Snap Shot | Answer key

4 How many Earths do you wear today?

1.1 Interpret the picture

Phase 1

1. *Sample:* In the foreground a small green seedling grows from dry, cracked earth; behind it, slightly out of focus, rises a large mound of rubbish / waste under a hazy, golden evening sky.
2. *Sample:* contrast between damage and hope – The cracked, lifeless ground and the heap of waste stand for the harm our consumption does to the planet, while the single seedling stands for renewal. Change is still possible.
3. *Expected outcome:* any detail with a clear reason. Strong answers link the waste mound to the title "How many Earths do you wear today?" (throw-away consumption / fast fashion) or read the lone seedling as fragile hope.
4. *Expected outcome:* to name a clear message (e.g. "our overconsumption is burying the planet, but recovery is still possible") and give a personal, reasoned agree / disagree.

1.2 a Reading comprehension: vocabulary in context

Phase 1

5. Land or sea that can actually produce biological resources and absorb waste / CO_2 – e.g. cropland, forest, pasture, fishing grounds. Deserts, areas covered by ice and land covered by buildings or roads are not considered biologically productive.
6. The part of a country's environmental impact that is caused abroad: the goods we consume are produced in other countries, so the footprint "belongs" to us but the pollution happens elsewhere.
7. Getting the same output with less input – e.g. an LED lamp, a modern fridge or car using far less energy than thirty years ago, or better house insulation. ("Saving money" is not a sufficient answer, as it does not explain how resources are used more efficiently.)
8. Reliable, verifiable data from many countries collected over a long period of time that demonstrates that ecological footprints decrease as countries become wealthier – measured by consumption (not just within borders) and from independent sources. A single example, or a footprint that only dropped because production moved abroad, would not count.

1.2 b Reading comprehension: comprehension

Phase 1

9. Almost four planets – about 3.7 (6.0 gha ÷ 1.6 gha). That is far above the world average footprint of roughly 2.6 gha.
10. Because about half of Austria's CO_2 footprint comes from imported goods produced in other countries (the "outsourced / embedded" footprint). Examples from the text: clothes from Bangladesh, electronics from China, or beef feed from Brazil.
11. Efficiency improved, but consumption grew faster than the efficiency gains (more devices, more flights, more processed food). GDP roughly doubled since 1990, so although the footprint per euro of GDP fell, the total footprint did not.
12. Supporters say richer countries eventually invest in clean technology and shrink their footprint; critics (e.g. the IPCC) say there is no real global evidence for this – footprints only fall in one country because they rise in another.

1.3 Your own hypotheses & guiding question

Phase 1

13. *Expected outcome:* For Austria, mobility and food are usually among the largest contributors, with housing and imported consumer goods also significant.

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14. *Expected nuance:* richer countries usually have larger per-capita footprints, but not strictly / automatically – some lower it through clean energy / services. Decoupling is possible but limited.
15. *Expected outcome:* probably not a full 10% drop. Footprint and GDP are not perfectly coupled (partial decoupling), so the footprint would likely fall by less than 10%. Strong answers mention the structure of the economy or rebound effects.
16. *Expected outcome:* any focused, debatable, researchable question on the footprint (e.g. "Can a country be rich and ecologically sustainable?"). Check that it is specific and not answerable with a single yes / no fact.

2 Build a fact base

Phase 2 – Round A

18. *Expected outcome:* notes should contain three sourced data points, e.g. Austria ≈ 6 gha, world ≈ 2.6 gha, a low-income country < 1 gha (source: Global Footprint Network), plus what surprised the student. Watch for the AI inventing numbers or sources.

2 Let your hypothesis be challenged

Phase 2 – Round B

19. *Expected outcome:* notes show the AI asked two to three testing questions, the student answered, then received one supporting and one contradicting argument with sources. A hypothesis that was refined, not just confirmed is rewarded.

2 Take the counter-position seriously

Phase 2 – Round C

20. *Expected outcome:* the three strongest pro-growth / Kuznets-Curve arguments (e.g. wealth funds clean tech; innovation; stronger environmental regulation) and the student naming which is hardest to refute, with a reason.

2 Numbers and the trade dimension

Phase 2 – Round D

21. *Expected outcome:* specific figures with sources, e.g. Austria ≈ 6 gha ≈ "almost 4 Earths" (about 3.7); over ~50% of the CO_2 footprint imported; two EU policies (e.g. EU Emissions Trading System, CBAM carbon border tariff, Ecodesign / Circular Economy Action Plan, European Green Deal). Disputed numbers flagged for phase 3.

2 Sharpen, do not confirm

Phase 2 – Round E

22. *Expected outcome:* three hard self-test questions and the one that unsettles the student most. The AI must not confirm the position – it should be sharpened, not settled.

3.1 Fact-check: verify what the AI told you

Phase 3

23. *Expected outcome:* two AI claims checked against an independent source, each marked match / mismatch / missing context. Typical real corrections: outdated reference year; gha vs. ha; per-capita vs. total; a fabricated "Global Footprint Network Annual Report 2024" (the real source is the Country Trends Explorer).

3.2 Your own source

Phase 3

24. *Expected outcome:* one new credible source not used in the dialogue (quality newspaper, NGO, or government report) with a proper citation and two to three sentences on the additional perspective it brings.

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4 Mini-podcast: cheat sheet

Phase 4

25. *Expected outcome (for the cheat sheet):* it must enable 1) own thesis ≤ 30 sec, 2) strongest counter-argument taken seriously ≤ 45 sec, 3) one AI claim corrected in phase 3 with the named source ≤ 45 sec, and a one-sentence final position.

5 Reflection on your thinking process

Phase 5

26. *Expected outcome:* to name a concrete change between the phase 1 notes and the podcast, and the specific piece of information that caused it (not "I learned a lot").

27. *Expected outcome:* to identify a moment the AI tried to answer instead of questioning, and how the student reacted (e.g. "Please stick to your role").

28. *Expected outcome:* to name the specific AI claim corrected in the phase 3 fact-check and draw a lesson about trusting AI on environmental data (figures are often outdated or confused).

29. *Expected outcome:* a reasoned judgement (better / worse / different) with specifics, e.g. the counter-position came from the dialogue, but the wording is the student's own.

30. *Expected outcome:* a concrete, usable personal rule that says when AI helps and when to avoid it (e.g. "I will use AI to challenge my arguments, but verify every number myself").

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