

# Canada's Cutting-Edge Discoveries: From Ancient Life to Quantum Leaps This

Canadian Science · Answer Key · 17 Questions

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**1. A recent fossil discovery in Canada's Mackenzie Mountains has revealed over 100 fossils of Ediacaran biota. Approximately how many million years earlier than previously thought do these fossils suggest some early animals were moving and reproducing?**

- A) 1-2 million years
- B) 5-10 million years**
- C) 15-20 million years
- D) 25-30 million years

**2. A CubeSat designed and built by students at the University of Victoria, named MARMOTSat, recently launched into space. Which mission was it aboard?**

- A) Artemis III
- B) SpaceX's Transporter-17**
- C) International Space Station (ISS) resupply
- D) Mars Reconnaissance Orbiter

**3. Researchers at McMaster University recently discovered a new antibiotic compound to fight drug-resistant bacteria. What is the name of this compound?**

- A) Manakcomycin**
- B) Penicillin
- C) Streptomycin
- D) Vancomycin

**4. The Canadian government, through the AgriScience Program, announced an investment in A.U.G. Signals Ltd. for AI-driven solutions in agriculture. What is the primary focus of this project?**

- A) Developing autonomous farming robots
- B) Optimizing crop health monitoring and yield forecasting**
- C) Creating genetically modified drought-resistant crops
- D) Establishing vertical farming networks

**5. Astronaut Jeremy Hansen, who recently concluded his historic Artemis II mission, is leaving the Canadian Space Agency (CSA). In what capacity will he continue to serve?**

- A) As a civilian science advisor
- B) As a Reservist with the Royal Canadian Air Force**
- C) As a consultant for private space ventures
- D) As an ambassador for international space diplomacy

**6. A new collaborative effort between Bell Canada and the Université de Sherbrooke (UdeS) aims to advance next-generation computing capabilities. Which of the following is NOT a primary focus of this collaboration?**

- A) Quantum technologies
- B) Post-quantum cybersecurity
- C) Sustainable data centre infrastructure
- D) Biotechnology for disease treatment**

**7. Canadian researchers are developing a new ice-resistant floating solar design. What is the main challenge this design aims to overcome in Canadian winters?**

- A) Extreme temperature fluctuations
- B) Ice formation on solar panels**
- C) Low solar irradiance due to snow cover
- D) Strong winds and storms

**8. A recent study published in Seismica highlights a novel marine monitoring network in the Lower St. Lawrence. This network, developed by McGill and other Canadian institutions, can simultaneously track multiple phenomena. Which of the following was NOT explicitly mentioned as being tracked by this network?**

- A) Earthquakes
- B) Whale calls
- C) Shipping noise
- D) Plankton blooms**

**9. The Canadian government is proposing a significant increase in AI data centre capacity. What is the estimated current AI data centre capacity in Canada, as of early July 2026?**

- A) Approximately 337 megawatts**
- B) Approximately 5.5 gigawatts
- C) Approximately 20 gigawatts
- D) Approximately 337 gigawatts

**10. Researchers at Western University, led by Patrick O'Donoghue, are investigating the potential of transfer ribonucleic acid (tRNA) for treating Huntington's disease. This research is supported by the Huntington Society of Canada. What is the primary goal of this investigation?**

- A) To develop a vaccine for Huntington's disease
- B) To correct or suppress mutations causing Huntington's disease**
- C) To enhance nerve cell regeneration
- D) To identify genetic markers for early diagnosis

**11. In the Canadian Northwest Territories, scientists have uncovered Ediacaran biota fossils in the Mackenzie Mountains. These fossils represent the 'White Sea assemblage,' which was previously found only on which continents?**

A) North America, South America, Africa

**B) Europe, Asia, Australia**

C) Africa, Europe, North America

D) Asia, Australia, South America

**12. Bell Canada and Université de Sherbrooke are collaborating to advance quantum technologies. Which Canadian university is also partnering with them to explore linking national high-performance computing with frontier quantum capabilities?**

A) University of Toronto

B) University of British Columbia

**C) Queen's University**

D) McGill University

**13. According to recent reports, climate change is causing more frequent and intense heat waves in Canada. Which organization warned about this trend in an updated fact sheet this week?**

A) Environment Canada

**B) The Canadian Climate Institute**

C) Statistics Canada

D) Natural Resources Canada

**14. A new design for a floating solar system has been developed for Canadian winters. What is a key characteristic of this 'bubbly' design intended to prevent ice formation?**

A) It utilizes a heating element within the panels.

**B) It incorporates air bubbles that circulate under the panels.**

C) It is designed to be submerged deeper during colder months.

D) It uses a special anti-icing coating.

**15. Recent research on the Ediacaran biota in Canada's Northwest Territories has provided evidence for the oldest known instance of what key evolutionary development?**

A) Photosynthesis

**B) Sexual reproduction**

C) Multicellularity

D) Cellular respiration

**16. The Government of Canada is investing in AI and remote sensing for climate-smart agriculture. Which Toronto-based technology company is leading a project to develop AI-driven solutions for crop monitoring and yield forecasting?**

- A) Clearpath Robotics
- B) A.U.G. Signals Ltd.**
- C) IBM Canada
- D) Boreal Agrometrics

**17. Canadian quantum computing company Xanadu Quantum Technologies Limited recently announced a significant expansion of its U.S. operations. Which U.S. state has become a key hub for this expansion, due to its innovation in quantum computing and semiconductor research?**

- A) California
- B) Texas
- C) New York**
- D) Massachusetts