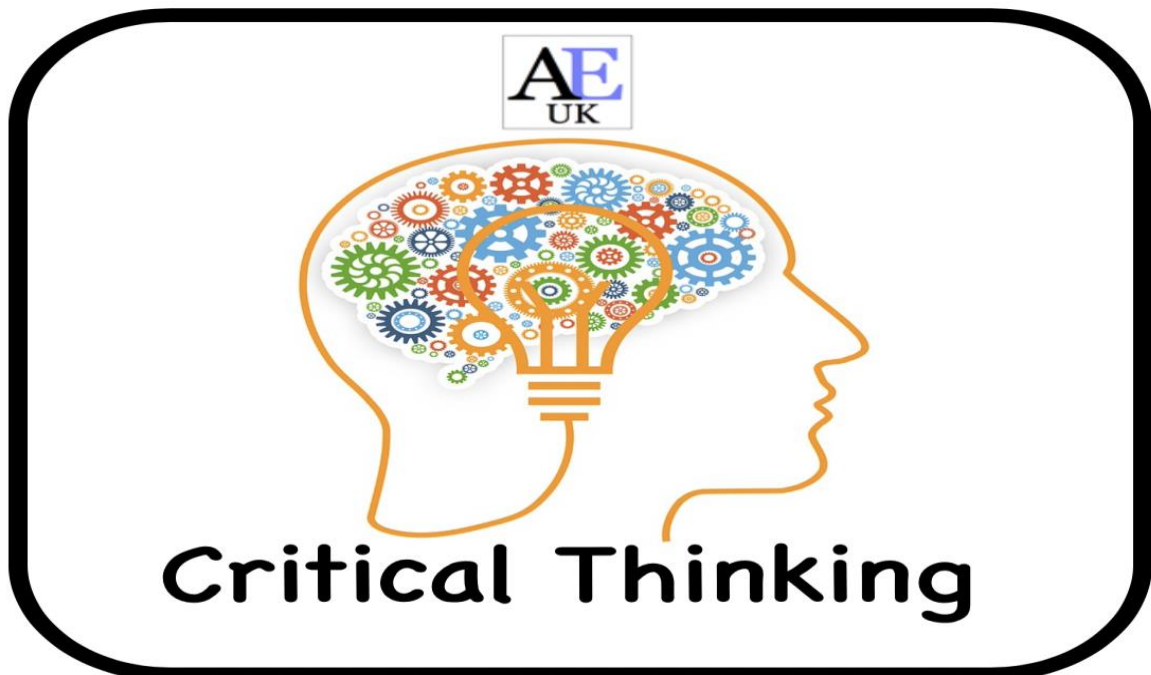


# AE Academic English UK

## Critical Thinking



## Reading Text Analysis 7

Life on other planets

EXAMPLE

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## Critical Thinking: Reading Text Analysis 7

### EXAMPLE

#### Lesson Plan

**Aim:** to provide quality practice in developing analytical critical reading skills.

#### 1. Preparation

- Reading text 'Life on other planets' for each student. [Page 3](#)
- Answer sheet (one sheet between two). [Page 4-5](#)

#### 2. Introduction

- Ask students to discuss: 'What is critical reading?'
- Try to elicit key terms and ideas: *questioning / critique / analysis / evaluation / validity / evidence / bias / opinion / stance / credibility / reliability / synthesis.*
- **EXTRA IDEAS! Go here:** *Critical thinking Dictogloss / Critical thinking videos / Bloom's Higher-level thinking skills* <https://www.academic-englishuk.com/critical-thinking>

#### 3. Set up

- Hand out the reading text 'Life on other planets'.
- Explain that you want the students to apply the critical thinking skills of analysing and evaluating to the text.
- Give examples of the two terms:  
**Analysis is to draw connections among ideas:** to examine / to question / to compare.  
**Evaluation is to justify a stand or decision:** to judge / to identify support and credibility / to appraise / to critique.

#### 4. The lesson

- As a whole group, do the first paragraph together. **Explain there are three possible problems.**
- Give the students 5-10 minutes to read the paragraph and try to identify areas in the paragraph can be questioned or critiqued.
- Students can conduct internet research to check information.
- Feedback individually or as a group using the answer sheet for guidance.
- Students work individually: Allow the students 20-30 minutes to read and highlight possible areas of question, critique or appraisal. **Explain there are ten possible problems to find.**

#### 5. Feedback

- Feedback in pairs - students share their ideas and justify their answers.
- Feedback as a whole class. Teacher highlights key answers and elicits other possible critiques.

**Disclaimer:** There are a variety of different answers to this activity.

## Are we alone? Life on other planets **EXAMPLE**

C. Wilson & H. Kennedy (2024)

Whether life exists on other planets in and beyond our solar system has been of considerable debate for many years. It was once thought that the only planets we could locate were the ones in our solar system, yet recently using new technology such as the Giant Magellan Telescope, AI and machine learning to scan the solar system, astronomers have now discovered thousands more stars in the Milky Way galaxy, many of them with planets as big as [REDACTED] which is the [REDACTED] is the area orbiting around a star that could host subsurface liquid water (NASA, 2024a; Mann, 2023). For these reasons, [REDACTED] that there is still much to [REDACTED] life beyond planet Earth.

Identifying liquid water is the main determining factor whether these planets [REDACTED]. Chan (2024) claims [REDACTED] to form, either internally or externally. Another suggestion is through examining elements of extraterrestrial [REDACTED] that show [REDACTED], either by way of biomineralization or fossilization. Furthermore, both Chan (2024) and [REDACTED] agree [REDACTED] things survive in hot, salty, acidic and radioactive environments. Meanwhile, NASA (2024) aims to focus [REDACTED] the signatures [REDACTED] water vapour, and possible chemical combinations between carbon, hydrogen, nitrogen, oxygen, [REDACTED] underway, as are plans [REDACTED]-sensing spacecrafts to exoplanets within the next [REDACTED] years. It is clear that the search for extraterrestrial [REDACTED]

However, ascertaining whether life exists on other planets [REDACTED] means, [REDACTED], no evidence [REDACTED]. NASA (2024b) admits that time and luck are crucial, as for every grain of sand on Earth, there are numerous [REDACTED] need even [REDACTED] telescopes. Mann (2023) argues that capturing light, however faint, from our [REDACTED] system, in order to [REDACTED], is key. In addition, Chan (2024) claims that more research into abiogenesis which is 'the transition from [REDACTED] building [REDACTED] from elements and chemicals to living systems that are capable of replication' is just as crucial. Thus, it seems [REDACTED] other [REDACTED] will [REDACTED] we view humanity forever.

### References

Chan, A., (2024). [REDACTED] [online]. Available at: <https://www.oxfordstudent.com/2024/01/28/xxxxxxxxxxxxxxxxxx> [Accessed 16.08.2024].

[REDACTED] *Questions: Are we alone in the universe?* [online]. Available at: <https://www.technologyreview.com/2023/11/13/xxxxxxxxxxxxx/> Accessed 15.08.2024].

[REDACTED] (2024a). *Are we alone?* [online]. [REDACTED] [Accessed 14.08.2024].

NASA, (2024b). [REDACTED] [online]. Available at: <https://science.nasa.gov/exoplanets/> [Accessed 14.08.2024].

## Possible critical evaluation **ANSWERS**

Whether life exists on other planets in and beyond our solar system has been of considerable debate for many years. It was once thought that the only planets we could locate were the ones in our solar system, yet recently using new technology such as the Giant Magellan Telescope <sup>(1)</sup>, AI and machine learning to scan the solar system, astronomers have now discovered thousands more stars in the Milky Way galaxy, many of them with planets as big as Earth and possess Earth-like qualities <sup>(2)</sup>. One of which is the circumstellar habitable zone <sup>(3)</sup> which is the area orbiting around a star that could host subsurface liquid water <sup>(4)</sup> (NASA, 2024a; Mann, 2023). For these reasons...

- 1) Why is this telescope so special?
- 2) Does 'Earth-like' mean that we could actually live there? (Nicholson and Haywood, 2023).
- 3) What is a definition of the circumstellar habitable zone?
- 4) A very small percentage are estimated to have liquid water ...

**ALL ANSWERS ARE INCLUDED IN PAID VERSION...**