- Technological wonders

Glossary

Page 41

- wonder (n) /'w∧nd∂(r)/ sth that makes you feel surprise and admiration • The Statue of Zeus at Olympia was one of the Seven Wonders of the World.
 > wonderful (adj), wonder (v) ◆ meraviglia
- bionic (adj) /bar'bn.ik/ technology that causes a non-living object to move ● The bionic dog could walk and bark just like a real one. ◆ bionico

Reading Pages 42-43

- 4.3 telescope (n) /'telrskəʊp/ a piece of equipment like a long metal tube you look through to see distant things as if they were closer ● The bird's nest was so far away that I had to use a telescope to see it.
 > telescopic (adj) ◆ telescopio
- 4.4 solar system (n) /'səʊlə 'sɪstəm/ planets around a sun ● *Earth is the only inhabited planet in our solar system.* ♦ sistema solare
- **4.5** asteroid (n) /'æstərɔɪd/ a large rock or small planet that orbits a sun
 If a huge asteroid hits Earth, it will cause massive destruction. Asteroide
- **float** (v) /fləʊt/ to hang in the air as if weightless ● *The balloon floated in the air and then the wind blew it away.* ◆ fluttuare
- 4.7 comet (n) /'kpmit/ a bright object with a tail that travels around the sun ● We looked at the comet through the telescope.
- 4.8 dust (n) /d∧st/ small pieces of soft dirt • He cleaned the dust off the furniture with a cloth. > dust (v), duster (n), dusty (adj) ◆ polvere
- **4.9** gas (n) /gæs/ a chemical substance like air that is not liquid or solid • The smell of poisonous gas rose from the ground on the volcano crater.
- 4.10 orbit (n) /'ɔ:bɪt/ a circular movement around an object like a planet or sun ● *The moon orbits the Earth.* > orbit (v) ◆ orbita

- end up (phr v) /end ∧p/ to find yourself somewhere you didn't want to be • *If you don't study harder, you'll end up resitting your exams.* ◆ finire per, trovarsi a
- 4.12 universe (n) /ˈjuːnɪvɜːs/ all of space ● Earth is just a small planet in an enormous universe. ➤ universal (adj)
 ♦ universo
- 4.13 galaxy (n) /'gæləksi/ a large system of stars in space ● With powerful telescopes, scientists can now observe other galaxies in space. ➤ galactic (adj) ♦ galassia
- engineering (n) /,endʒɪ'nɪərɪŋ/ planning and building things like roads, bridges or machines ● Janet is great at maths and physics so she's studying engineering at university. >> engineer (n) � ingegneria
- 4.15 construction (n) /kən'str∧k∫n/ the process of building • The construction of the Parthenon was organised by Perikles.
 > construct (v) ◆ costruzione
- **4.16** software (n) /'spftweə(r)/ computer programs ● Because she had some trouble with her computer, she had to reinstall all the software. ❖ software

4.17 invent (v) /In'vent/ to make or design sth that has not existed before ● Telescopes were invented in the 17th century. > inventor, invention (n), inventive (adj) ♦ inventare

- 4.18 innovation (n) /ɪnəˈveɪʃn/ a new idea or invention ● *I think technological innovations will make life easier in the future.* > innovative (adj) � innovazione
- achievement (n) /ə'tfiːvmənt/ sth you succeed in doing ● Raising baby pandas in a zoo is an incredible achievement because it is very hard to do. ➤ achieve (v)
 traguardo, risultato
- 4.20 complicated (adj) / komplikertid/ difficult to understand because it has many different parts ● The rules of this game are so complicated! I can't understand them. > complicate (v), complication (n)
 ♦ complicato
- 4.21 movement (n) /'mu:vmənt/ going from one place to another ● We observed the movements of the cat as it climbed the tree. > move (v, n), movable (adj)
 ♦ movimento

- **4.22 sunshield** (n) /'s∧n∫i:ld/ a device that protects sth, e.g. a telescope, from the light and heat of the sun • *She used a small umbrella as a sunshield.* ◆ scudo solare
- **4.23** pillar (of) (n) /'pɪlə(r) (əv)/ an important part of a group or system
 • Galileo was one of the pillars of astronomy.
 ◆ pilastro
- 4.24 creation (n) /kri'eɪʃn/ the whole universe and the process of creating it ● Humans are the most destructive animals in all creation! > create (v), creative (adj)
 ☆ creato
- 4.25 exoplanet (n) / eksəʊ,plænɪt/ a planet which is outside the Earth's solar system ● *I wonder if there is any life on* exoplanets in other solar systems. ◆ pianeta extrasolare
- 4.26 search (v) /s3:tʃ/ to look for ● She searched for information about her ancestors on the internet.
 > search (n) cercare
- 4.27 so far (expr) /'səʊ faː/ until now ● I've been watching the sky for hours, but I haven't seen the asteroid so far.
 ♦ finora
- 4.28 confirm (v) /kən'f3:m/ to show to be true ● Your weight confirms that you have eaten too much during the holidays.
 > confirmation (n) confermare
- 4.29 hold your breath (expr) /həʊld jɔː breθ/ to expect sth to happen ● *I think you have a* good chance of getting the job, but don't hold your breath – there are so many applicants.
 ♦ trattenere il fiato
- 4.30 sight (n) /sart/ sth that you see • The snow on the mountains was a wonderful sight. ➤ sightseeing (n)
 ♦ vista
- 4.31 light year (n) /laɪt jɪə/ very long time ● Manned space travel to distant planets seems light years away.
 ♦ anno luce
- 4.32 exist (v) /ɪg'zɪst/ to be real ● *Does life exist on Mars?* ≻ existence (n) � esistere
- 4.33 component (n) /kəm'pəʊnənt/ a part of sth ● There are so many components in this smartphone that I have no idea how it works. ❖ componente
- **4.34 source** (n) /sɔːs/ where sth comes from ● *In the past, the only source of heat was fire.* ◆ fonte

Space

asteroid	float	search
comet	galaxy	solar system
dust	innovation	spacesuit
engineering	light year	sunshield
exoplanet	orbit	universe

Vocabulary Page 44

- 4.35 calculator (n) /'kælkjuleɪtə(r)/

 a device or piece of software for making calculations with numbers The teacher asked us to solve the maths exercises without using a calculator. ➤ calculate (v)
 ❖ calcolatore
- 4.36 charger cable (n) /'tʃɑːdʒə(r) 'keɪbl/ a thick wire that carries electricity to a phone charger ● *I must find the charger cable for my smartphone. The battery is very low.* ❖ cavo di ricarica
- 4.37 external hard drive (n) /ɪkˌstɜ:nl 'hɑ:d draɪv/ a device for storing information from a computer ● *It's a good idea to back up files every day on an external hard drive in case anything goes wrong with your laptop.*♦ disco rigido esterno
- 4.39 monitor (n) /'mpnɪtə(r)/ a computer screen; a computer screen for observing movements in a particular area
 The security guard watched the monitors to see who was entering the building. ➤ monitor (v) ❖ monitor
- **4.40 device** (n) /dɪ'vaɪs/ an object with a particular purpose ● *This device is used to back up the data on your computer.* ◆ dispositivo
- 4.41 run (v) /r∧n/
 to work He stopped the car, but the engine was still running.
- 4.42 remote-controlled (adj) /rɪ'məʊt kən'trəʊld/ controlled by using equipment without having to touch it Ken was flying his remote-controlled plane in the park.
 ☆ a comando remoto
- **4.43 touchscreen** (n) /t∧tʃskri:n/ a screen that you touch in order to control a computer, phone, etc. • *This touchscreen phone doesn't have any buttons.* **♦** touchscreen

drone (n) /drəʊn/
a small aircraft without a pilot, controlled by a computer and used for taking photos or videos from above the ground ● *He almost destroyed his drone when it nearly landed in the sea after taking a video of the kayak.*❖ drone

4.44

- 4.45 wireless (adj) /'warələs/ being connected by signals instead of cables
 The school's wireless connection was a bit slow, so we had to wait for the information to upload. ➤ wireless (n) ❖ senza cavo
- 4.46 smart (adj) /smart/ that is operated through computers so that it can work by itself ● When you're away, you can control your home central heating, using smart technology. > smartly (adv)
 intelligente
- 4.47 connect (v) /kə'nekt/ to join together two or more things ● If I can connect to the internet, I'll send you some photos. > connection (n), connected (adj)
 ♦ collegare
 Opp: disconnect
- 4.48 podcast (n) /'ppdka:st/ an audio file from the internet that you can play on a computer, smartphone, or other device
 I sometimes listen to podcasts from British radio stations to hear different English accents.
 \$ podcast
- **4.49** post (v) /pəʊst/ to put comments, information or pictures on a website ● *He never posts personal details on social networking sites.* > post (n) ◆ postare, pubblicare
- 4.50 record (v) /re'kɔːd/ to write information down or store it in a computer so that it can be looked at in the future ● *The reporter recorded the interview on camera.* > record (n) ◆ registrare
- 4.51 update (v) /∧p'deIt/ to add the most recent information to sth
 Always update your virus protection so your computer is safe. > update (n) Aggiornare
- 4.52 upload (v) /,∧p'ləʊd/ to transfer files from one computer to another through the internet • *Gina uploaded her essay for her teacher to correct online.*☆ caricare
- 4.53 switch off (phr v) /swɪt∫ pf/ turn sth off by pressing a button or switch
 I want to sleep now. Please switch off the lights. ♦ spegnere
 © Opp: switch on
- **4.54** pillow (n) /'pɪləʊ/ a cloth bag filled with sth soft that you use to rest your head on in bed ● Jake rested his head on the pillow and went to sleep.
 ❖ cuscino

- 4.55 activity tracker (n) /æk'tɪvəti trækə(r)/ a device that records your physical movements and other health-related information
 According to the activity tracker, we've cycled 30 kilometres today. ◆ tracker delle attività
- 4.56 turn down (phr v) /t3:n daon/ to make quieter ● Dad's always telling me to turn down my music, but I like it loud!
 ◆ abbassare
- **4.57 volume** (n) /'volju:m/ the level of noise ● *Don't turn the volume up so loud; we won't be able to hear ourselves talking!* ◆ volume

Grammar Page 45

- 4.58 forecast (n) /'fɔ:kɑ:st/

 a description of how sb says sth will be in
 the future The latest forecast warns of
 heavy rain and stormy weather. * previsione
- 4.59 take off (phr v) /teɪk ɒf/ to leave the ground (for planes, etc.) ● The plane couldn't take off because of the storm over the airport. > take-off (n) ◆ decollare Sopp: land
- 4.60 look forward to (phr v) /lʊk 'fɔːwəd tuː/ to be happy waiting for sth good that is going to happen ● *I'm looking forward to seeing my relatives from Canada.* ◆ essere impazienti di, non vedere l'ora di
- 4.61 central heating (n) /'sentrəl 'hi:tɪŋ/ a heating system that heats a whole house or building ● Our house is really cold because the central heating isn't switched on.
 ♦ riscaldamento centralizzato
- **4.62** qualified (adj) /'kwolrfard/ having completed the correct training or having the experience for a particular job
 Sarah spent five years at university to become a qualified architect. >> qualification (n), qualify (v)
- **4.63** power cut (n) /'paʊə kʌt/ a period when the electricity supply stops working ● The storm caused power cuts throughout the city and the streets were in darkness. ◆ interruzione di corrente
- **4.64** accurately (adv) /'ækjərətli/ correctly ● *She worked out the total accurately by using a calculator.* > accurate (adj), accuracy (n) ◆ accuratamente
- **4.65** earthquake (n) /'3:θkweɪk/ the shaking of the ground ● *After an* earthquake, dogs are often used to find people in buildings that have fallen down. ❖ terremoto

- 4.66 spacesuit (n) /'sperssu:t/ a special suit worn by astronauts to survive in space ● An astronaut's spacesuit is made of strong but light material.
- 4.67 land (v) /lænd/ to arrive on the ground ● The plane landed safely at the airport despite the storm.
 > landing (n) ♦ atterrare S Opp: take off

Listening Page 46

- 4.68 aircraft (n) /eəkra:ft/ a vehicle that can fly ● The aircraft that took us to London was an Airbus. ◆ velivolo
 S Plural: aircraft
- 4.69 liquid (n) /'lɪkwɪd/ sth that is not solid and can be poured
 Oil and water are both liquids. ♦ liquido
- **4.70** image (n) /'ImIdʒ/ a picture ● The satellite took some wonderful images of the Earth from space. ❖ immagine
- 4.71 memory (n) /'meməri/ the amount of data storage space on a computer, phone, etc. ● My phone doesn't have enough memory to download any more apps. ◆ memoria
- 4.72 wearable (adj) /'weərəbə/ which can be worn ● Smartwatches are basically wearable computers. > wear (v)
 ♦ da indossare
- 4.73 coffee maker (n) /'kpfi meɪkə(r)/ a machine for making cups of coffee ● The first thing she does every morning is to switch on the coffee maker for breakfast. ◆ macchina del caffè
 Syn: coffee machine
- 4.74 dishwasher (n) /'dɪʃwɒʃə(r)/ a machine for washing dishes ● Don't wash the cups and plates by hand – just put them into the dishwasher. ◆ lavastoviglie
- 4.75 feature (n) /'fi:tʃə(r)/ an important part or a typical quality of sth
 A camera is a feature on most smartphones nowadays. >> feature (v) ☆ caratteristica
- 4.76 notification (n) /,nəʊtɪfɪ'keɪʃn/ a formal notice that gives information about sth • She receives a notification on her phone every time a text message arrives. ➤ notify (v)
 ☆ notifica
- **4.77 security** (n) /sɪ'kjʊərəti/ a system to warn you when sb enters a place illegally, or when there is danger, etc.
 - Our hotel room had its own security alarm!
 sicurezza

- 4.78 petrol (n) /'petrəl/ oil used to make an engine work ● The car was running out of petrol, so we stopped at a service station. ◆ benzina [®] US Eng: gasoline
- 4.79 diesel (n) /'dizzl/ a type of oil used to make an engine work instead of petrol ● *The city buses have diesel engines.* ◆ diesel
- 4.80 charging point (n) /'t∫ɑ:dʒɪŋ pɔɪnt/ a place where battery-operated devices or electric cars can be charged ● *There aren't* many charging points for electric cars in our town. ◆ punto di ricarica
- **4.81 depend (on)** (v) /dɪ'pend (pn)/ be affected by ● Whether wind farms really help the environment depends on the production process and where they are installed. ◆ dipendere

Speaking Page 47

- 4.82 invention (n) /In'ven∫n/ sth created by sb for the first time • The invention of the plane meant people could travel easily to foreign countries. > invent (v), inventor (n), inventive (adj) \$ invenzione
- 4.83 VR headset (n) /,vi: 'α:(r) 'hedset/ a set of headphones with a screen that you wear over your eyes to see images and hear sounds created by a computer ● *It feels like* you're in another world when you wear this VR headset to play a video game. ◆ cuffie VR
 Note: VR = virtual reality /,v3:tʃuəl ri'æləti/
- **4.84 driverless** (adj) /'draīvələs/ without a driver ● *I couldn't believe it when I first saw a driverless bus going around the town.* ◆ senza conducente

4.85 doorbell (n) /'dɔ:bel/ a button that you press outside a building, which rings a bell for the people inside to know you are there ● *The doorbell rang while I was in the shower.* ◆ campanello

Grammar Page 48

- 4.86 bullet train (n) /'bolt trein/ a high-speed railway service in Japan
 We got the morning bullet train to Tokyo, which was fast but really expensive.
 ☆ treno ad alta velocità
- 4.87 blossom (n) /'blosəm/ a flower on a plant or tree ● The air was filled with the lovely smell of orange blossoms.
 ♦ fiorire

Use your English Page 49

- 4.88 compete (v) /kəm'pi:t/ to try to get people to buy your products and not sb else's ● The small shops in the town centre compete for business. >> competition (n), competitive (adj) ◆ competere
- 4.89 competitive (adj) /kəm'petətıv/ showing you are trying hard to be more successful or better than others ● She wants to win, so she's a very competitive cyclist.
 > competitively (adv), compete (v), competition, competitor (n) ◆ competitivo
- **4.90** explosion (n) /ɪks'pləʊʒn/ a blast of energy (often from a bomb) ● *There* was a loud explosion at the power station and a fire broke out. >> explode (v), explosive (adj) \$ esplosione
- 4.91 explosive (adj) /ɪks'pləʊsɪv/ which could explode easily ● Petrol is a highly explosive liquid. So don't use devices like mobile phones near it. > explode (v), explosion (n) ◆ esplosivo
- 4.92 attraction (n) /ə'træk∫n/ an activity, feature or place that is interesting or exciting to sb; the feeling of being attracted to sb/sth • The cherry blossoms are one of Japan's greatest attractions. >> attract (v), attractive (adj) ◆ attrazione
- 4.93 inventive (adj) /In'ventīv/ able to create new things and ideas ● His grandparents were quite poor, but they were also inventive and found ways to make their own clothes and furniture. > invent (v), invention, inventor (n) ◆ creativo, inventivo
- 4.94 inspire (v) /ɪn'spaɪə(r)/ to make sb feel that they want to do sth and can do it ● He was inspired by Albert Einstein's work and he decided to become a physicist.
 > inspiration (n), inspirational (adj) \$ ispirare
- **4.95** attention (n) /ə'ten∫n/ interest in sth • Computers first caught his attention in primary school. ◆ attenzione
- **4.96** alternative (adj) /ɔːl'tɜ:nətɪv/ that can be used instead of sth else ● *I think* your idea is good, but *I have an alternative* solution that's better. > alternative (n)
 ❖ alternativo
- 4.97 back up (phr v) /bæk ∧p/ make a copy of information stored on a computer • Luckily, I had backed up my work before my computer crashed. > back-up (n)
 ☆ fare un back-up
- **4.98** log in (phr v) /lbg In/ to gain access to a computer ● You can log in to this website with a password. ❖ accedere

4.99 plug in (phr v) /plʌg 'ɪn/

to connect a machine to an electricity supply
You can plug your smartphone in to the PC.
collegare

- 4.100 set up (phr v) /set ∧p/ to get all necessary equipment ready for an activity • Mum set up my new laptop for me so I can use it now. > set-up (n) ◆ impostare
- **4.101** switch on (phr v) /swɪtʃ 'bn/ to turn sth on ● Let's switch the TV on and watch the news. ◆ accendere
- **4.102** shut down (phr v) /ʃ∧t daʊn/ to stop functioning; to stop a machine from working • *Remember to back up all your work in case there's a power cut that makes the computer shut down.* ◆ spegnere
- 4.103 access (n) /'ækses/ a way to see or use sth, e.g. information on a computer ● He can get access to his bank account online because he has internet banking. ❖ accesso
- **4.104** network (n) /'netw3:k/
 a group of people who are connected in some way Debbie has a large network of contacts on social media.
- 4.105 department (n) /dɪ'pɑ:tmənt/ a part of a large business, university, organisation, etc. ● Liam is a technician in the company's IT department. ◆ reparto
- **4.106** power supply (n) /paʊə sʌ'plaɪ/ where power comes from ● Plug this appliance into the power supply in the wall over there.
 ❖ alimentazione
- 4.107 record (n) /'rekɔ:d/ official information about people ● There are few written records of the history of this country. > record (v) ♦ documentazione
- 4.108 inventor (n) /ɪn'ventə(r)/ sb who creates sth new ● Hungarian inventor Maria Telkes created the first completely solarpowered house. >> invent (v), inventive (adj)
 ♦ inventore
- **4.109** astronomer (n) /ə'stronəmə(r)/ a scientist who studies the sun, moon, stars, planets, etc. ● Hypatia was the first female astronomer whose study of maths and astronomy became well-known in Ancient Greece. ➤ astronomy (n) ❖ astronomo
- 4.110 moreover (adv) /mɔːr'əʊvə(r)/ in addition; as well as that ● She's got a degree in Maths. Moreover, she's studying for a masters in Astrophysics. ◆ soprattutto
 Syn: furthermore, what's more
- 4.111 observe (v) /bb'z3:v/ to watch sth; to follow what is happening
 The nurse observed an improvement in the patient's condition. ➤ observer, observation (n)
 ♦ osservare

Phrasal verbs

back up	plug in	take off
carry out	set up	turn down
log in	shut down	
look forward to	switch off/on	

Writing Pages 50-51

- 4.112 due to (prep) /dju: tu:/ because of ● His depression is due to too much work and lack of sleep. ❖ a causa di
- 4.113 nevertheless (adv) /,nevəðə'les/ despite sth that has just been mentioned
 Sharks don't attack humans often. Nevertheless, many people think shark attacks happen every day. ♦ nondimeno
- **4.114** carry out (phr v) /'kæri aʊt/ to do or complete sth ● *Research is being carried out into sleep patterns.* ◆ eseguire
- 4.115 advance (n) /ədvɑ:ns/ progress ● Advances in medical science mean that many diseases which were deadly in the past can be cured today. >> advance (v)
 ♦ avanzamento
- 4.116 available (adj) /ə'veɪləbl/ (for things) ready to be used or bought; (for people) ready and with enough time to do sth ● There were no rooms available at the hotel. ➤ availability (n) ❖ disponibile
 Sopp: unavailable
- **4.118** regarding (prep) /rɪ'gɑ:dɪŋ/ concerning ● *Regarding space travel for the general public, I think it will be too expensive for most people.* **☆** in merito a
- 4.119 individual (adj) /ɪndɪ'vɪʤʊəl/ separate or different from others ● Our teacher writes different comments on each individual student's homework. ➤ individual (n)
 ♦ personale, singolo
- 4.120 informative (adj) /ɪn'fɔːmətɪv/ providing useful facts or ideas ● This magazine has an informative article on space travel.
 > inform (v), information (n) \$ informativo
 © Opp: uninformative
- 4.121 take an active part in (expr) /teɪk ən 'æktɪv paɪt ɪn/

to do sth about sth, be involved in sth
Anna is taking an active part in the fair and this afternoon she's demonstrating her new invention.

- 4.122 satisfied (adj) /'sætɪsfaɪd/ pleased because sth that you wanted to happen has happened ● Are your parents satisfied with your exam results? > satisfy (v), satisfaction (n), satisfactory (adj)
 ♦ soddisfatto ♥ Opp: dissatisfied
- **4.123 lightweight** (adj) /'laɪtweɪt/ not at all heavy ● You only need a lightweight jacket in the summer. ◆ leggero
- 4.124 user-friendly (adj) /,ju:zə 'frendli/ easy to use ● For online lessons, we use an app that was easy to install and is so user-friendly. ❖ a misura di utente
- 4.125 function (n) /'f∧ŋkʃn/ a program or part of a program on a computer, smartphone, etc. that does sth specific • *The* program has a 'Search' function. ❖ funzione
- to my mind (expr) /to mai maind/ in my opinion ● To my mind, space travel for everyone is the most exciting idea of this century. ◆ a mio parere
- 4.127 impression (n) /Im'pre∫n/ the opinion you have about sb/sth because of the way they seem • The robotics fair gave us all a very good impression as it was so wellorganised. >> impress (v), impressive (adj)
 ♦ impressione

Devices and technology

aircraft memory bullet train monitor calculator network central heating power cut charger cable power supply charging point satellite coffee maker security app console server device smart dishwasher telescope doorbell touchscreen drone tracker external hard drive user-friendly fibre optic cable VR headset headphones wireless image the World Wide Web

Video Page 52

- **4.128** server (n) /'s3:və(r)/ the main computer that runs a network ● *The company's IT department takes care of any problems with the server.* ◆ server
- 4.129 the World Wide Web (n) /ðə ,w3:ld ward 'web/ the system for finding information on the internet ● You can find information on almost everything you want on the World Wide Web – just check the source is reliable! ❖ il world wide web S Abbrev: www

- 4.130 via (prep) /'vaīə/ through; using a particular system, person, etc.
 They can send you the information via email.
 ♦ attraverso
- 4.131 console (n) /'konsəʊl/ a device with the controls for a video game
 We need two video game consoles to play against each other on PlayStation.
 ☆ console
- **4.132** electronic (adj) /I,lek'tronIk/ that has small parts that work through a computer or batteries, etc. ● You can download the book in electronic form. ◆ elettronico
- 4.133 satellite (n) /'sætəlaɪt/ an object in space that collects and sends information • Satellites provide signals for worldwide telecommunications. * satellite

4.134 transmit (v) /trænz'mɪt/

to pass sth from one person to another
A disease can be transmitted through the air, when people sneeze, for example.
trasmettere

- 4.135 fibre optic cable (n) / faɪbər 'pptɪk 'keɪbl/ a set of wires that carry internet signals ● Our internet connection is faster now that we have fibre optic cables in the neighbourhood.
 ❖ cavo della fibra ottica
- 4.136 speed (n) /spi:d/
 how fast sth moves This motorbike has a top speed of 220 kilometres per hour. > speed (v), speedy (adj) ◆ velocità