11 The digital age

Unit profile

Vocabulary: Technological advances
Reading: *Want it? Need it? Print it!*
Grammar: Present perfect continuous
Vocabulary: Adjective suffixes
Writing: A persuasive email

Warmer

1 Write these facts on the board and tell students to complete the gaps with numbers. (The correct answers for 2014 are given in brackets.)

Number of Tweets per day: ..... (*500 million*)
Number of YouTube views of Gangnam Style: ..... (*2 billion*)
Number of Facebook users per month: ..... (*1.3 billion*)
Number of pages on Wikipedia: ..... (*33 million*)
Number of Google searches per day: ..... (*6 billion*)

2 Put students into small groups to compare their answers and share some ideas as a class. Give them the correct answers.

3 Ask students to discuss which websites they use the most and why.

Your profile

Ask students to discuss the questions. If possible, find pictures of some technological advances that have been in the media recently to prompt discussion. In feedback, find out which new technologies are the most popular.

VOCABULARY Technological advances

1 Put students into pairs to describe the photos and to say what they know about the technology in each one. Elicit some information about each photo from the class. Ask students if they have ever used the items shown.

2 You might need to pre-teach *virtual classroom* (*online classroom used for distance learning*) and *cloud* (*online storage of files and programs*). Model these two as an example for the class and then ask students to match the words to the photos individually. Check answers. To consolidate understanding of the expressions, you could write each word on a slip of paper for each pair or small group, e.g. *wireless* and *electricity.* Pairs or groups should then match the slips of paper to make collocations, and give an example sentence for each one.

Mixed ability

To support weaker students, you could do exercise 2 as a whole-class activity, asking stronger students to clarify the meaning and pronunciation of each item as you work through them, e.g. *wearable* /ˈweə.rə.bl/ (*describing something you can wear*), *driverless* (*without a driver*) and *wireless* (*without a cable*).

Answers

a wearable computer
b interactive whiteboard
c 3D technology
d touch-screen/tablet computer
e virtual classroom
f cloud storage
g driverless car
h wireless electricity

3 2.02 Tell students that they are going to listen to people talking about the eight technologies and that they should match each one to a picture. Play the recording and then check answers. With weaker classes, you may want to pause the recording after each speaker, checking answers as you go.

Answers

1 wireless electricity **2** interactive whiteboards
3 virtual classrooms **4** touch-screen/tablet computer
5 driverless cars **6** 3D technology **7** wearable computers
8 cloud storage

Audioscript

1 When I first saw this, I couldn't believe it. I mean, look! No wires, no plugs, no batteries. Within ten years, experts believe that it will be part of everyday life.

2 Almost all classrooms in our school have these now. They're much better than traditional blackboards or whiteboards – they can play videos, games, lots of stuff which makes things much more interesting.

3 These are changing the way students learn forever. They allow students to learn when they can, at their own pace, and in their own home. They could put an end to problems of transportation to and from school instantly. Of course there are disadvantages too!

4 I used to use my laptop for reading stuff online but now I almost always use this. It's much lighter and easier to use, and the battery lasts longer. They're also surprisingly good to type on.

5 I can't wait until these are safe and affordable for ordinary people like me. I mean, can you imagine driving to work but being free to read, do some work or even sleep! I'll save so much time.

6 The very first one I saw was *Avatar* and in some scenes, it does mean you get really absorbed in the film. But you have to wear a special pair of glasses and after a while the whole thing gave me a bit of a headache.

7 I think we'll see lots more of these in the future. Watches, glasses, even clothing that are also computers. They're designed to be always on – so you'll be able to use them anytime. That means, no more starting a computer or even switching on your phone to check something online or take a picture. Incredible!

8 Instead of saving your files on your computer, you save them on a website. It means the days of forgetting or losing files are at an end. Whenever you have an internet connection, you can always access your music, videos, whatever – it's all there on the cloud!

4 2.02 Put students into pairs and give them two minutes to discuss any advantages of the technology shown. Play the recording and ask students to note down the advantage each speaker mentions. You may want to pause it after each speaker so that there is time to make notes. Allow them to compare their answers with a partner before checking as a class.

Possible answers

1 It makes it easier to charge and run electronic devices.
2 They make lessons more interesting.
3 They allow students to work at their own pace and they solve problems of transport to and from school.
4 They're light and easy to use and the battery lasts longer.
5 They will mean that drivers can read, work or sleep.
6 It makes you feel more absorbed in a film.
7 They're always on so can be used at any time.
8 You never lose your files.

5 Put students into small groups to discuss the questions. To avoid students simply choosing technologies and not discussing them, tell them to think of two reasons to support each choice. Elicit some ideas from the class, including their reasons. In feedback, take a class vote on which of the technologies is the most/least useful, the most boring and the most exciting.

READING

1 Ask students what they understand by '3D printers' and share ideas as a class (they allow you to print out a 3D design on your PC as a solid object). Set a strict two-minute time limit for this exercise to encourage students to read quickly to find the main ideas. Point out that they can often do this by just reading the first sentence and scanning for key words or ideas, e.g. with *a* they need to look for a paragraph with references to price (paragraph 3 mentions *thousands of dollars*, *cheaper, expensive*, *prices have fallen* and *affordable*). Check answers.

Answers

2 b The technology isn't new **3** a What they cost
4 f How they work **5** g A new age in manufacturing
6 d Negative uses of 3D printing **7** c What about the future?

2 Nominate a stronger student to answer question 1 before asking students to read the article again and to find the answers to 1–6. Give students more time for this exercise. Allow them to compare their answers with a partner before checking as a class.

Fast finishers

Ask fast finishers to think about whether they are concerned about the potential dangers of 3D printing and which potential use they find most exciting. Elicit their ideas when checking answers to exercise 2.

Possible answers

1 They are used by architects to make models of buildings and also by designers when designing trainers.
2 The printers have become a lot cheaper and easier to use.
3 3D printers use materials like plastic or metal instead of ink. They print lots of layers on top of each other until a 3D object is formed.
4 It is now much cheaper and much quicker to make models.
5 It is possible to print keys and, theoretically, coins. It is also possible to print copies of other people's designs.
6 One day it may be possible to print a meal. In medicine it will be possible to print real body parts for use in operations.

3 Put students into teams of four and tell them they have to find the meaning of the highlighted words using their dictionaries as fast as possible. The winning team is the first one to find all of the correct meanings. Then ask students to complete the gaps using the words. Check answers.

Answers
1 significantly **2** manufacturing **3** economical **4** endless
5 process **6** artificial

Talking points

Put students into pairs to discuss the questions, and elicit some ideas for each one. Ask pairs what they would use a 3D printer for and why. Put pairs into groups of four or six and tell them to choose the idea they think is the best from their alternatives. Nominate a few groups to tell the class about their idea and why they chose it.

EP Word profile

Books closed. Write *end* on the board and tell students to write an example sentence using it. Books open. Ask students to compare their sentence with the ones in the book, and to identify any with a similar meaning and use. Set the exercises on page 125. Check answers. Nominate individuals to share their answers to Exercise 2 with the class.

Answers
1 no end of **2** at an end **3** on end **4** put an end to
5 endless

Cooler

1 Put students into groups of four to six. Give them two minutes to make a list of important inventions in history.

2 Elicit some ideas from each group and write them on the board.

3 Tell students to discuss the inventions in their groups and to choose the most important one.

4 Ask each group to feed back to the class about what they chose and to explain the reasons for their choice.

GRAMMAR Present perfect continuous

1 Books closed. Write *present perfect continuous* on the board. Elicit an example sentence (e.g. *Designers have been using 3D printers for a few years*) and the form (*has*/*have* + been + *-ing* form of the verb). Then ask students to explain any uses of this tense they know (e.g. to measure the duration so far of a present activity). Books open. Tell students to compare their ideas with the examples and rules in the book, and to match the examples to the rules. Check answers.

→ **Grammar reference Student's Book page 148**

Answers
1 b **2** a
1 have **2** been **3** *-ing*

2 Ask students to complete these sentences individually and to then compare them with a partner. Monitor and help as necessary before checking answers.

Answers
1 have; been sitting **2** hasn't been working
3 have been dreaming **4** Have; been painting
5 has been using

3 Ask students to match the situations to the pictures. When eliciting the answer, encourage students to give you a full sentence answer using the present perfect continuous. You could get them to write out the sentences using the present perfect continuous. As an alternative, you could do this as a closed-book activity. Nominate a confident student to come to the front of the class and show them one of the activities. The student should mime this for the rest of the class to guess, using the present perfect continuous.

Answers
1 She's been watching a 3D film.
2 They've been chatting all lesson.
3 He's been playing the guitar for too long.
4 They've been arguing.

4 Books closed. Write *present perfect simple* on the board and ask students to give you an example sentence (e.g. *I've known my best friend for four years*) and the structure (*have*/*has* + past participle). Elicit different uses of the present perfect simple compared with the present perfect continuous. For example, the present perfect simple is used to talk about an action that is finished, to say how often an action has happened, and with verbs that aren't used in the continuous, e.g. *like*, *know*. Books open. Tell students to compare their ideas with the rules and example sentences in the book and to match the example sentences to the rules. Check answers.

Answers
1 b **2** c **3** a

5 Ask students to work individually to complete these sentences. Tell them to compare their answers with a partner and if they have any different answers, to try to agree on the correct one. Check answers, encouraging students to explain why their chosen answer is correct.

Answers
1 've watched **2** Have; been crying **3** 's been waiting
4 has rung **5** 've been tidying; haven't finished
6 has bought; Have; seen

6 Put students into pairs to complete exercise 1 on page 121. Check answers. Tell students to work individually to write short answers to each question. Ask them to swap papers and to make sentences about their partner. As an alternative you could stop the activity after exercise 2 and take in their short answers. Redistribute them around the room. Tell students to make sentences using the information and to guess who the person is.

Mixed ability

To support weaker students, do the first two questions in exercise 6 as a whole class. Nominate a stronger student to give an example short answer and another to show how this can be transformed into a full sentence.

Fast finishers

Ask fast finishers to write two example sentences about events in their life that show the different uses of the two tenses. Elicit some examples after checking answers to exercise 6.

Answers

2 How long have you known your best friend?
3 Who have you been hanging out with recently?
4 What have you been watching on TV lately?
5 Have you been working hard recently?
6 How many times have you checked your phone for messages today?

Corpus challenge

Ask students to read the sentence. Ask them when the person started and whether they think they are still playing. If so, ask students which tense they should use (present perfect continuous).

Answer

I have been playing the piano for ten years.

VOCABULARY Adjective suffixes

1 Ask students to underline the word endings that make the words adjectives. Check answers. To extend this task, give students one minute to think of as many words as possible ending in *-al* and *-ive*. Find out which pair has the most words and check they have formed them correctly.

Answers

1 -al **2** -ive

2 Ask students to look at the table that includes examples of the suffixes they will need for the exercise. Tell them they need to make adjectives from the nouns and verbs in 1–12. Allow students to compare their answers with a partner before checking as a class. Check pronunciation of *-able* /-ə.bl/. As an alternative, write the suffixes on the board and put students into small groups. Give them a short time limit to think of as many words as possible for each one. Find out who has the longest list and elicit the words. Ask the class if they have any other words not mentioned by the winning group.

Answers

1 famous **2** colourful **3** natural **4** mysterious **5** suitable
6 impressive **7** enjoyable **8** traditional **9** creative
10 careful / careless **11** sandy **12** spicy

3 The exercise provides preparation for *First* Reading and Use of english Part 3. Tell students to complete the questions with the adjective form of the word in brackets. Check answers and then get them to discuss the questions in same-ability pairs. Monitor and give positive feedback for interesting answers. Elicit some ideas for each question from different pairs.

Extension activity

Tell students to make questions using four of the adjectives from exercise 2. Monitor and check their questions. Put them into small, mixed-ability groups to ask and answer their questions. Nominate two or three groups to report their questions and answers to the class.

Answers

1 interactive **2** harmful **3** useless **4** nervous
5 fashionable **6** acceptable

WRITING A persuasive email

1 Give students a minute or two to answer the questions before nominating a student to give the answers.

Answers

1 Mrs Taylor is the headteacher of a school.
2 She would like students to propose items of technology that might be useful for the school to buy and give reasons for their choices.

2 Ask students to read the email and tick the reasons Anya gives for buying tablet computers. Check they understand *physically tough* by eliciting its opposite (*fragile*). Allow them to compare their answers with a partner before checking as a class.

Answers

1, **3** and **5**

3 Tell students to read the *Prepare* box and to match the highlighted expressions in Anya's email to the meanings. Check answers.

Answers
1 It goes without saying
2 in reality
3 most people would agree
4 I was pleased

4 Do the first one as a class (*entirely appropriate*) and then ask students to find other examples individually. Set a time limit to encourage them to read the text quickly. Check answers.

Possible answers
entirely appropriate, incredibly useful, considerably easier, far wider, fallen dramatically

5 Do the first one as an example and then ask students to complete the exercise individually. Remind them to read the sentences with the phrases in the box to see if they make sense. Check answers.

Extension activity
Ask students to choose three of the phrases from the box and to write sentences about their opinion on technology and learning. Tell them to exchange their ideas with a partner and to ask questions about each opinion. Get students to look at their email and see which phrases they discussed could be used. Elicit some ideas from the class.

Answers
1 incredibly cheap **2** completely change **3** barely adequate
4 firmly believe **5** considerably longer
6 improved significantly

6 Tell students to read exercise 1 again and to use the questions to plan their email. Ask them to exchange and discuss their plan with a partner. Their partner should give them ideas about how to improve their email.

Mixed ability
To support weaker students, set exercise 6 up as a group activity so that stronger students can help weaker ones by discussing their plans and ideas.

7 This exercise is related to *First* Writing Part 2, which offers students a choice of writing tasks. Give students twenty minutes to complete this exercise. Remind them to use the *Prepare* box to help them. Tell them to exchange their emails with a partner. Ask them to underline any examples of persuasive language and to indicate where they might include more.

Sample answer
Dear Mrs Taylor,
Thank you for giving me this opportunity to suggest a new technological item that would be of benefit to us as students. Actually, I would like to propose the purchase of a colour printer, because the ones we currently have are very outdated and incredibly slow.
The latest models have improved significantly and most of them offer many more features than the ones we have. What's more, the price of printers has come down a lot recently, so this would not make a big hole in your budget.
For our project work, we often need to print out maps and photographs, so I can guarantee that this piece of equipment would be used regularly. It goes without saying that the quality of our finished work would be greatly increased.
I hope you will consider my suggestion and I would be happy to research and identify the right printer for the school to buy.
Best wishes

Cooler
1 Put students into small groups and ask them to think of the negative effects technology can have on society.

2 Elicit some examples from the class and write them on the board, e.g. *poor sleep habits*, *bullying*, *addiction*.

3 Ask students to discuss whether they think technology should and could be controlled to limit these negative effects.

Project
Ask students to research the positive and negative effects of social networking. In the following class, students should discuss their findings in small groups and come up with five tips for limiting the impact of any negative effects. Share some ideas as a class. As an alternative, they could write a blog post for the class blog, if you have one, on this topic.

Teacher's resources
Student's Book
Grammar reference and practice page 148
Vocabulary list page 133
Video
The digital age
Workbook
Unit 11, page 44
Go online for
- Pronunciation
- Video extra worksheet
- Corpus tasks