,100 m)), which is typically greatly below groundwater reservoirs of basins if present. At such depth, there may not be sufficient permeability or reservoir pressure to allow natural gas and oil to flow from the rock into the wellbore at economic rates.

*proppant = A *proppant* is a solid material, typically treated sand or man-made ceramic materials, designed to keep an induced hydraulic fracture open. Agente de sustentación o apuntalante

1. LEA EL TEXTO Y ENCUENTRE:

a. Diferentes vocablos en inglés para referirse a ‘hydrifracturing’.

b. El evento ocurrido en 1949 al que se hace referencia.

c. Las tres variedades de gas mencionadas en el primer párrafo, para cuya extracción se usa el fracking.

d. Los beneficios y desventajas de la fractura hidráulica mencionados en el texto.

e. Los ejemplos de depósitos no convencionales mencionados.

f. A qué se refieren los números 5,000-20,000

2. INDIQUE A QUÉ O QUIÉN SE REFIEREN LAS PALABRAS EN NEGRITAS

a. For **these reasons** hace referencia a ……..

b. suspending or banning **it: It** se refiere a ……

c. At **such depth** hace referencia a …….

3. RESPONDA EN CASTELLANO LAS SIGUIENTES PREGUNTAS.

1. What is hydrofracturing?
2. What happens once hydraulic pressure has been removed?
3. How many times is this well stimulation conducted in the life of the well?
4. What is acidizing?
5. When did the first experimental use of hydraulic fracturing take place?
6. What does fracking for uranium involve?
7. Why has hydraulic fracturing come under international scrutiny?
8. Is fracking now banned in the United Kingdom? Why or why not?
9. What is hydraulic fracturing used for?
10. Can you name 2 two unconventional reservoirs?

TEXTO 3

GEOLOGIC TIME SCALE - From Wikipedia, the free encyclopedia

The **geologic time scale** (**GTS**) is a system of chronological measurement that relates stratigraphy to time, and is used by geologists, paleontologists, and other earth scientists to describe the timing and relationships between events that have occurred throughout Earth's history. The table of geologic time spans presented here agrees with the nomenclature, dates and standard color codes set forth by the International Commission on Stratigraphy.

Evidence from radiometric dating indicates that the Earth is about 4.54 billion years old. The geology or *deep time* of Earth's past has been organized into various units according to events which took place in each period. Different spans of time on the GTS are usually delimited by changes in the composition of strata which correspond to them, indicating major geological or paleontological events, such as mass extinctions. For example, the boundary between the Cretaceous period and the Paleogene period is defined by the Cretaceous–Paleogene extinction event, which marked the demise of the dinosaurs and many other groups of life. Older time spans which predate the reliable fossil record (before the Proterozoic Eon) are defined by the absolute age.

Terminology

The largest defined unit of time is the **supereon**, composed of **eons**. Eons are divided into **eras**, which are in turn divided into **periods**, **epochs** and **ages**. The terms eonothem, erathem, system, series, and stage are used to refer to the layers of rock that correspond to these periods of geologic time in earth's history.

Geologists qualify these units as Early, Mid, and Late when referring to time, and Lower, Middle, and Upper when referring to the corresponding rocks. For example, the Lower Jurassic Series in chronostratigraphy corresponds to the Early Jurassic Epoch in geochronology. The adjectives are capitalized when the subdivision is formally recognized, and lower case when not; thus "early Miocene" but "Early Jurassic."

Geologic units from the same time but different parts of the world often look different and contain different fossils, so the same period was historically given different names in different locales. For example, in North America the Lower Cambrian is called the Waucoban series that is then

subdivided into zones based on succession of trilobites. In East Asia and Siberia, the same unit is split into Alexian, Atdabanian, and Botomian stages. A key aspect of the work of the International Commission on Stratigraphy is to reconcile this conflicting terminology and define universal horizons that can be used around the world.

1. **Traduzca las frases subrayadas en el texto.**
2. **Encuentre en el texto las palabras en inglés para los siguientes significados.**

a. ……: Parte de la geología que estudia la disposición y caracteres de las rocas sedimentarias estratificadas.

b. ……: Especialista en paleontología, (estudio los organismos que han existido en el pasado de la Tierra a partir de sus restos fósiles)

c. ……: Ritmo y / o coordinación de los eventos en el tiempo.

d. ……: forma plural de '*estrato*'

e. ……: línea real o imaginaria que separa dos terrenos, países, etc., dos momentos, dos situaciones, etc.

f. ……: Acción y efecto de desaparecer.

g. ……: Anteceder o estar antepuesto.

3. Transcriba ejemplos de:

a. Voz pasiva
b. Formas comparativas
c. Presente perfecto

4. Traduzca el 4° párrafo.

5. Formule 3 preguntas acerca del 4° párrafo.

TEXTO 4

The Importance of Earth Surface Processes

Human-Landscape Dynamics

Largely within the last 3 millennia, humans have removed and replaced land cover, hastened the erosion of upland soils, and increased sediment supply to streams from upland erosion throughout many parts of the world (Figure 1.3). Worldwide damming of rivers has increased sediment trapping and residence times, however, greatly reducing the delivery of sediment to coasts and deltas. Although dams provide substantial societal benefits, including reduced flooding, hydroelectric power, and water for irrigation, their impact on sediment transport has caused the collapse of river ecosystems and starved coasts of sediment, leading to unanticipated delta subsidence, wetland loss, and greater coastal erosion.

Nearly every process on Earth's surface has been changed by human activities, heightening the need for new research on human-landscape dynamics and for a greater capacity to predict process responses to human influence. Earth-surface scientists have a unique and timely opportunity to use new tools and integrative approaches to enhance understanding and to predict future changes. More

importantly, they are in position to transfer their knowledge to the greater scientific community, applied practitioners, the public, and policy makers in order to facilitate decision making.
As an example of the role of Earth surface science in providing greater understanding of Earth surface processes and in predicting systemic responses to change, consider what happens as aging dams are removed or breached. Tens of thousands of dams of various sizes have slowed the flow of rivers and trapped sediment and nutrients throughout the United States for up to hundreds of years, and dams continue to be built throughout the world. Removal of some of these aging impoundments is desired for reasons that include fish passage, human safety, and improved water quality.
Recuperado de The National Academies Press OPENBOOK
http://www.nap.edu/read/12700/chapter/3

1. **Responde las siguientes preguntas sobre el texto anterior en español:**

a. What have humans over the las 3 millennia?

b. How are dams socially beneficial?

c. What are some of their drawbacks?

e. What do Earth-surface scientists have a unique and timely opportunity for?

f. How have dams affected rivers and sediments?

g. Which are some of the reasons why removal of some aging dams is desired?

2**. Encuentra en el texto una expresión que signifique lo siguiente…**

a. (paragraph 1) ……..: un área alta .

b. (paragraph 1)……..: un muro construido a través de un río que impide el paso del agua, para crear un dique

c. (paragraph 2)……..: investigación sobre un tema para descubrir nuevos hechos o ideas

d. (paragraph 2)……..: forma particular de pensar o estudiar

e. (paragraph 3)……..: que presenta una brecha o hueco

e. (paragraph 3)……..: acción de llevarse algo

3. **Referencia contextual**. ¿A qué hacen referencia las siguientes palabras en el texto?
Párrafo 1

their (impact) …….

Párrafo 1

They …….

their (knoeledge) …….