

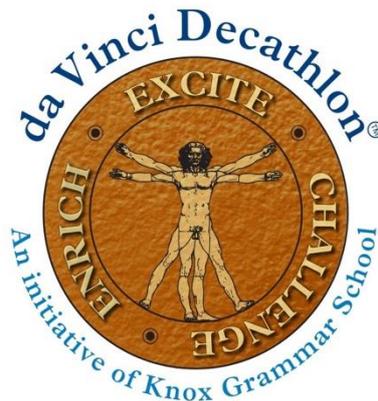


KNOX
GRAMMAR
SCHOOL

STATE

DA VINCI DECATHLON 2018

CELEBRATING THE ACADEMIC GIFTS OF STUDENTS
IN YEARS 7 & 8



GENERAL KNOWLEDGE

TEAM NUMBER _____

1	2	3	4	5	6	7	Total
/10	/10	/10	/10	/10	/10	/10	/70

ACTIVITY ONE: LEONARDO DA VINCI

Please select the best answer from the options provided.

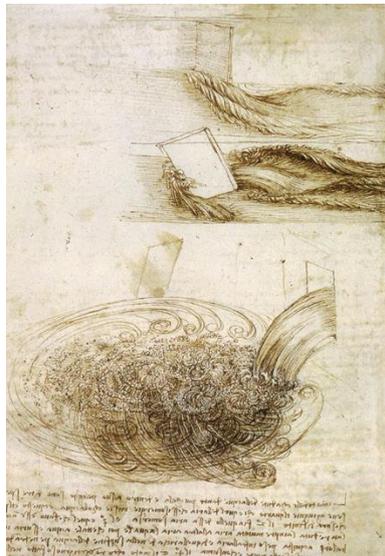
10 Marks

1. One of Leonardo's paintings was sold in 2005 for less than US\$10,000, with the seller thinking it was a copy of the original. It was restored by New York University between 2005 and 2011 and eventually sold most recently for US\$450 million in 2017. It is now going to be on display in the Louvre Abu Dhabi. Which painting is this?
 - a. The Mona Lisa
 - b. Salvator Mundi
 - c. Vitruvian Man
 - d. Annunciation
2. Leonardo's work in scientific fields changed the way art was created. Which field of research allowed da Vinci to have an immediate and lasting legacy through his artwork?
 - a. Use of new types of paint
 - b. Use of light and shadows
 - c. Use of colour
 - d. Use of material
3. When working as Andrea del Verrocchio's apprentice, Leonardo studied topographical anatomy of the human body. What does topographical anatomy involve?
 - a. The study of living organisms, divided into many specialized fields that cover their morphology, physiology, anatomy, behaviour, origin, and distribution.
 - b. The arrangement of the natural and artificial physical features of an area.
 - c. The study of anatomy based on regions or divisions of the body and emphasising the relations between various structures (muscles and nerves and arteries etc.) in that region.
 - d. The branch of science concerned with the bodily structure of humans, animals, and other living organisms, especially as revealed by dissection and the separation of parts.
4. Did Leonardo dissect humans for his research?
 - a. Yes
 - b. No
5. What was Leonardo's most significant contribution to the field of botany?
 - a. He established this field
 - b. He diagrammatically recorded the structure of plants
 - c. He recorded the appearance of plants
 - d. He determined what a flower was

6. The precision in the background of *The Virgin of the Rocks* (pictured below) reflects Leonardo's expertise in which field?



- a. Cartography
 - b. Biology
 - c. Geology
 - d. Neuropathology
7. The following sketch represents Leonardo's study of which area?



- a. Hydrodynamics
- b. Gravity
- c. Interpersonal relations
- d. Creation of a well

8. Earthshine is “the glow caused by sunlight reflected by the earth on the darker portion of a crescent moon.” What was Leonardo’s involvement in clarifying the concept of earthshine?
 - a. He designed a rocket to send humans to the Moon to determine the cause
 - b. He was not involved at all in researching Earthshine
 - c. He provided sketches and an explanation for the concept, which ended up being correct
 - d. He provided sketches and an explanation for the concept, which ended up being incorrect

9. Which of the following terms is Leonardo da Vinci widely (but colloquially) known as?
 - a. Super Human
 - b. Renaissance Man
 - c. Creator of the Renaissance
 - d. Italian Mastermind

10. Leonardo is considered to have been the first artist to use anamorphosis. What is anamorphosis?
 - a. Use of multiple colours in the one image.
 - b. Process of over the outline of a projected image on the canvas.
 - c. The technique of allowing tones and colours to shade gradually into one another, producing softened outlines or hazy forms.
 - d. A distorted projection or drawing which appears normal when viewed from a particular point or with a suitable mirror or lens.

ACTIVITY TWO: THE ARTS

Please select the best answer (A, B, C or D) from the options provided. **10 Marks**

1. What event is the following passage about?

This event was held at a dairy farm in the town of Bethel, New York from 15–18 August 1969. It might be the most famous rock concert and festival ever held. For many, it showed the counterculture of the 1960s and the "hippie era".

- a. Wimbledon
 - b. Woodstock Festival
 - c. Oxford Literary Festival
 - d. Glastonbury Festival
2. What is the main story of *The Lion, the Witch and the Wardrobe* by C.S. Lewis an allegory of?
- a. The danger of giving too much power to an individual
 - b. The importance of personal pride
 - c. Christ's Crucifixion
 - d. It's not an allegory
3. Michael Wolff wrote the book *Fire and Fury: Inside the Trump White House*. How did he receive access to the White House?
- a. Trump was his friend
 - b. He asked for access to write a summary of the first 100-days
 - c. He used to be a member of Trump's team
 - d. He bugged the White House
4. Despacito was one of the most popular songs of 2017, and it broke the record number of views of a single video on YouTube. It was the first video to exceed which of the following record level of views?
- a. 1 billion
 - b. 2 billion
 - c. 4 billion
 - d. 10 billion

5. Which prize did Harper Lee win for writing *To Kill a Mockingbird*?
- a. Booker Prize
 - b. Nobel Prize
 - c. British Book Awards
 - d. Pulitzer Prize
6. Read the book blurb below. Which location best fills the gap?

The extraordinary #1 New York Times bestseller that is now a major motion picture, Markus Zusak's unforgettable story is about the ability of books to feed the soul.

It is 1939. _____. The country is holding its breath. Death has never been busier and will become busier still.

Liesel Meminger is a foster girl living outside of Munich, who scratches out a meagre existence for herself by stealing when she encounters something she can't resist—books. With the help of her accordion-playing foster father, she learns to read and shares her stolen books with her neighbours during bombing raids as well as with the Jewish man hidden in her basement.

*In superbly crafted writing that burns with intensity, award-winning author Markus Zusak, author of *I Am the Messenger*, has given us one of the most enduring stories of our time. (Amazon.com, 2018)*

- a. London, England
- b. Nazi Germany
- c. Darwin, Australia
- d. Vienna, Austria

MATCH THE FOLLOWING AUTHORS WITH THEIR BOOK:

List of authors:

- a. John Marsden
 - b. Jane Austen
 - c. George Orwell
 - d. Charles Dickens
7. *Pride and Prejudice*
8. *Tomorrow, When the War Began*
9. *A Tale of Two Cities*
10. *Animal Farm*

ACTIVITY THREE: SCIENCE & SOCIETY

Please select the best answer from the options provided.

10 Marks

1. Choose a city to fill the gaps in the text below:

The city of _____ was plonked by its founders onto a peninsula not far from where the Indian and Atlantic oceans merge, often violently, beneath the imposing banks of Table Mountain. To its north lie the fertile fruit and wine farms that weigh down the city's restaurant tables with unimaginable bounty.

...

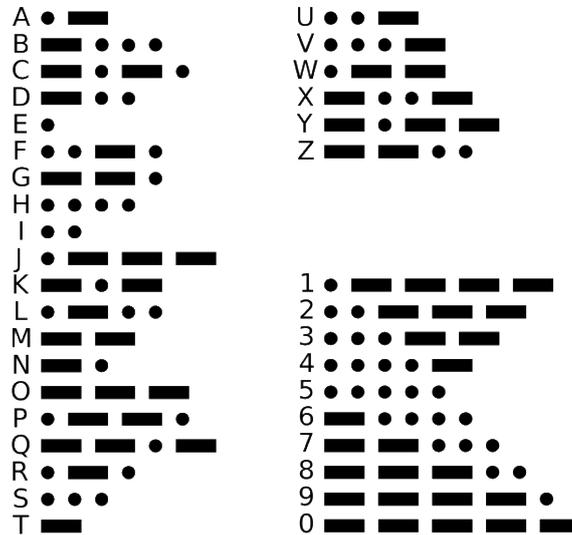
By current calculations, "Day Zero," the dystopian term for the date by which the city is expected to run out of water, and when all water will be rerouted to emergency pick up points, is June 4. This will mark the first time that a major modern city has run out of municipal water. In 2008, Barcelona came close. Sao Paulo, the biggest city in the Western Hemisphere, teeters on the brink. The government of Indonesia has given serious consideration to abandoning chunks of Jakarta, which is paradoxically sinking below sea level, drowning in torrential rains, and running out of potable water. What is now certain is that _____ will become a test case for what happens when climate change, extreme inequality, and partisan political dysfunction collide.

(Source: The Atlantic, 2018)

- a. Cairo
 - b. Sao Paulo
 - c. Cape Town
 - d. Lagos
2. What does HTTPS, often seen at the start of a website, stand for?
- a. Hypertext Transfer Protocol Secure
 - b. Hypertext Transfer Protocol Sensitive
 - c. Hypertransfer Text Protocol Sockets
 - d. Hypertransfer Text Protocol Secure
3. Smartphone cameras are seen around the world today. Which organisation is responsible for advancing their design in the 1990s?
- a. Apple
 - b. Microsoft
 - c. NASA
 - d. CSIRO

4. What language/method of communication is depicted in the diagram below?

1. The length of a dot is one unit.
2. A dash is three units.
3. The space between parts of the same letter is one unit.
4. The space between letters is three units.
5. The space between words is seven units.



- a. Braille
 - b. Morse Code
 - c. This isn't a language/method of communication
 - d. This is a password encryption tool used by Apple
5. What is a meteor shower?
- a. An event in which meteor disintegrate into the Sun.
 - b. A celestial event in which a number of meteors are observed to radiate, or originate, from one point in the night sky.
 - c. An event in which meteors crash into the Earth's surface.
 - d. A type of showerhead
6. In 1799, Nitrous Oxide was identified as a potential key component in what process?
- a. Anaesthesia
 - b. Injections
 - c. Dealing with migraines
 - d. Time travel

7. Choose a phrase to fill the gaps.

_____, meaning 'The Great Charter', is one of the most famous documents in the world. Originally issued by King John of England (r.1199-1216) as a practical solution to the political crisis he faced in 1215, _____ established for the first time the principle that everybody, including the king, was subject to the law. Although nearly a third of the text was deleted or substantially rewritten within ten years, and almost all the clauses have been repealed in modern times, _____ remains a cornerstone of the British constitution.

Most of the 63 clauses granted by King John dealt with specific grievances relating to his rule. However, buried within them were a number of fundamental values that both challenged the autocracy of the king and proved highly adaptable in future centuries. Most famously, the 39th clause gave all 'free men' the right to justice and a fair trial. Some of _____'s core principles are echoed in the United States Bill of Rights (1791) and in many other constitutional documents around the world, as well as in the Universal Declaration of Human Rights (1948) and the European Convention on Human Rights (1950).

(Source: British Library, 2014)

- a. Kyoto Protocol
- b. Declaration of Human Rights
- c. Magna Carta
- d. Rosetta Stone

8. Choose a word to fill the gaps:

_____ is an acute contagious disease caused by the variola virus, a member of the orthopoxvirus family. It was one of the world's most devastating diseases known to humanity. The last known natural case was in Somalia in 1977. It was declared eradicated in 1980 following a global immunization campaign led by the World Health Organization.

_____ is transmitted from person to person via infective droplets during close contact with infected symptomatic people.

(Source: WHO, 2018)

- a. Chicken pox
- b. HIV
- c. Cholera
- d. Smallpox

9. What do X-rays make up?

- a. X-ray scans
- b. X-radiation
- c. Non-X-radiation
- d. Y-radiation

10. Choose the correct phrase to fill the gap:

An AUS\$60m rescue plan to save the _____ has been announced by the Australian Prime Minister Malcolm Turnbull.

The package, which will be rolled out over the course of 18 months, will be used partly to fight the outbreak of crown-of-thorns starfish, which are known to contribute to the decline of corals.

Other proposed uses of the money included increasing the number of reef patrol officers and reducing pollution from chemicals used in farming that seep into the water.

(Source: The Guardian, 2018)

- a. Sydney Harbour National Park
- b. Kakadu National Park
- c. Great Barrier Reef
- d. Broome

ACTIVITY FOUR: PEOPLE

Please select the best answer from the options provided.

10 Marks

1. Select a name to fill the gap in the passage below.

Civil rights activist _____ refused to surrender her seat to a white passenger on a segregated Montgomery, Alabama bus, which spurred on the 381-day Montgomery Bus Boycott that helped launch nationwide efforts to end segregation of public facilities. The city of Montgomery had no choice but to lift the law requiring segregation on public buses.

(Source: Biography, 2018)

- a. Martin Luther King
 - b. Hillary Clinton
 - c. Rosa Parks
 - d. Harper Lee
2. Which position was Adolf Hitler appointed to in 1933?
- a. Prime Minister of Germany
 - b. Chancellor of Germany
 - c. President of Germany
 - d. First Minister of Germany
3. Who was the first human in space?
- a. Neil Armstrong
 - b. Yuri Gagarin
 - c. Buzz Aldrin
 - d. Andy Thomas
4. A stretcher bearer is known for using his donkey to help him carry out his work in the ANZAC Campaign. This has become part of the ANZAC legend. What was the name of the stretcher bearer?
- a. John Simpson
 - b. Charles Begg
 - c. John Monash
 - d. David Morrison

5. Which President does this newspaper article refer to?

Full Coverage Of Assassination (throughout both sections) **THE HERALD-PRESS** Weather Much Colder
 ***** FINAL *****—12 PAGES ST. JOSEPH, MICH., SATURDAY, NOVEMBER 21, 1963 PRICE SEVEN CENTS

PRESIDENT'S DEATH MOURNED BY WORLD

They Can't Believe It
 Public officials and civic leaders of the five cities and surrounding area reacted with a profound sense of shock and disbelief to the news of President Kennedy's assassination.

Whole World Pays Respect To Kennedy
 An hour of silence after the President's death was solemnly observed in many and there were reports the world was mourning the death of a great leader.

Oswald Held As Assassin
 SALLAB, Tex. (AP)—A young man who was held by police here today is charged with being the one who shot and killed the President.

Oswald Admits Belonging To Commie Party
 CHICAGO (AP)—A young man who admitted he had been a member of the Communist Party here today admitted he had shot and killed the President.



John Fitzgerald Kennedy

Funeral Set Monday Noon
 WASHINGTON (AP)—A formal funeral for President Kennedy will be held here Monday at noon.



ACCOUNT OF ASSASSINATION—Joe Berner Oswald, 24, holds up his mangled hands as he is led to jail in a police station in Dallas after the killing of President Kennedy. Oswald was charged with murder in the killing of a United States president.

- a. Donald Trump
 - b. Harold Holt
 - c. Ronald Reagan
 - d. John F Kennedy
6. In 2017, the 'Me too' campaign gained momentum. What does this campaign seek to achieve?
- a. Help people recover from a mental illness
 - b. Demonstrate the widespread prevalence of sexual assault and harassment, particularly in the workplace
 - c. Help workers develop strategies to put in place after they receive a redundancy
 - d. Educate people on the impact of climate change on the world
7. The Da Vinci Code, The Lost Symbol, Inferno and Origin are all written by which author?
- a. JK Rowling
 - b. Margaret Atwood
 - c. Dan Brown
 - d. Leonardo da Vinci

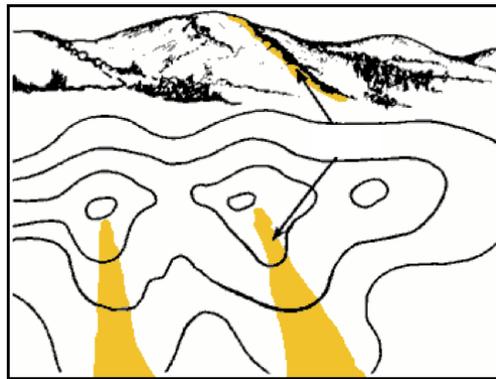
8. A technology company designed and built a battery system to prevent future blackouts in South Australia. Who is the CEO of this company?
 - a. Alan Joyce
 - b. Dick Smith
 - c. Tim Cook
 - d. Elon Musk
9. Who is the current French President?
 - a. Emmanuel Macron
 - b. François Hollande
 - c. Nicolas Sarkozy
 - d. Marie le Pen
10. At the 2018 PyeongChang Winter Olympics, I carried the Australian Flag into the Opening Ceremony. I competed in the halfpipe and won a bronze medal. Who am I?
 - a. Matt Graham
 - b. James Magnussen
 - c. Usain Bolt
 - d. Scotty James

ACTIVITY FIVE: GEOGRAPHY

Please select the best answer from the options provided.

10 Marks

1. What is the longest river in the world?
 - a. River Nile
 - b. Amazon River
 - c. Yangtze River
 - d. Mekong River
2. What is the topographic feature highlighted in yellow on this map?



- a. Ridge
 - b. Valley
 - c. Knoll
 - d. Spur
3. I was originally created in 1923 for a local real estate development. Whilst the letters are nearly level, the contours of the hill I am on makes them look wavy. Over the years, I have become closely associated with the city that I spell and am used in establishing shots to identify this city. What am I?
 - a. Coca-Cola Billboard in Sydney
 - b. The Hollywood Sign in LA
 - c. Big Ben in London
 - d. Entrance sign to Kakadu National Park
 4. Where was the peace treaty that ended World War I signed?
 - a. Munich, Germany
 - b. Hong Kong, Hong Kong
 - c. Cape Town, South Africa
 - d. Versailles, France

5. Some products have been developed in unexpected locations, which are often different from the current country they are associated with. Where was 'Kit Kat' chocolate first made?
 - a. York, England
 - b. Nairobi, Kenya
 - c. Rio de Janeiro, Brazil
 - d. Brisbane, Australia
6. Some products have been developed in unexpected locations, which are often different from the current country they are associated with. Where do 'hotdogs' originate from?
 - a. New York, USA
 - b. Europe
 - c. China
 - d. Japan
7. Some products have been developed in unexpected locations, which are often different from the current country they are associated with. Where do croissants originate from?
 - a. Austria
 - b. France
 - c. Canada
 - d. Cuba
8. Approximately how many times would France fit into the landmass of Australia?
 - a. Twice
 - b. 14 times
 - c. 50 times
 - d. 80 times
9. Select the climate zone listed below which is NOT part of Mount Kilimanjaro.
 - a. Climate Zone 1: Rainforest
 - b. Climate Zone 2: Tropical jungle
 - c. Climate Zone 4: Alpine Desert
 - d. Climate Zone 5: Arctic

10. What is significant about Kati Thanda-Lake Eyre?
- a. It contains the highest natural point in Australia
 - b. It contains the lowest natural point in Australia
 - c. It hasn't had water in it for 300 years
 - d. It does not have any salt crust

ACTIVITY SIX: PAST, PRESENT & FUTURE

Please select the best answer from the options provided.

10 Marks

1. Read the following passage. Whose footsteps will the 10 astronauts be following?

Over the next three and a half years, 10 astronauts will follow in their footsteps. Gene Cernan, commander of the last Apollo mission leaves the lunar surface with these words: "We leave as we came and, God willing, as we shall return, with peace, and hope for all mankind." (NASA, 2017)

- a. The astronauts in Apollo 11 – first mission to the moon
 - b. The first astronauts to have landed on Mars
 - c. NASA's first ever mission into space
 - d. The training program to become an astronaut
2. The Chernobyl disaster was a catastrophic nuclear accident, causing up to 41 deaths and spillage of radiation into the surrounding environment. Which modern-day country is Chernobyl in?
- a. Russia
 - b. Poland
 - c. Ukraine
 - d. Germany
3. A 13-day period in 1962 is widely considered as the closest the world has ever come to a full nuclear war. It involved a nuclear stand-off between the US and Soviet Union. What was this period called?
- a. Korean War
 - b. Cuban Missile Crisis
 - c. World War Three
 - d. American Missile Crisis
4. What is the Virgin Group's space branch called?
- a. Virgin America
 - b. Virgin Space
 - c. Virgin Extra-terrestrial
 - d. Virgin Galactic

5. Which New York City landmark is Wilbur Wright (from the Wright Brothers) known for flying around in 1909?
 - a. Statue of Liberty
 - b. Central Park
 - c. World Trade Center
 - d. Empire State Building
6. Pan Am Flight 103 was destroyed by terrorists in 1988. The incident has since been referred to as the '_____ bombing'. Choose the city over which the aeroplane was bombed, which also correctly fills the gap.
 - a. London
 - b. New York
 - c. Lockerbie
 - d. Sydney
7. A major change took place in English language pronunciation between 1350 and 1700. This involved the sound of all long vowels changing, meaning that not all words in the English language are now spelt phonetically. What was this change called?
 - a. Great Vowel Shift
 - b. Consonant Change
 - c. Pronunciation change
 - d. No formal name for the change

8. Read the following passage and select the continent which best fills the gap.
Source: World Economic Forum, 2017

In his 2015 Gates Annual Letter, Gates made the prediction that _____ 's agriculture industry will increase productivity by 50% by 2030, making the entire continent self-sufficient.

Currently, the continent imports roughly \$50 billion worth of food each year, despite the fact that 70% of residents in sub-Saharan _____ are farmers.

"In the next 15 years, however, innovations in farming will erase these brutal ironies," Gates wrote. "The world has already developed better fertilizer and crops that are more productive, nutritious, and drought- and disease-resistant; with access to these and other existing technologies, _____n farmers could theoretically double their yields."

- a. Asia
- b. Africa
- c. South America
- d. Oceania

9. In recent years there has been one 'doomsday' which attracted more attention than others. This date was regarded as the end-date of a 5,126-year-long cycle in the Mesoamerican Long Count calendar. Which year did this 'doomsday' pass without event in?
- a. 1950
 - b. 1980
 - c. 2012
 - d. 2017
10. What is the fifth planet from the Sun?
- a. Mars
 - b. Earth
 - c. Jupiter
 - d. Venus

ACTIVITY SEVEN: RECENT EVENTS

Please select the best answer from the options provided.

10 Marks

1. Qantas flight QF9 departing Perth on the evening of 24 March marked a significant event. What was it?
 - a) Anniversary of disappearance of Malaysia flight 370 and the cooperation of Qantas in the search.
 - b) Introduction of Nancy Bird Walton initiative – named after the pioneering Australian aviator – to improve on its 5 per cent proportion of **female pilots**
 - c) Other than the Concord, the fastest recorded flight to the UK.
 - d) First non-stop commercial flight between Australia and Europe.

2. Which Pacific nation was devastated by Cyclone Gita in February.
 - a) Fiji
 - b) Vanuatu
 - c) Tonga
 - d) New Caledonia

3. In March, Sergei and Yulia Stripal faced an unexpected situation, which prompted the EU to recall their ambassador to Russia. What was this situation?
 - a) They were caught spying.
 - b) They were poisoned.
 - c) They were imprisoned.
 - d) They were detained at the border.

4. Which company was recently exposed for inappropriately using data mined from Facebook?
 - a) Google
 - b) Cambridge Analytics
 - c) Google Analytics
 - d) Cambridge Analytica

5. What situation did this company allegedly influence using this data?
 - a) 2016 US presidential election
 - b) Consumer buying patterns leading to instability in the stock market, 2016
 - c) The stock prices of the Trump Organisation
 - d) The spread of 'fake news'.

6. A famous theoretical physicist died in March. Who was it and where was the funeral?
 - a) Stephen Hawking, at Westminster Cathedral
 - b) Stephen Hawking, at Great St Mary's church in Cambridge
 - c) Steven Weinberg, at Westminster Cathedral
 - d) Steven Weinberg, at Canterbury Cathedral

7. His ashes will be interred close to the remains of another famous physicist. Who is it?
 - a) Richard Feynman
 - b) Isaac Newton
 - c) Charles Darwin
 - d) Albert Einstein

8. Hamelin Bay in WA saw a tragedy in March when over a hundred whales were stranded. What type of whales were they?
 - a) Killer whales
 - b) Sperm whales
 - c) Southern right whales
 - d) Pilot whales

9. The first fatality involving a fully autonomous car occurred in Tempe USA prompting suspension of driverless car trials. Who operated the trial?
 - a) Uber
 - b) Tesla
 - c) Google
 - d) NASA

10. March 21 saw American astronaut Ricky Arnold launch from Kazakhstan for his mission on the International Space Station. His mission is to engage students and educators in human spaceflight and science, technology, engineering, and math (STEM) careers. What was his former career?
 - a) Mathematician
 - b) Physicist
 - c) Teacher
 - d) University lecturer