the Water Brothers EPISODE GUIDE QUESTIONS

WATER IN SPACE

1. What is often a factor limiting the amount of time an astronaut can stay in space?

2. What was the surface of the planet Mars shaped by?

3. Several moons orbiting Jupiter and Saturn contain vast quantities of _____?

4. True or False: On average, it costs over $60,000 to send a litre of water into space.

5. Why is it important that we develop methods for conserving water in space?

6. Provide an example of a technology that is used in space to conserve water.

7. Give an example of a NASA technology that is used to conserve water on Earth.

8. What is the Global Precipitation Measurement (GPM) mission?

9. What does the GPM help us predict?

10. How can NASA satellites help people on Earth? Give two examples.

the Water Brothers EPISODE GUIDE ANSWERS

WATER IN SPACE

1. **What is often a factor limiting the amount of time an astronaut can stay in space?** Supply of water is often a factor limiting the amount of time an astronaut can stay in space.

2. **What was the surface of the planet Mars shaped by?** The surface of the planet Mars was shaped by moving water.

3. **Several moons orbiting Jupiter and Saturn contain vast quantities of _____?** Several moons orbiting Jupiter and Saturn contain vast quantities of solid ice.

4. **True or False: On average, it costs over $60,000 to send a litre of water into space.** True.

5. **Why is it important that we develop methods for conserving water in space?** It is important that we develop methods for conserving water in space because bringing water into space is expensive.

6. **Provide an example of a technology that is used in space to conserve water.** An example of a technology that is used in space to conserve water is the “urine processor”. It recycles water from a person’s urine.

7. **Give an example of a NASA technology that is used to conserve water on Earth.** Global Precipitation Measurement (GPM) data is used by farmers on Earth. This data informs farmers on the precise timing and amount of incoming precipitation, which helps forecast crop yields. This also warns farmers of water shortages.

8. **What is the Global Precipitation Measurement (GPM) mission?** The GPM is an international constellation of satellites that provides measurements of rain and snow everywhere around the world, every three hours.

9. **What does the GPM help us predict?** The GPM helps us predict floods, landslides and hurricanes.

10. **How can NASA satellites help people on Earth? Give two examples.** NASA satellites can warn people of severe storms and monitor deforestation.

the Water Brothers EPISODE GUIDE ACTIVITIES

WATER IN SPACE

Water Supply in Space

- http://science.nasa.gov/science-news/science-at-nasa/2000/ast02nov_1/
- http://mentalfloss.com/article/67854/how-do-astronauts-get-drinking-water-iss

Water on Mars

- http://www.space.com/17048-water-on-mars.html
- http://news.nationalgeographic.com/2015/09/150928-mars-liquid-water-life-space-astronomy/

Conserving Water in Space

- http://science.nasa.gov/science-news/science-at-nasa/2000/ast02nov_1/
- http://www.astrobio.net/topic/exploration/moon-to-mars/recycling-water-in-space/
- http://abcnews.go.com/Technology/story?id=4858780

Global Precipitation Measurement

- http://www.nasa.gov/mission_pages/GPM/main/index.html
- http://pmm.nasa.gov/