

# Answer Key

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*The evidence-hunt questions (underline the sentence that proves it) are the load-bearing reading skill here — hold her to underlining an actual sentence, not just answering. All facts verified against NASA fact sheets; Olympus Mons is ~2½ Everests, Ingenuity really was the first aircraft to fly on another planet.*

## Part 1 (page 2) • The Solar System

- 1. in order: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune
- 2. Mars (4th from the Sun)
- 3. a star
- 4. Jupiter — the passage says all the other planets could fit inside it

## Part 2 (page 3) • Meet Mars

- 1. iron in the soil rusted. Underline (accept either): 'The soil of Mars is full of iron, and over billions of years that iron has rusted — just like a bike left out in the rain.' OR 'The whole planet is covered in rusty red dust.'
- 2. two — Phobos and Deimos
- 3. Olympus Mons — about two and a half Mount Everests tall
- 4. NO (inference) — two clues from: fiercely cold (–63°C), atmosphere too thin, and the wrong kind of air (carbon dioxide, no oxygen)

## Part 3 (page 4) • A Day on Mars

- table: Earth day 24h / Mars day about 24.6h (a little longer); Earth year 365 days / Mars year 687 Earth days; Earth 1 moon / Mars 2; Earth warm (about 15°C) / Mars very cold (about –63°C)
- 2. the friend is WRONG — birthdays come after a full year, and a Mars year is 687 days (almost two Earth years), so birthdays come LESS often. The proof number: 687
- 3. the day — a Mars day is only about half an hour longer than ours
- 4. best title: 'Days and Years on Mars' (the story is about BOTH, not just one)

## Part 4 (page 5) • The Robot Explorers

- 1. Mars is far and dangerous for people, so robots scout ahead first
- 2. Ingenuity is a little helicopter — the first aircraft ever to fly on another planet
- 3. underline (verbatim): 'Perseverance hunts for clues that Mars once had rivers and lakes — and maybe, long ago, tiny living things.' Own words: signs of ancient water and tiny life
- 4. in the order printed: lands=2, radioed home=4, rocket launches=1, explores=3 (full story: launch → land → explore → radio home)
- 5. prediction — accept anything reasoned from a story clue: air/oxygen (wrong kind of air), warm suits (–63°C), food/water (nothing grows), a radio (millions of miles)

## Part 5 (page 6) • Mission Words & Fact File

- 1. orbit=path · rover=robot car · atmosphere=air layer · crater=crash hole · astronaut=space traveler
- 2. fact file: 4th planet · half as wide as Earth · 2 moons (Phobos & Deimos) · day ≈ 24.6h · year = 687 Earth days · red because of rust (iron)

## Part 6 (page 7) • Your Mission Report

- her own writing + drawing — grade for: complete sentences, at least one real Mars fact used, and (for the message) anything worthy of a martian penpal