

Australia's Cutting-Edge Discoveries: From Deep Seas to Distant Galaxies

Australian Science · Answer Key · 19 Questions

1. During a recent expedition in the Coral Sea Marine Park, scientists discovered a significant number of new species. Approximately how many new species were identified, with potential for the total to exceed 200?

- A) Around 50
- B) More than 110**
- C) Over 150
- D) Exactly 200

2. What type of fossils, representing the first evidence in Australia and potentially the world's oldest known, were unearthed along Victoria's coastline?

- A) Theropod dinosaur fossils
- B) Megaraptoid and carcharodontosaur fossils**
- C) Early mammal fossils
- D) Fossilized insect swarms

3. Australian astronomers, using a radio telescope in Western Australia, have created a highly detailed map of what celestial phenomenon to better understand galaxy formation?

- A) Nebulae
- B) Black holes
- C) Magnetic fields**
- D) Cometary trails

4. Recent climate research indicates that Australia's average land and sea temperatures have increased. By approximately how much has Australia's climate warmed since national records began in 1910?

- A) 0.51 °C
- B) 1.51 °C**
- C) 2.51 °C
- D) 3.51 °C

5. A new technology developed in Western Australia is set to change how surgeons identify what during breast cancer surgery?

- A) Blood flow
- B) Nerve damage
- C) Remaining cancer cells**
- D) Tumor size

6. What type of celestial object's system, involving a white dwarf pulling material from a companion star, has been identified by astronomers using the ASKAP Telescope as a source of mysterious cosmic signals?

- A) Pulsar
- B) Quasar
- C) Cataclysmic variable (white dwarf binary)**
- D) Neutron star

7. Researchers at the Garvan Institute have identified a new type of bone cell that could offer targets for treating which skeletal disease?

- A) Osteoporosis**
- B) Arthritis
- C) Paget's disease
- D) Rickets

8. A new drug approved for use in Australia has shown promise in delaying the onset of symptoms and the need for insulin injections in patients with which condition?

- A) Type 2 Diabetes
- B) Type 1 Diabetes**
- C) Gestational Diabetes
- D) Prediabetes

9. Scientists have identified fossilized claw prints in Australia that suggest amniotes, the ancestors of reptiles, birds, and mammals, evolved approximately how many million years earlier than previously thought?

- A) 10 million years
- B) 20 million years
- C) 40 million years**
- D) 60 million years

10. What type of scientific research is being advanced by Monash University's new AI supercomputer named MAVERIC?

- A) Quantum computing
- B) Gene sequencing
- C) Complex health and environmental challenges**
- D) Particle physics

11. A recent study found that Australia's astronomy research generates a significant economic value annually. Approximately how much is this value estimated to be?

- A) \$90 million
- B) \$150 million
- C) \$330 million**
- D) \$500 million

12. A prospector in Western Australia discovered a rare meteorite debris known as an australite, estimated to be approximately how old?

- A) 80,000 years old
- B) 800,000 years old**
- C) 8 million years old
- D) 80 million years old

13. A new technology developed by Australian researchers uses a patient's blood to analyze how deadly brain tumors are responding to medical treatment. This device is being developed by which institution?

- A) CSIRO
- B) University of Sydney
- C) Walter and Eliza Hall Institute of Medical Research**
- D) Australian National University

14. Researchers are creating a virtual copy of Australia's agricultural landscape to test scenarios for what purpose?

- A) Optimizing crop yields
- B) Simulating disease outbreaks and stress-testing crops**
- C) Predicting market fluctuations
- D) Developing new fertilizer compounds

15. The Australian Institute for Machine Learning will develop advanced, vision-based positioning and navigation technologies for what type of exploration?

- A) Deep-sea exploration
- B) Arctic exploration
- C) Lunar exploration**
- D) Cave exploration

16. Which Australian university's spin-out company, Syenta, has secured significant funding to advance next-generation AI chip connectivity?

- A) University of Melbourne
- B) The Australian National University (ANU)**
- C) University of Queensland
- D) University of New South Wales

17. A University of Sydney trial found that cannabidiol (CBD) oil can significantly reduce pain in individuals suffering from what type of pain?

- A) Osteoarthritis pain
- B) Migraine pain
- C) Chronic neuropathic pain**
- D) Lower back pain

18. Scientists have discovered over 110 new species in the deep waters of the Coral Sea Marine Park. This area is Australia's largest marine protected area, located to the east of which famous natural wonder?

- A) Kangaroo Island
- B) The Great Barrier Reef**
- C) Ningaloo Reef
- D) Kakadu National Park

19. The development of a new AI model by the Australian Artificial Intelligence Institute (AAIL) has enabled it to decode words and sentences directly from what?

- A) Facial expressions
- B) Body language
- C) Brainwaves**
- D) Eye movements