

# Paragraf Completes

:oko:

**Most mysterious, perhaps, of all substances in the sea is iodine. In sea water it is one of the least common of the non-metals, difficult to detect and resisting exact analysis. ---- . Sponges, corals and certain seaweeds, in particular, accumulate vast quantities of it.**

- A) The ocean is the earth's greatest storehouse of minerals
- B) In the human body, iodine functions as a regulator of the basal metabolism
- C) Yet it is found in almost every marine plant and animal
- D) The plants and animals of the sea are very much better chemists than men
- E) Iodine deficiency in the body causes certain metabolic disorders

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**mysterious = gizemli, esrarlı**

detect = ortaya çıkarmak, bulmak, fark etmek, keşfetmek, discover, identify

resist = direnmek, karşı koymak, withstand, confront

**sponge = sünger**

**coral = mercan**

**seaweed = deniz yosunu**

accumulate = toplamak, yığ(ıl)mak, birik(tir)mek, gather, collect, zıt anl. = disperse,

scatter

**vast = çok geniş, engin, çok büyük, huge, immense**

**storehouse = depo**

**regulator = düzenleyici**

**basal = temel, bazal**

**marine = denize ait**

deficiency = eksiklik, yetersizlik, inadequacy, insufficiency, shortage, zıt anl. =

adequacy, sufficiency, excess

disorder = bozukluk, hastalık, düzensizlik, kargaşa, illness, ailment, confusion, mess,

zıt anl. = health, order

**Bridges are among the most important, and often the most spectacular, of all civil engineering works. ---- . Without them it would be impossible to imagine how traffic in Istanbul could circulate. Moreover, they are the symbolic link of two continents.**

- A) A further aspect of civil engineering is the choice of a suitable site
- B) The bridges across the Bosphorus are a case in point
- C) One of the major problems posed by long bridges is that of maintenance
- D) The construction of bridges requires a number of engineering skills
- E) Historically there has always been a dream to construct a bridge across the Bosphorus

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**spectacular = harikulade, olağanüstü**

circulate = deveren etmek, dolaşmak, go about, move around

aspect = yön, taraf, cihet, özellik, feature

**a case in point = iyi bir örnek**

pose = (sorun, zorluk vs.) yaratmak, extend

**When scientists are trying to understand a particular set of phenomena, they often make use of a model. A model, in the scientist's sense, is a kind of analogy or mental image of the phenomena in terms of something we are familiar with. ---- . We cannot see waves of light as we can see water waves; but it is valuable to think of light as if it were made up of waves because experiments indicate that light behaves in many respects as water waves do.**

- A) Other natural laws have been discovered over centuries
- B) The atomic model of matter has gone through many refinements
- C) Models often lead to important theories
- D) One example is the wave model of light
- E) This is the obvious difference between a theory and a model

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**phenomenon = görüngü, fenomen, anlaşılması zor olay**

make use of = —den yararlanmak, utilize

**analogy = benzeşme, karşılaştırma**

indicate = işaret etmek, göstermek, point to, denote

**in many respects = birçok açıdan/yönden**

**refinement = arıtma, saflaştırma**

lead to = —e yol açmak, cause

**Evaporation can be described as the process by which a liquid is changed into vapour by heat. ---- . The higher the temperature the quicker the process. Obviously, evaporation is a fundamental process in nature.**

- A) Desalination depends upon the process of evaporation
- B) Whenever a liquid is exposed to heat, evaporation takes place
- C) The average annual temperature in the arctic region is far below that in the Mediterranean
- D) The human body can easily adapt to a humid climate
- E) Some plants are more affected by evaporation than others



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fundamental = esaslı, temel, asıl, basic, central, primary, zıt anl. = secondary

**desalination = tuzunu giderme**

be exposed to = —e maruz kalmak

adapt = adapte etmek, uyarlamak, intibak etmek, adjust, accommodate, zıt anl. =

Dislocate

**humid = rutubetli, nemli**

affect = etkilemek, influence

---- . He was one of the earliest to argue that the interior of the earth was not solid but that it consisted of a condensed and highly heated fluid or gas. He also argued that on its exterior the earth had a relatively thin shell of matter.

A) The great achievements of Benjamin Franklin in natural science should not blind us to the fact that he was a great statesman

B) When Benjamin Franklin was a young man, he moved from Boston to Philadelphia, where he spent the rest of his life studying political science

C) In the eighteenth century, Benjamin Franklin made remarkable contributions to the field of electricity

D) Benjamin Franklin played an important part in the early development of American political thought

E) Benjamin Franklin had many original and penetrating ideas on geology

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consist of = —den meydana gelmek, —den ibaret olmak,  
be made up of

relatively = göreceli olarak, nispeten, comparatively

**shell = kabuk**

**matter = madde, özdek**

achievement = başarı, elde etme, kazanma,  
accomplishment, success, zıt anl. =

failure, defeat

**blind (to) = kör etmek, görmeyi/algılamayı engellemek**

remarkable = dikkate değer, olağanüstü, notable,  
extraordinary, zıt anl. = ordinary

**penetrating = içe işleyen, etkili**

**Scientists are only just beginning to explore the seabed. Remote-controlled submarines are bringing up sediment from an apparently lifeless sea floor. ---- . Indeed, so many new species are being identified that the deep seabed may turn out to support a greater bio-diversity than the rainforests.**

- A) There are trenches in the seabed that are 11 km deep
- B) Sedimentation is a slow process of creating land masses
- C) By means of echo-sounding much can be learned about the surface of the seabed
- D) But under the microscope this sediment teems with life
- E) There, ocean-floor magma vents support an ecology independent of sunlight

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explore = (keşif için) dolabmak; araştırmak, incelemek, search, examine

**remote-controlled = uzaktan kumandalı**

**sediment = tortu, çökelti**

identify = tanılamak, teşhis etmek; kimliğini teşhis etmek, determine, diagnose

turn out = ortaya çıkmak

**diversity = çeşitlilik**

**trench = çukur, hendek**

teem with = ile dolu olmak

**by means of = yoluyla**

**vent = delik, yarık**

**The science of how fire spreads is simple enough. ---- . This means that in a typical house fire, the flames and fumes move upwards until they meet an obstruction, such as a ceiling, where they mushroom out laterally until they reach a wall.**

- A) The opening of a door or window requires great caution as it may cause a violent outbreak of flames
- B) Today fire-fighters begin their basic training with physics
- C) One of the most skilled techniques employed by fire-fighters is ventilation
- D) Ventilation helps to reduce the risk of explosions resulting from the build-up of hot gases
- E) Once air is heated, it becomes lighter, rises and seeks to escape through any openings that may be available

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spread = yayılmak, yaygınlaşmak, dađılmak,  
expand, zýt anl. = shrink

**fume = duman**

**obstruction = engel**

**mushroom out = mantar gibi açılmak**

**laterally = yana dođru**

outbreak = patlama, fıpkırma; patlak verme;  
salgın

**ventilation = havalandırma**

seek = aramak, look for

**The power loom was invented by Dr Edmund Lartwright in the early 19th century. However, many improvements were necessary before it came into common use. Gradually its range was extended to include all fibres and types of cloth. ---- . At the same time, speed and precision were increased.**

- A) Recently, the craft of hand-loom weaving has gained in popularity
- B) The running speeds of looms vary according to various factors, including width and type of cloth
- C) In fact, by about 1850, it had superseded the hand loom almost entirely
- D) The warp threads are kept taut by iron weights
- E) Since about 1900, automatic looms have been progressively introduced



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**loom = dokuma tezgahý**

extend = uza(t)mak, sürmek, prolong, run on, zýt anl. = shorten, shrink

precision = kesinlik, dođruluk, açýklýk, accuracy, zýt anl. = imprecision, inaccuracy

gain in = kazanmak, —si artmak

supersede = (yeni bir þey eskisinin) yerini almak, replace, take over

**warp thread = çözü ipliđi (kumaþýn boyuna olan iplik)**

**taut = gergin**

progressively = giderek, gradually

**Some years ago, measurements on ice cores showed that the concentration of carbon dioxide in the atmosphere was lower during ice ages than it is today. ---- . Some researchers have sought an explanation by suggesting that the whole-ocean reservoir of algal nutrients was larger during glacial times than it is now. Others by proposing that the biological pump was more efficient then.**

- A) So far no one has ever tried to solve this puzzle
- B) As yet there is no broadly accepted explanation for this difference
- C) The reason for this was soon obvious
- D) There have been large cyclic variations in climate and glaciation during the past two million years
- E) The experiment focuses on the open ocean surrounding Antarctica

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**core = derinden alýnan numune**

**reservoir = hazne, havza, depo**

**algal = deniz yosununa ait**

**nutrient = besin, gýda, food**

**glacial = buz çađýna ait**

**puzzle = bilmece**

**broadly = geniþ çaply, generally**

**cyclic = periyodik, dönemsel**

**glaciation = buzullaþma**

**Concrete is strong in compression but it is relatively weak in tension. That means it is strong when pushed together, but a continuous flat slab will not stretch well and might crumble. ---- . Steel is generally used for this purpose as it improves the elasticity of concrete.**

- A) To overcome this weakness and control cracking, concrete has to be reinforced
- B) The base materials of concrete are sand, cement and aggregate
- C) Different percentages of the base ingredients are used depending on the strength required
- D) Signs of corrosion and cracking sometimes appear soon after constructing
- E) Nevertheless, concrete is not as popular a building material as previously

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**compression = sýkýptýrma**

**tension = gerilme kuvveti**

**slab = kalýn dilim/levha**

**stretch = ger(il)mek**

**crumble = parçalanmak, ufalanmak**

**overcome = aþmak, üstesinden gelmek, yenmek, defeat, get over, zýt anl. = retreat,**

**surrender**

**cracking = çatlama**

**reinforce = desteklemek, takviye etmek, sađlamlaþtýrmak, güçlendirmek, pekiþtirmek,**

**strengthen**

**aggregate = agrega, çakýl vs. gibi dolgu maddesi**

**ingredient = içerik, öđe, parça, eleman**

**The drag of an airship is made up of two parts. ---- . The latter include an often important increase of the former due to disturbance of flow, and may approach 50% of the former.**

- A) The maximum cross-sectional area is about one-seventh of the “wetted surface”
- B) Hulls are usually given a fineness ratio of about 6, which means the length is six times the maximum diameter
- C) There is the drag of the bare hull and the effective drag of all appendages
- D) As a result, model experiment is quite unsuitable
- E) One brake horse-power for each 100 lb gross weight may be expected to give a speed of about 75 miles per hour

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**drag = su veya havanın içinde ilerleyen bir cisme mukavemeti, hız kesme gücü**

**airship = (zeplin vs. gibi) hava gemisi**

**disturbance of flow = akışın bozulması**

**hull = gemi veya uçak gövdesi**

**appendage = eklenti, aksesuar**

**brake = fren**

**Space research is the scientific study of the universe by means of vehicles in space. ---- .**

**Unlike other scientific disciplines, space research is thus distinguished by technical means not by field of study.**

A) The long life of satellites makes possible the observation of occasional phenomena such as the effects of solar flares

B) Geophysics and astrophysics are also subjects for space research but are not completely comprehended in it

C) This is why space vehicles can make direct studies of phenomena of interest above the dense atmosphere

D) Experiments involving the artificial creation of new conditions in space have also been conducted

E) Space, in this connection, means regions beyond the earth which cannot be reached by airborne vehicles such as balloons or aeroplanes



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**distinguished = ayrılmış, farklılaşmış**

occasional = ara sıra olan, infrequent, zıt anl. = frequent

**flare = parlama**

**airborne = havadan gelen, hava yoluyla taşınan**

**Food industrialists hail biotechnology as a miracle, but there are many people who feel distinctly uneasy about this new development. ---- . They wonder what unknown changes take place when the genes of living things are manipulated and what the long – term consequences might be.**

A) One of the most exciting and fearful areas in genetic research today is the cloning of animals

B) These people feel that tampering with genetics may change organisms in ways not yet fully understood, even by the scientists who developed the techniques

C) Indeed, it is now possible to select desirable traits from a number of species and insert them into the genetic material of crops and animals

D) Biotechnology means the use of biological systems or organisms to create or modify products

E) Biotechnology promises to produce greater crop yields, leaner meats and better nutrient composition

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**hail = selamlamak, seslenmek, welcome, acclaim**

distinctly = açık, belirgin bir şekilde, clearly

uneasy = kaygılı, tedirgin, restless, uncomfortable, zıt anl. = at ease

manipulate = (bir çıkar veya amaç için) kullanmak, değiştirmek, kurcalamak, fiddle

with, tamper with

consequence = sonuç, semere, (ardından gelen) etki, result, effect, zıt anl. = cause,

source

desirable = arzulanır, çekici, cazip, preferred, attractive, zıt anl. = undesirable,

unsuitable

**yield = verim**

**lean = yağsız**

**When an aircraft collides with a bird, the result can be a potentially catastrophic damage. ---- . This is why a team at Britain's Defence Evaluation and Research Agency plans to use crystals that glow when fractured to warn of such unseen damage.**

- A) In this instance, the impact damage resulted in 60 per cent of the material's compressive strength being lost
- B) But, if planes are made of carbon composites, one cannot see the damage
- C) Getting an aircraft back into the air quickly can be vital
- D) This makes visual inspections for damage unreliable
- E) Ultrasound and X-ray techniques have both been used, but these are slow and costly

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collide = çarpışmak, çarpmak, clash

catastrophic = feci, felaket getiren, disastrous

**glow = (kor gibi) kızarmak, parlamak**

**fracture = kırılmak, parçalanmak**

instance = örnek, durum, vaka, case, example, occurrence

vital = yaşamsal, hayati, çok önemli, yaşam için gerekli, canlı, critical, essential,

pivotal, zıt anl. = insignificant, trivial

**Dust devils, which look like miniature tornadoes, form when sunlight warms air just above the ground. ---- . Once it has started spinning, it can draw in more air, forming a whirlwind that picks up dust from the ground.**

A) This is why there is always a dusty haze to be seen around Mars

B) Dust devils often develop in dry areas on Earth, too

C) A few much larger ones have been spotted on Mars

D) These small whirlwinds load the Martian atmosphere with dust

E) Small breezes can then give a twist to the rising warm air

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**dust devil = hortum gibi dönen toz bulutu**

draw in = içine çekmek, pull in

**whirlwind = hortum**

**haze = pus, hafif sis**

spot = seçmek, görmek, (yerini) bulmak, detect, locate

**load = yüklemek, doldurmak**

**breeze = esinti**

**twist = büklüm, burma**

**Some people believe that solar power stations on the moon could provide enough electricity to power the Earth by the year 2050. ---- . This would be sent to Earth-based receivers using a microwave beam, and converted back into electricity.**

- A ) There would be no need to ship raw materials to the moon because they are already present in the moon's dusty surface
- B) As the population of Earth increases, more and more power is required
- C) The moon has no weather so a lunar power station there would not be affected by clouds or rain
- D) To achieve this, large banks of solar panels would be built on the moon to collect sunlight and turn it into electricity
- E) In fact, just one per cent of the solar power received by the moon would meet man's needs



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**bank = küme, yığın**

**A volcano in Papua New Guinea is threatening to erupt and has put thousands of lives at risk. ---- . Fifteen thousand people have already been evacuated and scientists fear the worst may be yet to come.**

A ) As a precaution, the Papuan government is considering increasing food supplies to the area

B) For almost 500 years now there has been virtually no action

C) The mission is proving to be one of the team's most difficult so far

D) In fact, some areas are only accessible by helicopter

E) For two months now it has been slowly pumping out lava, and occasionally rocks and ash

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**erupt = (volkan) patlamak, püskürmek**

put at risk = tehlikeye atmak, riske sokmak

**pump out = dışarı pompalamak, püskürtmek**

**On the whole, only one-third of the oil in an oilfield can be brought to the surface. Some is forced out by gas pressure when a well is drilled, and engineers can sometimes pump water to drive out more. ---- . And although plastics can be used to block stringers or even to increase the viscosity of the water, they are very expensive. It has been suggested that the problem can be solved effectively with the help of tiny bacteria that form biofilms to block f issues.**

A ) When oil companies want to squeeze more crude oil out of an oil well, they usually turn to experts in physics, chemistry or engineering

B) But if the water escapes through layers of permeable rock called stringers, this strategy will fail

C) When an oil well shows signs of running dry, it is time to call in experts to stop it leaking away

D) Biofilms grow on every surface where there are bacteria

E) Biofilms can make oil wells up to 20 per cent more productive

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**well = kuyu**

drill = delmek, make a hole

drive out = çıkarmak, yerinden oynatmak

block = tıkmak, engellemek, kesmek, obstruct, cut off, zıt anl. = let go, release

**stringer = geçirgen kaya**

tiny = küçücük, minicik, minuscule, zıt anl. = enormous, huge

**fissure = (toprak veya kayada derin) yarık, çatlak**

squeeze = ezmek, sıkmak, suyunu çıkarmak, zorlayarak almak, press, extract, extort

turn to = başvurmak, yardımını istemek, invoke, refer to, resort to

**permeable = geçirimli, geçirgen**

call in = davet etmek, invite

leak away = sızarak tükenmek/kaybolmak

**The simplest way to measure gravity is with a gravimeter, basically an extremely sensitive weighing device comprising a mass hanging on a spring. ---- . But gravimeters are sensitive to movement , so it takes time to set up the equipment and this makes surveys expensive.**

- A ) Gravity surveys are also used to detect ore bodies of minerals
- B) It is simple to use and get results quickly
- C) The stronger the gravity field, the further the spring extends
- D) However, magnetic storms can interfere with the measurements
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comprise = kapsamak, içermek, —den oluşmak, oluşturmak, constitute, consist of,  
make up  
show up = görünmek, meydana çıkmak, appear,  
zıt anl. = disappear

**Smoke is a mixture of gases and particles. It is usually the product of a combustion process and, in this case, its composition depends on the fuel and the technology used. The main gas involved in smoke processes is carbon dioxide.**

---- .

A ) But other gases such as carbon monoxide, nitrogen oxides, hydrocarbons and sulphur dioxide might also be present

B) The warm air is higher than the cold air, so there is little vertical turbulence to carry smoke upwards

C) Smoke rises because it is part of a stream of hot gases that are normally warmer than the surrounding air

D) The vertical and straight nature of the smoke plume depends very much on the wind conditions

E) Wood smoke is often seen in a layer above houses where it is burnt and sometimes it subsequently descends to street level



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**involved (in) = (olaya) karışmış, işin içinde olan**

**turbulence = çalkantı, girdap**

**stream = akım, cereyan**

**smoke plume = havada uzanan duman**

**The health of the wildlife around us can be seen as an indicator of how we are managing the world's resources. There is much concern about the fact that some species are disappearing. ---- . For instance, some species once thought to be extinct have been rediscovered as scientists have gone deeper into the surviving wild areas.**

A) Their aim is to help poor, local communities to protect their food sources and local wildlife at the same time

B) An increasing number of today's conservation projects involve sustainable development programmes

C) Habitat restoration and captive breeding programmes have already brought several species back from the brink of extinction

D) Although certain species are indeed endangered, the overall picture is not as gloomy as is sometimes suggested

E) In Britain, with the restoration of river habitats and a reduction in pollution, the otter is another genus that has made an impressive recovery

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indicator = gösterge, ibre, sign

gloomy = umutsuz, iç karartıcı, kasvetli, depressing, dull, zıt anl. = uplifting

otter = su samuru

genus = tür, cins, soy

recovery = (hastalıktan, yok olmaktan vs.) kurtulma, iyileşme, telafi, yeniden elde

etme, cure, remedy, retrieval, zıt anl. = deterioration, worsening

**The emergence of the World Wide Web has been the most important technological development of the last decade as regards the spread of information. ---- . As such, the web is the biggest advance in information technology since the invention of the printing press in 1450.**

- A) To start with, the web was simply a handy aid for academics
- B) It was conceived as a means of giving everyone access to information anywhere and at any time
- C) A British scientist, Berners-Lee, was the visionary behind the web
- D) These early browsers only worked on academic computers
- E) With the launch of the Mosaic web browser, the numbers of people using the web grew at a phenomenal rate

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E) With the launch of the Mosaic web browser, the numbers of people using the web grew at a phenomenal rate

emergence = ortaya çıkma, appearance, zıt anl. = disappearance

as such = bu sıfatla; kendi içinde, in that capacity; in itself

conceive = anlamak, kavramak, algılamak, düşünmek, tasarlamak, think, consider, devise

**visionary = vizyon sahibi kimse**

launch = başlama, kullanıma sunma, introduction

**phenomenal = olağanüstü, şaşılacak**

**Future computer chips may not have wires, but miniature radio transmitters and receivers. ---- . Here a team of scientists has demonstrated a wireless communication system built on a chip. The discovery could lead to earthquake detectors and listening devices for the military. Also it could usher in a new generation of faster computers.**

- A) That's the promise of research at the University of Florida
- B) This has been hailed as the most radical advance in information technology
- C) The result will be a world-wide network of computers
- D) So the network of information can be accessed by anyone
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usher in = öncülük etmek; (içeri) getirmek, bring in

**Water filters are particularly useful if you live in a hard water area. Hard water contains a greater concentration of calcium than soft water. ---- . It also means that you won't get many studs from your soap. As well as softening the water, a filter removes other chemicals to improve its look and taste.**

- A) There are many other chemicals which pollute water
- B) Today a water filter is a common sight in many kitchens
- C) Indeed, there's more to the household water filter than meets the eye
- D) A water filter is equipped with a cartridge which contains ion exchange resin and activated carbon
- E) In fact, it is this that causes lime scale in kettles, irons and other electrical appliances



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suds = köpük

soften = yumuşatmak

than meets the eye = göze çarpandan

resin = reçine

**Otto Lehmann observed that liquid crystals are remarkably sensitive. ---- . Further, they can register the minutest fluctuations in temperature by a change in colour.**

A) Liquid crystals in thermometers, thermographs, computers, TVs and solidstate devices were too far in the future for him to imagine

B) Lehmann dedicated 25 years of work to studying these strange chemicals

C) In his last book he suggested many applications, mostly in power generation and transformation, but none of them proved practical

D) They respond to heat, light, sound, mechanical pressure, electromagnetic fields and radiation, and even some chemical vapours

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minute = çok ufak, önemsiz, little, minimal, zıt anl. = huge

**fluctuation = dalgalanma, oynama**

dedicate = vermek, adanmak, devote

write off = gözden çıkarmak, önemsiz görmek

**Fragile ecosystems like the Arctic could face many more years of contamination from PCBs (polychlorinated biphenyls), despite international treaties banning their use. — . An estimated 1.3 million tonnes of PCBs were made between the 1930s and 1990s around the world for use in the manufacture of pesticides, lubricants, and plastics. But an investigation to determine the fate of these PCBs has failed to locate most of them.**

A) On the other hand, PCBs may be carried by wind to cold countries where they condense out in the cold air

B) Indeed, soils in temperate lands have captured most of the PCBs so far released into the environment

C) On the contrary, PCBs could pose a threat to polar bears for years to come

D) That is the conclusion of a study into the fate of PCBs manufactured worldwide during much of the 20th century

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fragile = nazik, narin, kırılğan, delicate, brittle, zıt anl. = sturdy, strong

contamination = bulaştırma, kirlenme, pislik, pollution, blemish

fate = akıbet, yazgı, kader, destiny

condense = 1) yoğunlaş(tır)mak, koyulaş(tır)mak, concentrate; 2) özetlemek, abridge

**pose a threat = tehdit oluşturmak**

**for years to come = daha uzun yıllar**

**urban = şehirlere ait, şehirlerde bulunan**

**The Kavli Foundation's approach differs from the increasingly utilitarian focus of most funded research. — . Kavli opposes this practice for he believes you have to be willing to fund science without knowledge of the benefits.**

A) To obtain funding from any source, scientists must usually frame their ideas in the context of studies already completed and short-term impact

B) Knowledge about materials and processes in the universe could open up benefits that we can't even imagine

C) In fact, the foundation pays for nondirected research in its three main areas of interest: astrophysics, nanoscience and neuroscience

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utilitarian = faydacıl, fayda/yarar gözetici, useful, practical, zıt anl. = unpractical

frame = şekil vermek, tasarlamak, düzenlemek, build, plan, compose

in the context of = bağlamında, çerçevesinde

**Traditionally, the study of planet formation has proved frustrating, as astronomers have never been sure whether their theories apply to other planetary systems. — . Now, however, the observations of debris discs around stars of different masses and ages are helping to place our solar system in context.**

- A) Some discs look like gigantic versions of the rings of Saturn
- B) Most of the discs, however, could not be seen directly
- C) What the recent images show is wonderfully unexpected
- D) This is because the solar system is the only known example of a planetary system
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frustrating = (yoğun çabaların karşılıksız kalması durumları için) asap bozucu, sinirlendirici, annoying, exasperating  
**debris disk = döküntü halkası**  
place in context = yerli yerine oturtmak  
gigantic = devasa, muazzam, enormous, huge, zıt anl. = tiny  
**collusion = çarpışma**

**Isaac Newton presented the earliest scientific definition of mass in 1687 in his landmark work Principium: “The quantity of matter is the measure of the same arising from its density and bulk conjointly.” That very basic definition was good enough for Newton and other scientists for more than 200 years.**

**— . In recent years, however, the why of mass has become a research topic in physics.**

- A) The laws of gravity predict that gravity acts on mass and energy
- B) Most people think they know what mass is, but actually they understand only a very small part of what it entails
- C) Fundamental particles have an intrinsic mass known as their rest mass
- D) Energy and mass are related, as described by Einstein’s famous equation,  $E=mc^2$
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**landmark = sınır taşı, nirengi noktası, dönüm noktası**

arise from/out of = —den meydana gelmek, çıkmak, originate

**conjointly = birlikte, beraber**

intrinsic = kendine özgü, kendi tabiatında olan, peculiar, innate, zıt anl. = acquired

**Can coal ever become a friend of the environment? Coal-fired power stations supply half the electricity used in many industrial countries. — . This, of course, is the most worrisome of the so-called “greenhouse gases.”**

- A) New ones will have to comply with the Clean Air Act
- B) They are, however, responsible for 80% of the power industry’s emissions of carbon dioxide
- C) Energy engineers are already talking about “clean coal” technology
- D) Clean coal means different things to different people
- E) Coal treatment and refining processes are rightly getting a lot of attention as well

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**The world's ten most important coral reef hotspots have been identified. The sites, which are all over the world, have one thing in common: ---- . The findings contradict a long-held contention that marine species are unlikely to become extinct because of their vast geographic ranges in the oceans.**

A) they are all rich in marine species found only in small areas and therefore highly vulnerable to extinction

B) habitat destruction leads to loss of biodiversity

C) most of the world's coral reefs are under threat from human activities, in particular from pollution

D) the advantages of an integrated land and sea conservation strategy are suggested by at least eight of them

E) the ten hotspots account for a tiny 0,017 per cent of the oceans, but 34 per cent of restricted range coral reef species

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coral reef = mercan kayalığı

hotspots = tehlike altında olan bölgeler/noktalar

in common = ortak olarak, genel olarak

contradict = aksini söylemek, yalanlamak

long-held contention = uzun zamandır (doğruluğuna) inanılan bir görüş

become extinct = soyu tükenmek, nesli tükenmek, be wiped out

This dog race (ırk) became extinct about 300 years ago.

vulnerable (to) = savunmasız, kolaylıkla yaralanabilir

Elderly people, living alone, are especially vulnerable.

under-threat = tehdit altında

in particular = özellikle, bilhassa, particularly

integrated = karma, bütünleşmiş

conservation = koruma, doğal kaynakları ya da çevreyi koruma

One of the aims of TEMA Foundation (Vakıf) is to make people realise the importance of conservation.

restricted = yasaklanmış, yasak

The town is now a restricted area barred (yasaklanmış) to journalists without special authorisation (yetki, izin).

**The training for tourists travelling into space is tough; the journey itself is even tougher.**

**---- . Moreover, the G-forces push their organs and blood to the back of their body. Eight minutes later they should be 805 km above Earth, travelling at speeds of more than 40,234 km/h.**

- A) Besides the vigorous training programme, there are stringent medical and fitness tests
- B) The view and the experience, however, more than compensate for any unpleasantness
- C) After ignition the force of acceleration drags on the tourists with the weight of eight men
- D) Would-be travellers to space have also to complete a 22-month training programme
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**tough = zor, zahmetli**

**vigorous = terleten, zahmetli,**

**stringent = sert, sıkı, strict**

**compensate (for) = telafi etmek, to make up (for)**

Nothing can compensate for the death of a loved one.

**ignition = ateşleme düzeni, kontak**

**acceleration = ivme kazanma, hızlanma**

**drag = çekmek**

**would-be = gelecekteki, müstakbel**

**demanding = çok şey isteyen, zorlu**

a demanding job

**One important aim of this “Scientific Opportunities” organisation is to create a more welcoming environment for creative, inventive thinkers. ----; but they are tools that aren’t used nearly enough. Too many young people become bored with science and maths education, and they learn far too little about what the great inventors have done to create the world we live in.**

- A) Other skills are naturally required if the job is to be done properly
- B) No cause is more important than cultivating the potential of the human mind
- C) Every trade has its own tools and special equipment
- D) Invention and creativity are humanity’s most powerful tools for making the world a better place
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welcoming = dostça, içten

inventive = yaratıcı, bulucu, creative

properly = uygun bir şekilde, doğru olarak, adequately

He didn’t close the door properly and the room got colder and colder in a few

minutes.

cultivate = işlemek

long-standing = çok eski, uzatmalı

The deceased (rahmetli), Rüçhan Adlı, was Türkan Şoray’s long-standing lover.

available = elde edilebilir, hazır

similarity = benzerlik

that = (That zamiri soruda chemical composition yerine geçmektedir.)

constantly = değişmez bir şekilde, sürekli olarak, invariably

withdraw (from) = geri çekmek, çekilmek

shell = kabuk

skeleton = iskelet

storehouse = ambar, ardiye

proportion = oran, rate

reverse = tersine çevirmek

component = parça, unsur, eleman

annual = yıllık

seaward = denize doğru

inflow = içine akma

**There is very little similarity between the chemical composition of river water and that of sea water. The various elements are present in entirely different proportions. ---- . An important reason for the difference is that immense amounts of calcium salts are constantly being withdrawn from sea water by marine animals for the making of shells and skeletons.**

A) The ocean is the earth's greatest storehouse of minerals

B) The rivers bring in four times as much calcium as chloride, for example; yet in the ocean the proportions are reversed; there is 46 times as much chloride as calcium

C) Although the earth is constantly shifting her component materials from place to place, the heaviest movements are always from land to sea, not from sea to land

D) The annual flow of water seaward is believed to be about 5,500 cubic miles, and this inflow of river water gives the ocean several billion tonnes of salts

E) In a single cubic mile of sea water there are, on the average, 166 million tons of dissolved salts

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**Acid rain not only kills fish, it also erodes buildings. Airborne urban pollution, including SO<sub>2</sub>, nitric acid and carbon particles (soot) is deposited on the wet surfaces of stonework to form unsightly black crusts. ---- . Porous stones and sandstone are especially vulnerable.**

A) To make matters worse, the features of many of these statues have also been eroded away

B) Air pollution was much worse in Western cities 30 years ago than it is today

C) The crust is essentially soot, mixed with gypsum - the soft mineral calcium sulphate which forms when stone reacts with sulphuric acid

D) Another problem that used to be associated with acid rain was lead poisoning, but plastic pipe work has more or less eliminated this risk

E) Rural sources of acidity from industrial sites have similarly been increasing at an alarming rate

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**erode = erozyona uğramak/uğratmak, kemirmek  
airborne = havada olan, havada taşınan (airborne bacteria)**

**urban = kentsel, kentle ilgili**

There have been huge traffic jams in urban areas.

**soot = is, kurum**

**deposit (on) = (üstünde) birikmek**

**stonework = taş, taş işi**

**unsightly = çirkin, göze hoş gelmeyen**

**crust = kabuk**

**porous = gözenekli, süngerimsi**

**sandstone = kum taşı**

**feature = ayırıcı özellik, belirgin nitelik, property**

**statue = heykel**

**gypsum = alçı**

**pipe = boru**

**eliminate = ortadan kaldırmak, gidermek, eradicate, cut out**

Poverty must be eliminated.

**rural = kırsal**

**The object of the air traffic control officers is to achieve the highest densities in all parts of the controlled air space that is consistent with safety and the elimination of collision risk. ---- . The amounts of the separation are partly dependent upon the means available for determining accurately the position and course of the various aircraft.**

- A ) For purposes of air traffic control, air space is divided and then subdivided
- B) Military aviation originally held itself outside any air traffic control but for a long time now this has not been practicable
- C) They, therefore, direct the captains of aircraft so as to maintain adequate vertical and horizontal separation between aircraft
- D) As these are within controlled air space a pilot intending to fly along them must file a flight plan
- E) The 'flight progress strip' gives an indication of what is happening to any aircraft in the area



**The object of the air traffic control officers is to achieve the highest densities in all parts of the controlled air space that is consistent with safety and the elimination of collision risk. ---- . The amounts of the separation are partly dependent upon the means available for determining accurately the position and course of the various aircraft.**

A ) For purposes of air traffic control, air space is divided and then subdivided

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object = amaç, hedef, purpose, goal, objective

elimination = ortadan kaldırma, eleme, çıkartma

**collision = çarpışma, çatışma**

**separation = ayırma, birbirinden uzaklaştırma**

**course = yön, rota**

practicable = uygulanabilir, yapılabilir, elverişli, possible

intend = niyet etmek, tasarlamak, planlamak, aim, plan

**file = (resmi) işleme koymak, dosya halinde teslim etmek, dosyalamak**

**strip = hava sahası şeridi**

indication = belirti, delil, gösterge, işaret, evidence, hint

**The Wankel engine has many advantages over the reciprocating piston engine.**

**Fewer moving parts are necessary because it produces a rotary movement without using a connecting rod and a crankshaft. ---- . In addition, it has no valves and it is smaller and lighter than conventional engines of the same power.**

A ) Though there are advantages, there are also disadvantages

B) Because of this rotary movement it has no vibration

C) A fresh charge is then induced into the cylinder

D) The Wankel piston is triangular with curved sides

E) Fuel enters the cylinder through the inlet port

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reciprocating = karşılık gelen, dengi olan

rotary = dönel, (bir eksen etrafında) dönen

conventional = geleneksel

induce = (elektrik akımı) meydana getirmek

**Thermal insulation is concerned with the problem of reducing the transfer of heat from one place to another and depends upon the thermal resistance of the insulating medium. ---- . However, this is not very satisfactory in an ordinary air space because radiation is also involved in the transfer of heat.**

- A ) Since air is a very poor conductor, an air gap, narrow enough to minimize convection, may be used for insulation
- B) Thermal conductivity is a term that is only strictly applicable to homogeneous materials
- C) In general, the lighter the material per unit volume, the greater its insulating value per unit thickness
- D) The vertical air spaces used in insulating buildings are actually only about one third as thick
- E) The optimum thickness must also be chosen to avoid condensation of moisture inside the walls

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**insulation = yalıtım, izolasyon**

strictly = tartışmasızca, tamamen, exclusively, entirely

**applicable = uygulanabilir**

**Germination is the initiation of growth in a newly formed plant-structure, or the resumption of growth after a period of rest, as in fungus and bacterial spores, but exemplified most vividly in seeds.**

**---- . Growth is stopped and respiration is extremely slow. At germination, development is resumed and there is a spectacular acceleration of function.**

A ) The essential point about germination is the sudden change from a resting state to one of intense activity

B) The development of the new plant starts at fertilisation

C) Before full physiological activity can be resumed, the dehydrated tissues must become fully turgid with water

D) As the embryo swells it ruptures the seed coat

E) In the resting condition, the life processes are slowed down to a minimum

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**germination = filizlenme, çimlenme**

**initiation = başlangıç, başlatma**

**resumption = yeniden başlama, sürdürme**

**fungus = mantar**

exemplify = örnek olmak, örneğiyle açıklamak

vividly = çok canlı/güçlü bir şekilde, lively, clearly, zıt anl.  
= vaguely

**respiration = soluma, hava alıp verme**

resume = yeniden başlamak, kalınan yerden devam etmek, restart, carry on, zıt anl. =

abandon, suspend

**acceleration = hız arttırma, giderek hızlanma**

essential = asıl, esas, temel, zaruri, vital, crucial, fundamental, zıt anl. = incidental,

peripheral

intense = şiddetli, güçlü, fierce, powerful, zıt anl. = mild

**fertilization = dölleme, gübreleme**

**dehydrate = suyunu almak, kurutmak**

**tissue = doku**

**turgid = şişmiş**

swell = şişmek, kabarmak, expand, zıt anl. = contract

rupture = kırmak, yırtmak, break, tear apart

**seed coat = tohum kabuğu**

**Improved efficiency of the use of fuel is a theme to which more attention has been given as the cost of fuel has increased.**

**---- . The processing of raw fuel into the form in which it is to be used is another.**

A ) The efficient and economical use of fuels is indeed one of the chief aspects of the work of the fuel technologist

B) Each type of fuel and each process naturally has its own problems

C) There is a staff to advise on methods of increasing the efficiency of the use of fuel in industry

D) It is well known that the probable resources of coal are very extensive

E) Fuel technology is now a recognized and even an essential profession



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**recognised = kabul gören**

**Engineers are problem solvers. ---- . A child playing with building blocks who learns how to construct a taller structure is doing engineering. A secretary who stabilizes a wobbly desk by inserting a piece of cardboard under the short leg has engineered a solution to the problem.**

- A) Certainly, engineers benefit from scientific theory
- B) Early in human history, there were no formal schools to teach engineering
- C) This approach resulted in some remarkable accomplishments
- D) In a sense, all humans are engineers
- E) Sometimes a solution is required before the theory can catch up to the practice

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stabilize = sabitle(n)mek, dengele(n)mek, otur(t)mak, settle, balance

**wobbly = sallanan, dengesi bozuk**

**insert = sokmak, (arasına) koymak**

**cardboard = karton**

**engineer = (çözüm) geliştirmek, work out**

benefit from = (bir şey)'den yarar / fayda sağlamak, yararlanmak, capitalise, profit from, zıt anl.= suffer

formal = resmi, usule uygun, conventional, proper, zıt anl.= informal

approach = yaklaşım, attitude, stance

remarkable = dikkate değer, olağanüstü, notable, extraordinary, zıt anl.= ordinary

accomplishment = başarı, üstesinden gelme, success, achievement, zıt anl.= failure,

defeat

in a sense = bir bakıma, in a way

catch up to = (bir şey)'e yetişmek, (gelişmeler vs.)'yi yakalamak, zıt anl.= fall behind

**Gecko lizards can run up a wall or across a ceiling with ease because of their remarkable toes. But gecko toes aren't sticky in the usual way, like duct tape or Post-it notes.**

---- .

- A) In spite of this, the ability of geckos to stick to surfaces has attracted scientific scrutiny since the time of Aristotle
- B) Instead, gecko toes have a combination of structures that act together as a smarter adhesive
- C) Hence, it is not surprising that scientists are trying to create artificial, geckolike adhesives
- D) The theory that gecko toe pads act as suction cups has since been disproven
- E) A gecko can stop itself by re-attaching its toes to passing leaves or branches

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**gecko lizard = keler (dünyanın her tarafında yaygın olarak bulunan, pek çok türü**

olan, duvarlarda ve tavanda gezinebilmesi ile tanınan kertenkele)

**ceiling = (oda için) tavan, zıt anl.= floor**

with ease = kolaylıkla, zorluk çekmeden, easily, zıt anl.= with difficulty

**toe = ayak parmağı**

**sticky = yapışkan**

usual = alışılmış, olağan, zıt anl.= unusual

**duct tape = genellikle kumaş destekli, kaliteli koli bandı**

**scrutiny = derinlemesine inceleme, araştırma, investigation**

**attract scientific scrutiny = bilimsel araştırmaların ilgi odağı olmak**

combination = birleşim, kombinasyon, unification

smart = yetenekli, işlevsel, brilliant

**adhesive = yapıştırıcı**

hence = böylece, dolayısıyla, thus, therefore

artificial = yapay, suni, man-made, zıt anl.= natural, genuine

**geckolike = keler benzeri**

**pad = bazı hayvanların ayaklarının altındaki yumuşak taban, yastıkçık**

**suction cup = vantuz**

disprove = aksini kanıtlamak, invalidate, zıt anl.= prove, confirm

---- . **The dimension of length may be described by units of metres, feet, inches, and so forth. Thus, dimension is an abstract idea, whereas unit is more specific.**

A) The metre is currently defined by the distance light traverses in a given length of time

B) Any measuring system must establish base units from which all other units are derived

C) For units of measure to be useful, they must be standardized so that business transactions are unambiguous

D) The metre was first defined in 1793 by dividing the “quadrant of meridian” into 10 million parts

E) The distinction between dimension and unit is best understood by example

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dimension = boyut, ölçü

foot = (çoğul: feet) ayak (30.48 cm’ye eşdeğer uzunluk ölçüsü)

and so forth = ve benzerleri, and so on, and the like

abstract = soyut, conceptual, unreal, zıt anl.= concrete, actual

define = tanımlamak, specify, designate

**traverse = (mesafe) kat etmek, travel**

given = belirli, belirlenmiş, set

length = (zaman için) süre, müddet

establish = 1) oluşturmak, oturtmak, form, found, constitute; 2) saptamak, tespit

etmek, authenticate, verify

**base unit = temel birim (Örneğin, “metre” temel bir birim, “santimetre” ise türetilmiş**

bir birimdir.)

derive (from) = elde etmek, çıkarmak, türemek, obtain, originate

standardize = standartlaştırmak

transaction = işlem, action, deed

unambiguous = açık, net, ikilem içermeyen, clear, zıt anl.= ambiguous

**quadrant of meridian = bir meridyen dairesinin dörtte biri, kutup ile Ekvator**

arasındaki uzaklık

distinction = fark, difference

**If you have ever burned your finger on a metal pot while waiting for the water in it to boil, you know that water heats up much more slowly than metal. ---- . In fact, because of hydrogen bonding, water has a better ability to resist temperature change than most other substances.**

A) Because of this property, Earth's giant water supply moderates temperatures, keeping them within limits that permit life

B) Temperature and heat are related, but different

C) Another way water moderates temperatures is by evaporative cooling

D) At 66% of your body weight, water helps moderate your internal temperature

E) Water must absorb an unusually large amount of heat in order to vaporize because its hydrogen bonds tend to hold the molecules in place



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**pot = tencere, pişirme kabı**

**hydrogen bonding = hidrojen bağı oluşması**

resist = direnmek, karşı koymak, oppose, withstand, confront, zıt anl.= surrender,

yield to

property = özellik, characteristic, feature

supply = rezerv, reserve

moderate = yumuşatmak, ılımanlaştırmak

within = içinde, içerisinde

permit = izin vermek, (bir şey) için elverişli olmak, allow for

related = ilgili, bağlantılı, in connection, zıt anl.= unrelated

**evaporative cooling = buharlaşma yolu ile serinletme**

internal = dahili, iç, zıt anl.= external

**absorb = emmek, soğurmak, suck in, zıt anl.= discharge, emit**

unusually = alışılmadık şekilde, uncommonly, zıt anl.= commonly

**vaporize = buharlaş(tır)mak, evaporate**

tend to = eğiliminde olmak, be disposed to, be likely to

**Replication's not the only way to improve accuracy in scientific experimentation. ---- . Blocking is a method of experimental design that reduces the effects of chance errors; modelling, on the other hand, is much less familiar to practicing scientists.**

A) Accordingly, most scientists try to develop new and more reliable methods

B) Scientific data always contain a mixture of signal and noise; the scientist's job is to find the signal

C) Two other strategies, called blocking and modelling, can provide at least one replication's worth of accuracy at almost no cost

D) Replication is one of the finest ideas in the history of science, but it faces a severe law of diminishing returns

E) Scientists prefer an average of two replicates to a single unreplicated observation because the former is likely to be more accurate

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**replication = yineleme (bilimsel bir deneyde daha doğru bir sonuç elde etmek amacı**

ile, ölçülen / incelenen olayı tekrar tekrar yeniden oluşturma)

accuracy = doğruluk, kesinlik, precision, exactness, zıt anl.= inaccuracy

**blocking = gruplandırma (bilimsel bir deneyde denekleri benzer özelliklerine göre**

sınıflandırarak inceleme)

**chance error = tesadüfi / rastlantısal hata**

**modelling = modelleme (incelenen bir konuyu daha iyi anlamak amacı ile onu daha**

basit ya da daha küçük ölçekli bir modele indirgeme)

familiar = tanıdık, bildik, aşina, zıt anl.= unfamiliar

reliable = güvenilir, emin, sağlam, trustworthy, dependable, zıt anl.= unreliable

**noise = (elektronikte) gürültü, istenmeyen sinyal**

at least = en azından, at any rate

**worth of accuracy = (bir şey) değerinde / (bir şey'in katacağına) eşdeğer oranda**

kesinlik

at almost no cost = neredeyse bedelsiz / masrafsız olarak

severe = sert, katı, şiddetli, ciddi, firm, hard, rigid, serious, zıt anl.= soft, mild

**diminishing return = gittikçe azalan getiri**

**replicate = tekrar, yineleme yolu ile elde edilen veriler**

former = (bahsi geçen iki şeyden) önceki, previous, zıt anl.= latter

likely = olası, muhtemel, probable, expected, zıt anl.= improbable, unlikely

**Hippopotamuses can be irritable and aggressive when it comes to defending their territory and their young. ---- . They have trampled or gored people who came too near, dragged them into lakes, tipped over their boats, and bitten off their heads.**

A) Hippos are led by dominant males, which can weigh 6,000 pounds or more

B) Agricultural irrigation systems and other developments have depleted the hippos' wetland, river and lake habitats

C) Although hippos occasionally fight with crocodiles, a growing number of their attacks are on humans

D) A decade ago there were about 160,000 hippos in Africa, but the population has dwindled to between 125,000 and 148,000 today

E) In countries beset by civil unrest, where people are hungry and desperate, hippos are hunted for their meat

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**hippopotamus = hipopotam, su aygırı**

**irritable = hırçın, asabi, sinirli, petulant**

**territory = bölge, toprak, alan**

**young = yavrular, offspring**

**trample = ezmek, çiğnemek; ezip geçmek**

**gore = (boynuz, fil dişi vb. ile), karnını deşmek / fena halde yaralamak**

**drag = (çekerek) sürüklemek**

**tip over = devirmek**

**bite off = ısırarak koparmak**

**hippo = hippopotamus kelimesinin kısaltılmış hali**

**irrigation = sulama, watering**

**deplete = tüketmek, bitirmek, exhaust, consume, zıt anl.= add, restock**

**wetland = karasal iklim bölgeleriyle deniz iklim bölgeleri veya göller arasında kalan,**

**nemli ve genellikle bataklık bölge**

**occasionally = bazen, ara sıra, now and then, from time to time, once in a while, zıt**

**anl.= frequently, often**

**crocodile = timsah**

**dwindle = azalmak, diminish, shrink, zıt anl.= grow, expand**

**beset = 1) rahat vermemek; 2) kuşatmak, etrafını almak**

**civil unrest = sosyal kargaşa, iç kargaşa, civil disturbance**

**desperate = 1) çaresiz, helpless; 2) ümitsiz, hopeless**

**The historian G. Sarton said that the development of mathematics is unknown to the general public. ---- . Cayley's seminal investigations of matrix algebra were crucial for the development of linear algebra. The terms matrix, determinant and Jacobian, familiar to most science students, were invented by Sylvester.**

- A) Cayley was a Trinity College fellow at Cambridge for a few years until he married
- B) It isn't clear when they met, but by 1847 they were corresponding to share thoughts about mathematics
- C) Each had triumphed on the University of Cambridge's fearsome Tripos examinations
- D) Certainly very few have ever heard of A. Cayley or J.J. Sylvester, two of the most prolific mathematicians of the Victorian era
- E) J.J. Sylvester was not only a mathematician but also an enthusiastic poet who called himself the "mathematical Adam"

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**seminal** = kendisinden sonrakilere kaynak teşkil eden türden (araştırma / çalışma)  
**matrix algebra** = matris cebiri (matrisler üzerinde yapılan işlemler ile ilgili matematik dalı)  
**crucial** = çok önemli, kritik, pivotal, vital, zıt anl.= trivial  
**linear algebra** = doğrusal / lineer cebir (vektörler ve lineer denklemler ile yapılan işlemler ile ilgili matematik dalı)  
**determinant** = determinant (bir matris veya bir denklem için özel bir prosedür kullanılarak elde edilen, matrisler veya denklemler arası işlemlerde kullanılan sayı)  
**fellow** = doktora veya bilimsel araştırma bursu alan kimse; akademi üyesi  
**triumph** = başarı sağlamak, zafer kazanmak, succeed  
**fearsome** = korkunç  
**Tripos** = Cambridge Üniversitesi'nde bitirme sınavlarına verilen ad  
**prolific** = üretken, verimli, productive, fruitful  
**era** = devir, çağ, (Victorian Era = Viktorya Devri, İngiltere'de Kraliçe Viktorya'nın hüküm sürdüğü 1837 ile 1901 yılları arasında kalan dönem)  
**enthusiastic** = şevkli, hararetili, heyecanlı, excited, devoted, zıt anl.= disinterested  
**poet** = şair

**----? The answer to that question can range from days to months to decades on the one extreme and from centuries to millennia, and possibly even longer depending on such diverse and interrelated factors as design, construction and maintenance.**

- A) How old is the world-famous Brooklyn Bridge
- B) Can a bridge possibly be designed to last a century
- C) How long did London's Millennium Bridge stay open
- D) The Tacoma Narrows Bridge lasted only four months before it fell to the wind, didn't it
- E) How long can a bridge last



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- E) **How long can a bridge last**

range = (bir şey) ile (başka bir şey) arasında değişmek

extreme = en son nokta, aşırı uç

millennium = (çoğul: millennia) bin yıl

diverse = çeşitli, farklı, different, various

interrelated = birbiriyle ilgili / ilişkili

maintenance = (makine vs. için) bakım

fall to = **yenik düşmek, be defeated by**

**Detecting a virus on any nanosize particle usually means fixing it to a substrate or attaching a fluorescent probe to it, neither of which is practical for detecting particles in real time. ---- . The system splits a laser beam in two, sending one half to a sample. When the light hits a small particle, it is reflected back and recombined with the reserved half of the laser beam, producing a detectable interference pattern only when a moving particle is present.**

- A) The method works because it relies on the light's amplitude rather than its intensity
- B) The investigators have so far detected single particles as small as seven nanometres across
- C) Now physicists have assembled a simple system for doing just that
- D) A substrate is a substance that reacts when it comes into contact with a particular enzyme
- E) Amplitude is the square root of intensity

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D) A substrate is a substance that reacts when it comes into contact with a particular enzyme

E) Amplitude is the square root of intensity

**nanosize particle = 100 nanometreden küçük boyutlu parçacık, nanoparticle**

**substrate = enzimin, bağlanarak reaksiyona girdiği madde**

**attach = tutturmak, takmak**

**fluorescent = floresan (kimyasal veya ışınım yolu ile aldığı enerji ile parıldayan)**

**probe = sonda**

**(in) real time = gerçek zamanlı olarak, canlı, live**

**split = bölmek, divide, zıt anl.= join**

**beam = ışın, ışık huzmesi, ray**

**sample = örnek, numune, example, specimen**

**recombine = birleştirmek, yeniden bir araya getirmek**

**reserve = saklı tutmak, ayırmak**

**interference pattern = (ışık için) iki farklı dalganın birleşerek oluşturduğu karışımın**

**bir ekranın üzerinde oluşturduğu desen**

**rely on = güvenmek, bel bağlamak, depend on, zıt anl.= distrust**

**amplitude = dalga yüksekliği**

**intensity = yoğunluk, şiddet, force, power**

**nanometre = nanometre, milimetrenin milyonda biri, 10-9 metre**

**assemble = kurmak, parçaları bir araya getirerek oluşturmak, install, zıt anl.=**

**dismantle, disassemble**

**enzyme = enzim (kimyasal tepkimeleri hızlandıran molekül)**

**square root = karekök**

**Why do young chameleons prefer to stay close to the ground? In a recent study published in Behavioural Ecology and Sociobiology, biologists argue that cannibalism in the common chameleon has resulted in a habitat shift. ---- . Juvenile chameleons tend to stay in low grasses, whereas adults make better use of their anatomical gifts by living primarily in trees.**

- A) That is, as individuals develop, their choice of habitat changes
- B) With its prehensile tail and strong, opposing toes, the common chameleon is a natural climber
- C) Young chameleons showed little change in behaviour when with other juveniles
- D) The biologists placed a one-way mirror between an adult and a juvenile, so that the adult could see the juvenile but not the other way round
- E) Whether an attack was likely when there was close contact between the generations was also tested

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**chameleon = bukalemun (renk değiştirebilen bir kertenkele türü)**

**cannibalism = yamyamlık, kendi türünü yeme**

common = yaygın, sık rastlanan

**shift = değişmek, (başka bir alana) kaymak, switch, alter**

**juvenile = genç**

**prehensile tail = (hayvanlarda) nesnelere kavrayabilme becerisine sahip kuyruk**

**opposing toe = ters dönebilen başparmak**

**one-way = tek yönlü geçirgen, dışarıdan içini göstermeyen (cam vs.)**

**the other way round = öbür türlü, tam ters, opposite, vice versa**

likely = olası, muhtemel, probable, expected, zıt anl.= improbable, unlikely

**Engineers are hired by clients (and employers) specifically for their specialized expertise. ---- . Therefore, engineers have ethical obligations to their clients, because the client often cannot assess the quality of the engineer's technical advice. These obligations are part of engineering ethics, the set of behavioural standards that all engineers are expected to follow.**

- A) Civil engineering is generally considered the oldest engineering discipline
- B) Successful teamwork results in accomplishments larger than those that can be produced by individual team members
- C) Generally, the client knows less about the subject than the engineer
- D) Biochemical engineers combine biological processes with traditional chemical engineering to produce foods and pharmaceuticals and to treat wastes
- E) An engineer does not need to have a licence to practise engineering, but those who do may have more career opportunities

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**clients = müşteri**

**employers = işveren**

**ethical = etik, ahlaki**

obligations = yükümlülük, zorunluluk, Sorumluluk, responsibility, commitment

assess = değerlendirmek, değer biçmek, hesaplamak, evaluate, appraise

accomplishment = başarı, achievement

**pharmaceutical = insan veya hayvan üzerinde kullanılma amaçlı kimyasal madde,**

ilaç

**licence = lisans, ruhsat, ehliyet**

**An athlete's body must be heavier for its height than a nonathlete's body because the athlete's bones and muscles are denser. ---- . However, this is not true. Weight standards that may be appropriate for others are inappropriate for athletes. Therefore, measures such as fatfold tests yield more useful information about body composition.**

- A) When athletes consult standard weight-for-height tables and see that they are on the heavy side, they may mistakenly believe that they are too fat
- B) The increasing incidence of abnormal eating habits among athletes, especially young women, is causing concern
- C) Athletes are particularly likely to develop eating disorders
- D) They fail to realize that the loss of lean tissue that accompanies energy restriction actually impairs their physical performance
- E) Male athletes, especially wrestlers and gymnasts, are affected by these disorders as well, but research shows that females have a greater tendency



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appropriate = uygun, yerinde, suitable, proper, zıt anl.=  
inappropriate, unsuitable

inappropriate = yanlış, uygunsuz, yersiz, improper, awkward, zıt  
anl.= appropriate,

proper

**fatfold = yağ dokusu**

**weight-for-height table = ağırlık-boy tablosu**

mistakenly = yanlışlıkla, yanılğı içinde, incorrectly

be likely to... = ...-ması muhtemel olmak

particularly = özel olarak, özellikle, especially, specifically, zıt anl.=  
generally

**lean tissue = kas doku**

**accompany = eşlik etmek, (bir şeyin) beraberinde gelmek**

**restriction = kısıtlama, limitation**

**impair = bozmak, zayıflatmak, damage, hurt, weaken, zıt anl.=  
enhance, improve**

**wrestler = güreşçi**

**gymnast = jimnastikçi**

disorder = bozukluk, hastalık, düzensizlik, illness, ailment, zıt anl.=  
health

tendency = eğilim, inclination

**Thanks to their status as one of the world's top predators, great whites are among the best known sharks on Earth, yet essentially nothing is known about their mating habits. That could soon change, as researchers have discovered a remote spot in the North Pacific Ocean that may be a mating ground for great whites, according to a recent study. ---- . But, as scientists have explained, the theory that the area is a feeding ground for great whites may be incorrect.**

- A) It's not an area that a shark would logically go to from California to find something to eat
- B) At first, scientists nicknamed the region, 1,553 miles west of the Baja Peninsula, the "great white café" because they suspected sharks could be going there to feed
- C) The sharks migrate long distances seasonally from the coast of California to Hawaii and to the offshore area
- D) On average, the sharks dive every 10 minutes, 325 metres down, perhaps to sniff for mates, whose scent could be detected at a certain level of depth
- E) Sharks gather at marine mammal habitats in California during autumn and winter months, feeding on the abundant elephant seals and other prey before migrating to the offshore waters

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**great white = büyük beyaz (köpekbalığı)**

**shark = köpekbalığı**

essentially = esas itibariyle, aslında, fundamentally

**mating = çiftleşme**

remote = uzak, distant

spot = nokta, küçük yer

logically = mantıken, mantıklı olarak

**nickname = takma isim koymak**

migrate = göç etmek

**offshore = kıyıdan uzak**

**dive = dalmak**

**sniff = koklamak, koku almak amacıyla burundan hızlı hızlı nefes almak**

**mate = (genellikle hayvanlar için) eş**

**scent = koku, smell, odour**

**depth = derinlik**

abundant = bol, ample, zıt anl.= scant, scarce, inadequate

**elephant seals = fil fokusu, ağırlığı 2 tonu geçen iri bir fok türü**

**prey = av**

**The dark side of nanotechnology is the nightmare possibility that “nano-robots” could be programmed to turn everything on Earth into more nano-robots. ---- . Some researchers, however, say that while they also have some worries about nanotechnology, they don’t want it banned because its benefits outweigh its risks.**

- A) R. Smalley discovered the three-dimensional nanoscale carbon cages called fullerenes
- B) E. Drexler says he invented the word “nanotechnology”
- C) The inventors of nanotechnology were awarded a Nobel Prize
- D) In 1990, a team of scientists found they could use a scanning tunnelling microscope to drag individual atoms of xenon over the surface of a crystal of nickel
- E) There are other fears, such as nanoscale particles creating unforeseen toxic hazards

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**E) There are other fears, such as nanoscale particles creating unforeseen toxic hazards**

**nightmare possibility = kabus senaryosu, en kötü olasılık**  
**ban = yasaklamak, forbid, prohibit, bar, zıt anl.= allow, permit**

benefits outweigh its risks = yararları içerdiği risklerden ağır çeker, risklerinden fazla

yararları var

**three-dimensional = üç boyutlu, 3D**

**cage = kafes**

**fullerene = C60 gibi kafes formunda molekülleri olan karbon allotropları**

**scanning tunnelling microscope = Quantum tünelleme yöntemiyle çalışan,**

maddeleri atom seviyesinde görüntülemeye yarayan mikroskop

drag = sürüklemek

**xenon = Zenon gazı, Xe**

**nickel = Nikel, Ni, parlatılabilen bir metal**

unforeseen = beklenmedik, umulmadık, unexpected, zıt anl.= expected

**toxic = zehirli**

hazard = tehlike, risk, risk, danger, zıt anl.= safety, security

**Seismologists have struggled for years to find a reliable earthquake predictor. Could balls of light in the sky preceding quakes hold the key? The US Federal Emergency Management Agency (FEMA) has begun asking that very question. ---- . Thus, they have funded NASA to study earthquake lights using weather satellites and the MODIS research satellite during the past few years.**

A) In 1999, floating balls of light in the sky were broadcast on Turkish television, reportedly

filmed the night before the earthquake in İzmit

B) In 1968, the first photographs of “earthquake lights” were taken by Yutaka Yasui of the Kakioka Magnetic Observatory

C) The main problem facing FEMA is that earthquake lights still don’t have an accepted scientific explanation

D) Most earthquakes occur at plate boundaries, where one plate slides beneath another hundreds of kilometres below the Earth’s surface

E) Mainstream geologists had dismissed these earlier claims as coincidental

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**seismologists = sismolog, deprembilimci**

**earthquake predictor = deprem habercisi**

**ball of light = ışık topu**

precede = önce gelmek, come before, zıt anl.= succeed, follow

that very question = tam da o Soru

**floating = havada asılı duran**

**broadcast = yayınlamak**

**reportedly = bildirilene göre, anlatılana göre**

**observatory = gözlemevi, rasathane**

face = karşı karşıya kalmak, karşısına çıkmak, confront, encounter,  
zıt anl.= avoid,

evade

**plate = plaka**

**boundary = sınır**

**slide = kaymak**

beneath = altına

mainstream = 1) bir topluluğa hakim tutum, düşünce veya davranışları temsil eden;

2) ana / genel görüş

dismiss = reddetmek, aklından çıkarmak, discard, reject

coincidental = tesadüfi

**Carbon nanotubes have been hailed as a semiconducting wonder ingredient that will make materials stronger. ---- . Moreover, their ability to act as filters might one day be exploited to build artificial livers.**

A) In the molecules of a polar liquid, some atoms are slightly positively charged while others carry a balancing negative charge

B) Some experts in nanotube chemistry have published extensively

C) Accordingly, it is possible to make nanotubes generate electricity

D) Thus, their importance has been greatly overrated

E) In addition, they will help miniaturize electronics systems



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**E) In addition, they will help miniaturize electronics systems**

**nanotube = nanotüp (nano boyutlarda boru benzeri bir yapı)**

**hail = (beğeni ile) karşılamak, selamlamak, acclaim**

**semiconducting = yarı iletken (elektronik devre üretiminde kullanılan bir malzeme çeşidi)**

**wonder = mucize, harika**

**ingredient = bir karışımı oluşturan maddelerden her biri**

**act as = (bir şey) gibi / (bir şeye) benzer şekilde davranmak**

**artificial liver = suni / yapay karaciğer**

**polar liquid = polar sıvı, hidrofob / suyu iten sıvı (etil asetat, heksan gibi, elektronları molekülün bir**

**tarafında toplama eğiliminde olduğu için molekülleri elektriksel kutuplanma sergileyen sıvı)**

**positively charged = pozitif yüklü**

**balancing = dengeleyici**

**charge = (elektriksel) yük**

**publish = yayınlamak**

**extensively = yaygın bir şekilde, büyük miktarda, substantially, largely, zıt anl.= partly**

**accordingly = dolayısıyla, bu nedenle, so, consequently**

**overrate = gereğinden fazla önemsemek, magnify, overestimate, zıt anl.= underrate**

**in addition = ek olarak**

**miniaturize = minyatürleştirmek, minyatürize etmek (bir şeyin, aynı işi gören ama daha küçük**

**ebatlı olanını üretmek)**

**Locomotion can be considered to be a flow of mass from one location to another. ---- . They seek and find paths and rhythms that allow them to move their mass the greatest distance per expenditure of useful energy while minimizing thermodynamic imperfections such as friction.**

- A) All of these designs allow for the maximum transfer of material with the least amount of resistance
- B) A flow is an equilibrium of areas with high and low resistivities
- C) Animals move on the surface of Earth in the same way as rivers, winds and oceanic currents
- D) A river basin configures and reconfigures itself so that the water is discharged with the least resistance through the mouth of the river
- E) One of the basic goals of any design - whether it's an animal or a machine - is to get maximum output for minimum energy

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**locomotion = lokomosyon (enerji harcayarak ve kuvvet uygulayarak yer deęiřtirme)**

consider to be = (bir Őey) olarak grmek / kabul etmek

**flow = akıř**

location = belirli bir yer

seek = aramak, arařtırmak, peřine dřmek, look for, pursue, inquire

**rhythm = ritm**

expenditure = harca(n)ma, expense

minimize = minimize etmek, en aza indirmek, zıt anl.= maximize

**thermodynamic = termodinamik (ısı enerjisi ve hareket arasındaki iliřkiyi inceleyen bilim dalı ile**

ilgili)

**imperfection = eksiklik, kusur, fault, defect**

**friction = srtnme**

allow for = (bir Őey) iin olanak / fırsat yaratmak

amount = miktar

resistance = direniř, karřı koyma, hindrance, opposition

**equilibrium = denge, eřitlik**

**resistivity = zdiren (birim uzunluktaki bir materyalin, iinden geen elektrik akımına gsterdięi**

diren)

**oceanic = okyanuslar ile ilgili**

**basin = havza**

**configure = deęiřtirmek, ayarlamak**

**reconfigure = tekrar deęiřtirmek / ayarlamak**

discharge = tahliye etmek, release

goal = ama, hedef, aim, target, objective

output = randıman, ıktı, retim, verim, product, yield, zıt anl.= input

**Only a few large meteorites have struck the earth. The largest we know about fell in Arizona and made what is now called Meteor Crater, a hole about a mile across and 600 feet deep. ----. Other big meteorites fell in ancient times, in Texas, in Argentina, in northern Siberia and in Greenland.**

- A) When a meteor reaches the earth, it is called a meteorite
- B) This big meteorite may have fallen as much as twenty-five thousand years ago
- C) The amazing thing about these meteor showers is that they come year after year
- D) Most meteors are small, probably a few inches in diameter
- E) The most remarkable meteor shower was seen in Connecticut on the night of November 12, 1833

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**meteorite = meteorit (dünyaya düşen küçük göktaşı)**

**strike = çarpmak, hit**

across = karşıdan karşıya, bir yakadan diğer yakaya

**foot = (çoğul = feet) ayak (30.48 cm'ye eşdeğer uzunluk ölçüsü)**

**ancient = antik, eski, antique, archaic, zıt anl.= modern**

**Siberia = Sibirya (Kuzey Rusya'da bir bölge)**

**Greenland = Grönland (Atlas Okyanusu'nun kuzeyinde, Kuzey Kutbu'na yakın bir yerde yer alan**

ve siyasi olarak Danimarka'ya ait bulunan büyük bir ada)

**meteor = meteor (atmosfere giren göktaşı)**

reach = ulaşmak, varmak, arrive, come

amazing = insanı hayrete düşüren, şaşırtıcı, astonishing, surprising, zıt anl.= banal, dull

**meteor shower = meteor yağmuru**

**year after year = yıl be yıl, her yıl**

remarkable = dikkate değer, olağanüstü, notable, extraordinary, zıt anl.= ordinary

**Connecticut = Kuzeydoğu ABD'de bir eyalet**

**Although a soccer ball can be put together in many ways, there is one design so ubiquitous that it has become iconic. This standard soccer ball is glued together from 32 polygons, 12 of them five-sided and 20 six-sided, arranged in such a way that every pentagon (five-sided) is surrounded by hexagons (six-sided). ---- . This colour scheme was introduced for the World Cup in 1970 to enhance the visibility of the ball on television, although the design itself is older.**

- A) 12 pentagons and 20 hexagons form a figure known to mathematicians as a “truncated icosahedron”
- B) To a mathematician, the iconic black and white soccer ball is an intriguing puzzle
- C) A number of questions can be tackled about the arrangement of pentagons and hexagons using the language of mathematics
- D) The usual way to colour such a ball is to paint the pentagons black and the hexagons white
- E) Every soccer ball contains at least 12 pentagons, but may well contain more

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put together = (parçaları) bir araya getirerek üretmek

**ubiquitous = her yerde var olan, yaygın**

iconic = sembolleşmiş, ikonlaşmış

**glue together = (bir şeyin parçalarını birbirine) yapıştırarak (bütünü) oluşturmak / bir araya**

Getirmek

**polygon = çokgen**

arrange = düzenlemek, yerleştirmek

**colour scheme = renk düzenlemesi**

introduce = 1) ortaya koymak, tanıtmak, present; 2) piyasaya arz etmek / sunmak; 3) başlatmak,

initiate, institute

enhance = artırmak, yükseltmek, çoğaltmak, geliştirmek, increase, improve, zıt anl.= decrease,

weaken

visibility = görünebilirlik

figure = şekil

mathematician = matematikçi

**truncated icosahedron = kesik yirmiyüzlü (düzgün bir yirmiyüzlünün köşelerinin kesilip atılması ile**

oluşturulan futbol topu benzeri geometrik cisim)

intriguing = merak uyandıran

tackle = (bir sorunu) ele almak, çözmeye çalışmak, deal with, work on, zıt anl.= avoid

arrangement = düzenleme, yerleştir(il)me, setup

may well = pekala ... (olabilir / yapabilir) de

**This year researchers from some 60 nations are participating in the International Polar Year, an intensive burst of interdisciplinary research focusing on the polar regions. ---- . For instance, water from the melting ice sheet is flowing into the North Atlantic much faster than scientists had previously thought possible.**

- A) Greenland, especially, has become a kind of barometer for the rest of the world because of its sensitivity to climate changes
- B) Climatologists have found that the best places to study global warming are the coldest regions on Earth
- C) Thus far, the data the researchers have seen has been alarming
- D) A glacier that accelerates with a warming atmosphere is within the realm of scientific expectation
- E) Arctic climatologist Konrad Steffen has spent 18 consecutive springs on the Greenland ice cap, personally building and installing the weather Stations



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E) Arctic climatologist Konrad Steffen has spent 18 consecutive springs on the Greenland ice cap, personally building and installing the weather Stations

participate = katılmak, yer almak, take part

intensive = yoğun, şiddetli, in-depth, thorough, zıt anl.= partial, superficial

burst = patlama, bir anlık ve genellikle kısa süreli çok yüksek artış

**interdisciplinary = bilimler / disiplinler arası**

for instance = mesela, örneğin, for example

**ice sheet = buz tabakası**

previously = önceden, daha önceleri, earlier, formerly, zıt anl.= subsequently

sensitivity = duyarlılık, hassasiyet, responsiveness, zıt anl.= insensitivity

**climatologist = iklim bilimci (iklimleri inceleyen bilim insanı)**

**global warming = küresel ısınma (dünyadaki ortalama sıcaklık değerlerindeki genel artış eğilimi)**

thus far = şimdiye kadar, so far

alarming = ürkütücü, korkutucu, appalling

**glacier = buzul**

accelerate = hızlan(dır)mak, ivme kazan(dır)mak, speed up, zıt anl.= retard

expectation = beklenti

consecutive = art arda, peş peşe, successive

**ice cap = dağ zirvelerindeki veya gezegen kutuplarındaki kubbemsi şekilli buzul**

**install = kurmak, tesis etmek**

**weather = hava (durumu)**

**Antoine Lavoisier was one of the first chemists to try to explain what makes a substance acidic. In 1777, he proposed that oxygen was an essential element in acids. But in 1808, Humphry Davy showed that hydrogen chloride, which dissolves in water to give hydrochloric acid, contains only hydrogen and chlorine. ---- .**

- A) Acids react with active metals such as magnesium and zinc to release hydrogen
- B) The Swedish chemist Svante Arrhenius defined acids and bases in terms of the effect these substances have on water
- C) Then chemists realized that hydrogen, not oxygen, must be the essential constituent of acids
- D) Acids and bases were first recognized by simple properties such as taste
- E) The stronger acids are those that lose their protons more easily

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**Antoine Lavoisier = 1743-1794 yılları arasında yaşamış olan ve modern kimyanın kurucusu kabul**

edilen Fransız araştırmacı

**chemist = kimyacı, kimyager**

**substance = madde, material, entity**

**acidic = asidik (çözünmüş hidrojen iyonu oranı yüksek, pH seviyesi düşük olan)**

essential = asıl, esas, temel, zaruri, vital, crucial, fundamental, zıt anl.= incidental, peripheral

**Humphry Davy = 1778-1829 yılları arasında yaşamış olan İngiliz kimyacı ve mucit**  
**hydrogen chloride = hidrojen klorür (kimyasal formülü HCl olan, oda sıcaklığında gaz halinde**

bulunan bir bileşik)

**hydrochloric acid = hidroklorik asit (hidrojen klorür gazının suda çözülmesi ile elde edilen güçlü bir**

asit)

contain = içermek

**chlorine = klor (doğada genellikle keskin kokulu, yeşilimsi sarı renkli, zehirli ve tahrış edici Cl<sub>2</sub>**

(diklorin) gazı olarak bulunan element)

**active metal = aktif metal (kimyasal tepkimelere kolaylıkla giren metal)**

**zinc = çinko (mavimsi açık gri renkte, kırılğan bir metal)**

**Swedish = İsveçli, İsveç'e ait**

**Svante Arrhenius = 1859-1927 yılları arasında yaşamış olan, fiziksel kimyanın kurucularından**

sayılan İsveçli fizikçi ve kimyacı

define = tanımlamak, tarif etmek

realize = farkına varmak

constituent = öge, unsur, element, factor, zıt anl.= aggregate, whole

recognize = tanımak, ayırt etmek, discern, distinguish

taste = tat

**The aim is to transform scientific discoveries into commercially viable products and translate academic expertise into industrial strength. ---- . However, over the next 10 years 75 new centres will be set up involving the creation of several thousand new jobs.**

- A) Without financial support the scheme can never take off
- B) So far no definite plans have been formulated
- C) This aspect of the scheme has been widely criticized
- D) The universities themselves came up with the idea
- E) But this will not happen overnight

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**E) But this will not happen overnight**

aim = hedef, amaç, goal, target

transform (into) = (bir şey)'e dönüştürmek, değiştirmek, change, convert, zıt anl.= preserve

discovery = keşif, buluş, bulgu

**commercially viable = ticari olarak üretilebilir / yapılabilir**

**translate = çevirmek, tercüme etmek**

**expertise = ekspertiz, uzmanlık**

involving = kapsayan

creation = (örn. iş alanları) yaratma, ortaya çıkarma

**financial = finansal, parasal, ekonomik, economic, monetary**

support = destek

scheme = hareket planı, proje, düzen, tertip, strategy

**take off = kalkmak, havalanmak**

so far = şimdiye kadar, şu ana kadar, until now, to date

definite = kesin, net

formulate = formülize etmek, formül halinde ifade etmek

widely = yaygın olarak, sıklıkla

criticize = eleştirmek

**overnight = bir gece içinde (birdenbire anlamında)**

**Satellites are an essential part of modern life. They give access to dozens of extra television channels and let people talk on the phone right across the world. However, it is worth bearing in mind that they also have a covert, even a disturbing use as well, which is why they were invented in the first place. ---- .**

- A) Satellite spying, in fact, has a history that is just as fascinating as the technology itself
- B) A tiny Proba satellite measures just 60x60x80 cm
- C) To get a better idea of exactly where the Earth observation satellites are, the Web includes a "Sky View" programme
- D) Therefore, this gave rise to many a spacerelated theory
- E) On the contrary, a digital method of image capture was required to bypass this weak link and beam photos directly back to Earth

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satellite = uydu

access = erişme, erişim

dozens of = düzinelerce

right across the world = dünyanın diğer ucu(ndaki)

be worth = (bir şey)'e değer olmak

bear in mind = akılda tutmak, akıldan çıkarmamak

covert = gizli (genellikle casusluk vs. ile alakalı)

disturbing = rahatsız edici, endişe verici, annoying, troublesome, zıt anl.= agreeable, convenient

invent = icat etmek, yaratmak, create

in the first place = en başta

spying = casusluk

in fact = aslında, esasen, in reality, in truth, indeed

Proba satellite = (kısaltma = Project for On-Board Autonomy) 2001'de uzaya gönderilen bir dünya

görüntüleme uydusu

get a better idea of = (bir şey) hakkında daha iyi bir fikre sahip olmak / daha çok bilgi edinmek

exactly = tam olarak

observation = gözlem, izleme

give rise to = yol açmak, neden olmak, lead to, bring about, produce, zıt anl.= eradicate, destroy

many a = pek çok

space-related = uzay ile ilgili

on the contrary = aksine, tersine, bilakis

image capture = fotoğraf çekimi

require = gerektirmek

bypass = etrafından dolanarak / yanından geçerek / uğramadan aşmak, baypas etmek

beam = (elektromanyetik dalgalar aracılığı ile) göndermek, ışınlamak

**Ultimately we should be sending people to Mars because they can do things that robots cannot do. ---- . It cannot realize that something is interesting and start to investigate.**

- A) We need to learn much more about the Martian environment
- B) A robot is programmed with a specific set of instructions, and cannot go beyond them
- C) One day it may be worth sending people to Mars, but that day has not yet come
- D) Human exploration goes beyond scientific motives
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ultimately = son / nihai olarak; esasen, finally; fundamentally

investigate = arařtırmak, soruřturmak, teftiř etmek, incelemek, inquire, inspect, examine

**Martian = Mars gezegeni ile ilgili, Mars gezegenine ait**

specific = belirli, distinct, particular, zıt anl.= general

**instructions = direktif, yönerge**

beyond = ötesi(ne)

exploration = arařtırma, inceleme

scientific = bilimsel

**motive = güdü, motivasyon, neden**

**Clay is a natural mixture of very small crystals of certain silicate sheet minerals. These minerals form by the weathering of granite. ---- . The resulting wet platelike crystals adhere to one another to give a plastic mass.**

- A) During the elevated temperatures of the firing, complex irreversible changes occurred
- B) Fired clay is a major medium for producing objects of art
- C) When a pure liquid substance freezes, it usually forms a crystalline solid
- D) Clay minerals easily absorb water
- E) The word “ceramics” comes from a Greek word for pottery

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**D) Clay minerals easily absorb water**

E) The word “ceramics” comes from a Greek word for pottery

**clay = kil**

**silicate sheet minerals = silikat levha mineralleri**  
(granitin aşınması ile oluşan, genellikle ince pullar halinde bulunan mineraller)

**weathering = hava etkisiyle değişime uğrama**

**plate-like = levha benzeri**

**adhere (to) = (bir şey)’e bağlanma, yapışma**

one another = birbirleri(ni/ne), each other

**plastic mass = plastik yığını**

**elevated = yüksek, yükseltilmiş**

**firing = fırınlama, ateşe tutma**

**irreversible = geri döndürülemez**

**fired clay = fırınlanmış kil (kilin, genellikle şekil verildikten sonra ateş veya seramik fırını aracılığı ile**

pişirilerek sertleştirilmiş hali)

**medium = (çoğul = media) araç, ortam**

**art = sanat**

pure = saf

**freeze = don(dur)mak, zıt anl.= thaw**

**crystalline solid = atomları veya molekülleri geometrik bir düzen içerisinde yer alan katı madde**

**pottery = çömlekçilik**