

Thinking Outside the Box

Developing creative and
innovative 21st century
thinkers

Tbilisi, 9th November 2019
Alex Warren, National Geographic Learning

Bringing the world to the classroom and the classroom to life

ELTNGL.COM

A PART OF CENGAGE

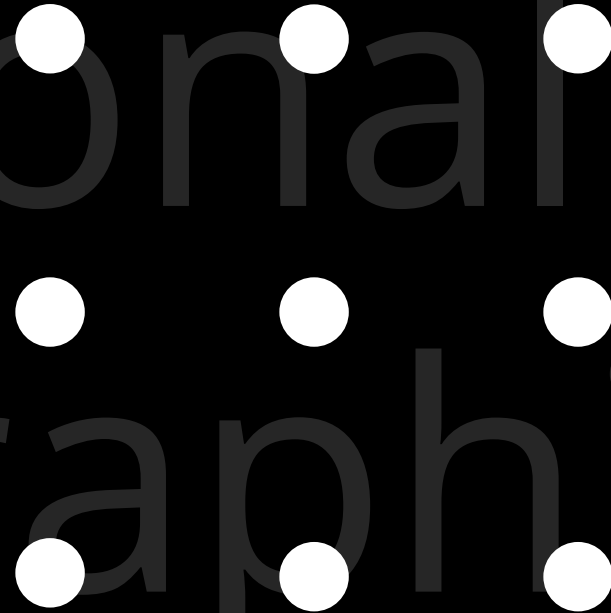
AGENDA

What is creative thinking?

Why is it so important?

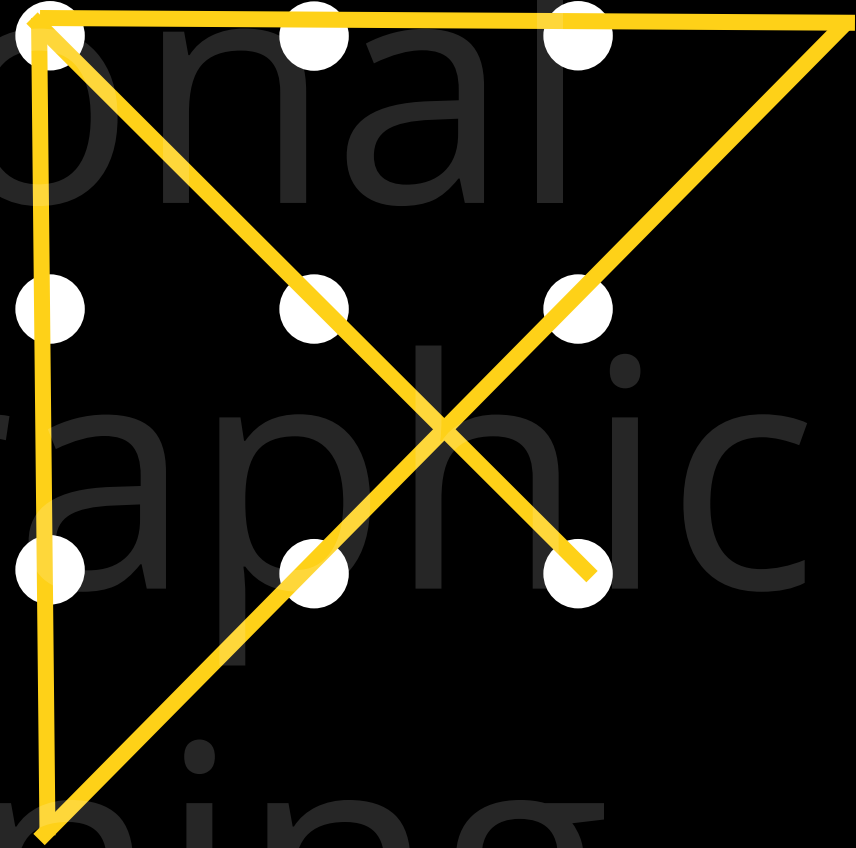
How we can incorporate it into the English Language classroom

Draw four
straight lines
that connect
all nine dots
without lifting
your pen or
pencil off of
the paper.



National
Geographic
Learning

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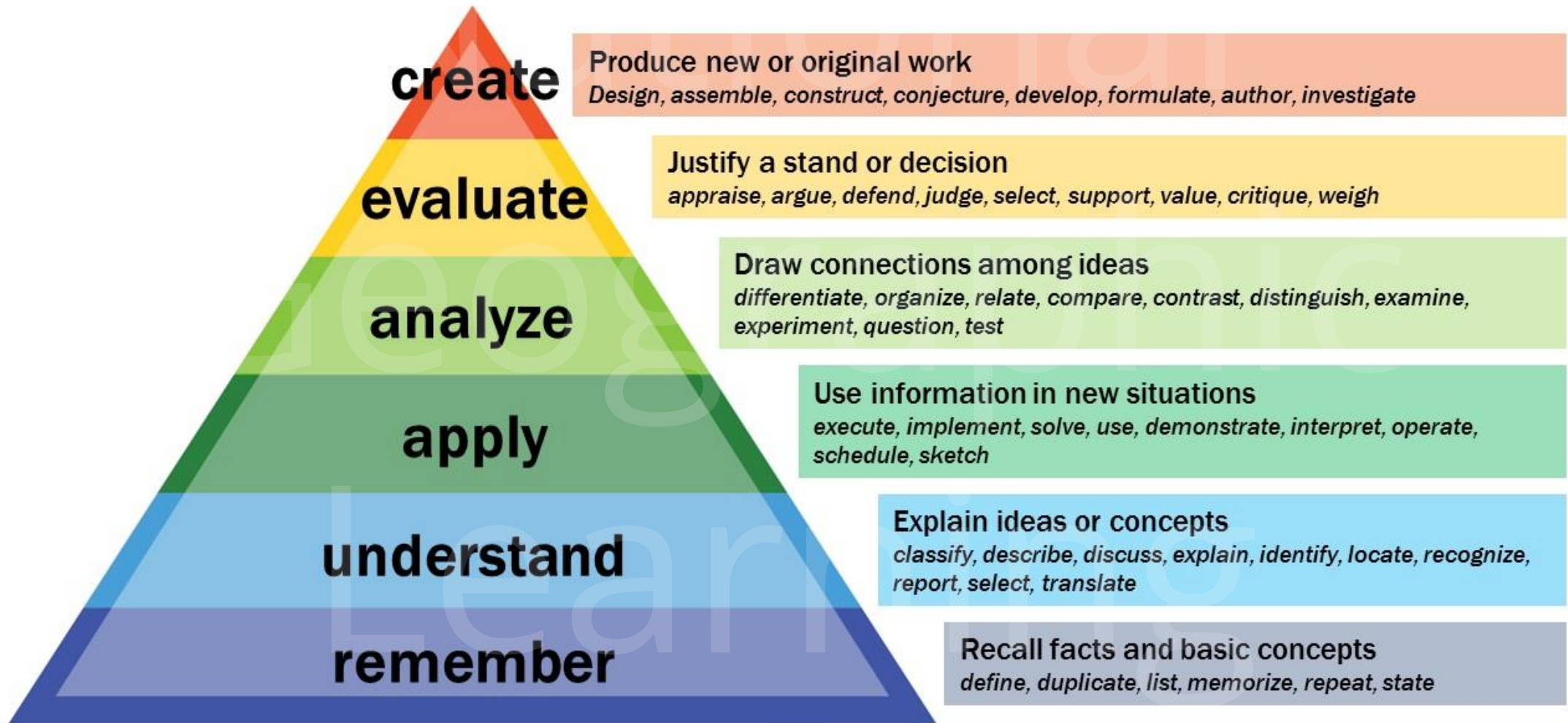


“Creative thinking is a way of looking at problems or situations from a fresh perspective that suggests unorthodox solutions.”

A Taxonomy for Teaching, Learning and Assessment

revised

Bloom's Taxonomy



FRAMEWORK FOR 21st CENTURY LEARNING DEFINITIONS



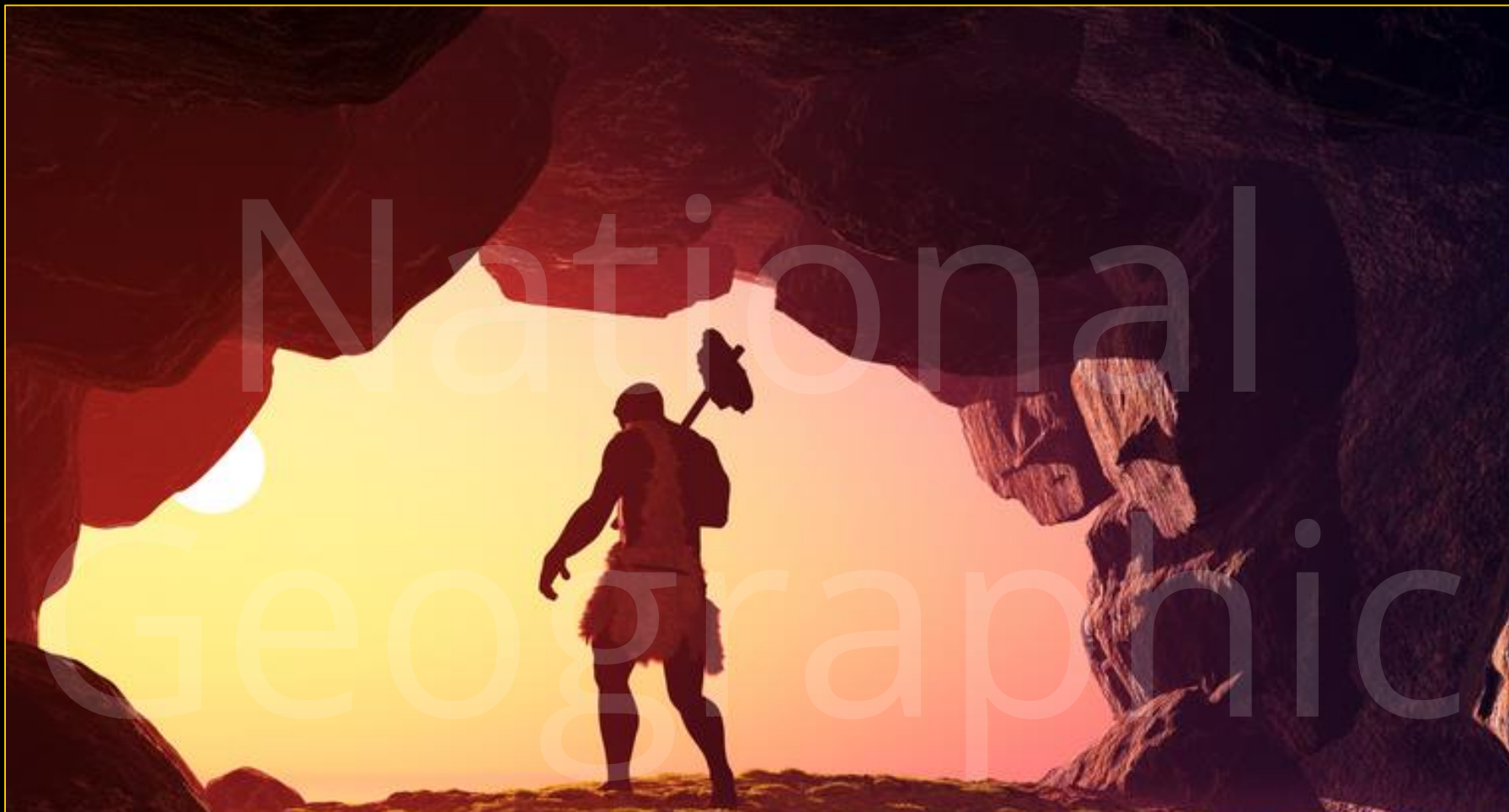
Creativity and Innovation

THINK CREATIVELY

- Use a wide range of **idea-creation techniques** (such as brainstorming)
- Create **new** and worthwhile ideas
- Elaborate, refine, **analyze**, and **evaluate** their own ideas in order to improve and maximize creative efforts

WORK CREATIVELY WITH OTHERS

- **Develop**, implement, and communicate new ideas to others effectively
- Be **open and responsive** to new and diverse perspectives
- Demonstrate **originality** and inventiveness in work
- View failure as an **opportunity** to learn



“We are attempting to **educate** students today so that they will be ready to solve **future problems** that have not yet been identified, using technologies not yet invented, based on scientific **knowledge** not yet discovered.”

JJ Lagowski



“Creativity now is as important in education as literacy. We should treat it with the same status.”

Sir Ken Robinson

On a scale of 1-10 (10=totally agree) how far do you agree? Why/Why not?

Ken Robinson:

Do schools kill creativity?

TED2006 · 19:24 · Filmed Feb 2006

 59 subtitle languages 

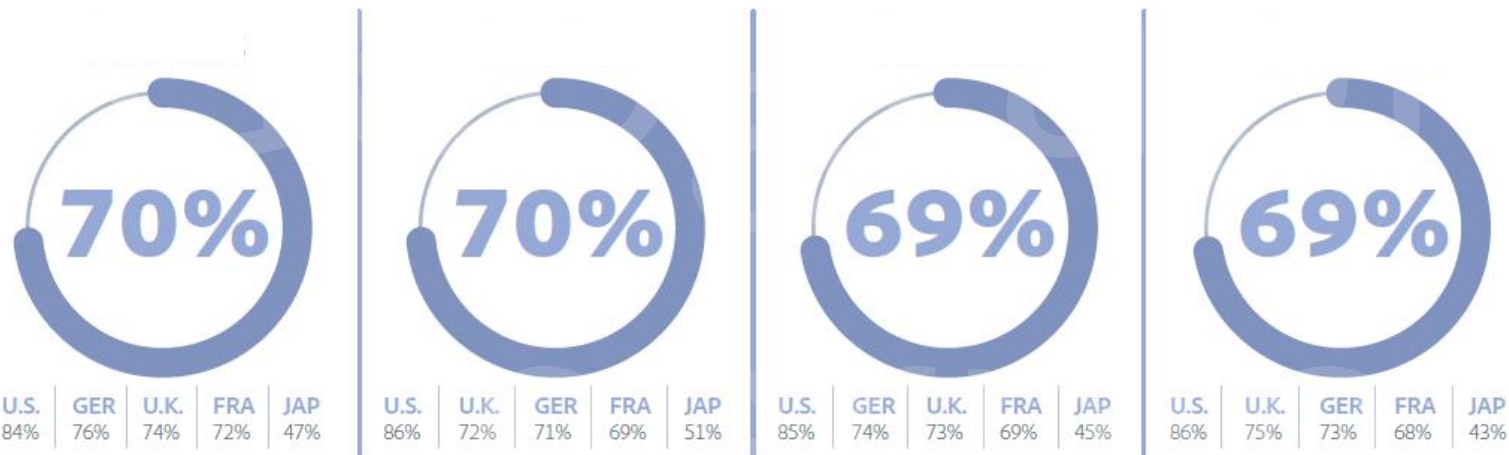
 [View interactive transcript](#)



62,897,423 views!

Being more creative makes people better...

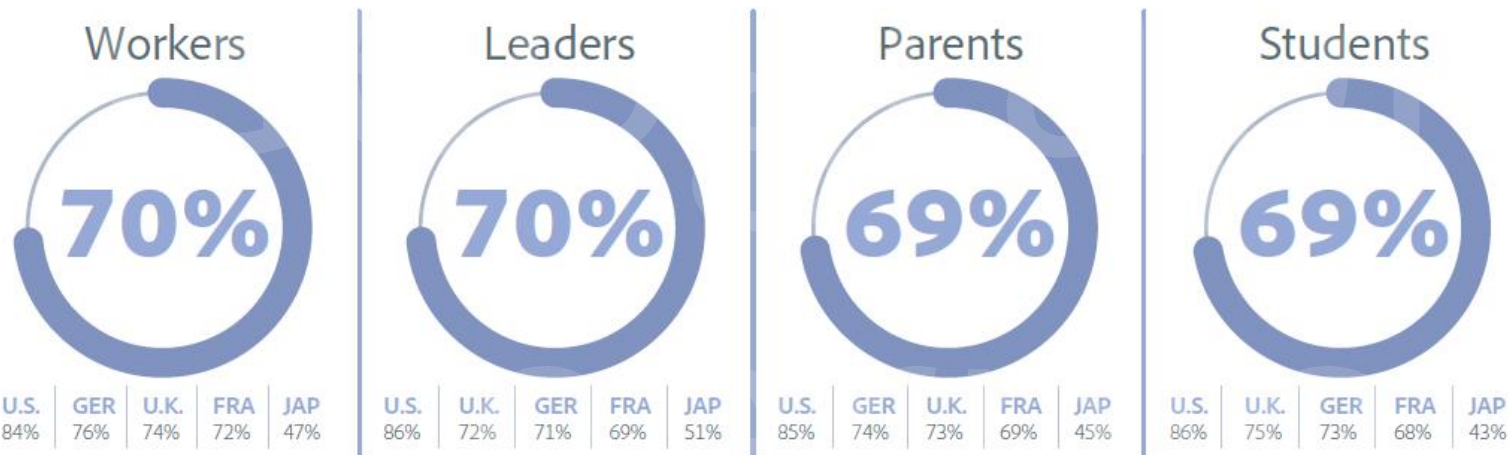
(% GLOBAL, TOP 2 BOX)



Q21. Please indicate to what extent you agree or disagree with the following statements: Being more creative helps make people... (Top 2 box <Somewhat/Strongly agree> reported)
Base sizes: Global - 5,026, U.S. - 1,009, U.K. - 1,004, Germany - 1,006, France - 1,007, Japan - 1,000
Photo by Victoria Siemer

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Photo by Victoria Siemer

A person wearing a white dress shirt and a dark tie is shown from the chest up. The image is heavily stylized with vibrant, multi-colored paint splatters and streaks in shades of blue, green, yellow, and purple. Overlaid on the center of the image is the text '41%' in a large, bold, yellow font. The background is a dark, textured grey.

41%

Are you a creative person?

8 WAYS TO BOOST YOUR CREATIVITY

1

GO NATURAL

Even pictures of nature inspire people's minds to be more creative. Better still, get out in the wild!



2

MOVE MORE

Research shows people come up with more ideas after even minimal activity



3

USE YOUR HANDS

Working with materials and models will help you create more ideas



4

LOSE YOUR PRIDE

If you're not worried who gets the credit for creativity, then you'll love building new ideas with other creatives



5

WARM UP

Take an every day object and see how many different uses you can think of for it in 2 minutes



6

SEARCH FOR EVIDENCE

Get a list of all the times in the past when you've come up with creative solutions to things



7

ASK WHAT IF I WAS A KID?

Children aren't constrained in their thinking as we are, so if you can, think like a kid, or better still, ask one some questions



8

HANG OUT WITH CREATIVE PEOPLE

Who are your most creative friends? Go and spend some time with them and pick their brain about what helps them be creative



8 WAYS TO BOOST YOUR CREATIVITY

NATURAL

Let nature inspire you to be more creative. Get out in nature



WARM UP

Take an every day object and see how many different uses you can think of for it in 2 minutes

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Alternative Uses Test



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Learning

Alternative Uses Test



- > Cufflinks
- > Earrings
- > Bookmark
- > Thing you use to push the emergency restart button on your router
- > Keeping headphones from getting tangled up
- > Nose weight for paper aeroplanes
- > Hairclip
- > Lock pick
- > Fish hook
- > Back scratcher
- > Money clip
- > Lock for hamster cage
- > Picture hanger

Odd One Out



Peach, strawberry, melon,
pineapple, grapes

Dog, cat, fish, pig, cow

Spider, butterfly, bee, grasshopper,
snail

Car, boat, train, bicycle, bus

Creativity needs to be a priority in education

WHAT SCHOOLS SHOULD **PRIORITIZE** (% GLOBAL)



Learning by "doing"
vs. direct instruction

| GER | U.S. | JAP | FRA | U.K. |
|-----|------|-----|-----|------|
| 87% | 85% | 85% | 84% | 81% |



Creativity vs. retaining or
memorizing information

| GER | U.S. | JAP | U.K. | FRA |
|-----|------|-----|------|-----|
| 84% | 78% | 72% | 71% | 71% |



Time for creative
activity vs. a fully
structured school day

| GER | FRA | U.S. | JAP | U.K. |
|-----|-----|------|-----|------|
| 84% | 79% | 77% | 68% | 63% |



Developing a wide
variety of skills vs. a
specialized set of skills

| U.S. | U.K. | GER | FRA | JAP |
|------|------|-----|-----|-----|
| 79% | 78% | 74% | 65% | 61% |

Q30. Which is more important for schools to prioritize?
Base sizes: Global - 5,026, U.S. - 1,009, U.K. - 1,004, Germany - 1,006, France - 1,007, Japan - 1,000
Photo by Takashi Yasui

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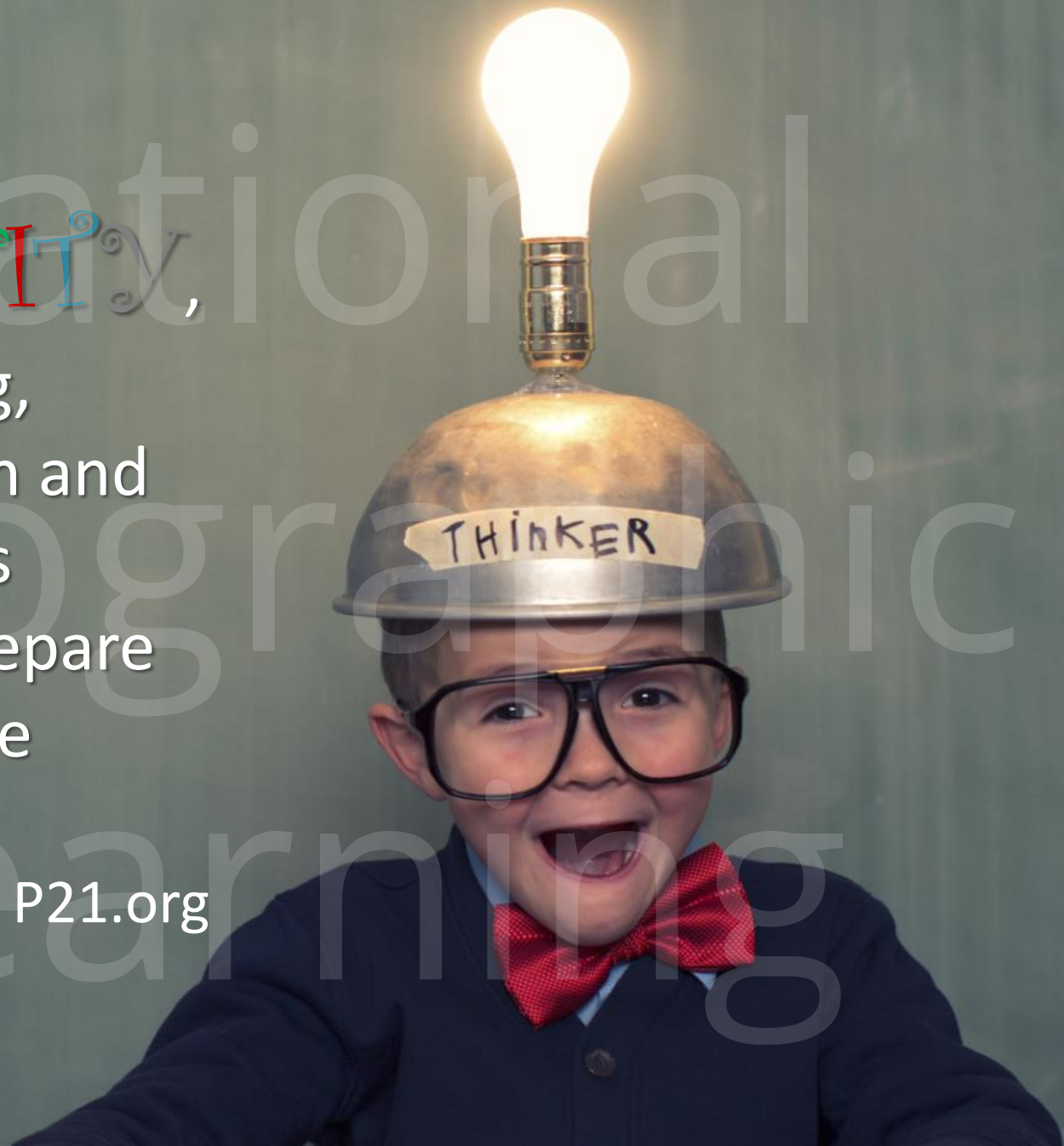
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Photo by Takashi Yasui

“A focus on
CREATIVITY,
critical thinking,
communication and
collaboration is
essential to prepare
students for the
future.”

P21.org



So ———

**How can we foster creativity
in the ELT classroom?**

A woman in a red dress is speaking on a stage in a large, ornate auditorium. The stage has a red carpet and a large red "TED" sign. The audience is seated in rows, and the room is dimly lit with blue stage lights. The text "IDEAS WORTH SPREADING" is overlaid in white, bold, sans-serif font across the center of the image.

IDEAS WORTH SPREADING

National Geographic Learning



12.1 Creative problem-solving in the face of extreme limits

TED TALKS Watch at home

1 ▶ **12.1** Watch the first part (0.00–1.37) of the edited TED Talk. Listen to the descriptions of three inventions from different countries. Complete the table.

| Country / Region | Description of invention | Unique feature |
|------------------|--------------------------|----------------|
| 1 India | | |
| 2 Africa | | |
| 3 Peru | | |

2 ▶ **12.1** Watch the second part (1.37–3.33) of the talk. Answer the questions.

- 1 What two things are typical of the entrepreneurs Navi Radjou has met in developing countries?
- 2 What are some of the basic resources that these entrepreneurs lack?
- 3 What resource do people have to rely on when they lack these other resources?
- 4 What can *Jugaad* entrepreneurs 'magically' do?
- 5 What is the essence of frugal innovation? Complete the quote: It's 'the art of doing _____ with _____.'

3 ▶ **12.1** Watch the third part (3.33–5.31) of the talk. Complete the summary. The first letter has been given for you.

In China an IT company has developed a solution whereby doctors in ¹ c_____ communicate with less ² q_____ health workers and help them to treat patients in Chinese ³ v_____. This frugal innovation is important because by 2050 China will have half a billion ⁴ s_____ citizens.

Frugal innovation is the opposite of the way companies in the North and West innovate. They use a lot of natural ⁵ r_____ to create more ⁶ c_____ products so that they can charge customers more for new features. This more for ⁷ m_____ business model is breaking down since a) customers in the West have less ⁸ m_____ ; b) there is less natural ⁹ w_____ and oil; and c) there is a growing gap between the products companies offer and the basic ¹⁰ n_____ of most customers.

4 ▶ **12.1** Watch the fourth part (5.31–7.45) of the talk. Navi Radjou gives examples of two Western companies that use frugal innovation. Make notes on each idea. Then compare notes with your partner.

- 1 Grameen Danone factory
- 2 Siemens CT scanner



8.1 A skateboard, with a boost

TED TALKS

- 1 ▶ **8.1** Watch the TED Talk. Discuss with a partner how this electric skateboard works (in simple terms) and what its main benefit is.
- 2 ▶ **8.1** Watch the first part (0.00–1.16) of the talk again. Complete the facts about the electric skateboard.
 - 1 Weight: _____ a bicycle
 - 2 Charge time: _____ minutes
 - 3 Cost per 1,000 kms: _____ dollar(s)
 - 4 Top speed: _____ kilometres per hour
 - 5 Battery range: _____ kilometres
 - 6 Number of US car trips possible with board: _____ of all trips
- 3 Work in pairs. What does Sanjay Dastoor say most people think of when they hear the word 'vehicle'?
- 4 ▶ **8.1** Watch the second part (1.16–1.44) of the talk again. What does Sanjay Dastoor emphasize about the following things:
 - 1 where the components in the skateboard come from
 - 2 the experience of using the skateboard
- 5 ▶ **8.1** Watch the third part (1.44–2.51) of the talk again. What images accompany each of the four subtitles? Discuss with your partner what you saw and what each subtitle means.
 - 1 6 Mile Range
 - 2 Top Speed Near 20 mph
 - 3 Uphill Climbing
 - 4 Regenerative Braking



8.1 How to make the work–life balance work

TED TALKS

- 1** ▶ **8.1** Nigel Marsh once gave up work for a year to spend time with his family. In this TED Talk, he shares four observations about the work–life balance with the audience. Watch the edited version of the talk and tick (✓) the four observations he shares.
- a An honest debate about the work–life balance is essential.
 - b He's never met anyone who has found a happy balance between life and work.
 - c Finding balance depends on individuals taking control of their lives.
 - d We need to be realistic about the time frame we use to achieve balance.
 - e Employers play a key role in this debate.
 - f We need to look at work–life balance in a balanced way.
- 2** ▶ **8.1** Watch the first part (0.00–3.06) of the talk again. Complete the sentences with the words and expressions Nigel Marsh uses.
- 1 When Nigel Marsh turned 40, he decided to try and turn his _____ around.
 - 2 He learned that it was quite _____ to balance work and life when he didn't have any work.
 - 3 He says so many people talk so much _____ about work–life balance.
 - 4 He thinks that going to work on Friday in _____ doesn't get to the root of the problem.



3.1 Making peace is a marathon

TED TALKS

1 ▶ 3.1 Watch the TED Talk. Number the sections of the talk in order. Then check your answers with a partner.

- a El-Khalil is struck by personal tragedy
- b Lebanon, a country ripped apart by war
- c Peace is possible and other lessons from the Beirut Marathon.
- d El-Khalil comes up with the idea of the Beirut marathon.
- e Hope for the future
- f The dream becomes a reality

2 ▶ 3.1 Find and correct five errors in the summary of the first part of the talk. Then watch the first part (0.00–3.43) of the talk again and check your answers.

The idea of starting a marathon came to May El-Khalil while she was recovering from a terrible rail crash. As a result, she spent two years in hospital and had six surgical operations. During this difficult time, she needed an objective to look forward to, and wanted to give something back to her doctors. After she got out of hospital, she visited and spoke with lots of people in different parts of the city. They shared their stories and together they built trust. They all agreed that together, they would show the politicians that Lebanon wanted to live in peace and harmony.

PART 2 TED TALKS

Forget shopping. Soon you'll download your new clothes.

“I wonder what our world will look like when our clothes will be digital.”

BEFORE YOU WATCH

A Work with a partner. Read the information about the TED speaker. Then discuss these questions.

1. What do you know about 3D printing?
2. Would you like to print your own clothes on a 3D printer? Why, or why not?

DANIT PELEG Fashion Designer

Danit Peleg is a fashion designer who also loves to experiment with new technology. She created one of the first 3D-printed fashion collections, producing all of the garments using only home printers.

Peleg's idea worth spreading is that technology can give designers more independence and can give the public greater access to all kinds of fashion.

Is it
possible to
make filthy
drinking
water
drinkable?
How?



=





6.1 How to make filthy water drinkable

TED TALKS

1 ▶ **6.1** Watch the TED Talk. What is Michael Pritchard's main message?

- 1 Relief operations after natural disasters need to be greatly improved.
- 2 By providing the Lifesaver bottle, the UK government could save a lot of foreign-aid money.
- 3 Providing safe, affordable drinking water for everyone on Earth could save millions of lives.

2 ▶ **6.1** Watch the first part (0.00–3.22) of the talk again. Answer the questions.

- 1 What medical condition, caused by drinking contaminated water, does Pritchard talk about?
- 2 Why do we (and governments and aid agencies) 'switch off' in discussions about the global need for clean water around the world?
- 3 In the Asian tsunami, what was the alternative to drinking contaminated water?
- 4 After Hurricane Katrina in the USA, how many days passed before clean water arrived?
- 5 What does Lifesaver filter out that other filter systems can't?

This video includes a TED Talk
courtesy of TED.com.

https://www.ted.com/talks/michael_pritchard_invents_a_water_filter?language=en



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“Every **problem** has a solution. You just have to be **creative** enough to find it.”

Travis Kalanick, co-founder of Uber



How to rehabilitate old oil supertankers

www.bbc.com/future/story/20171029-five-big-ideas-and-when-theyll-happen

By Richard Gray

1 July 2019

The enormous ships that ferry crude oil around the world embody the fossil fuel era and its legacy of pollution. But can they be transformed to be good for the environment?

Work in groups.

What ideas can you think of to rehabilitate oil supertankers once they are no longer needed?

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Discuss the pros and cons of these ideas, then rank them in order of how good an idea you think they are.

1. Dispose of/dismantle them for recycling
2. Turn them into mobile waste water treatment plants
3. Turn them into floating public villages
4. Transform them into environmentally friendly mobile power stations
5. Turn them into floating factories
6. Sink them to create artificial reefs



9.1 How to tie your shoes

TED TALKS

1 ▶ **9.1** Work in pairs. Watch the TED Talk. Then show your partner Terry Moore's method of tying your shoes.

2 ▶ **9.1** Watch the first part (0.00–0.31) of the talk again. Answer the questions.

- 1 How does Terry Moore describe his TED audience?
- 2 What piece of bad news does he give them?

3 ▶ **9.1** Watch the second part (0.31–1.12) of the talk again. Complete the summary below.

Terry Moore bought some ¹ *exercise / expensive* shoes. But they came with ² *round / flat* laces and he couldn't keep them ³ *tied / tight*. So he took them ⁴ *off / back*. He said to the salesman, 'I love the ⁵ *style / shoes*, but I hate the laces.' And the salesman said, ⁶ *'You're tying them wrong.'* 'They're ⁷ *too long*.' Moore was surprised because he thought by the age of ⁸ *40 / 50*, he had learned how to tie shoes.

4 ▶ **9.1** Watch the third part (1.12–2.09) of the talk again. Answer the questions.

- 1 What does Terry Moore demonstrate first?
- 2 What does his second demonstration show?
- 3 What are the advantages of the second method he describes? Complete the notes.
It's a ¹ _____ knot. It will come ² _____ less often. It will let you ³ _____ less. And it ⁴ _____ better.

5 ▶ **9.1** Watch the fourth part (2.09 to the end) of the talk again. According to Terry Moore, what does this way of tying your shoes teach us? Complete the sentence.

'A ¹ _____ advantage someplace in ² _____ can yield ³ _____ results someplace ⁴ _____.'

SPEAKING Practical solutions

11 21st CENTURY OUTCOMES

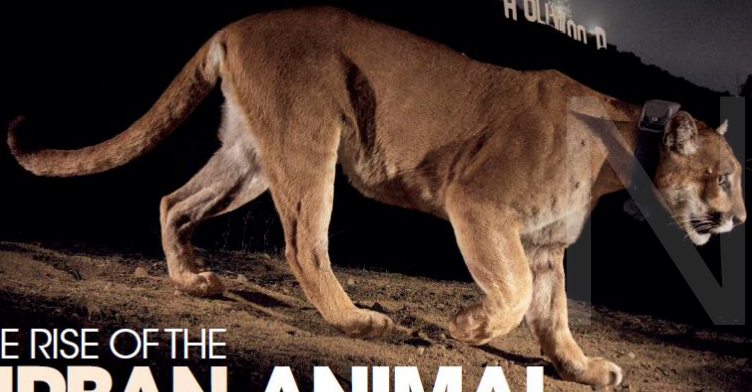
Work in pairs. Look at the everyday problems (1–5). Think of solutions and then write sentences using the first conditional or an imperative with *if*, *when*, *before* and *after*.

- 1 People often forget their passwords.
- 2 People often feel stressed at work and become unproductive.
- 3 People are often short of spending money at the end of the month.
- 4 Employees often feel they have to stay late at work to show they are working hard.
- 5 People often feel they don't have enough time to do sport or exercise.

1 It is important to change your password regularly. But people worry that if they change their password they will forget it. One answer is to ...

12 Exchange ideas with another pair. Which solutions did you find the most useful?

A mountain lion, Hollywood, USA



THE RISE OF THE URBAN ANIMAL

▶ 94

There are now more peregrine falcons per square kilometre in New York City than anywhere else on Earth. In northern Mumbai, an estimated 35 leopards roam freely in Sanjay Gandhi National Park. Suburban Chicago is home to over 2,000 wild coyotes; some have even been seen hanging around the international airport. In Berlin, wild boars forage for food in people's gardens and raise families in local woods. In Los Angeles, mountain lions tiptoe invisibly past tourists in the Hollywood hills. And walking the streets of London in the early hours of the morning, you are as likely to see an urban fox as a domestic cat.

Rodents and insects, such as ants, have long been city-dwellers, living in sewers or under pavements and feeding on our discarded food. But there is now a trend for bigger animals, many of them carnivores, taking up residence in our towns and cities. 'I grew up in London,' says Tristan Donovan, one of many ecologists studying the phenomenon, 'and it didn't seem like there were that many foxes around when I was kid. And that made me wonder: is this happening everywhere?' The answer is yes. But the real question is why? It seems the main attraction for these creatures is the abundance of food in cities. Seagulls have come inland to scavenge from land-fill sites and foxes have abandoned the countryside in favour of back alleys and rubbish bins. And where small animals have moved in, some of their predators have followed. Peregrine falcons sit high up on New York's skyscrapers and watch the pigeons below, waiting to swoop on any which venture into the open.

There are other factors too. Urban sprawl and climate change have meant that animals' native habitats are shrinking or disappearing. The mountain lions of Hollywood, who in the wild typically roam an area of around 1,000 square kilometres, are limited there to a mere 65 square kilometres. At the same time, the animals feel less wary of their human neighbours than in the past and with good reason, because animal hunting is far less popular.

But if they are less scared of us, should we be any less scared of them? Certainly not, according to wildlife ecologist, Stan Gehrt, who says that when predators lose their instinctive fear of humans, they actually become more likely to attack us. He urges anyone who sees a large wild cat or coyote to shout or throw stones. To ensure our own safety, he says, we must establish our authority over these animals, because they are 'not going to go away'. Fortunately, incidents of urban animals attacking residents are relatively rare, though attacks on domestic pets are common.

Co-habitation with humans has caused other adaptations in animal behaviour. Some have even started to take on human traits, like the coyotes in Chicago, who were spotted waiting at a traffic light before crossing the road. Bears around Lake Tahoe in the United States feed so well on discarded food all year round that they no longer need to hibernate in winter.

But is this a case of animals evolving to meet the demands of a new environment or just a case of certain animals having the right personality to suit the circumstances? Gehrt thinks it might be the latter. What he has observed is that animals which are naturally cautious or neophobic (afraid of new things) tend to do much better in cities than those which are bold. So, not so much a case of fortune favouring the brave, as you would expect, but fortune favouring the timid.

City life is not for everyone and some animals will never adjust to it. But for those that have, it is time that we began to view them as one of us. As Seth Magle of Chicago's zoo puts it, 'We started from this narrative in which the city is an evil landscape that chews up the landscape and leaves nothing behind. But the reality is that we're not going to stop urbanizing the planet, so how do we turn cities into something good, something positive for wildlife?'

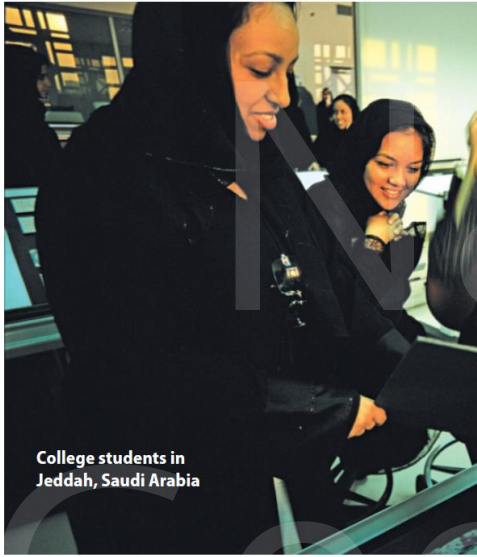
hibernate (v) /'hɪbər(ɪ)neɪt/ (of animals) go to sleep for the winter
sewer (n) /'suːə(r)/ underground channels for carrying waste water away
swoop (v) /swu:p/ dive down towards something from above
urban sprawl /'ɜː(r)bn sprɔːl/ the spreading of cities onto undeveloped land

Speaking my life

11 Work in groups. Discuss what you think could be done, if anything, about the following problems. Then share your ideas with the class.

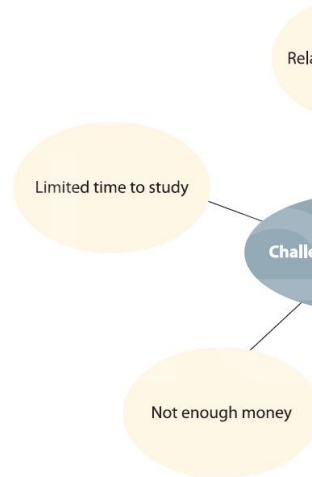
- animals' native habitats being lost because of human (especially urban) development
- urban animals which are a danger to humans
- animals, e.g. tigers, which are in danger of extinction because of human activity
- the hunting of animals (e.g. elephants and rhinos), for valuable body parts (e.g. tusks and horns)

B Speaking

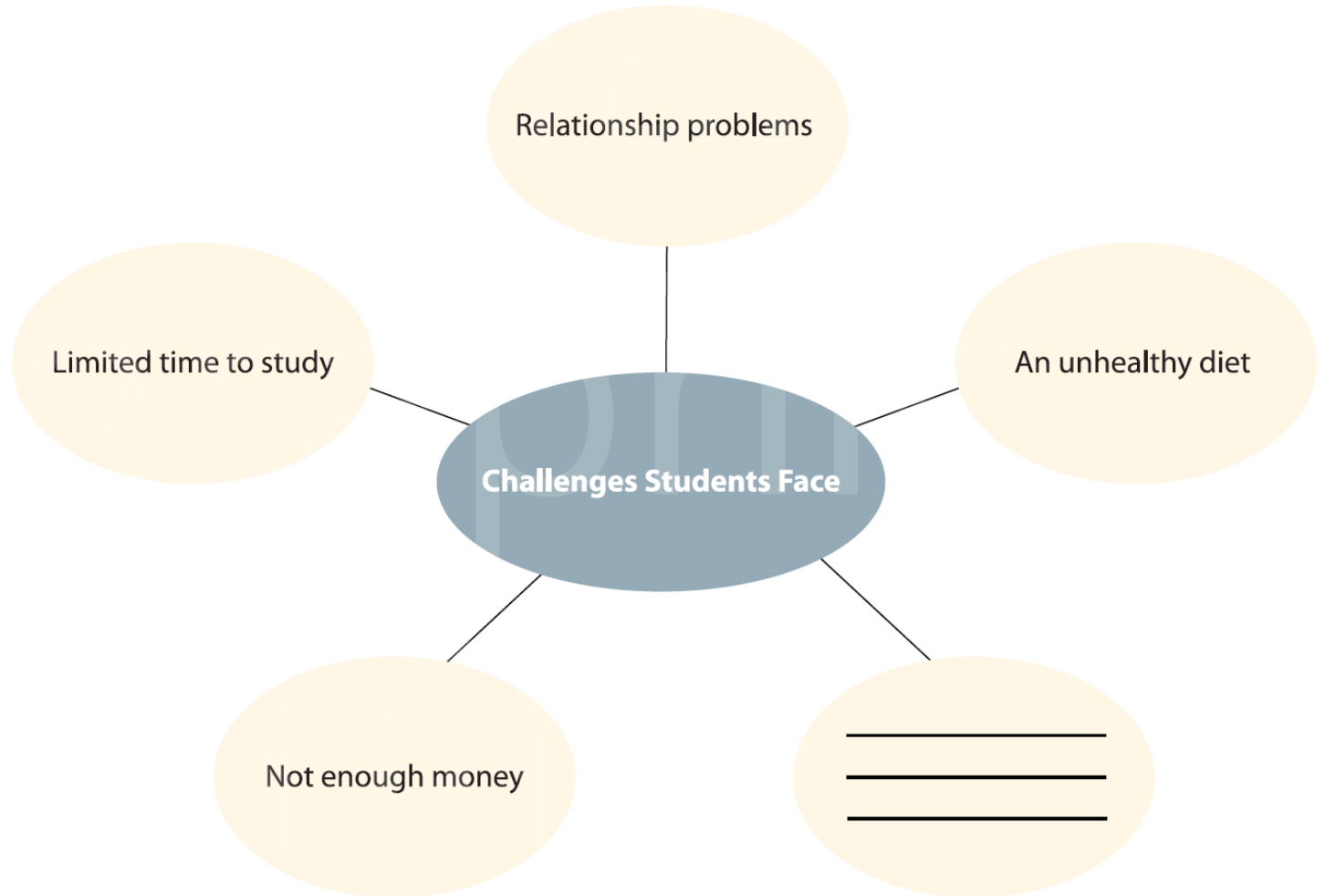


College students in Jeddah, Saudi Arabia

BRAINSTORMING **A** Work with a partner. Look at the idea map. Then brainstorm at least two possible solutions for each one and add them to the map.



A Work with a partner. Look at the idea map and add one more common challenge. Then brainstorm at least two possible solutions for each one and add them to the map.



E Work in a small group. Look at the photos and read the information. Then answer the questions.

The word *chindogu* translates as “weird tools.” The International Chindogu was founded by Japanese designer and inventor Kenji Kawakami and U.S. inventor Dan Papia. Kawakami, who came up with the name *chindogu*, has invented a lot of strange and unusual objects. *Chindogu* inventions are impractical solutions to everyday problems. Every invention is somewhat useless, but always fun.

1. Have you ever heard of *chindogu* or anything similar before?
2. What do you think of the idea of *chindogu*? Why?
3. Would you ever use either of the *chindogu* inventions? Explain.
4. What other *chindogu*-style alarm clocks or helmets can you imagine?

A: I've never heard of *chindogu* before. Have you?
B: No, but I think the inventions are really ...
C: I agree, but don't you think they're also ... ?



▲ Kawakami demonstrates his alarm clock. It has a snooze button under a bed of sharp pins to make sure you don't go back to sleep.



▲ This *chindogu* is the perfect bike helmet for those who like to wear hair in braids or ponytails.

LESSON TASK Presenting a Design

- A** Work in a small group. Come up with your own idea for a *chindogu* invention. Make sure your idea meets the principles of *chindogu* in exercise F.
- B** In your group, work together to draw or create a picture of your design. Then use the outline below to plan a three-minute talk.

1. Introduction with a question to the audience. (*Have you ever...?*)

2. Explanation of what your invention is called and how it works.

3. Explanation of who might use it.

- C** Practice your presentation. Keep these points in mind.

Make sure:

- you display the picture of the design that you created
- that everyone in your group has the chance to say something
- you can deliver your talk in three minutes or less

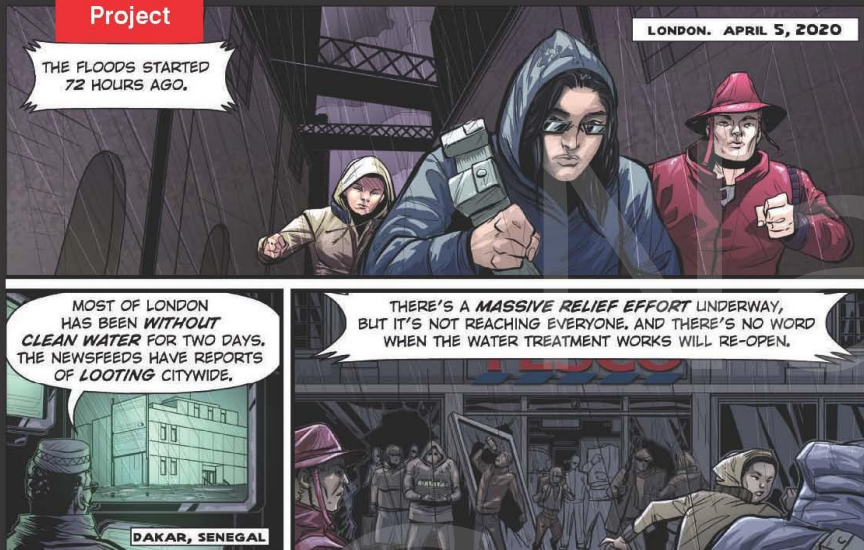
- D** As a group, deliver your talk and answer any questions from other students. Then listen to the other groups present their ideas, and ask questions.

Project Based Learning

“PBL can be defined as an extended learning process that uses inquiry and challenge to stimulate the growth and mastery of skills.”

Thom Markham, 2012

Project



Evolve, a social network game developed by Jane McGonigal with the World Bank, aims to empower people all over the world to come up with creative solutions to urgent social problems.

- A.** Work with a partner. You and your partner have been hired by the Institute for the Future to come up with a proposal for an online game that can have a positive impact on the world.

You need to decide:

- on a global issue. Some ideas include reducing climate change, fighting epidemics, producing enough food for everyone, improving education, disaster relief, dealing with resource shortages (water, oil, trees, etc.), and so on.
- the game's end goal; how the game works; what do gamers need to do?
- the title of the game.

- B.** Work with two other pairs.

- Give your presentation. Explain your proposal.
- As you listen, take notes.
- At the end, review your notes.
- Which proposal is the most likely to receive funding from the Institute for the Future?

EXPLORE MORE

Learn more about online gaming. Read "10 online games . . . with a social purpose" on the TED Blog at TED.com. What are some other games that help people think about big, real-world problems? How do you play them? Share your information with the class.

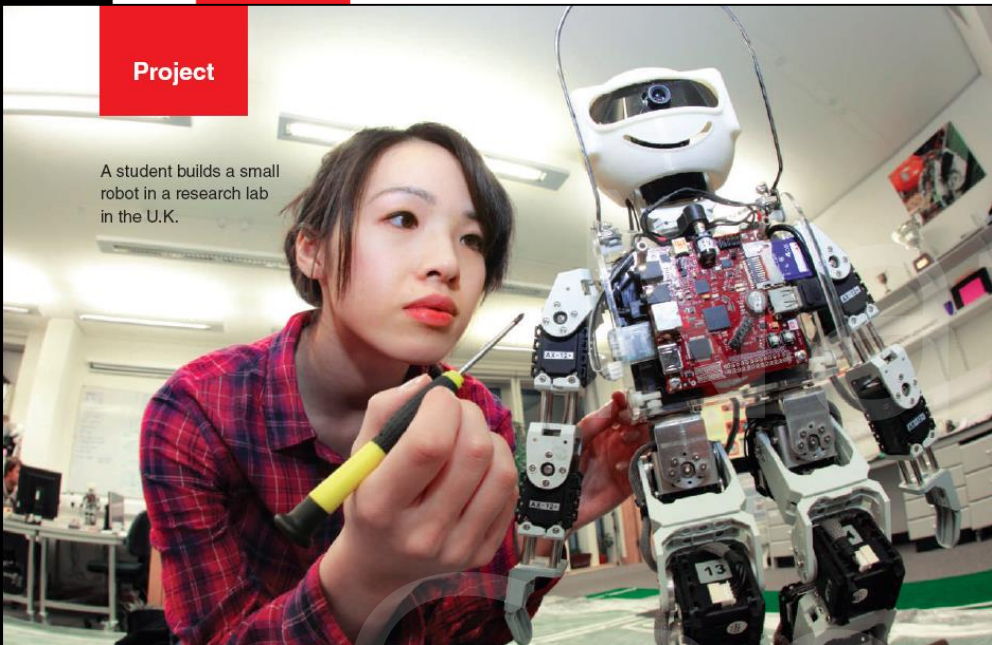
63



McGonigal's idea worth spreading is that the skills we learn playing games can also be used to solve real-world problems.

Project

A student builds a small robot in a research lab in the U.K.



A. Work with a partner. You are going to design a robot.

1. With your partner, decide the following:

- What kind of robot is it (e.g., a social robot)?
- What is its purpose?
- Who does it help?
- What does it look like?
- What special skills does it have?

2. Create a two-minute presentation. Include a diagram or drawing of your robot.

B. Work with two other pairs.

- Give your presentations.
- As you listen, take notes.
- At the end, review your notes.
- Discuss: Which robot idea is the most useful? Why?

EXPLORE MORE

Learn more about robots. Go to TED.com and search for the playlist called "How to Live with Robots." Choose one of the TED Talks that interest you the most, and share what you learn with your class.

147



Breazeal's idea worth spreading is that personal robots have the potential to improve our individual well-being and connect us more closely to one other.

148

“With creativity and commitment, you can create beauty and comfort and safety, and even luxury, out of a material that will grow back.”

ELORA HARDY

Read about Elora Hardy and get ready to watch her TED Talk. ▶ 2.0



AUTHENTIC LISTENING SKILLS

Listening for gist

When you listen, don't try to understand every word. Try to relax and focus on what you do understand, not what you don't understand. Notice words that the speaker repeats or stresses, and the types of words that are used a lot, for example, adjectives. Try to work out the connections between the words you understand.

- Listen to the extract from the TED Talk. Circle the topics Elora talks about. ▶ 13
 - a doors
 - b windows
 - c shapes
 - d construction materials
- What is the general idea of what she is talking about? Write a sentence.
- Share your idea with a partner.

WATCH

- Look at the photo on page 20 and read the caption. Why do you think it might be important to use local materials, like bamboo in Bali, to build houses?

- Watch Part 1 of the talk. Choose the correct option to complete each sentence. ▶ 2.1

- _____ drew a fairy mushroom house.
 - a When Elora was a child, her mother
 - b Last year, Elora
 - c When she was a child, Elora
- The curved roof helps keep the house _____.
 - a dry
 - b cool
 - c warm
- It's easy to _____ a person who is using the bathroom.
 - a hear
 - b see
 - c avoid

- Watch Part 2 of the talk. Are the sentences true (T) or false (F)? ▶ 2.2

- Bamboo is a grass.
- Bamboo grows very slowly.
- Bamboo is light and strong.
- Hardy plans to build a school from bamboo.
- The Green School used sustainable materials.

- Watch Part 3 of the talk. Choose the correct option to complete each sentence. ▶ 2.3

- Elora says it is important to *make bamboo do what you want / design for bamboo's strengths*.
- Elora builds models of her houses to *help sell houses to her customers / to test the design*.
- She prefers to build doors that are *balanced / not shaped like teardrops*.
- Bamboo grows back quickly, so it is a *safe / an environmentally friendly* material.

- VOCABULARY IN CONTEXT**

- Watch the clips from the TED Talk. Choose the correct meanings of the words. ▶ 2.4
- Answer the questions.
 - What is one thing that just *doesn't feel right* in your town or city?
 - Has someone ever *just had to tell you* something? What was it?
 - Who is one person who has *treated you well*?
 - In your city, what material *makes perfect sense* to build with?
 - Think of someone you know who is *elegant*. Why would you describe them like this?

- Work in pairs. Read the extract from the talk. Discuss the questions.

The floor that you walk on, can it affect the way that you walk? Can it change the footprint that you'll ultimately leave on the world?

- Is Elora talking about an actual floor?
- How can the floor we walk on change our *footprint*?
- We can't all build bamboo houses. What else can we do in our homes to change the footprint we leave?
- What kind of footprint will you leave on the world? Why?

- MY PERSPECTIVE**

Work in small groups. Discuss the questions.

- As a child, Elora's dream house looked like a mushroom. What is your idea of a dream house?
- Elora designs her houses to be comfortable in hot weather. What is the weather like where you live? How do you make your house comfortable?
- How are Elora's houses similar to your house? How are they different?
- Would you like to live in one of Elora's houses? Why? / Why not? What are the good and bad things about them, in your opinion?

CHALLENGE

Think of the dream house you described in Exercise 10. Do the following:

- Decide what material you would build with: wood, brick, bamboo, something else?
- Decide how it will work with the environment. How will it stay comfortable in hot or cold weather?
- Draw a plan for the house and label the rooms and other details in the house. Include as many rooms as you like – a music room, a cinema, etc.

CHALLENGE

Work in small groups. Isabel and Melati chose to make a positive change in their area. What could you and your friends do to make your world a better place? Think about the following:

- where you shop
- the things you buy
- how products are packaged
- what you do with things you no longer use

Take notes about your ideas.

- 8** Work in the same group. Plan a campaign like the one the Wijsen sisters started. Use your ideas from the Challenge box. Think about how you will start the campaign, what you will do, who will help you and how you will get more support. Present your ideas to the class.



6 VOCABULARY IN CONTEXT

- a Watch the clips from the talk. Choose the correct meanings of the words and phrases. ▶ 8.3
- b Complete the sentences so they are true for you.
- 1 Thinking of problems in the world, I'd like to *do something about* ...
 - 2 An example of a person who *walks his or her talk* is ...
 - 3 An example of a person who has *made a difference* in my life is ...
 - 4 A time in my life when I *went for it* was when I ...
 - 5 A person who is a good example for others and tries to *be the change* they want in the world is ...

CRITICAL THINKING Understanding a speaker's authority

When you think about a speaker's message, consider their experience. When a speaker talks about things they have actually done, their argument is stronger. They have more authority.

- 7** Isabel and Melati tell us to 'Go for it!' and to 'Make that difference.' What is the best reason why we should listen to them?

- a They have watched other people successfully make changes in the world.
- b They know that a lot of people believe that plastic bags are a serious problem.
- c They've actually done what they're telling us to do, and they've succeeded.

CHALLENGE

Work in small groups. Isabel and Melati chose to make a positive change in their area. What could you and your friends do to make your world a better place? Think about the following:

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CHALLENGE

Work in pairs. Imagine you have to design a transport strategy for a sustainable city. Which three features would you prioritize? Which three would you not include? Make notes on your reasons for each.

- build more cycle networks
- build road tunnels and flyovers
- encourage carsharing
- encourage working from home
- allow parking outside the city centre only
- expand the metro network
- encourage delivery by drones
- invest in driverless cars
- invest in modular vehicles
- subsidize all public transport
- widen existing roads

Now work in groups. Try to reach agreement on a plan to include five different features.



- 7 Watch Part 3 of the talk. Complete the sentences with numbers or a percentage. ▶ 7.3
- 1 Almost _____ of traffic in cities is caused by drivers looking for somewhere to park.
 - 2 _____ of cars in cities contain only one passenger.
 - 3 Every time our heart beats, it pushes _____ of red blood cells around the body.
 - 4 More than _____ of the oxygen capacity of our blood cells is used efficiently.
- 8 Complete the summary with one or two words in each gap.
- The train Wanis describes does not need to stop because the wagons (1) _____ and turn into (2) _____ buses. Then a section of the bus (3) _____ and (4) _____ to your house.
- 9 Watch Part 4 of the talk. Choose the correct option. ▶ 7.4
- 1 It is *easy* / *difficult* for driverless cars to learn traffic rules.
 - 2 Driverless cities *would still need* / *would not need* traffic lights and traffic lanes.
 - 3 Cars would drive *faster than* / *at the same speed as* they do now.
 - 4 Cars would move according to *new rules* / *changing algorithms*.
 - 5 Driverless cars *will flow freely* / *will not need robotic control*.
 - 6 Wanis says that it's technologically possible for these developments to happen *now* / *in the near future*.

- 10 VOCABULARY IN CONTEXT
- a Watch the clips from the TED Talk. Choose the correct meaning of the words and phrases. ▶ 7.5
 - b Think of an example of the following things. Then work in pairs and compare your examples.
 - an *aha moment* you have had
 - something that has been an *eye-opener* for you
 - how a city can be *car-centric* or *people-centric*
 - the *attributes* of a great pet / school / film

CHALLENGE

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Now work in groups. Try to reach agreement on a plan to include five different features.

- 11 MY PERSPECTIVE
- Work in pairs. Would you want to travel in a driverless car? Why? / Why not?



9 Watch Part 3 of the talk. Are these statements true (T), false (F) or not given (NG)? ▶ 9.3

- 1 Karl got in trouble with his teacher for being late to school.
- 2 The people waving were talking on the phone to people watching TV.
- 3 The queen was interviewed on the programme.
- 4 When the queen appeared on the programme, Twitter crashed.
- 5 The programme holds a world record.
- 6 Thomas thinks that Slow TV was a fun idea but it isn't attractive any more.
- 7 He thinks that good ideas for Slow TV programmes are ideas that other people don't think are good.
- 8 Slow TV is becoming popular in other parts of the world.

10 VOCABULARY IN CONTEXT

- a Watch the clips from the TED Talk. Choose the correct meaning of the words and phrases. ▶ 9.4
- b Work in pairs. Tell your partner about each of the following.
 - a TV programme, game or book that has *gripped* you recently. Why is it so good?
 - an idea or plan you've *come up with* recently
 - an event you went to but very few other people *showed up*
 - the longest number of *days in a row* that you didn't go to school for some reason
 - a difficult situation that you *handled well*
 - a *buzzword* that's popular at the moment

CRITICAL THINKING Supporting your argument

Here are ways that speakers can support their argument.

- a Ask the audience relevant questions or ask them to imagine themselves in a situation.
- b Describe a series of events.
- c Explain why their argument is true.
- d Let the audience experience something so they can decide for themselves.
- e Make comparisons.
- f Provide statistics and other information.

11 Thomas argues that Slow TV provides surprisingly popular entertainment. Which of the techniques above does he use in his talk to support his argument?

12 What other ways does he use to persuade you that Slow TV can be entertaining?

CHALLENGE

NRK have made programmes about journeys, knitting and bird watching. Thomas says 'we started looking for other things we could make Slow TV about'. What Slow TV might be popular with your friends or people in your country?

In groups, choose the best idea and think about:

- why the idea is fun or engaging
- who will watch it
- how long it will run for
- how the viewers can take part

Present your Slow TV idea to the class. Together, decide on the ideas that:

- would get the highest ratings
- would be the most difficult to make
- would be boring and addictive at the same time

CHALLENGE

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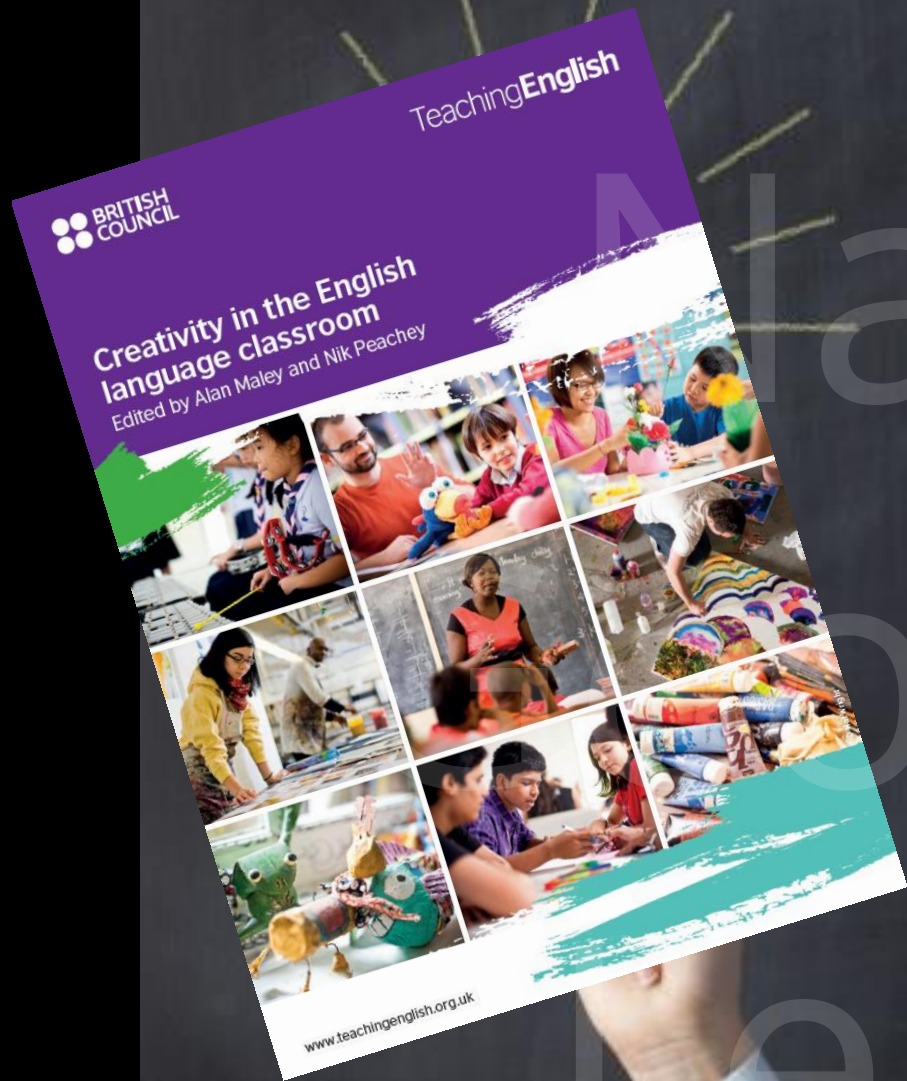
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“One **major advantage** of project work is that it makes school more like **real life**. It’s an in-depth investigation of a real-world topic worthy of learner’s **attention** and effort.”

Sylvia Chard, educational researcher

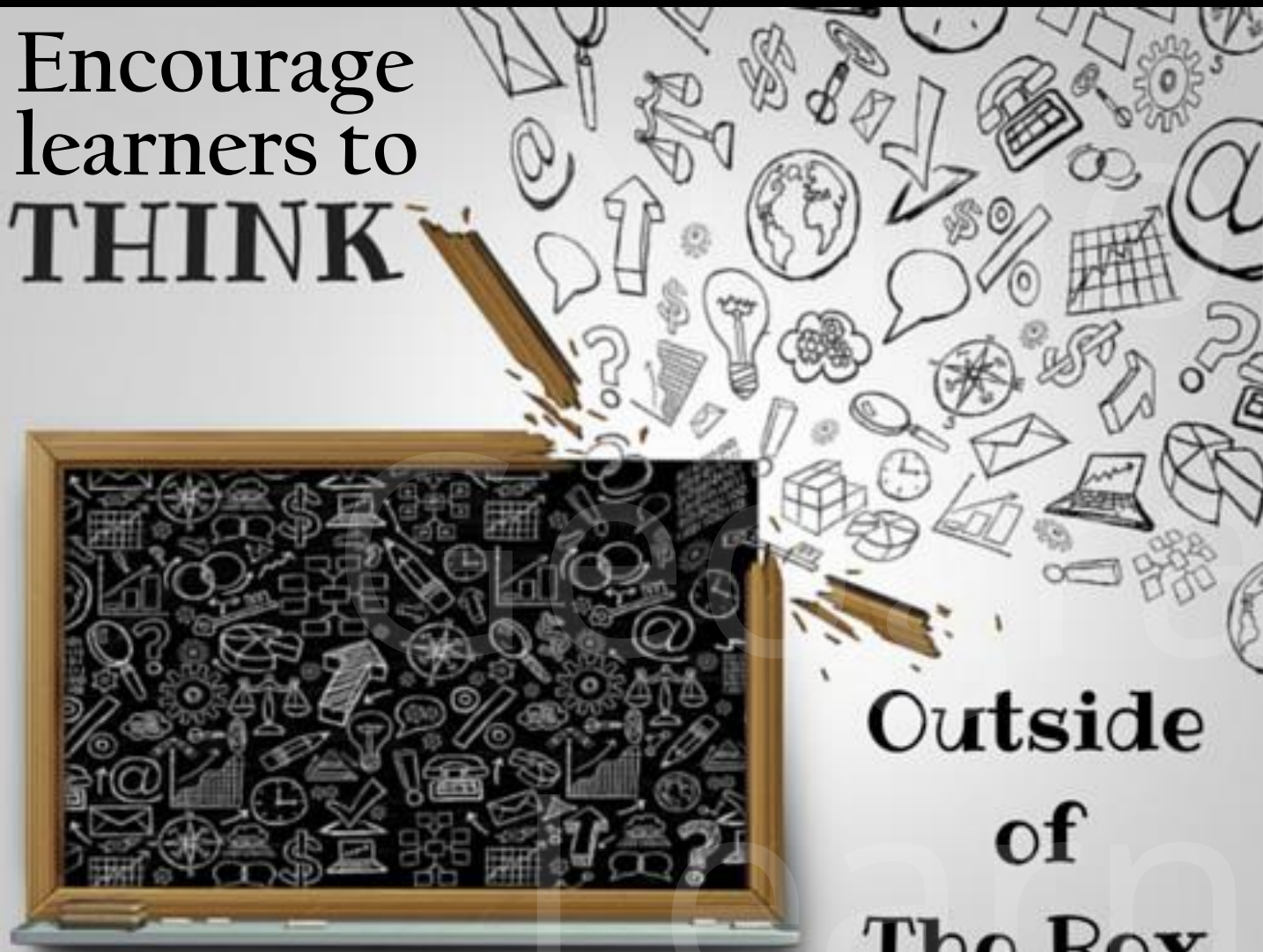


“Creativity is contagious. Pass it on.”

Albert Einstein

International Geographic Learning

Encourage
learners to
THINK



**Outside
of
The Box
by...**

- using brainstorming and creativity based tasks
- inspiring them with TED speakers
- incorporating problem and solution tasks
- incorporating project work
- being a creative teacher



“The **principle** goal of education is to create people who are capable of doing **new** things, not simply of repeating what other generations have done — people who are **creative, inventive,** and discoverers.”

Jean Piaget



What will you try to do to develop both your own creative thinking skills and those of your students?



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