

4 Technological Marvels

Unit Opener

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- 4.1 **marvel** (n) /'mɑ:vəl/
an extremely useful person or thing • *The Internet is one of the technological marvels of our times.* > marvel (v), marvellous (adj)
- 4.2 **humanoid** (adj) /'hju:mənɔɪd/
like a human • *In Japan they have humanoid robots who look after the elderly!*
> human (n, adj)

Reading

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- 4.3 **jet-powered** (adj) /dʒet-'paʊəd/
with powerful engines • *His brother is in the air force and flies a jet-powered aeroplane.*
- 4.4 **aircraft** (n) /eəkrɑ:ft/
a vehicle that can fly • *The aircraft that took us to London was an Airbus.*
✎ Plural: aircraft
- 4.5 **hot air balloon** (n) /hɒt eə bə'lu:n/
a large balloon that flies using air that is heated • *The hot air balloon slowly floated above us in the sky.*

Word Focus

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- 4.6 **feather** (n) /'feðə/
one of the soft light things that cover a bird's body • *That bird is a flamingo and it has beautiful pink feathers.*
- 4.7 **wax** (n) /wæks/
a substance used to make candles • *The wax in these candles smells pleasantly of lemon.*
> wax (v), waxy (adj)
- 4.8 **melt** (v) /melt/
turn a substance from solid to liquid, or make sth do this • *If you leave ice in the sun, it melts.*
- 4.9 **weightless** (adj) /'weɪtləs/
having or seeming to have no weight
• *The astronaut felt weightless and floated in the spaceship.* > weigh (v), weight, weightlessness (n)
- 4.10 **private enterprise** (n) /'praɪvət 'entəpraɪz/
a private business, one not controlled by the state • *Some people believe that private enterprise performs better than state-controlled companies.*

Reading

pages 44–45

- 4.11 **edge** (n) /edʒ/
the part of sth furthest from its centre
• *I wonder what there is at the edge of the universe.*

- 4.12 **mankind** (n) /mæn'kaɪnd/
all humans • *Mankind first went into outer space in the twentieth century.*
- 4.13 **invention** (n) /ɪn'venʃn/
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)
- 4.14 **advanced** (adj) /əd'vɑ:nst/
very modern • *This computer is expensive because it is the most advanced model available.* > advance (v, n), advancement (n)
- 4.15 **fighter plane** (n) /'faɪtə pleɪn/
a plane used in war • *The F16 is a powerful fighter plane used by the Hellenic Air Force.*
- 4.16 **fascination** (n) /fæsi'neɪʃn/
being very interested in sth • *John's fascination with technology has taken him to Japan to see humanoid robots.*
> fascinate (v), fascinating, fascinated (adj)
- 4.17 **drive** (v) /draɪv/
influence sb to do sth • *His interest in planes drove him to become a pilot.* > drive (n)
- 4.18 **take to the skies** (expr) /teɪk tə ðə skaɪz/
start flying • *Mankind first took to the skies over two hundred years ago in hot air balloons.*
- 4.19 **factory** (n) /'fæktri/
a place where machines are used to make things • *Cars are made in this Japanese factory.*
- 4.20 **introduce** (v) /ɪntrə'dju:s/
make sth exist, happen or be used for the first time • *Air travel for the general public was first introduced in the 1950s.* > introduction (n)
- 4.21 **development** (n) /dɪ'veləpmənt/
an improvement • *Developments in communications over the past twenty years mean that now most people have a mobile phone.* > develop (v)
- 4.22 **space shuttle** (n) /speɪs 'ʃʌtl/
a vehicle designed to travel into space and return to Earth more than once • *The Americans built the first space shuttle in the 1970s.*
- 4.23 **grab sb's attention** (expr) /græb 'sʌmbədɪz ə'tenʃn/
make sb interested in sth • *Computers first grabbed his attention in primary school.*
- 4.24 **reusable** (adj) /ri:'ju:səbl/
that can be used again • *These plastic bags are reusable, so don't throw them away.*
> reuse (v)

- 4.25 launch** (n) /lɔːntʃ/
when sth is sent into the sky or space • *The launch of the first spaceship was an important event in the history of space travel.*
> launch (v)
- 4.26 orbit** (v) /'ɔːbɪt/
move around an object like a planet or sun
• *The moon orbits the Earth.* > orbit (n)
- 4.27 resolve** (v) /rɪ'zɒlv/
make a firm decision to do sth • *He has resolved to pass all his exams and go to university.* > resolution (n)
- 4.28 float** (v) /fləʊt/
hang in the air as if weightless • *The balloon floated in the air and then the wind blew it away.*
- 4.29 curiosity** (n) /kjʊərɪ'bjʊərɪti/
an object that is interesting because it is unusual or strange • *Computers were a curiosity when my parents were young, but now most families have one.* > curious (adj)
- 4.30 observation** (n) /əbzə'veɪʃn/
sth you notice and say • *Our teacher made the observation that our computer studies projects were very good.* > observe (v)
- 4.31 optimism** (n) /'ɒptɪmɪzəm/
a tendency to believe that good things will happen • *I wish I shared her optimism about the future!* > optimistic (adj)
📎 Opp: pessimism
- 4.32 pay off** (phr v) /peɪ ɒf/
have successful results • *All that studying has paid off and you have got into university!*
- 4.33 make it back (to)** (expr) /'meɪk ɪt 'bæk (tuː)/
manage to return • *We finally made it back to our hotel at midnight.*
- 4.34 requirement** (n) /rɪ'kwɪəmənt/
sth that sb says you must have in order to do sth • *Writing an assignment is a requirement on this history course.* > require (v)
- 4.35 scheme** (n) /skiːm/
a plan • *There is a new scheme for recycling paper, glass and aluminium.*
- 4.36 commercialise** (v) /kə'mɜːʃəlaɪz/
sell sth new to the public for the first time
• *If space travel is commercialised, people will buy tickets to go to space.* > commercial (adj)
- 4.37 license** (v) /'laɪsəns/
give official permission for sb to do sth
• *This restaurant is licensed to sell wine.*
> licence (n)
- 4.38 unveil** (v) /ʌn'veɪl/
show sth new for the first time • *The new car was unveiled to the public at the motor show.*
- 4.39 follow-up** (adj) /'fɒləʊ ʌp/
continuing sth that has started; done in order to find out more about sth • *The follow-up study had some amazing results.*
> follow-up (n), follow up (phr v)
- 4.40 craft** (n) /krɑːft/
a vehicle that can travel in space • *The craft landed on Mars on 15 April.*
- 4.41 aboard** (adv) /ə'boɪd/
on or onto a plane, ship, bus or train • *There are three hundred passengers aboard this ship.*
- 4.42 gaze** (v) /geɪz/
look at sth for a long time • *She gazed out of the train window at the beautiful view.*
> gaze (n)
- 4.43 galactic** (adj) /gə'læktɪk/
relating to a galaxy • *A galactic year is the time it takes the sun to orbit the centre of our galaxy.* > galaxy (n)
- 4.44 launch** (v) /lɔːntʃ/
send a spacecraft into the sky or into space
• *The craft was launched at 6 a.m. this morning.* > launch (n)
- 4.45 turn into** (phr v) /tɜːn 'ɪntə/
become different; change sb or sth into sth different • *Water turns into ice at 0°C.*
- 4.46 degree** (n) /dɪ'ɡriː/
a qualification from a university when you successfully complete your studies there
• *If you have a university degree, you should find a good job.*

Above the ground

aircraft	launch
fighter plane	orbit
float	Space Shuttle
hot air balloon	take to the skies

Vocabulary

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- 4.47 speaker** (n) /'spiːkə/
the part of a sound system, radio, etc from which the sound comes out • *The music coming out of those speakers is really loud!*
- 4.48 cloning** (n) /'klɒnɪŋ/
making an exact copy of an animal or plant by taking a cell from it and developing it artificially
• *Cloning is possible and the first animal to be created in a lab was a sheep.* > clone (v, n)
- 4.49 process** (n) /'prəʊses/
a number of actions that are done in order to get a particular result • *Making cheese is usually a slow process.*

- 4.50 gadget** (n) /'gædʒɪt/
a small device that does sth useful • *This sat nav is a handy gadget which helps me find my way around.*
- 4.51 portable** (adj) /'pɔ:təbl/
that can be carried and moved to another place • *His laptop is portable, so he takes it with him when he travels abroad.*
> portability (n)
- 4.52 lightweight** (adj) /'laɪtweɪt/
not at all heavy • *You only need a lightweight jacket in the summer.*
- 4.53 efficient** (adj) /ɪ'fɪʃnt/
able to work well and produce results • *The spellcheck on this computer isn't efficient and often misses wrong words.* > efficiency (n)
✎ Opp: inefficient
- 4.54 demonstrate** (v) /'demənstreɪt/
show how sth works • *Demonstrate the new equipment to the boss so she can see how it works.* > demonstration (n)
- 4.55 touch-screen** (adj) /tʌtʃ skri:n/
having a computer with a screen that you touch in order to tell the computer what to do • *This touch-screen phone doesn't need any buttons.*
- 4.56 operate** (v) /'ɒpəreɪt/
use; make sth work • *Please show me how to operate this machine as I can't get it to do anything.* > operator, operation (n)
- 4.57 device** (n) /dɪ'vaɪs/
an object with a particular purpose • *This device is used to back up the data on your computer.*
- 4.58 run** (v) /rʌn/
work • *He stopped the car, but the engine was still running.*
- 4.59 appliance** (n) /ə'plaɪəns/
a piece of equipment like a fridge or cooker that is used in a home • *I love buying appliances like espresso machines and toasters.*
- 4.60 vacuum cleaner** (n) /'vækju:m 'kli:nə/
an electrical appliance used to clean the floor and carpets • *This vacuum cleaner cleans the carpets very well.*
- 4.61 brochure** (n) /'brɔ:ʃə/
a small book with information about a product • *He got a brochure from the shop to see what new cameras they are selling.*
- 4.62 improvement** (n) /ɪm'pru:vmənt/
making sth better • *This silent vacuum cleaner is a great improvement over older models.*
> improve (v)
- 4.63 innovation** (n) /ɪnə'veɪʃn/
a new idea or invention • *I think technological innovations will make life easier in the future.*
> innovative (adj)
- 4.64 stage** (n) /steɪdʒ/
a part of a process • *The next stage in communications is hand-held tablets that have a phone, a camera and Internet connection.*
- 4.65 guide** (n) /gaɪd/
information on a subject; explanation how to do sth • *Read the guide before you use the new DVD player.*
- 4.66 pay off** (phr v) /peɪ ɒf/
bring good results • *Her hard work had finally paid off.*
- 4.67 fabulous** (adj) /'fæbjʊləs/
extremely good • *This fabulous netbook is just what I needed to take on my trip.*
- 4.68 rough** (adj) /rʌf/
difficult or unpleasant • *He had a rough time at work today because his computer wasn't working.*
- 4.69 rocky** (adj) /'rɒki/
with obstacles • *The rocky road to fame nearly made Fred give up, but in the end he was successful.*
- 4.70 commercial** (adj) /kə'mɜ:ʃl/
related to buying and selling things • *The commercial area in the city centre is a great place to go shopping.* > commercialise (v)
- 4.71 licence** (n) /'laɪsəns/
official permission to do sth • *Have you got a licence to sell these goods in the street?*
> license (v)
- 4.72 cellar** (n) /'selə/
a room in basement used for storing things • *Put this old computer in the cellar.*
- 4.73 worthless** (adj) /'wɜ:θləs/
having no value • *You can't sell that old mobile phone. It's worthless.* > worth (n)
- 4.74 consider** (v) /kən'sɪdə(r)/
think carefully about sth • *They are considering buying a new house.*
> consideration (n)

Grammar

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- 4.75 bring out** (phr v) /brɪŋ aʊt/
produce; publish • *They've just brought out their new CD.*
- 4.76 install** (v) /ɪn'stɔ:l/
put equipment somewhere and connect it so that it is ready to be used • *We had a new alarm system installed last week.*
> installation (n)
- 4.77 surveillance camera** (n) /sə'veɪləns 'kæmrə/
a camera that records everything that happens in a place • *Surveillance cameras were used in the shop to deter thieves.*

- 4.78 whiteboard** (n) /'waɪtbɔ:d/
a board used, for example, in a classroom, which is connected to a computer • *All our lessons at school use whiteboard technology.*
- 4.79 education minister** (n) /edʒu'keɪʃn 'mɪnɪstə/
a politician in charge of the education department • *The education minister announced that many schools would be closed.*
- 4.80 confirm** (v) /kən'fɜ:m/
show sth to be true • *Ken sent an email to confirm he would be attending the meeting.* > confirmation (n)
- 4.81 way to go** (expr) /weɪ tu ɡəʊ/
used to say that sb has done sth very well • *You've built a robot? Way to go!*
- 4.82 visionary** (adj) /'vɪʒənri/
having the ability to imagine what sth will be like in the future • *HG Wells was a visionary author who wrote about space travel long before it was possible.* > vision (n)
- 4.83 revolutionary** (adj) /revə'lu:ʃənri/
causing great change • *The Internet has had a revolutionary effect on the world.* > revolution (n)
- 4.84 tool** (n) /tu:l/
sth useful for a particular purpose • *Interactive whiteboards have become a tool for teaching foreign languages.*
- 4.85 hands-on** (adj) /hænds-ɒn/
doing sth rather than just talking about it • *You've learnt about robotics in theory; now you need some hands-on experience.*
- 4.86 presently** (adv) /'prezntli/
now; at the present time • *The police are presently investigating the case.* > present (n, adj)
- 4.87 academics edition** (n) /ækə'demɪks ɪ'dɪʃn/
a version of a book for universities • *Buy the academics edition of the book because it has some useful notes at the back of the book.*
- 4.88 major** (adj) /'meɪdʒə/
important • *Technology plays a major role in business these days.*
- 4.89 laboratory** (n) /lə'bɒrətəri/
a room where experiments are done • *These robots have been developed in laboratories in Japan.*
- 4.90 doubt** (n) /daʊt/
a feeling of being not sure if sth is true or right • *I'm not sure that's the right thing to do. I have some doubts.* > doubt (v), doubtful (adj)

Listening

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- 4.91 household** (n) /'haʊshəʊld/
all the people living together in a house or flat • *Most households today own at least one computer.*

- 4.92 supplier** (n) /sə'plaɪə(r)/
a person or company that sells sth • *They are one of the biggest computer suppliers in the area.* > supply (v, n)
- 4.93 regulation** (n) /regjʊ'leɪʃn/
an official rule • *There are regulations for the design of appliances so that they are safe to use.* > regulate (v)
- 4.94 cooker** (n) /'kʊkə/
an appliance used for cooking • *How are we going to make supper if the cooker is broken?* > cook (v, n)
- 4.95 structure** (n) /'strʌktʃə/
the way in which the parts of sth are connected and form a whole • *We are studying the structure of the human body at school.* > structural (adj)

Machines and equipment

appliance	sat nav
cooker	surveillance camera
device	tool
gadget	vacuum cleaner
hardware	video games console

Speaking

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- 4.96 replace** (v) /rɪ'pleɪs/
put sth new in the place of sth old • *Robots have already replaced people in many factories.* > replacement (n)
- 4.97 video game console** (n) /'vɪdɪəʊ geɪm 'kɒnsəʊl/
a device with the controls for a video game • *We need two video game consoles to play against each other on PlayStation.*
- 4.98 sat nav** (n) /sæt 'næv/
a piece of equipment in a vehicle that tells the driver what the best way to a place is • *Remember to switch on the sat nav when you leave the hotel.*
- 4.99 simplify** (v) /'sɪmplɪfaɪ/
make easier • *If you don't understand these instructions, I can simplify them for you.* > simple (adj)
- 4.100 face-to-face** (adj) /feɪs-tə-feɪs/
in person • *We didn't communicate by email but had a face-to-face meeting in his office.*
- 4.101 via** (prep) /'vɪə/
through; using a particular system, person, etc • *They can send you the information via email.*

- 4.102 file** (n) /faɪl/
a set of data on a computer • *This file on my computer is called HW01 because it's the first homework I did this year.* > file (v)
- 4.103 update** (v) /ʌp'deɪt/
add the most recent information to sth
• *Always update your virus protection so your computer is safe.* > update (n)
- 4.104 technician** (n) /tek'nɪʃn/
sb whose job is to check equipment and make sure it is working properly • *The technician has to come to the office today to set up our new computers.*
- 4.105 hardware** (n) /'hɑ:dweə/
computer machinery and equipment • *Your computer hardware is getting old. You need to buy a new hard drive.*
- 4.106 get on board** (expr) /get ɒn bɔ:d/
enter a vehicle • *The pilot got on board the fighter plane and prepared to take off.*
- 4.107 security alarm** (n) /sɪ'kjʊərəti ə'lɑ:m/
equipment that makes a loud noise when sb enters a place illegally, when there is danger, etc • *Our hotel room had its own security alarm!*
- 4.108 up-to-date** (adj) /ʌp-tu-deɪt/
modern and using the most recent technology
• *This is the most up-to-date information on the subject.*
- 4.109 access** (v) /'ækses/
open a file on a computer in order to find information • *I don't know what's in the file – I can't access it.* > access (n)
- 4.110 download** (v) /daʊn'ləʊd/
move information or programs from a computer network to a small computer • *He downloaded a map of the city from the Internet.*
> download (n)
- 4.111 demonstration** (n) /demən'streɪʃn/
showing sb how to do sth or how sth works
• *The chemistry teacher gave the pupils a demonstration of the experiment in the lab.*
> demonstrate (v)
- 4.112 application** (n) /æplɪ'keɪʃn/
a formal request for sth such as a job or place at university • *She filled in an application for a job at the factory.* > apply (v), applicant (n)
- 4.113 gather** (v) /'gæðə(r)/
collect • *Have you gathered all the information you need?*
- 4.114 activate** (v) /'æktɪveɪt/
make sth start working • *If you push this button, you'll activate the alarm.*
> activation (n)

- 4.115 spare** (adj) /speə(r)/
If sth is spare, you do not use or need it all the time. • *You can stay with us – we've got a spare room.*

Use your English

- 4.116 explosion** (n) /ɪks'pləʊzən/
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)
- 4.117 reactive** (adj) /rɪ'æktɪv/
reacting to what happens rather than doing new things yourself • *Reactive laws won't help – they need to do something before the problems start.* > react (v), reaction (n)
- 4.118 empower** (v) /ɪm'paʊə/
give sb control over their own life • *A good education empowers people and gives them the confidence to succeed in life.*
- 4.119 revolutionise** (v) /revə'lju:ʃənəɪz/
change sth completely • *Personal computers have revolutionised the way we live and work.*
> revolution (n), revolutionary (adj)
- 4.120 industrialise** (v) /ɪn'dʌstriəlaɪz/
develop industry • *The western world was industrialised in the nineteenth century and many factories were built.* > industry (n), industrial (adj)
- 4.121 inspiration** (n) /ɪnspə'reɪʃn/
sth that gives you a new idea • *The inventor's inspiration comes from books on space travel.*
> inspire (v), inspirational (adj)
- 4.122 excellence** (n) /'eksələns/
the quality of being extremely good • *The school has a reputation for excellence. Many of its students go on to university.*
> excel (v), excellent (adj)
- 4.123 initial** (adj) /ɪ'nɪʃl/
first • *My initial reaction was to say no.*
- 4.124 back up** (phr v) /bæk ʌp/
make a copy of information stored on a computer • *Luckily, I had backed up my work because my computer just crashed.*
> back-up (n)
- 4.125 blast off** (phr v) /blɑ:st/
leave the ground and head for space • *The Space Shuttle blasted off yesterday and will return to Earth in a week.* > blast-off (n)
- 4.126 hook up** (phr v) /hʊk ʌp/
connect • *You'll have to hook up the phone if you want to call anyone.*
- 4.127 log in** (phr v) /lɒg ɪn/
gain access to a computer • *You can log in to this website with a password.*

- 4.128 set up** (phr v) /set ʌp/
get all necessary equipment ready for an activity • *Dad set up my new laptop for me so I can use it now.* > set-up (n)
- 4.129 power supply** (n) /paʊə sʌ'plai/
where power comes from • *Plug this appliance into the power supply in the wall over there.*
- 4.130 gain access** (expr) /geɪn 'ækses/
find information on a computer • *He can gain access to his bank account online because he has Internet banking.*

Writing:

a formal email

pages 52–53

- 4.131 postpone** (v) /pəʊs'pəʊn/
delay until a later date • *The robotics demonstration has been postponed for an hour because the expert isn't here yet.*
📎 Syn: put off
- 4.132 fair** (n) /feə/
an event where people show and sell their products • *There is a technology fair on at the university next week.*
- 4.133 extend** (v) /ɪk'stend/
continue for a longer time; make sth last longer • *I've extended my stay in Japan so that I can go to a robotics fair next week.* > extension (n)
- 4.134 interactive** (adj) /ɪntə'ræktɪv/
an interactive computer program, game, etc allows you to communicate with it and reacts to your actions • *I prefer playing interactive games to playing games on my own.*
> interact (v), interaction (n)
- 4.135 challenging** (adj) /'tʃæləndʒɪŋ/
difficult in an interesting way • *This computer game is very challenging, but I'm not going to give up.* > challenge (v, n)
- 4.136 principal** (n) /'prɪnsəpl/
a person who is in charge of a school • *The principal asked to see the student's parents.*
- 4.137 feedback** (n) /'fi:dbæk/
comments or information about how good or useful sth is • *So far we've had positive feedback from our customers.*
- 4.138 facilities** (pl n) /fə'sɪlətɪz/
a room, equipment or service provided for a particular purpose • *The facilities at the university include a library and a sports club.*
- 4.139 grateful** (adj) /'ɡreɪtful/
feeling you want to thank sb • *Thank you for letting me use your computer. I'm very grateful.* > gratitude (n)
📎 Opp: ungrateful
- 4.140 informative** (adj) /ɪn'fɔ:mətɪv/
providing useful facts or ideas • *This magazine has an informative article on space travel.*
> inform (v), information (n)
📎 Opp: uninformative
- 4.141 appealing** (adj) /ə'pi:lɪŋ/
interesting; attractive • *They're trying to make the product more appealing to young people.*
> appeal (v, n)
📎 Opp: unappealing
- 4.142 former** (adj) /'fɔ:mə/
having a particular position in the past • *Do you know the names of many former prime ministers of Greece?*
- 4.143 hesitate** (v) /'hezɪteɪt/
not speak or act for a moment because you are nervous or not certain • *Please do not hesitate to call me if you need help setting up the system.* > hesitation (n), hesitant (adj)
- 4.144 comment** (n) /'kɒment/
an opinion you express about sb or sth; a remark • *The class had good comments to make about her project so she felt pleased.*
> comment (v)
- 4.145 regarding** (adj) /rɪ'ɡɑ:dɪŋ/
concerning • *Regarding space travel for the general public, I think it will be too expensive for most people.*
- 4.146 a great deal** (expr) /ə greɪt di:l/
a lot • *There is a great deal of information on the Net about fighter planes.*
- 4.147 impression** (n) /ɪm'preʃn/
the opinion you have about sb or sth because of the way they seem • *The robotics fair gave us all a very good impression as it was so well organised.* > impress (v), impressive (adj)
- 4.148 consequently** (adv) /'kɒnsɪkwəntli/
as a result • *The weather was bad. Consequently, the launch of the spaceship was postponed.* > consequence (n)
- 4.149 greet** (v) /ɡri:t/
say hello • *The new pupil greeted the teacher as he walked into the classroom.*
> greeting (n)
- 4.150 constructive** (adj) /kən'strʌktɪv/
useful and helpful • *The teacher's constructive criticism will help us do better next time.*
- 4.151 sum up** (phr v) /sʌm ʌp/
summarise • *At the end of your composition, sum up your main ideas.*
- 4.152 equipment** (n) /ɪ'kwɪpmənt/
the things needed for a certain purpose • *We packed all our camping equipment into the car and drove to the campsite.*
- 4.153 range** (n) /reɪndʒ/
a number of different things of the same kind • *The shop has a wide range of souvenirs to choose from.*

- 4.154 stargazing** (n) /'stɑ:geɪzɪŋ/
looking at or studying the stars • *Stargazing sounds really interesting, but I haven't got a telescope.*
- 4.155 leisure** (n) /'leɪzə/
free time • *He plays golf in his leisure time.*
> leisurely (adj, adv)
- 4.156 meet (my) needs** (expr) /mi:t (maɪ) ni:dz/
provide what is necessary • *Does this vacuum cleaner meet your needs or do you want a more powerful one?*
- 4.157 feature** (n) /'fi:tʃə/
an important part or a typical quality of sth
• *A camera is a feature on most mobile phones nowadays.* > feature (v)
- 4.158 purchase** (v) /'pɜ:tʃəs/
buy • *They purchased a new washing machine yesterday for four hundred euros.*
> purchase (n)
- 4.159 provide** (v) /prə'vaɪd/
give • *The sun could provide us with a lot more energy* > provision, provider (n)
- 4.160 in advance** (expr) /ɪn əd'vɑ:ns/
before a particular time • *The boss thanked his staff in advance for being willing to work the following weekend.*
- 4.161 to my mind** (expr) /tʊ maɪ maɪnd/
in my opinion • *To my mind, space travel for everyone is the most exciting idea of this century.*
- 4.162 convenient** (adj) /kən'veɪniənt/
If sth is convenient, it is useful because it saves you time or does not cause you problems.
• *Modern appliances are convenient and make life much easier.* > convenience (n)
☞ Opp: inconvenient
- 4.163 ideal** (adj) /aɪ'di:əl/
perfect • *This MP4 player would be an ideal present for John. He loves music.*
- 4.164 appropriate** (adj) /ə'prəʊpriət/
correct; suitable • *Do you think robots are appropriate presents for little children?*
☞ Opp: inappropriate
- 4.165 enthusiast** (n) /ɪn'θju:ziæst/
sb who is very interested in sth • *As a computer enthusiast, I read about new programs all the time.*
- 4.166 take an active part in** (expr) /teɪk ən 'æktɪv pɑ:t ɪn/
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.*
- 4.167 solar power** (n) /'səʊlə 'paʊə(r)/
energy produced from the heat or light of the sun • *We use solar power to heat water in our building.*
- 4.168 generate** (v) /'dʒenəreɪt/
produce • *The sun's energy can be used to generate electricity.* > generator (n)
- 4.169 renewable** (adj) /rɪ'nju:əbl/
Renewable energy is replaced naturally or easily so that there is always enough of it.
• *Wind power is a renewable energy source.*
> renew (v)
- 4.170 advocate** (n) /'ædvəkət/
sb who supports sth publicly • *The Minister of the Environment is an advocate for alternative sources of power.* > advocate (v)
- 4.171 solar cell** (n) /'səʊlə sel/
equipment for producing electric power from sunlight • *A solar cell on our roof provides us with hot water.*
- 4.172 utility company** (n) /ju:'tɪləti 'kʌmpəni/
a company that provides gas, electricity, water, etc • *The utility company which provides us with electricity wants to increase prices.*
- 4.173 photosensitive** (adj) /fəʊtəʊ'sensətɪv/
having sensitivity to light • *This camera has an automatic photosensitive system so you don't need to use the flash.*
- 4.174 photovoltaic** (adj) /fəʊtəʊvɒl'teɪɪk 'sɪstəm/
able to make electricity from the sun
• *A photovoltaic panel can produce a lot of electricity.*
- 4.175 capture** (v) /'kæptʃə/
catch • *A solar cell captures the heat from the sun and then heats up water.*
- 4.176 reflect** (v) /rɪ'flekt/
send back an image, light, etc off a surface
• *This shiny metal reflects light.* > reflection (n)
- 4.177 tube** (n) /tju:b/
a hollow cylinder • *This tube of toothpaste is recyclable, so don't throw it away.*
- 4.178 dependable** (adj) /dɪ'pendəbl/
trusted to do what you expect • *Paul is dependable, so he won't forget to help you with your homework.* > depend (v)
- 4.179 reliable** (adj) /rɪ'laɪəbl/
a reliable person or thing can be trusted or depended on • *Solar energy is a reliable source of power; the weather here is usually sunny.* > rely (v)
☞ Opp: unreliable
- 4.180 affordable** (adj) /ə'fɔ:dəbl/
not too expensive to buy • *Electricity is becoming so expensive that soon it won't be affordable for many people.* > afford (v)

- 4.181 resource** (n) /rɪ'zɔ:s/
sth such as land, water, oil or coal that exists in a country and can be used to increase its wealth • *What will humans do when the Earth's resources run out?*
- 4.182 net metering** (n) /net 'mi:tərɪŋ/
when people produce their own solar energy and sell it to a utility company • *Some people are buying solar cells so they can sell electricity by net metering to the utility companies.*
- 4.183 solar plant** (n) /'səʊlə paʊə plɑ:nt/
a place where electricity is produced using solar power • *Many people believe that solar plants do less damage to the environment.*
- 4.184 facility** (n) /fə'sɪləti/
a place or building used for a particular activity
• *The world's largest solar power facility is in the USA.*
- 4.185 work at full capacity** (expr)
/'wɜ:k ət fʊl kə'pæsɪti/
If sth is working at full capacity, it is working, producing things, etc as fast as possible.
• *The factory is working at full capacity.*
- 4.186 megawatt** (n) /'megəwɒt/
one million watts (watt = a unit for measuring electrical power) • *The solar power plant produces 17.3 megawatts per hour.*
- 4.187 carbon dioxide** (n) /'kɑ:bən daɪ'ɒksaɪd/
the gas produced when animals breathe out
• *Carbon dioxide is poisonous to humans.*