Rockets and planes chase the solar eclipse

8th April 2024

Astronomers and pilots chased a solar eclipse across the heavens on Monday. This occurred while millions of people in Canada, the USA and Mexico gazed into the sky to catch a glimpse of a rare celestial event - a total eclipse of the sun. The sun, moon and Earth aligned to block the view of the sun's disc. NASA equipped its high-altitude WB-57 planes with special sensors and instrumentation to gather information from the unique solar event. Pilots navigated a path within the eclipse, 15,240 meters high, to get a view of the corona – the sun's outer surface. NASA also fired rockets into Earth's upper atmosphere, known as the ionosphere, to try to unravel some of the sun's greatest mysteries.

A total solar eclipse happens when the moon obscures the face of the sun from view. This celestial phenomenon momentarily turns day to night. Totality means the sun's corona becomes a million times dimmer than the sun's disc. This makes it easier for scientists to observe and study the sun. Dr Amir Caspi, a solar astrophysicist, explained that: "Total solar eclipses let us study and see the corona in ways that just would not be possible at any other time and in any other way." Solar eclipses often have confusing effects on nature. They briefly stir nocturnal creatures and make birds and insects fall silent. Motorists can also be affected and should slow down as lighting and visibility conditions change.

Sources: cnn.com / *usatoday.com* / *pbs.org*

Writing

It is very important to study the sun. Discuss.

Chat

Talk about these words from the article.

astronomers / solar eclipse / celestial event / high altitude / sensors / atmosphere / moon / phenomenon / scientists / corona / nature / nocturnal creatures / visibility

True / False

1) Astronomers chased pilots across the heavens on Monday. T / F
2) The eclipse took place across North and South America. T / F
3) High-altitude planes flew at a height of 30,000 metres to see the eclipse. T / F
4) The Earth's upper atmosphere is called the ionosphere. T / F
5) A total solar eclipse happens when the sun totally obscures the moon. T / F
6) The sun's corona is a million times dimmer than its disc in an eclipse. T / F
7) Solar eclipses can make nocturnal creatures wake up. T / F
8) Birds can stop singing during an eclipse. T / F

Synonym Match

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

1.	**gazed**	a.	briefly
2.	**celestial**	b.	sight
3.	**unique**	c.	solve
4.	**view**	d.	watch
5.	**unravel**	e.	stared
6.	**obscures**	f.	bewildering
7.	**momentarily**	g.	hides
8.	**observe**	h.	heavenly
9.	**confusing**	i.	wake
10.	**stir**	j.	distinctive

Discussion – Student A

a) What do you think about what you read?
b) What do you think of solar eclipses?
c) What would it be like to be a fighter pilot?
d) What do you want to know about space?
e) What three adjectives best describe this story?
f) What effects do eclipses have on nature?
g) How dangerous might driving be during an eclipse?
h) What questions would you like to ask the astronomers?

Phrase Match

1.	pilots chased a solar eclipse	a.	and instrumentation
2.	catch a glimpse of a rare	b.	silent
3.	planes with special sensors	c.	greatest mysteries
4.	NASA also fired rockets into Earth's	d.	the face of the sun
5.	unravel some of the sun's	e.	astrophysicist
6.	the moon obscures	f.	upper atmosphere
7.	a solar	g.	conditions change
8.	They briefly stir nocturnal	h.	celestial event
9.	birds and insects fall	i.	creatures
10.	lighting and visibility	j.	across the heavens

Discussion – Student B

a) What did you think when you read the headline?

b) What images are in your mind when you hear the word 'solar'?

c) What do you know about eclipses

d) How interested are you in astronomy?

e) What do you think when you look up at the sky?

f) Have you ever seen an eclipse?

g) What might scientists learn from this eclipse?

h) What do you know about the ionosphere?

Spelling

1. raemtossnro and pilots
2. catch a glimpse of a rare ialetlcse event
3. moon and Earth alindeg to block the view
4. NASA equipped its high-tldtieau WB-57 planes
5. Pilots nvtedgiaa a path within the eclipse
6. known as the neprhoioes
7. the moon bsesocur the face of the sun
8. lmytiranmoe turns day to night
9. a solar issaitcytphrso
10. They briefly stir nnuctolra creatures
11. oitmtssro can also be affected
12. lighting and iiivsblity conditions

Answers – Synonym Match

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

Role Play

Role A – Solar Eclipse
You think a solar eclipse is the most interesting thing in the sky. Tell the others three reasons why. Tell them why their things aren't as interesting. Also, tell the others which is the least interesting of these (and why): a shooting star, the Milky Way or Aurora Borealis.

Role B – A Shooting Star
You think a shooting star is the most interesting thing in the sky. Tell the others three reasons why. Tell them why their things aren't as interesting. Also, tell the others which is the least interesting of these (and why): a solar eclipse, the Milky Way or Aurora Borealis.

Role C – The Milky Way
You think the Milky Way is the most interesting thing in the sky. Tell the others three reasons why. Tell them why their things aren't as interesting. Also, tell the others which is the least interesting of these (and why): a shooting star, a solar eclipse or Aurora Borealis.

Role D – Aurora Borealis
You think the Aurora Borealis is the most interesting thing in the sky. Tell the others three reasons why. Tell them why their things aren't as interesting. Also, tell the others which is the least interesting of these (and why): a shooting star, the Milky Way or a solar eclipse.

Speaking – The Heavens

Rank these with your partner. Put the most interesting things to see in the heavens at the top. Change partners often and share your rankings.

- Solar eclipse
- Lunar eclipse
- Shooting stars
- Milky Way
- A comet
- Mars
- Aurora borealis
- International Space Station

Answers – True False

1	F	2	F	3	F	4	T	5	F	6	T	7	T	8	T

Answers to Phrase Match and Spelling are in the text.

