DATA CENTRES IN SPACE? SOME PEOPLE SAY NO



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1 Warm up

Look at the pictures. What can you see? How are the pictures connected? Then answer the questions with your teacher.



PICTURE A · a rocket



PICTURE B · a satellite in space



PICTURE C · a big room with many computers



PICTURE D · a dark night sky with stars

1. Do you use the internet every day? What do you do online?
2. What can you see in the sky at night?
3. Do you like space? Why? / Why not?

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2 Pre-listening task: new words

Part A: Match the words with the definitions.

Group 1

satellite (n)	**rocket (n)**	**data centre (n)**
space (n)	**the night sky (n)**	**company (n)**

1. _____ a big building with many computers
2. _____ a machine that goes around the Earth
3. _____ a vehicle that goes up into space
4. _____ the place outside the Earth, with the Moon and the stars
5. _____ a business, for example Google or Apple
6. _____ what you see when you look up at night

Group 2

pollution (n)	**stars (n)**	**petition (n)**
government agency (n)	**million (n)**	**ozone layer (n)**

1. _____ 1,000,000
2. _____ dirty air, water or land
3. _____ small lights in the sky at night
4. _____ a letter from many people asking for a change
5. _____ a group that works for the government
6. _____ a layer of gas high in the sky; it protects us from the sun

Part B: Answer these questions with your teacher.

1. Is there a lot of **pollution** in your city?
2. Can you see the **stars** at night where you live? Why? / Why not?
3. Why do you think **companies** want **data centres** in space?

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3 Listening for comprehension

AUDIO

You are going to listen to a short news report about data centres in space. Listen and choose the correct answer: a, b or c. Then listen again and check.

1. What is a data centre?
   a. a big building with many computers
   b. a space rocket
   c. a big shop
2. Which company wants to send up to one million satellites into space?
   a. Blue Origin
   b. SpaceX
   c. NASA
3. How many satellites does the company want?
   a. up to 1,000
   b. up to 100,000
   c. up to 1,000,000
4. How many environmental groups wrote the petition?
   a. two
   b. three
   c. four
5. Who did they send the petition to?
   a. NASA
   b. the FCC
   c. the United Nations
6. What is the FCC?
   a. a US government agency
   b. a space company
   c. a university
7. What can be bad for the ozone layer?
   a. old satellites that burn in the sky
   b. trees
   c. the sea
8. Why is light from satellites a problem?
   a. It is difficult to see the stars.
   b. It is very hot.
   c. Phones don't work.
9. How many active satellites were there in 2015?
   a. about 1,400
   b. about 15,000
   c. about 58,000

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10. How many active satellites are there in 2026?
    a. about 1,400
    b. about 15,000
    c. about 1,000,000

4 Pre-reading task: new words

Part A: You are going to read the opinions of four people about data centres in space. Read the text quickly. Find the words for these definitions.

Group 1

1. _____ (noun, para. A): the person in charge of a company
2. _____ (noun, para. A): power for machines, for example electricity
3. _____ (noun, para. A): the time after now
4. _____ (noun, para. B): the Earth, Mars and Venus are examples
5. _____ (noun, para. B): the place where you live

Group 2

1. _____ (adjective, para. C): with a lot of light
2. _____ (adjective, para. C): with no light
3. _____ (noun, para. D): a person who studies science
4. _____ (noun, para. D): things you must or must not do; laws
5. _____ (noun, para. D): possible dangers

Part B: Which two words from Part A are opposites? Write them here.

_____ and _____



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Data centres in space: yes or no?

Four people give their opinions about the news.

A. Mark, 52

I am the boss of a big technology company. We use a lot of data. Data centres on Earth need a lot of energy and a lot of water. In space, there is sun all day, every day. I think space is the future. My company wants to build data centres in space, too. New ideas are always a little dangerous, but they are important.

B. Maria, 30

I work for an environmental organisation. I love our planet. It is our only home. Rockets make a lot of pollution, and old satellites burn in the sky. I think big companies only want money. They don't think about the planet. We need to stop these plans now.

C. Leo, 26

I am a photographer. I take photos of the stars at night. Every year, there are more satellites in the sky. They are bright and they move. Now my photos have white lines on them. One million more satellites? That is terrible for me, and for animals too. Birds and turtles need dark nights.

D. Carla, 48

I am a scientist. I study the air. In the 1980s, many countries stopped using some dangerous chemicals. Now the ozone layer is getting better. This shows that rules work. I don't say "no" to new technology. But we need to study the risks first. We need time and good information.

Texts written for NATeacher. Sources: earthjustice.org, datacenterdynamics.com

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5 Reading comprehension

Part A: Read the text again. Match the questions with the correct person. One question has no answer in the text. Mark it "Not given".

Which person...

1. ... talks about the past? _____
2. ... takes photos? _____
3. ... talks about life on Mars? _____
4. ... wants to build data centres in space? _____
5. ... says the Earth is our only home? _____

a. Leo
b. Maria
c. Not given
d. Mark
e. Carla

Part B: Choose the correct answer.

1. Why does Mark like space for data centres?
   a. There is sun all day.
   b. It is cold.
   c. It is near.
2. What do big companies want, according to Maria?
   a. money
   b. clean air
   c. stars
3. What is the problem with Leo's photos?
   a. They are dark.
   b. They have white lines.
   c. They are small.
4. What does Carla want?
   a. no new technology
   b. to study the risks first
   c. more satellites now

Part C: Who says "yes" to data centres in space? Who says "no"? Who do you agree with? Why? Tell your teacher.

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6 Language focus: there is / there are

Look at the examples from the lesson.

	One thing / uncountable **(is)**	Many things **(are)**
+	**There is** sun all day in space.	**There are** more satellites in the sky.
–	**There isn't** a data centre in space today.	**There aren't** any computers in this room.
?	**Is there** a data centre in your city?	**Are there** many satellites?

Part A: Complete the sentences with *is*, *are*, *isn't* or *aren't*.

1. In 2026, there _____ about 15,000 active satellites in space.
2. There _____ a lot of pollution from rockets.
3. Bogotá has a lot of lights. There _____ many stars at night.
4. _____ there a data centre near your office?
5. _____ there many computers in your company?

Part B: Tell your teacher about your office. Say three sentences with *There is...* / *There are...*

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7 Discussion: space and our planet

Choose TWO cue cards. Talk about the ideas on the cards with your teacher. Use your own ideas or ideas from the lesson.

Cue card 1: The night sky

- Stars where I live
- Lights in my city
- Animals at night

Cue card 2: The internet and me

- My favourite apps
- Hours online every day
- My photos and videos in “the cloud”

Cue card 3: Space companies

- Names of space companies
- What they do
- Good or bad for the world?

Cue card 4: Travel to space

- Do I want to go to space?
- The Moon or Mars?
- Three things I take with me

Cue card 5: Our planet

- Pollution in my city
- Things I do for the planet
- Water and energy at home and at work

8 Talking point

Answer the questions with your teacher. Give reasons and examples.

1. Are data centres in space a good idea? Why? / Why not?
2. What do you do on the internet every day?
3. Are big technology companies good for the world? Why? / Why not?
4. What can your company do to help the planet?
5. What new technology do you like? Why?

9 Wrap-up

Complete the sentences. Then tell your teacher.

1. Today I learnt three new words: _____
2. One fact from the news: _____
3. My opinion: I think data centres in space are _____ because _____
4. At work, I can use these words when I talk about _____

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10 Optional extension / homework: writing

Write 40–60 words with the title "Data centres in space: my opinion". Use these phrases:

- I think... because...
- I like / I don't like...
- We need to...

Alternative activity:

Make a poster. Choose ONE topic. Write a title and three short sentences. Present your poster to your teacher in the next class.

- Save our night sky!
- Stop pollution in space!
- Data centres in space: yes!

References

Earthjustice. (2026, July 8). *Coalition calls for rigorous federal review of space-based data center proposals* [Press release]. https://earthjustice.org/press/2026/coalition-calls-for-rigorous-federal-review-of-space-based-data-center-proposals

Russell, L. (2026, July 17). Coalition of environmental action groups petition FCC to halt orbital data center applications. *DatacenterDynamics*. https://www.datacenterdynamics.com/en/news/coalition-of-environmental-action-groups-petition-fcc-to-halt-orbital-data-center-applications/

Original materials: the listening script and the four opinion texts were written for NATeacher and simplified for A1. Mark, Maria, Leo and Carla are fictional people.

Photos: NASA, SpaceX, Tony Marinescu and Joshua Woroniecki on Unsplash (unsplash.com), used under the Unsplash License.

Transcripts

3. Listening for comprehension

Original NATeacher script based on real news (July 2026). Read it aloud slowly or record it. Approx. 1 minute 30 seconds.

Speaker: Hello, and welcome to the news. Today's story is about data centres in space.

Speaker: A data centre is a big building with many computers. Big technology companies have a lot of data centres on Earth. Now, some companies want to put data centres in space. One company, SpaceX, wants to send up to one million satellites into space.

Speaker: But some people say no. In July 2026, three environmental groups wrote a petition to the FCC. The FCC is a US government agency. The groups want the FCC to stop and study the plans first.

Speaker: Why? Rockets make pollution. Old satellites fall and burn in the sky. This can be bad for the ozone layer. Satellites also make light in the night sky. With a lot of satellites, it is difficult to see the stars. And animals need dark nights.

Speaker: There are more and more satellites. In 2015, there were about 1,400 active satellites. Today, in 2026, there are about 15,000.

Speaker: Data centres in space: a good idea or a bad idea? What do you think?

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Key

Learning objectives. By the end of the lesson, the student can: understand a short, simple news report; understand four short opinions; use basic vocabulary about technology, space and the environment; give a simple opinion with *I think... because...*; describe places with *there is / there are*; talk about their own internet use and their company.

Total time: approx. 60 minutes (5 + 6 + 6 + 5 + 10 + 7 + 6 + 10 + 5). Section 10 is optional homework.

1. Warm up

5 mins.

Tell the student they are going to listen to a short news report and read four opinions about data centres in space. Show the pictures and elicit simple words (*rocket, computer, sky, stars*). Accept short answers and help the student make full sentences: "I use the internet for email."

Possible answer for the pictures: "Rockets take satellites into space. Computers are in data centres. Satellites are in the night sky."

2. Pre-listening task: new words

6 mins.

The student matches the words with the definitions. Then ask the Part B questions and help them answer in full sentences.

Group 1

1. data centre
2. satellite
3. rocket
4. space
5. company
6. the night sky

Group 2

1. million
2. pollution
3. stars
4. petition
5. government agency
6. ozone layer

Pronunciation: *satellite* /ˈsætəlaɪt/; *data* /ˈdeɪtə/ (also /ˈdɑːtə/ in British English and /ˈdætə/ in American English — all correct).
Spelling: *centre* (British) / *center* (American) — both correct. This worksheet uses British spelling.

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3. Listening for comprehension

6 mins.

Pre-teach “active” (= working). Read the script slowly once. The student chooses the answers, then listens again to check. Check answers together and ask: “Why?”

1. a.	2. b.	3. c.	4. b.	5. b.
6. a.	7. a.	8. a.	9. a.	10. b.

Differentiation: If the student needs more support, pause after each paragraph. If the student finishes early: “Is this a good or a bad plan for you? Why?”

4. Pre-reading task: new words

5 mins.

Part A

Ask the student to read the text quickly (not every word) and find the words.

Group 1

1. boss
2. energy
3. future
4. planet
5. home

Group 2

1. bright
2. dark
3. scientist
4. rules
5. risks

Part B

bright and **dark**

5. Reading comprehension

10 mins.

The student completes the task alone. Then check the answers together and ask the student to find the sentence in the text.

Part A

1. → e.	2. → a.	3. → c.	4. → d.	5. → b.

Part B

1. a.	2. a.	3. b.	4. b.

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Part C (possible answers)

"Yes": Mark. "No": Maria (and Leo). Carla says "study it first". Accept any opinion with a reason: "I agree with Carla because we need information." Use Part C as a short conversation: share a different opinion so the student must defend theirs.

6. Language focus: there is / there are

7 mins.

Point to the examples in the table. Elicit the rule: *is* for one thing or uncountable nouns (*sun, pollution*); *are* for many things. Keep the explanation short (1–2 minutes) and move to practice.

Part A

1. are 2. is 3. aren't 4. Is 5. Are

Part B (possible answers)

"There is a big meeting room. There are twenty computers. There isn't a coffee machine." Accept any correct sentences. Ask follow-up questions: "Is there a window? Are there many people?"

Common mistakes: "There is many..." → "There are many..."; "Have a data centre in my city" (Spanish *hay*) → "There is a data centre in my city." In informal speech, some speakers say "there's" + plural; for A1, teach the standard form.

7. Discussion: space and our planet

6 mins.

The student chooses TWO cards and talks about each one for about 3 minutes. Model one sentence first: "I live in a big city. I can't see many stars. There are a lot of lights." If you can't print the cards, show them on screen.

8. Talking point

10 mins.

Ask the questions one by one. Let the student speak first, then ask follow-up questions: "Why?", "Can you give an example?", "And at your company?"

Common mistakes: "There is many satellites" → "There are many satellites"; "a satellites" → "a satellite"; "I am agree" → "I agree". Correct with a quick recast after the student finishes speaking; don't stop the conversation.

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9. Wrap-up

5 mins.

The student completes the sentences and says them aloud. Check that they can use the new words and give an opinion with a reason.

Possible answers: "Today I learnt *satellite*, *pollution* and *petition*." "One fact: SpaceX wants up to one million satellites." "I think data centres in space are a bad idea because rockets make pollution." "At work, I can talk about technology and the environment."

10. Optional extension / homework: writing

At least 20 mins.

For the first option, the student writes 40–60 words with "I think... because...". For the poster, the student chooses a topic, writes a title and three short sentences, and presents it to the teacher in the next class.

Model answer: "I think data centres in space are a bad idea because rockets make pollution. I like the night sky and the stars. We need to study the risks first. Then companies can decide."

References

Earthjustice. (2026, July 8). *Coalition calls for rigorous federal review of space-based data center proposals* [Press release]. https://earthjustice.org/press/2026/coalition-calls-for-rigorous-federal-review-of-space-based-data-center-proposals

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