

NAME: _____

DATE: _____

Unit 6 Thinking Outside the Box

Exercise 1

Below, there are eight descriptions of eight science attractions in the UK. Decide which one would be the most suitable for the following people.

1



Jason loves the natural world and is interested in finding out about the story of planet earth. He wants to visit a centre where he can actively touch and use the objects, participate in workshops and get hands-on experience.

2



Nicola wants to explore the history of space travel, astronomy and how it influences meteorology and the weather. She'd also like to learn how to use a telescope. She will visit a science centre with her family.

3



Noah wants to visit an educational show on space and see what the first Apple computer looked like. His mum wants to experience scientific events from the past in 3D.

4



Lucia is interested in the concept of the bionic human and wants to find out how the body works and how our eyes and brain work together. She wants to visit a centre that is constantly changing its programme of events.

5



Kenji is interested in scientists, engineers and inventors. He's keen on learning through interactive workshops in an entertaining way. He'd like to be with his classmates.

Eight Family-friendly Science Attractions in the UK!

<p>A. We The Curious, Bristol</p> <p><i>We The Curious</i> is a two-floor science centre in Bristol city centre that is packed with activities. Visitors can make their own light-up badge at the Invention Lab, watch a stage show that explores the science of sound and discover all about food in the sensory arcade. On top of these, they can make their own creations in the animation workshop and visit the UK's only 3D Planetarium.</p>	<p>B. The Eden Project</p> <p>The Eden Project is a beautiful garden in Cornwall, UK with a plethora of plants and the world's largest indoor rainforest. There's an undercover ice rink, artworks, performance and storytelling, and even a youth hostel/campsite if you don't want to leave!</p>
<p>C. Dynamic Earth Science Centre, Edinburgh</p> <p>Dynamic Earth in Edinburgh gives you the chance to experience the earliest forces of nature and see how they shaped our planet. It will take you on a journey through time. In this interactive tour you will feel the heat of a bubbling volcano and the chill of a real-life iceberg before landing in the tropical rainforest and coming face to face with dinosaurs!</p>	<p>D. National Space Centre, Leicester</p> <p>With 250 exhibits, and over 100 of those interactive, the National Space Centre in Leicester will offer children the opportunity to find out about how space informs weather forecasting, watch an incredible 360-degree movie in the UK's largest planetarium, or space walk around three floors of activities exploring the space race and beyond.</p>
<p>E. London Science Museum</p> <p>London's Science Museum is one of the most famous science attractions in the UK, and brilliant for the whole family with plenty of interactive activities to do on space, technology and medicine. Teens can experience the careers of technicians, explore the history of flight, and take a virtual tour of the International Space Station. Also, they will learn how vaccines are developed quickly and effectively to fight a global pandemic, be transported below the ocean surface and visit the Discovery Motion 3D cinema.</p>	<p>F. Techniqest, Cardiff</p> <p>There's lots to discover at <i>Techniqest</i>, which was designed to make real science fun and engaging for all ages. There are lots of interactive exhibitions throughout the centre, including areas where children can play with, discover how electricity works, work a robotic arm as well as lots of optical illusions, puzzles and games. There are extra special exhibits that change regularly throughout the year, so there's always something new to see, learn and do!</p>
<p>G. Ministry of Science Live</p> <p>The Ministry of Science Group is one of the UK's leading science communication specialists with live shows across theatres, festivals, cruise ships and schools on science, engineering and invention. The national theatre tour plays some of the UK's largest theatres annually to both schools and family audiences across the country. The live shows and hands-on workshops can also be found aboard cruises during the summer.</p>	<p>H. Royal Navy Submarine Museum</p> <p>Take a voyage through time with the National Museum of the Royal Navy. The National Museum of the Royal Navy offers a brand-new schools programme of interactive learning opportunities and resources, holds the most comprehensive collection of some of the most famous ships, planes or submarines in naval history in the UK and the largest collection of historic ships in Europe.</p>

1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Exercise 2

Read the following passage. For each question, choose the correct answer.

Quinn Callander



*by Shanelle Felipe - Middle School
- from Red Deer, Alberta in
Canada*

During this pandemic, we've seen pictures and stories of healthcare workers with bruised faces from the long hours of wearing protective equipment. Luckily, an answer soon came up to solve this problem, and it's from an unexpected source.

Quinn Callander is a 13-year-old Boy Scout, who responded to a social media request from a hospital in his town for a protective gear that could keep doctors and nurses comfortable while wearing masks. He created dozens and dozens of his own ear guard design directly from his 3-D printer. The gadgets wrap around the back of the head and can be connected to mask straps on each side, enabling wearers to adjust their masks and keep the straps from rubbing against the back of their ears.

Quinn Callander is a 13-year-old Boy Scout, who responded to a



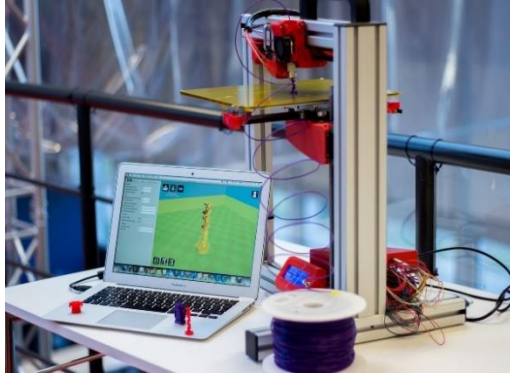
He donated them to local hospitals and in just one week, Quinn produced 1,300 ear guards and even personally distributed 1,215 of the straps to surrounding hospitals.

Not only does the ear guard provide a break for tired ears, but it also gives a higher level of safety for people who are born with birth defects that physically affect their ears, individuals who have a disfiguration from a past accident, or people who have simply lost an ear. The ear guard helps them wear a safety mask, allowing them to be at least protected slightly from the virus.

Not only does the ear guard provide a break for tired ears, but it also gives a higher level of

What's truly heart-warming is that this has shown us how dependable and reliable the next generation is. Often, people talk about how the younger generations are only stuck to their phones and rely on technology too much. Quinn proved this idea wrong as he created this invention with the help of technology, showing us his leadership and creative qualities.

A 3-D printer in processFelix 3-D Printer | Wikimedia Commons



Instead of keeping this design for himself, Quinn generously shared his files and design to the public. This way anyone with a 3-D printer could replicate them. Quinn and his mother are also encouraging everyone on Facebook to get involved.

Adapted from: <https://myhero.com/quinn-callander>

1. According to the article, what problem did the pandemic create?
 - a) Lack of personal protective equipment.
 - b) Exhaustion from the long hours at hospital.
 - c) Marks on the healthcare workers' faces.
 - d) A risk of catching the virus.

2. What encouraged Quinn Callander to take action?
 - a) A call of help by his local hospital.
 - b) A request from health care workers.
 - c) A newspaper article.
 - d) A school project.

3. Which of the following is **NOT** true about the ear guard?
 - a) It relieves pain from wearing protective masks all day.
 - b) It protects from the virus.
 - c) It guarantees stopping infections.
 - d) It is designed for people with physical disabilities.

4. What would someone say about younger generations?
 - a) They spend too much time using technology.
 - b) They have a smartphone addiction.
 - c) They are technology and mobile phone experts.
 - d) They are insensitive to people's needs.

5. What might Quinn post on Facebook about his experience?
- a) "I am surprised by the number of people who got infected with the Coronavirus," says Quinn.
 - b) "Everyone can make a difference," says Quinn. "No matter what age or where they are."
 - c) "Everyone should have a 3-D printer at home."
 - d) If you want to make your own rear guards, download the file for a small fee.

Exercise 3

For each question, choose the correct answer.

A Bicycle Built of Bamboo

In 1991, Craig Calfee, a master bike tech pioneer and owner of Calfee Design in La Selva Beach, California, built the first bamboo bikes to **(1)** in the Tour de France with the support of three-time Tour de France champion Greg LeMond.

Bamboo **(2)** the raw materials for a lot of things including textiles, flooring, furniture, toilet paper and even bicycles. It's much lighter than steel, more comfortable than vibrating aluminium and cheaper than carbon fibre.

Surprisingly, many parts of a bamboo bike beyond just the frame itself can be **(3)** from bamboo and much of it can be assembled without welding.

However, building with bamboo is not without its **(4)** For example, bamboo must be sealed properly to prevent splitting.

Worldwide, thousands of bamboo bikes sell annually. Calfee says that the aesthetic aspect of bamboo as well as curiosity about its **(5)** definitely influence buyers, but that a desire to invest in an eco-friendly bike is also a big **(6)**

Adapted from: <https://science.howstuffworks.com/bamboo-bicycles.htm>

- | | | | | |
|----------|-------------------|----------------------|---------------------|------------------|
| 1 | a face | b fight | c compete | d help |
| 2 | a provides | b lends | c gives | d holds |
| 3 | a made | b fit | c invented | d found |
| 4 | a pains | b tests | c challenges | d threats |
| 5 | a skill | b performance | c talent | d effort |
| 6 | a sight | b action | c attraction | d gift |

Exercise 4

Write one word for each gap.

Nikola Tesla

Nikola Tesla was born in 1856 in Croatia. He was a very clever child. (1) school his teachers were surprised to see him doing difficult maths problems in his head. When he was 14, Tesla left home to study science and engineering. In 1884, Tesla decided to move to New York City. At that time, many scientists were working to find ways to bring electricity to cities. One important scientist was Thomas Edison, and Tesla went to work for him, improving and creating new products. The two men had (2) disagreements, so Tesla started his own business. At first, he was unsuccessful because his business partners stole his ideas.

(3), he found some new partners and in his second business, he invented a new system to bring electricity safely to buildings over long distances. This was called alternating current, or AC. With the help of a powerful businessman called George

Westinghouse, AC became the main system used in the USA. Westinghouse and Tesla also used hydroelectric energy (4) the first time to bring electricity from Niagara Falls to the large city of Buffalo, New York. Tesla then started to work on a way to send information and even electricity from one place to another without using wires. He died in 1943, aged 86. Tesla is remembered today (5) the inventor of the technology which makes our modern life possible. To remember his achievements, his name (6) given to the electric car company, Tesla Motors, in 2003.



1 _____ 2 _____ 3 _____
4 _____ 5 _____ 6 _____

Unit 6 Think Outside the Box

Prepared by: Anna-Maria Andreou

Level Intermediate (CEFR B1)

Answer Key!

Exercise 1

1. C, 2. D, 3. E, 4. F, 5. G

Exercise 2

1. C, 2. B, 3. C, 4. A, 5. B

Exercise 3

1. compete, 2. provides, 3. made, 4. challenges, 5. performance, 6. attraction

Exercise 4

1. At, 2. some, 3. However, 4. for, 5. as, 6. was