

2021 to be huge for space exploration

4th January, 2021



Cosmologists, astronomers and space engineers are predicting that 2021 will be a great year for space exploration. An increasing number of countries and commercial companies are investing in technology to venture into the heavens.

Entrepreneurs like SpaceX's Elon Musk and Virgin Galactic's Richard Branson are setting their sights on space tourism and sending astronauts to Mars. What once seemed like science fiction is quickly becoming space fact. Such are the advances in technology, we might no longer be surprised at news of asteroids being mined, Mars being colonised, or of new forms of holidays, such as getaway weekend breaks to the Moon.

The year will start with an exciting project that will help scientists better understand the universe. NASA will launch its Q-PACE probe on January the 15th. This will study the collision of small particles in space to provide an insight into how planets originally formed. A month later, NASA's Perseverance rover will land on Mars. This mission will test for signs of possible past microbial life. NASA said: "Returning samples of Mars to Earth has been a goal of planetary scientists since the early days of the space age." In October, the James Webb Space Telescope, the successor to the Hubble Telescope, will launch into space. Its mission is to observe the first galaxies that formed in the early universe.

Sources: salon.com / washingtonpost.com / newatlas.com

Writing

It is important to spend lots of money on space exploration. Discuss.

Chat

Talk about these words from the article.

cosmologist / astronomer / a great year / the heavens / space tourism / asteroids / project / the universe / collision / an insight / mission / microbial life / space / galaxy

True / False

- a) Cosmologists doubt that 2021 will be great for space exploration. T / F
- b) Companies are investing in technology to get us to heaven. T / F
- c) The article says science fiction is turning out to be real life. T / F
- d) The article says we will not be surprised by our colonising Mars. T / F
- e) A NASA probe called Q-PACE will study the collision of small particles. T / F
- f) Another NASA probe will look for microbial life on the Moon. T / F
- g) NASA said scientists have wanted samples of Mars for a long time. T / F
- h) The Hubble Telescope will re-launch in October. T / F

Synonym Match

(The words in **bold** are from the news article.)

- | | |
|----------------------|-----------------------|
| 1. predicting | a. impact |
| 2. commercial | b. journey |
| 3. venture | c. enterprise |
| 4. advances | d. vacations |
| 5. breaks | e. cosmos |
| 6. project | f. forecasting |
| 7. collision | g. specimens |
| 8. samples | h. next-in-line |
| 9. successor | i. private enterprise |
| 10. universe | j. breakthroughs |

Discussion – Student A

- a) What do you know about space?
- b) What do you want to know about space?
- c) How important is space exploration?
- d) How good is the job of an astronomer?
- e) How have commercial companies changed space exploration?
- f) What motivates space entrepreneurs?
- g) Does science fiction always become space fact?
- h) What do you think of getaway weekend breaks to the Moon?

Phrase Match

- investing in technology to venture
- setting their sights
- science fiction is quickly becoming
- surprised at news of asteroids
- getaway weekend
- the collision of small
- an insight into how planets
- test for signs of possible past
- planetary
- observe the first galaxies that formed
- microbial life
- being mined
- in the early universe
- into the heavens
- space fact
- scientists
- particles in space
- breaks to the Moon
- originally formed
- on space tourism

Discussion – Student B

- What do you think about what you read?
- How excited are you about space exploration?
- How do you think the early universe started?
- Why is space exploration important?
- What would happen if alien life came to Earth?
- What do you know about the Hubble Telescope?
- What do you think space exploration will be like in 100 years?
- What questions would you like to ask the astronomers?

Spelling

- Cosmologists, rsroaenmots and space engineers
- micalomrec companies
- enevutr into the heavens
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- signs of possible past acomrbiil life
- a goal of laaetrnyp scientists
- the ousserccs to the Hubble Telescope
- the first axagslei that formed

Answers – Synonym Match

1. f	2. i	3. b	4. j	5. d
6. c	7. a	8. g	9. h	10. e

Role Play

Role A – Jetpacks

You think jetpacks are the most desirable things to have in the future. Tell the others three reasons why. Tell them what is wrong with their things. Also, tell the others which are the least desirable of these (and why): Moon holidays, drone cars or robot police.

Role B – Drone Cars

You think drone cars are the most desirable things to have in the future. Tell the others three reasons why. Tell them what is wrong with their things. Also, tell the others which are the least desirable of these (and why): jetpacks, Moon holidays or robot police.

Role C – Moon Holidays

You think Moon holidays are the most desirable things to have in the future. Tell the others three reasons why. Tell them what is wrong with their things. Also, tell the others which are the least desirable of these (and why): drone cars, jetpacks or robot police.

Role D – Robot Police

You think robot police are the most desirable things to have in the future. Tell the others three reasons why. Tell them what is wrong with their things. Also, tell the others which are the least desirable of these (and why): Moon holidays, drone cars or jetpacks.

Speaking – Science fiction

Rank these with your partner. Put the best futuristic things at the top. Change partners often and share your rankings.

- Jetpacks
- Robot police
- Drone cars
- Moon holidays
- Reverse-ageing machine
- Teletransportation
- Computer-assisted brains
- 100% sustainability

Answers – True False

a	F	b	F	c	T	d	T	e	T	f	F	g	T	h	F
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Answers to Phrase Match and Spelling are in the text.