

Pacific Skies: Indigenous Astronomy, Climate Tech, and Regional Space Aspi

Space Exploration · Answer Key · 15 Questions

1. Which Australian Indigenous astronomical concept, often passed down through oral traditions, utilizes celestial bodies to represent landscapes and ancestral journeys?

A) Gugurmin (Emu in the Sky)

B) Songlines

C) The Emu's Egg

D) The Celestial Canoe

2. In Maori astronomy, known as 'Tatai Arorangi,' what is the term for the traditional lunar calendar that guided seasonal activities and navigation?

A) Kapehu Whetu

B) Te Ikaroa

C) Maramataka

D) Purakau

3. The Fiji Space Center (FSC) project, an educational initiative, is planned to be developed in two phases, with the first phase projected for completion by which year?

A) 2025

B) 2026

C) 2027

D) 2028

4. The NASA Sea Level Change Team is utilizing data from the SWOT satellite to assess the impact of rising sea levels on which low-lying Pacific island nation?

A) Fiji

B) Samoa

C) Vanuatu

D) Kiribati

5. Which Australian research centre is New Zealand researchers collaborating with, supported by the New Zealand Government's Catalyst Fund, to advance space science and technology in the Trans-Tasman region?

A) Australian Space Agency

B) SmartSat Cooperative Research Centre

C) CSIRO

D) Australasian Space Innovation Institute

6. Papua New Guinea's cultural heritage has recently been marked on the Moon as part of the historic LifeShip 'Pyramid on the Moon' payload, which was carried by which launch vehicle?

- A) Ariane 5
- B) Falcon 9**
- C) Atlas V
- D) Vega

7. The 'Takahe Mission' concept, a collaborative project between Australia and New Zealand, aims to enhance maritime domain awareness in the Southern Indo-Pacific using which type of space-based radar systems?

- A) Synthetic Aperture Radar (SAR)
- B) Interferometric Synthetic Aperture Radar (InSAR)**
- C) Radar Altimetry
- D) Doppler Radar

8. Which Pacific island nation, facing significant climate change impacts, is participating in the Seabed 2030 initiative to map its waters using crowd-sourced bathymetry?

- A) Tonga
- B) Marshall Islands
- C) Kiribati**
- D) Tuvalu

9. Peter Swanton, an ANU PhD scholar, is researching how Indigenous knowledge of the night skies can be applied to contemporary stargazing and astrophysics, particularly focusing on which aspect of astronomical occurrences?

- A) Light pollution mitigation
- B) Supernovas and eclipses (transient events)**
- C) Exoplanet detection
- D) Cosmic microwave background radiation

10. The New Zealand Space Agency signed a partnership with the Environmental Defense Fund to work on MethaneSAT, an Earth observation satellite focused on studying what specific type of emissions?

- A) Carbon Dioxide
- B) Nitrous Oxide
- C) Methane**
- D) Sulfur Dioxide

11. The Asia Pacific Regional Space Agency Forum (APRSAF) was co-hosted by the Australian Space Agency and JAXA in Perth in November 2024. This forum aims to foster closer ties across which sectors within the region's space industry?

- A) Research and Development only
- B) Government, industry, and academia**
- C) Private sector and academia
- D) Government and private sector only

12. In Maori astronomy, the 'star compass' or 'kapehu whetu' was a crucial tool for celestial navigation, dividing the night sky into segments known as what?

- A) Whare**
- B) Atua
- C) Tipua
- D) Whetu

13. Which Australian initiative, running from 2021-2026 with A\$150 million in funding, aims to support Australian businesses and research organizations in space activities, including lunar and Martian exploration?

- A) Industry Growth Program
- B) Research and Development Tax Incentive (R&DTI)
- C) Moon to Mars (M2M) initiative**
- D) National Reconstruction Fund (NRF)

14. The GAIF-CDC's Fiji Space Center (FSC) plans to include a 'Space/Earth Monitoring Center' with large screens displaying real-time data for various phenomena, including what specific geophysical activity?

- A) Volcanic eruptions
- B) Tectonic plate movement
- C) Seismic activities**
- D) Geomagnetic storms

15. Which of the following is NOT a stated application of space technology for Small Island Developing States (SIDS) in Oceania, according to recent analyses?

- A) Planning against cyclones and erosion
- B) Monitoring illegal fishing activities
- C) Developing advanced interplanetary propulsion systems**
- D) Accessing funds to fight climate change