



Teacher Resource

NASA Venus Missions

Focus Questions

1. Retell the BTN story using your own words.
2. Venus is the _____ brightest object in our sky.
3. How is Venus similar to Earth?
4. What are some of the differences?
5. Venus is the hottest planet in our solar system. True or false?
6. The atmosphere of Venus is made up mainly of...
 - a. Carbon Dioxide
 - b. Hydrogen
 - c. Oxygen
7. What is NASA's VERITAS mission going to do?
8. The aim of the DAVINCI+ mission is...
9. What are some of the challenges of exploring Venus?
10. Think of three unanswered questions you have about Venus. Share them with the class.

Activity: Quick Venus Quiz

Begin the NASA Venus Missions activity with a quick true or false quiz. Circle the correct answer.

1. Venus is the 2nd planet from the sun.	True False
2. Venus is bigger than Earth.	True False
3. Venus is the hottest planet in the solar system.	True False
4. The atmosphere of Venus is made up mainly of hydrogen.	True False
5. A day on Venus is longer than a year.	True False
6. Venus doesn't have any moons.	True False
7. Venus is named after the Roman god of fire.	True False

Answers: 1 True, 2 False, Earth is slightly bigger than Venus, 3 True, 4 False, the atmosphere is made up mainly of carbon dioxide, 5 True, 6 True, 7 False, it is named after the Roman goddess of love and beauty.

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KEY LEARNING

Students will learn more about Venus and the NASA missions planned.

CURRICULUM

Science – Year 5

The Earth is part of a system of planets orbiting around a star (the sun).

Scientific knowledge is used to solve problems and inform personal and community decisions.

Science – Years 5 & 6

With guidance, pose clarifying questions and make predictions about scientific investigations.

Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena and reflects historical and cultural contributions.

Activity: Class Discussion

Discuss the BTN NASA Venus Missions story as a class. Ask students to record what they know about Venus. What questions do they have? Use the following questions to help guide discussion:

- Make a list of all the things you know about Venus.
- What does Venus look like?
- How similar are Venus and Earth?
- What are some differences between Venus and Earth?
- Describe the location of Venus in relation to Earth and the Sun.
- Can humans survive on Venus? Why or why not?
- Why do you think NASA wants to explore Venus?
- What might be some of the challenges of exploring it?
- Think of three unanswered questions you have about Venus. Share them with the class.

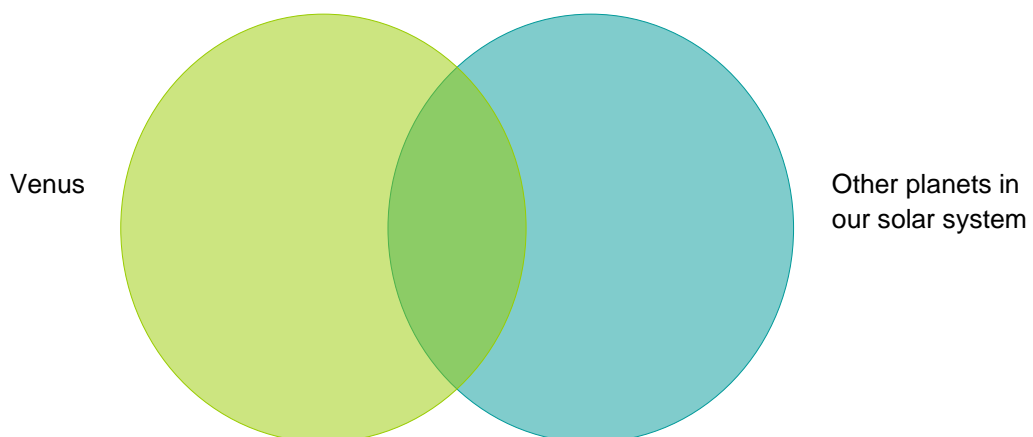


Activity: Profile of Venus

Create a profile of Venus using a range of sources of information. The following questions will help guide students' research:

- Who discovered Venus and when was it discovered?
- How was it named?
- How big is Venus?
- Where is Venus in the solar system?
- Describe Venus' atmosphere.
- What does Venus look like? Describe using words and pictures.
- List 10 interesting facts about Venus.

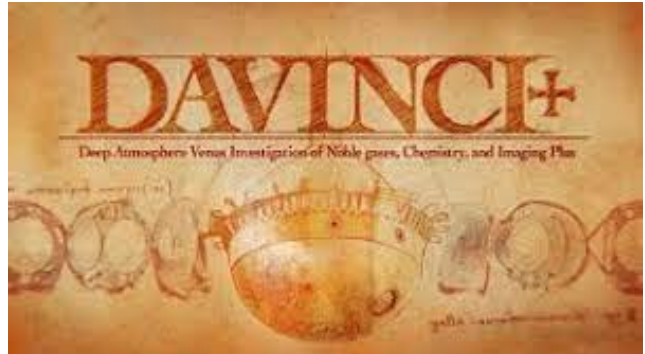
Use a Venn diagram to compare and contrast Venus with other planets in our solar system. Compare and contrast the size of the planets, the distance from the sun and its physical features.



Activity: NASA Venus Mission

Watch [NASA's new mission to Venus video](#) to learn more about the DAVINCI+ mission. Students can then respond to the following questions:

- Why is the probe described as both a time capsule and time machine?
- The probe will act as chemistry lab and _____.
- How long will the mission take?
- What is the purpose of the [Veritas Mission](#)?
- Do you think these missions are important? Explain your answer.



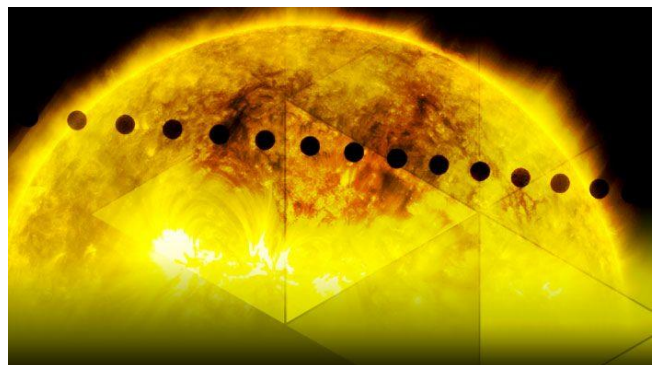
The [Evolution of Venus animations](#) shows the change in Venus' landscape over time. Ask students to write a paragraph explaining how Venus' landscape has evolved. They can then research why these changes have occurred. The [Mysterious Planet video](#) helps to explain why Venus has changed over time.



Activity: BTN Transit of Venus

Students watch the BTN [Transit of Venus story](#) then answer the questions below.

1. Captain James Cook travelled to which place to witness the transit of Venus?
2. In which century did he make the journey?
3. What were scientists and astronomers hoping to learn from the mission?
4. What was Captain Cook's secret mission?
5. Describe Wayne's feelings about Cook's trip to New Zealand.
6. Why did students in New Zealand ask for plant seeds to be sent back from England?
7. Where did Cook go to from New Zealand?
8. Why was the transit of Venus significant to the European settlement of Australia?



Useful Websites

- [NASA's going to send new spacecraft to Venus. Here's why](#) – ABC News
- [NASA plans two new missions to Venus, its first in decades](#) – ABC News
- [Venus: NASA to launch two new missions between 2029 and 2030](#) – Newsround
- [Venue Overview](#) – NASA Solar System Exploration
- [Transit of Venus](#) – BTN