Worksheet | Innovation is GREAT

Lead-In: Look at the poster and discuss the questions.

1. What does the word 'innovation' mean to you? Write your own definition.

   _____

   _____

   _____

   _____

2. Can you think of any innovative people? Who are they, and in which ways are they innovative?
3. Do you think the poster shows a good example of innovation? Why?

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Task 1: Match the words to their definitions.

Word	Definition
1. vaccine	a. a circular shaped sports track which starts and ends in the same place
2. pneumatic	b. a substance which contains a form of a bacteria or virus, which is injected into a person to prevent them from developing an illness or disease
3. suspension bridge	c. an infectious and dangerous illness which causes a fever and spots on the skin
4. circuit	d. a type of antibiotic medicine which kills bacteria
5. smallpox	e. containing air
6. penicillin	f. a bridge which is supported at each end by strong metal ropes which are connected to towers
7. supersonic	g. make something smaller in size
8. artery	h. able to continue over a period of time because little or no damage is caused to the environment
9. sustainable	i. copy or make something exactly like another thing
10. pioneer	j. faster than the speed of sound
11. shrink	k. seeming to be everywhere
12. ubiquitous	l. a tube which carries blood from the heart around the body
13. replicate	m. be the first person / people to do something

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Task 2: Watch a video about British innovation.

- Tick the innovations you see.
- Write the date of each innovation you see.

the television set	iPod design	the first scheduled international flight service	the camera
the car	the first automatic landing with passengers	the World Wide Web	the motor racing circuit
the supersonic passenger plane	nuclear power	the computer	Formula One

Discuss the questions.

1. Which inventions were not mentioned?
2. Do you know anything about these inventions?
3. When were they invented?
4. Where were they invented?
5. Who invented them?

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Task 3: Read the text. Find seven examples of British innovation.

British innovation in transport.

Throughout the years, British inventors have made a significant contribution to transport, and this continues to this day.

From tractors to trains, the steam engine was a popular way of powering all kinds of machinery during the industrial revolution. In 1765, the steam engine was developed (by the Scotsman James Watt and his contemporaries) to greatly improve its efficiency. This had a huge impact on industry in Britain and throughout the world, and later, in 1928, Britain pioneered another type of engine. The jet engine was invented by Frank Whittle – the man who some people say 'shrank the world' by enabling people to travel by aircraft.

Before cars, cycling was a preferred method of getting around. The Penny Farthing bicycle was invented in 1871 by James Starley, and was very popular in Victorian times. It was named after the 'penny' (a large coin) and the 'farthing' (a smaller coin) because the front wheel was much bigger than the back wheel, and therefore the bicycle represented the two coins in appearance.

Riding a bike became a more comfortable experience when the pneumatic tyre was invented in 1885. Since then, pneumatic tyres have become ubiquitous and are now used on all modern bikes – including motorbikes. Unlike environmentally friendly bicycles, however, motorbikes produce pollutants which some people believe are responsible for global warming. In 2005, the hydrogen fuel cell motorbike was designed to address this problem. Although the current price for this kind of motorbike is very high, they will become more affordable as demand for them increases, and scientists predict that, in the future, all major car manufacturers will be mass-producing hydrogen fuel vehicles.

Londoners, and visitors to the capital city, are likely to be very familiar with 'The Tube', which carries more than one billion passengers every year. The subway train was invented in 1865 and London was the first city to have an underground railway system. Countries throughout the world soon replicated the idea and there are now approximately 160 similar systems in operation internationally.

In the future, transport may be taken to a much greater extreme and, in the same way that Frank Whittle shrank the world with the jet engine, spacecraft looks set to shrink the universe. The idea of space tourism was invented in 2009 and Virgin Galactic's first spaceflight took place in 2018.

Discuss these questions.

- Which of these inventions do you think is most impressive?
- Which do you think has had or will have the biggest impact?

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Task 4: Follow the instructions.

1. Find seven examples of the past simple passive in the text from Task 3. Write them below.

1. In 1765, the steam engine was developed (by the Scotsman James Watt and his contemporaries).
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

2. Change these sentences from the active to the passive voice.

1. Active: Tim Berners-Lee invented the World Wide Web in 1991.
   Passive: _____

2. Active: Hugh Locke-King designed the motor racing circuit in 1907.
   Passive: _____

3. Active: Alexander Fleming discovered penicillin in 1928.
   Passive: _____

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Task 5: Work in pairs and follow the instructions.

- Fold the page along the dotted line.
- Look at the table for Student A or Student B.
- Ask your partner questions to complete the table.

Student A

Q: When was … invented / discovered? **A: The … was invented / discovered in …**	**date**
the first vaccine for smallpox	
the suspension bridge	1826
the telephone	
the electric light	1878
the structure of DNA	
hawk-eye	2001
the artificial artery	
the most sustainable stadium in Olympic history	2012

_ _

Student B

Q: When was … invented/ discovered? **A: The … was invented/ discovered in …**	**date**
the first vaccine for smallpox	1798
the suspension bridge	
the telephone	1876
the electric light	
the structure of DNA	1953
hawk-eye	
the artificial artery	2010
the most sustainable stadium in Olympic history	