Year 7 Science: The Moon as a clock, the maramataka, and eclipses

Name: _____ Date: _____

Try these without your notes first, then check the answer key.

Practice

1. Full moon is on 24 December 2026. Roughly when is the next last quarter?

2. Which phase must the Moon be in for a solar eclipse?

3. In a lunar eclipse, which body is in the middle of the line?

4. Why do iwi in different regions have different maramataka?

5. Why is a solar eclipse seen only from a small part of Earth, while a lunar eclipse is seen by everyone on the night side?

Fix the mistake

6. Correct this statement: "A solar eclipse is when Earth's shadow covers the Sun."

7. Correct this statement: "There must be an eclipse every new moon and full moon."

8. Correct this statement: "The maramataka is the same everywhere in New Zealand."

9. Correct this statement: "A lunar eclipse can happen at any phase."

Answer key (for parents and tutors)

1. Full moon is on 24 December 2026. Roughly when is the next last quarter?
   About a week later, around 31 December 2026.
2. Which phase must the Moon be in for a solar eclipse?
   New moon.
3. In a lunar eclipse, which body is in the middle of the line?
   Earth, between the Sun and the Moon.
4. Why do iwi in different regions have different maramataka?
   Each region has its own climate, plants and animals, so the tohu and best times differ.
5. Why is a solar eclipse seen only from a small part of Earth, while a lunar eclipse is seen by everyone on the night side?
   The Moon's shadow on Earth is small, but in a lunar eclipse the whole Moon goes into Earth's shadow, so everyone who can see the Moon sees it darken.
6. Correct this statement: "A solar eclipse is when Earth's shadow covers the Sun."
   In a solar eclipse the Moon blocks the Sun; Earth's shadow on the Moon is a lunar eclipse.
7. Correct this statement: "There must be an eclipse every new moon and full moon."
   The Moon's orbit is tilted, so most months the three bodies do not line up exactly.
8. Correct this statement: "The maramataka is the same everywhere in New Zealand."
   Each iwi and region has its own maramataka, fitted to local signs and conditions.
9. Correct this statement: "A lunar eclipse can happen at any phase."
   A lunar eclipse needs Earth between the Sun and the Moon, which only happens at full moon.