**CCS ELA Reading Assessment**

**GRADE: 7th**

**NAME OF ASSESSMENT:** Defining Life

**STANDARDS ASSESSED:**

#### Key Ideas and Details:

[CCSS.ELA-LITERACY.RI.7.1](http://www.corestandards.org/ELA-Literacy/RI/7/1/)  
Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

[CCSS.ELA-LITERACY.RI.7.2](http://www.corestandards.org/ELA-Literacy/RI/7/2/)  
Determine two or more central ideas in a text and analyze their development over the course of the text; provide an objective summary of the text.

[CCSS.ELA-LITERACY.RI.7.3](http://www.corestandards.org/ELA-Literacy/RI/7/3/)  
Analyze the interactions between individuals, events, and ideas in a text (e.g., how ideas influence individuals or events, or how individuals influence ideas or events).

#### Craft and Structure:

[CCSS.ELA-LITERACY.RI.7.4](http://www.corestandards.org/ELA-Literacy/RI/7/4/)  
Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of a specific word choice on meaning and tone.

#### Integration of Knowledge and Ideas:

[CCSS.ELA-LITERACY.RI.7.8](http://www.corestandards.org/ELA-Literacy/RI/7/8/)  
Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.

[CCSS.ELA-LITERACY.RI.7.9](http://www.corestandards.org/ELA-Literacy/RI/7/9/)  
Analyze how two or more authors writing about the same topic shape their presentations of key information by emphasizing different evidence or advancing different interpretations of facts.

**EXPLANATION OF STANDARD ALIGNMENT:**

[CCSS.ELA-LITERACY.RI.7.1](http://www.corestandards.org/ELA-Literacy/RI/7/1/)  
Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

* *In task 1 and 2 students must identify multiple definitions of life and trace the reasoning behind certain arguments in a text by citing textual evidence and quotes*

[CCSS.ELA-LITERACY.RI.7.2](http://www.corestandards.org/ELA-Literacy/RI/7/2/)  
Determine two or more central ideas in a text and analyze their development over the course of the text; provide an objective summary of the text.

* *In task 1, students must determine two central definitions of life and summarize those definitions using evidence from the text.*
* *In task 3, students must trace the evolution of the definition of biological life as depicted in the article from Astrobiology magazine. In doing so, they must summarize the ideas as well as depict it graphically (through a timeline), which is also a form of summary*

[CCSS.ELA-LITERACY.RI.7.3](http://www.corestandards.org/ELA-Literacy/RI/7/3/)  
Analyze the interactions between individuals, events, and ideas in a text (e.g., how ideas influence individuals or events, or how individuals influence ideas or events).

* *In task 2, students must analyze the reasoning presented in a text in order to defend the evidence presented. The evidences discussed in the text were all highly influenced by various interactions and events in the past. Thus, in order for students to provide a strong defense of these evidences, they must be able to understand the interaction of related events and ideas.*
* *In task 3, students must trace the evolution of the scientific definition of life over time. In doing so, students must analyze how one event/idea influenced another over time.*

#### *Craft and Structure:*

[CCSS.ELA-LITERACY.RI.7.4](http://www.corestandards.org/ELA-Literacy/RI/7/4/)  
Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of a specific word choice on meaning and tone.

* *In task 1, students must identify and explain two definitions of life from a technical and scientific standpoint*
* *In task 2, students must defend two pieces of evidence and in doing so they must understand and explain the meanings of some technical terms as well as some potential figurative and connotative language.*

#### *Integration of Knowledge and Ideas:*

[CCSS.ELA-LITERACY.RI.7.8](http://www.corestandards.org/ELA-Literacy/RI/7/8/)  
Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.

* *In task 2, students must identify two claims in a text, evaluate and defend the reasoning behind those claims to determine whether the reasoning is sound.*

[CCSS.ELA-LITERACY.RI.7.9](http://www.corestandards.org/ELA-Literacy/RI/7/9/)  
Analyze how two or more authors writing about the same topic shape their presentations of key information by emphasizing different evidence or advancing different interpretations of facts.

* *In task 1, students must identify two different definitions of biological life and must cite textual evidence. In order to do this task, students must understand what qualities (evidences emphasized, in this case) distinguish the various definitions*
* *In task 2, students must identify and defend what evidences and reasoning make for two strong definitions of life. This requires students to be able to identify what key information helps an author make their point or a perspective valid.*

**DURATION OF ADMINISTRATION:** 1.5-2 hours

**MATERIALS NEEDED:**

* Internet Access for all students
* Individual laptop/tablets
* *Astrobiology Magazine-Defining Life* article
* Pencils/pens

**PREPARATION FOR THE ASSESSMENT:**

1. Provide digital access to the [*Astrobiology Magazine-Defining Life*](http://www.astrobio.net/exclusive/226/defining-life)article in a universally accessible forum. Be sure that students can access all hyperlinks within the article.
2. Tell students that they will be exploring the answer to the question of “how do we define life?” and that this is still a major debate in the scientific community, particularly as it pertains to the field of astrobiology. Explain to students that astrobiology is the field of studying the possible biology extraterrestrially (outside of Earth). However, in order to study the possibility of life elsewhere in the universe, we must first define what we are looking for.
3. Distribute the assessment forms and pencils

**INTRODUCTION:**

Astrobiology has become a significant focus in space studies and is the study of biology as it pertains to cosmic bodies aside from planet Earth. A primary aim in the field of astrobiology is to potentially find life elsewhere in the universe. Although astrobiologists might be primarily concerned with the search for extraterrestrial life, they are still highly curious about how life survives on Earth, particularly in extreme environments. Scientists wish to understand terrestrial extremophiles to see if they could be potential analogs for life else-where in the universe. However, in order to determine that or even begin the search for life elsewhere in the universe, we must know what we are looking for. This then beg the questions how do we define life? And What are the characteristics/qualities of life?

**Task 1:**

*Read the following article, “Defining Life” published online by the Astrobiology Magazine.*

<http://www.astrobio.net/exclusive/226/defining-life>

Using the box and bullet outline below: **identify** two definitions of life provided in the article, who proposed that definition, and what was their central argument/reason for their definition. Be sure to cite textual evidence.

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| --- |
| **Definition #1:** |

* Who proposed it: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Where did you find it in the text (page or paragraph number): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Central argument/reason for this definition (textual evidence): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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* + Where did you find it in the text (page or paragraph number):

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| **Definition #2:** |

* Who proposed it: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Where did you find it in the text (paragraph or page number): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Central argument/reason for this definition (textual evidence): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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* + Where did you find it in the text (paragraph or page number):

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**Task 2:**

Select the definition of the life that you think is the best one? Identify at least one piece of evidence/argument which supports it and one argument/piece of evidence which counters it, using textual evidence. Explain each piece of evidence.

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| --- | --- |
| **Definition:** | |
| **Evidence/Argument Supporting this Definition** | **Evidence/Argument**  **Against this Definition** |
|  |  |
| *Explanation:* | *Explanation:* |

**Task 3:**

Trace the evolution of the scientific definition of life by completing the timeline below. Use evidence from the text. Your timeline should show at least **3 definitions.**