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Faculdade de letras – FALE
Programa de Pós-graduação em Estudo Linguísticos – POSLIN
Curso de Especialização em Ensino de Inglês – CEI

PEDRO SZYDLONSKI SANTOS

From Lab to Language: Exploring Science Through English

(Unidade Didática para o Ensino de Inglês)

Belo Horizonte
2024

Pedro Szydlonski Santos

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(Unidade Didática para o Ensino de Inglês)

Trabalho apresentado ao Curso de Especialização em Ensino de Inglês da Faculdade de Letras da Universidade Federal de Minas Gerais, como requisito parcial para a obtenção do título de Especialista em Ensino de Língua Inglesa.

Orientadora: Valdeni Reis.

Belo Horizonte
2024

UNIVERSIDADE FEDERAL DE MINAS GERAIS
CURSO DE ESPECIALIZAÇÃO EM LÍNGUA INGLESA/CEI

ATA DE DEFESA DE MONOGRAFIA/TCC

Às 09:40 horas do dia 07 de dezembro de 2024, reuniu-se na Faculdade de Letras da UFMG a Comissão Examinadora indicada pela Coordenação do Curso de Especialização em Língua Inglesa, para julgar, em exame final, o trabalho intitulado, From Lab to Language: Exploring Science Through English, apresentado por Pedro Szydlonski Santos, como requisito final para obtenção do Grau de Especialista em Ensino de Língua Inglesa. Abrindo a sessão, a banca examinadora, após dar conhecimento aos presentes do teor das Normas Regulamentares do Trabalho Final, passou a palavra à (ao)candidato(a) para a apresentação de seu trabalho. Seguiu-se a arguição pelos examinadores com a respectiva defesa do(a)candidato(a). Em seguida, a Comissão se reuniu, sem a presença do(a) candidato(a) e do público, para julgamento e expedição do resultado final.

Foram atribuídas as seguintes indicações:

Profa. Dra. Climene Fernandes Brito Arruda indicou a (X) aprovação/ ( ) reprovação do(a)candidato(a);

Profa. Me. Isabela Soares de Almeida Dias indicou a (X) aprovação/ ( ) reprovação do(a) candidato(a).

Pelas indicações, o(a) candidato(a) foi considerado (X) aprovado(a)/ ( ) reprovado(a).

Nota: 80

O resultado final foi comunicado publicamente ao(à) candidato(a) pelo Presidente da Comissão. Nada mais havendo a tratar, este encerrou a sessão, da qual foi lavrada a presente ATA assinada eletronicamente por todos os membros participantes da Comissão Examinadora.

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Resumo

O presente trabalho apresenta o currículo From Lab to Language: Exploring Science Through English (A2), desenvolvido como projeto final do Curso de Graduação em Inglês (CEI) da Universidade Federal de Minas Gerais (UFMG). O objetivo principal do projeto é integrar o ensino da língua inglesa com conceitos científicos, promovendo uma aprendizagem significativa para alunos do 9º ano do ensino fundamental (nível A2). Para isso, utiliza-se a abordagem Content and Language Integrated Learning (CLIL), permitindo que os estudantes desenvolvam competências linguísticas e cognitivas simultaneamente.

A metodologia adotada fundamenta-se em teorias de aquisição de segunda língua e aprendizagem significativa, incluindo a Hipótese do Input de Krashen (1985), a Teoria da Proficiência Cognitiva Acadêmica (CALP) de Cummins (1979) e a Zona de Desenvolvimento Proximal (ZPD) de Vygotsky (1978). O currículo é estruturado em unidades temáticas, sendo as duas primeiras dedicadas ao estudo do Sistema Solar e do Sol, utilizando estruturas comparativas e superlativas para contextualizar a gramática na exploração científica. A multimodalidade também é um aspecto central do projeto, com o uso de imagens, diagramas e gráficos para facilitar a compreensão e engajamento dos alunos, conforme sugerido por Coyle, Hood e Marsh (2010).

Os resultados esperados incluem o aumento da proficiência em inglês, o desenvolvimento do pensamento crítico e a ampliação do interesse dos alunos pelo aprendizado interdisciplinar. Além disso, espera-se que os estudantes adquiram maior autonomia na utilização da língua inglesa como ferramenta para explorar e compreender conceitos científicos. Como conclusão, o currículo From Lab to Language demonstra o potencial do ensino integrado de línguas e ciências para promover uma aprendizagem mais dinâmica, significativa e motivadora, preparando os alunos para desafios acadêmicos e do mundo real.

Palavras-chave: ESL; EFL; CLIL; Ensino de Inglês.

Abstract

This paper presents the curriculum From Lab to Language: Exploring Science Through English (A2), developed as the final project for the Graduate Course in English (CEI) at the Federal University of Minas Gerais (UFMG). The primary objective of the project is to integrate English language teaching with scientific concepts, fostering meaningful learning for 9th-grade students (A2 level). To achieve this, the curriculum applies the Content and Language Integrated Learning (CLIL) approach, allowing students to develop both linguistic and cognitive skills simultaneously.

The methodology is based on second language acquisition and meaningful learning theories, including Krashen's Input Hypothesis (1985), Cummins' Cognitive Academic Language Proficiency (CALP) theory (1979), and Vygotsky's Zone of Proximal Development (ZPD) (1978). The curriculum is structured into thematic units, with the first two focusing on the Solar System and the Sun, using comparative and superlative structures to contextualize grammar through scientific exploration. Multimodality is also a key element, incorporating images, diagrams, and charts to enhance student comprehension and engagement, following the recommendations of Coyle, Hood, and Marsh (2010).

The expected results include increased English proficiency, the development of critical thinking skills, and a greater interest in interdisciplinary learning. Furthermore, students are expected to become more autonomous in using English as a tool for exploring and understanding scientific concepts. In conclusion, the From Lab to Language curriculum demonstrates the potential of integrating language and science education to promote a more dynamic, meaningful, and engaging learning experience, preparing students for academic and real-world challenges.

Keywords: ESL; EFL; CLIL; English Teaching.

Acknowledgements

To my father, Wagner, who has always been my greatest example of perseverance, dedication, and the pursuit of knowledge. Your support and encouragement have been invaluable.

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And to myself, for the resilience and determination to keep going, even when the path seemed uncertain. This achievement is a testament to my perseverance.

Thank you all for being part of this milestone in my life.

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INTRODUCTION

This curriculum is deeply personal, born from my childhood fascination with Cosmos by Carl Sagan—a series that sparked my love for science and English. Watching Cosmos opened my eyes to the beauty of the universe, the power of curiosity, and the importance of communicating complex ideas in simple, engaging ways. These passions naturally found their way into my teaching philosophy, inspiring me to design lessons that merge language learning with exploring the wonders of science.

Developed as my final project for the Graduate Course in English (CEI) at UFMG, From Lab to Language is designed to captivate 9th-grade Brazilian students (ages 13–14) by introducing English through fascinating scientific topics such as the Solar System and the Sun. The curriculum uses the study of comparative and superlative structures not just as grammar points, but as tools for students to engage with real-world ideas—comparing planets, discussing the Sun's role in our solar system, and imagining possibilities beyond Earth. The name From Lab to Language reflects this fusion, capturing the essence of exploration and discovery while ensuring that every activity feels meaningful and connected to students' learning journeys.

At its core, the curriculum is built on the principles of Content and Language Integrated Learning (CLIL), an approach that weaves together subject content and language instruction. As David Marsh, one of CLIL's founders, notes, "integrating language with content enhances cognitive and linguistic development by engaging students in real-world topics that promote curiosity and critical thinking" (Marsh, 2002). This approach aligns seamlessly with Stephen Krashen's Input Hypothesis, which emphasizes that learners thrive when exposed to language that is both challenging and comprehensible (Krashen, 1985). By carefully designing lessons around scientific topics slightly above students' current language proficiency, the curriculum provides the right balance of challenge and accessibility to foster both engagement and growth.

The curriculum is also informed by the work of Do Coyle, Philip Hood, and David Marsh, who highlight the value of using CLIL to enhance student engagement. They argue that combining language and subject matter increases not only linguistic competence but also curiosity and motivation (Coyle, Hood & Marsh, 2010). In practice, this means that every lesson in From Lab to Language is crafted to spark wonder while building essential language skills, creating a learning experience that is as memorable as it is effective. From Lab to Language represents more than a teaching tool; it's a reflection of my personal journey and a commitment to helping students see English as a gateway to understanding and exploring the world around them.

Reflecting Jim Cummins' Cognitive Academic Language Proficiency (CALP) theory, which underscores the value of academic language for deep learning, this curriculum offers students opportunities to go beyond conversational English, encouraging them to use the language as a tool for academic inquiry and critical thinking. Each unit is designed specifically for A2-level English learners, presenting age-appropriate scientific concepts to naturally incorporate comparative and superlative forms. For example, the first unit, “The Solar System,” explores planetary characteristics such as size, distance from the sun, and composition to provide a context for using comparative language. The second unit, “The Sun,” builds on this by using superlatives to describe the Sun’s unique qualities, such as its immense size and central role. This gradual progression is based on Vygotsky’s Zone of Proximal Development (ZPD), scaffolding learning in a way that challenges students just enough to encourage growth (Vygotsky, 1978).

The curriculum incorporates verbal and non-verbal resources, such as images, charts, and diagrams, to support students’ understanding. This multimodal approach aligns with CLIL principles, as outlined by Coyle et al. (2010), which advocate for diverse materials to engage students and aid comprehension. Visual aids, such as diagrams of planets or the Sun, make complex scientific ideas easier to grasp, reinforcing the connection between language and content. The input approach draws on multimodal learning, supported by researchers like Coady and Huckin (1997), who emphasize that using multiple forms of input helps students understand and retain new vocabulary. Additionally, research by Laufer and Hulstijn (2001) suggests that tasks requiring active involvement are essential for meaningful language acquisition and vocabulary retention. This curriculum encourages students to observe, compare, and analyze scientific data, making learning more interactive. By motivating students to use English as a practical tool for scientific inquiry, the curriculum supports the higher-order thinking skills Cummins (1979) identifies as necessary for advanced language development.

This curriculum is intended solely for educational use, without any commercial intent. It may only be reproduced or distributed with the author’s permission, underscoring its exclusive purpose of supporting quality, accessible learning. Aimed at Brazilian 9thgrade students, the curriculum ensures thematic relevance and age-appropriateness, fostering engagement and making English a practical tool for scientific exploration In summary, From Lab to Language: Exploring Science Through English (A2) combines English language learning with scientific exploration for A2-level students, leveraging CLIL principles, Krashen’s Input Hypothesis, and Vygotsky’s Zone of Proximal Development to offer a structured and engaging approach to language development.

By balancing linguistic and cognitive growth, this curriculum enables students to build both language proficiency and scientific literacy, preparing them for academic and realworld applications of English. This material is created solely for educational purposes, with no commercial intent, and may not be reproduced or distributed without the author’s permission.

From Lab to Language: Exploring Science Through English

By Pedro Szydlonski Santos

From Lab to Language: Exploring Science Through English (A2)

Unit 1. The Solar System

I. Warm-Up:

A. Discuss in pairs the questions below:

a) What is the solar system?
b) How many planets orbit our sun?
c) Which galaxy is our home?
d) Would you like to travel in space?

B. Match up as many words and meanings as you can. Recheck this exercise after reading the text.

a) orbit
b) debris
c) distance
d) astronomer
e) classify
f) gas

( ) an air-like substance that moves around

( ) loose, broken materials often made of rock

( ) a person who studies stars and planets

( ) how far two objects or places are from each other

( ) to put something into a category or group

( ) to go in a circle around something else

II. Reading:

The Solar System

Did you know that there are eight planets in our solar system? Planets in our solar system orbit around the same sun. Besides planets, our solar system also has moons, asteroids, comets, and space debris.

Each of the eight planets is a different distance from the sun. Mercury is the closest planet to the sun. Then come Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune.

Even farther away than Neptune is another planet called Pluto. In 2008, astronomers decided Pluto was too small to be a regular planet. Instead, they classified it as a "dwarf planet."

The planets closest to the sun are made of metal and rock. The planets that are farthest away are made of gas, like hydrogen and helium. These two groups of planets are divided by an asteroid belt. Asteroids are space rocks that used to be part of other planets.

The solar system is 4.6 billion years old. For thousands of years, humans thought Earth was the center of the universe. Now we know that our solar system is just one of many other solar systems in the Milky Way galaxy. There are other galaxies too. No one knows how big the universe is.

III. Comprehension

Discuss these questions in pairs and then write the answers below.

1 How many planets are there in our solar system

____

____

2 Which planet is very close to the sun

____

____

3 Why did astronomers decide that Pluto wasn't a planet?

____

____

4 What are the planets that are farthest away from the sun made of?

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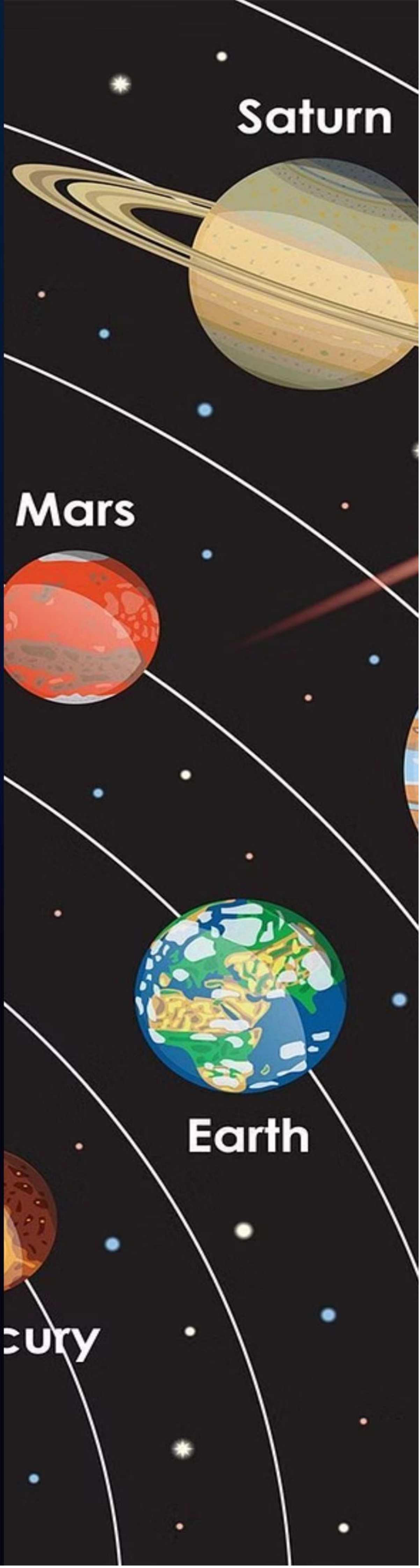
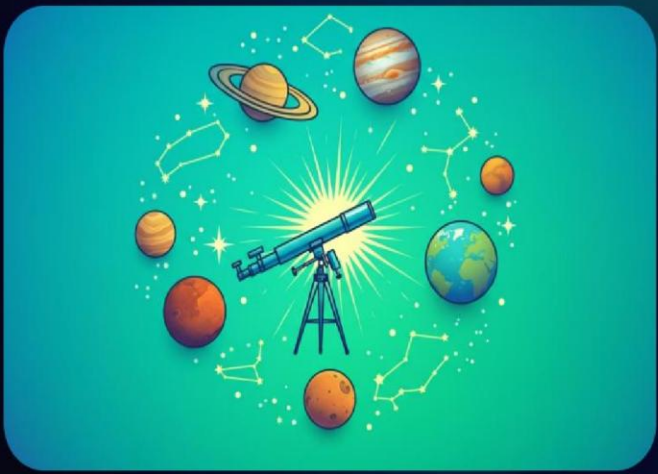


IV. Practice:

Match the words and their examples.



Words

1. astronomer
2. distance
3. orbit
4. debris
5. gas

Examples

( ) The moon takes 27 days to travel around the earth.

( ) This birthday balloon is full of helium.

( ) After the explosion, the city was full of broken pieces of buildings.

( ) Galileo studied the stars and planets.

( ) Mercury is 36 million miles from the sun.

V. Grammar Practice:

Scientists believe the Solar System began as a spinning cloud of gas and dust, with gravitational forces forming the Sun at its center. Lighter gas particles were pushed farther away than denser dust particles, which stayed closer to the Sun and clumped together to form planets. These clumps grew larger than surrounding debris and eventually cleared their orbits.

Gas giants formed in cooler, more distant regions, making them much larger than the rocky planets like Earth, which formed closer to the Sun. Until the 1990s, scientists thought the planets in our Solar System were more varied than those elsewhere, but advanced telescopes revealed exoplanets that are brighter, more massive than Jupiter, or smaller and rockier than Earth. Today, many exoplanets appear more habitable than the planets in our Solar System.

(Adapted from **https://www.nationalgeographic.com/science/article/the-solar-system**)

1. Answer the questions below to start noticing patterns in how objects are compared.

a) Which word shows that some particles of gas are not as heavy as others?

b) Find the word that shows some particles were closer to the Sun.

c) Which word describes planets that are bigger than Jupiter?

What do these words have in common?

- Each word is comparing two or more objects.
- These words often end in "-er" or use "more" before the adjective.

We call these words comparative adjectives. Comparative adjectives help us describe differences between two or more things by showing how one thing is greater, smaller, or closer in quality than another.

Now that you know how to spot comparatives, think about other objects in space. Use comparative adjectives to write sentences about each one. Look at the examples below to get started.

- Example: Mercury is closer to the Sun than Venus.
- Example: Jupiter is larger than Earth.

Rules for Forming Comparatives

Now that you've found comparative adjectives, see if you can find a pattern for when we add "-er" and when we use "more"

a) When do you add "-er" to make a comparative adjective?

---

b) When do you use "more" in front of an adjective to make it a comparative?

Now that you've thought about the examples, let's study the rules for forming comparatives!

Comparatives help us show how two things differ in terms of quality, and we can express superiority, equality, or inferiority.

A) **Comparatives of Superiority** are used to show that one thing has more of a quality than another.

1. a) Short adjectives (one syllable): Add "-er" to the end of the adjective to form the comparative. Example: "Larger particles of dust remained closer to the Sun."
2. b) Two-syllable adjectives ending in "-y": Change the "y" to "i" and add "-er". Example "Mars is drier than Earth."
3. c) Long adjectives (two or more syllables): Use "more" before the adjective. Example: "Scientists discovered planets that are more massive than Jupiter."

B) **Comparatives of Equality** Use "as + adjective + as" to show that two things are equal in quality. Example: "Jupiter's gravity is as strong as Saturn's gravity."

C) **Comparatives of Inferiority** are used to show that one thing has less of a quality than another. Use "less + adjective + than" to show that something has a lower degree of quality. Example: "The smaller particles of gas are less dense than the larger particles of dust."

Superiority	-er / more + adjective + than	"Jupiter is **larger than** Earth."
Equality	as + adjective + as	"Mars is **as rocky as** Earth."
Inferiority	less + adjective + than	"Gas is **less dense than** dust."

Exercises:

Complete each sentence with the correct form of the comparative adjective provided in parentheses. After, compare answers with a classmate.

1. Mercury is ____________________(close) to the Sun than Venus.
2. Venus is ____________________ (hot) as Mercury.
3. Pluto is____________________ (important) than Earth in supporting life.
4. Jupiter is ____________________ (beautiful) than Saturn's rings.
5. Mars' climate is____________________ (bad) than Earth's for supporting human life.

VI. Listening:

Watch the short National Geographic video below about the solar system and judge whether the statements are true (T) or false (F).

a) The Solar System's formation is older than Earth ( )

b) The Sun is brighter than the Earth. ( )

c) Mars is colder than Neptune. ( )

d) Mercury is closer to the sun than Earth. ( )

e) Saturn is Bigger than Jupiter. ( )

Pronunciation:

Pronunciation Practice: The /θ/ Sound

Step 1: Practice the /θ/ Sound

Say each of the following words three times. Focus on placing your tongue gently between your teeth and blowing air out to create the /θ/ sound:

- Earth
- Thin
- Thirty
- Math
- Thick

Step 2: Voiced and Unvoiced Sounds

The /θ/ sound can be unvoiced or voiced.

- Unvoiced: You push air out without vibrating your vocal cords (e.g., "thin").
- Voiced: You push air out and vibrate your vocal cords (e.g., "this").

Activity: Place the Words

Work with a partner to identify whether each word has an unvoiced or voiced /θ/ sound. Write them in the correct column in the table below.

Words to classify:

Earth, Thin, Thirty, Math, Thick, This, That, Other, Weather, Breathe

Voiced	Unvoiced

Step 3: Pair Work

Take turns pronouncing the words in each category with your partner. Help each other by providing feedback on tongue placement and airflow.

VII. Writing:

Let's put into practice what we studied. Read the instructions below to produce a writing:

The solar system presents various possibilities and challenges when considering planetary colonization. Write an essay focusing on comparisons to explore which planet might be the most feasible for human habitation.

In your essay:

- Compare Earth, the only habitable planet we currently know of, with other celestial bodies.
- Discuss Mars as a potential option and compare its challenges (e.g., extreme heat, lack of atmosphere) to Earth's conditions.

Focus on comparative language: Use comparative forms (e.g., "hotter," "more suitable," "less habitable") to analyze the advantages and disadvantages of different planets or celestial bodies.

Be sure to:

- Organize your essay logically.
- Provide clear reasons and examples to support your comparisons.

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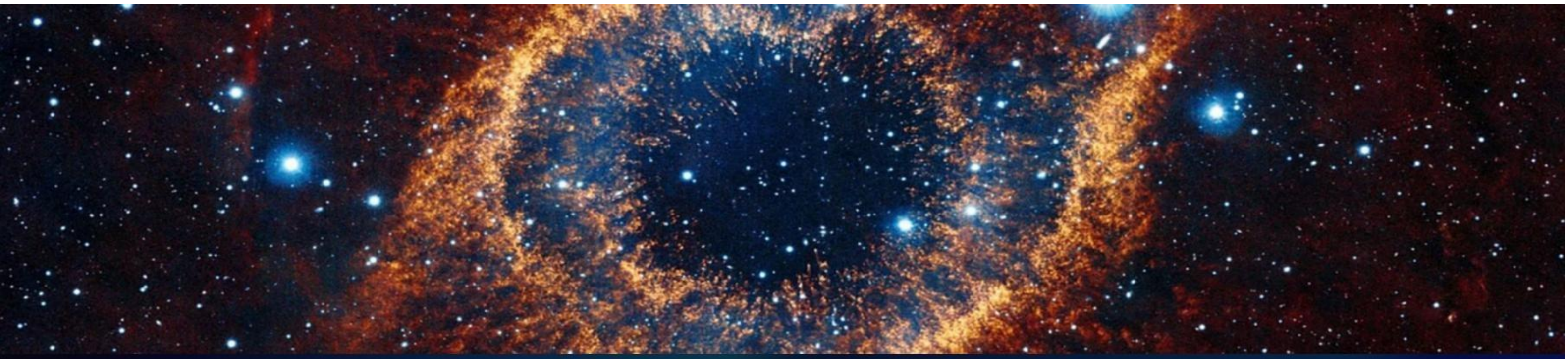

VIII. Speaking

In pairs or small groups, discuss the following questions. Use comparative language (e.g., "more suitable," "less habitable") to share your opinions and explain your ideas.

Earth vs. Mars

- What makes Earth better to live on than Mars?
- Why do you think it would be hard to live on Mars?

Mars vs. the Moon

- Which is easier to get to: Mars or the Moon?
- Do you think it would be harder to live on Mars or the Moon? Why?

Mars vs. Jupiter’s Moons

- Do you think Mars is safer than Jupiter’s moons?
- Which place do you think has more things humans need to survive, like water or air?

Your Choice

- If you could live on any planet or moon, which one would you pick? Why?
- What makes it better than the others?

Let's discover!

- Neptune was the last planet to be discovered. It was discovered on September 23, 1846.
- The rings around Saturn are made of ice particles.

After this unit....	Of course	I need more practice	Not yet
I can compare and describe the planets			
I can use the “comparative” structure			
I can talk about the solar system			

A. Discuss in pairs the questions below:

A) What words describe the sun?

B) Is the Sun Bigger than Jupiter?

C) How old is the sun?

D) Is the sun a planet?

B. Match up as many words and meanings as you can. Recheck this exercise after reading the text.

a) star

b) brightest

c) sphere

d) massive

e) gas

f) planet

( ) a round object in the shape of a ball.

( ) a large ball of burning gas in space.

( ) very big.

( ) having the most light.

( ) an air-like substance that moves around.

( ) a sphere-shaped object in space that moves around a star.

II. Reading:

The Sun

Did you know that the Sun is a **star**? It’s the closest star to us, which is why it appears the **brightest** in the sky. The Sun sits at the center of our solar system, with Earth as the third planet from it. Like Earth, the Sun is shaped like a **sphere**, but it’s much bigger! About 1.3 million Earths could fit inside the Sun. Unlike Earth, however, the Sun is **a massive** ball of hot **gases**.

The Sun, located 93 million miles from our **planet**, provides essential heat, light, and energy, holding the solar system together with its gravity. Despite the distance, sunlight reaches Earth in just 8 minutes. Scientists estimate the Sun and our planet are both around 4.5 billion years old, and the Sun still has a long life ahead, ensuring continued support for life on Earth.

III. Comprehension:

Discuss these questions in pairs and then write the answers below.

1 Where is the sun?

____

2 What is the sun?

____

3 How big is the sun?

____

4 How old is the sun?

____

5 Why do we need the sun?

____

IV. Practice:

Draw a line between the matching words and their opposites.

Words	Opposites
1. brightest	a farthest
2. closest	b darkest
3. hottest	c smallest
4. biggest	d youngest
5. oldest	e coldest

1. Grammar Practice:

Read the passage carefully. As you read, think about the words used to describe the Sun. What makes the Sun different from other stars and objects in the solar system? Pay special attention to the words highlighted.

The Sun is the real star of the show—literally! As the closest star to Earth, it's the most essential source of all the heat and light that makes flowers bloom. Life wouldn't exist without it. It's also the central and by far the largest object in our solar system. With the capacity to fit more than a million Earths inside, it's the biggest body around! Our star's strongest gravity grips all the planets, dwarf planets, asteroids, and comets, keeping them from spinning into the deepest parts of space. Put simply, we wouldn't have a solar system without the Sun. [...]

(Adapted from **https:kids.nationalgeographic.com**)

1. Answer the questions below to uncover patterns in the way the Sun is described.

a) Which word in the passage tells you that the Sun is "the most important"?

____

b) Find the word that shows the Sun is the "biggest" or "largest" in size.

____

c) Which word indicates that the Sun's gravity is "the strongest" in the solar system?

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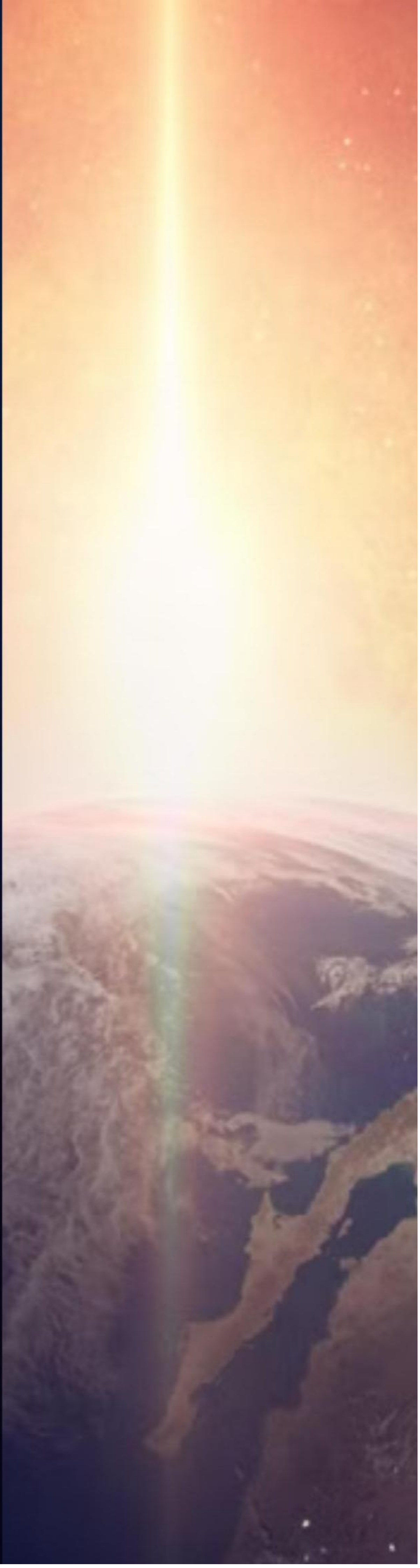


Look at the words you wrote above. What do they all have in common?

- Each word is describing something in the highest degree.
- These words often end in "-est" or have "most" in front of them.

We call these words superlative adjectives. Superlative adjectives help us describe when something is the best, the most, or the highest in a certain quality.

2. Now that you know how to spot superlatives, think about other objects in space. Use superlative adjectives to write sentences about each one. Look at the examples below to get started.

- Example: Jupiter is the biggest planet in our solar system.
- Example: Mars has the most extreme dust storms of any planet.

____

____

____

____

Now that you've found superlative adjectives, see if you can find a pattern for when we add "-est" and when we use "most" to form superlatives.

a) When do you add "-est" to make a superlative?

____

b) When do you use "most" in front of an adjective to make it a superlative?

____

Now that you've analyzed the examples, let's study the rules for forming superlatives!

- Short Adjectives (one syllable): For most adjectives with one syllable, we add "-est" to the end of the adjective to form the superlative.

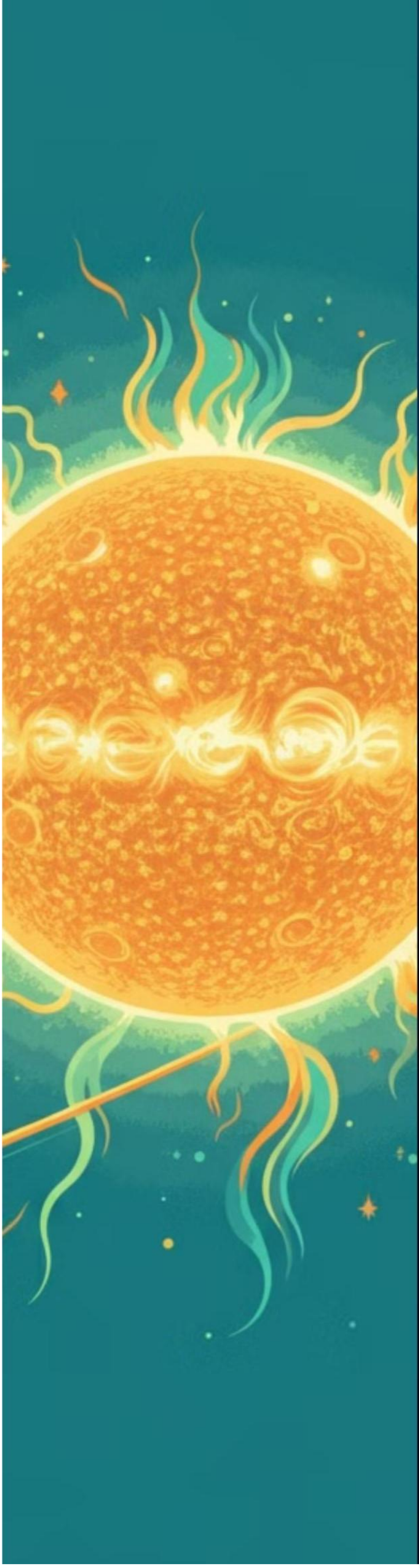
Example from the passage: "The Sun is the closest star to Earth." ?

- Adjectives with Two or More Syllables: For adjectives with two or more syllables, we use "most" before the adjective to make it a superlative.

Example from the passage: "The Sun is the most essential source of heat and light."

Quick Summary:

- Use "-est" for short, one-syllable adjectives.
- Use "most" for longer adjectives with two or more syllables.



VI. Listening: Listen to the Podcast from NASA about the Sun and answer the following questions

A) Listen to the short podcast above about the solar system and judge whether the statements are true or false.

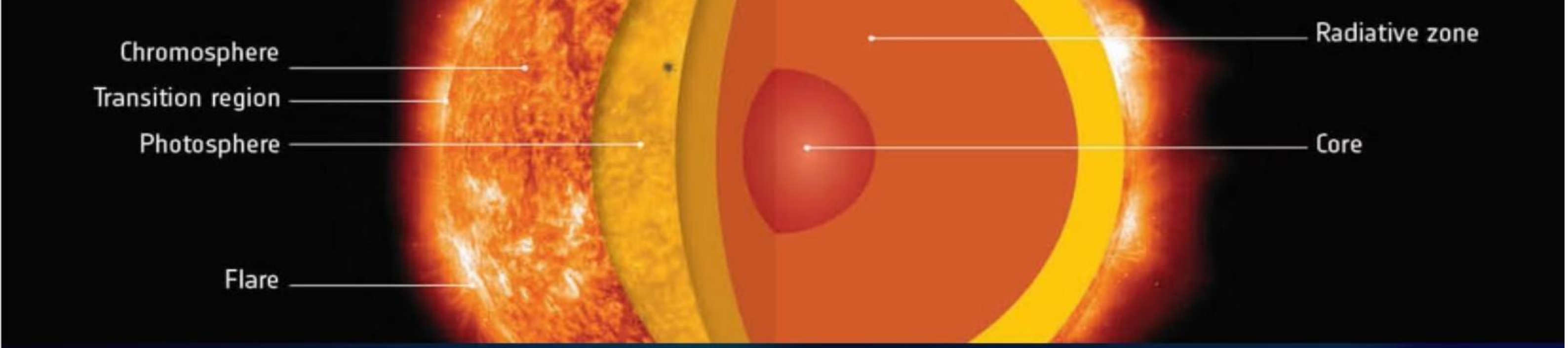
1. The Sun is a calm, predictable ball in the sky. ( )
2. The Sun is currently at Solar Maximum, meaning it is at its most active. ( )
3. The Parker Solar Probe is a NASA mission aiming to get close to the Sun's corona. ( )
4. The corona, or outer layer of the Sun, is cooler than the photosphere. ( )
5. A solar flare releases energy quickly, while a coronal mass ejection sends plasma into space more slowly. ( )

B) Complete the gaps using the correct superlative form based on what you heard in the audio about the Sun and solar activity.

a) The Sun is at its ________________ level of activity, called Solar Maximum, making it the ________________ it can be. (high / active)

b) The Parker Solar Probe is NASA's ________________ mission to the Sun, aiming to reach the ________________ part of its corona. (close / outer)

c) Earth's magnetosphere is one of the ________________ shields we have, protecting us from the ________________ solar wind and particles. (strong / powerful)



VII. Writing:

After listening to the podcast, imagine you are writing a letter to Joe Westlake, Division Director for Heliophysics at NASA Headquarters. In the podcast, Joe explains his view about the Sun, describing it as a "giant ball of gas and plasma" and calling it an "average star." He shares how important the Sun is to life on Earth, but he also mentions that it's like other stars in the galaxy.

In your letter, explain why you agree or disagree with Joe's view of the Sun. Use notes from the podcast, including any information about the Sun's unique role in our solar system or its impact on life on Earth. Be sure to explain your point of view clearly and give reasons or examples for your opinion.

Consider:

- The Sun's role in creating the "habitable zone" for Earth.
- How the Sun's activity (solar flares, solar wind) affects life on Earth.
- Why the Sun might or might not be "average" compared to other stars.

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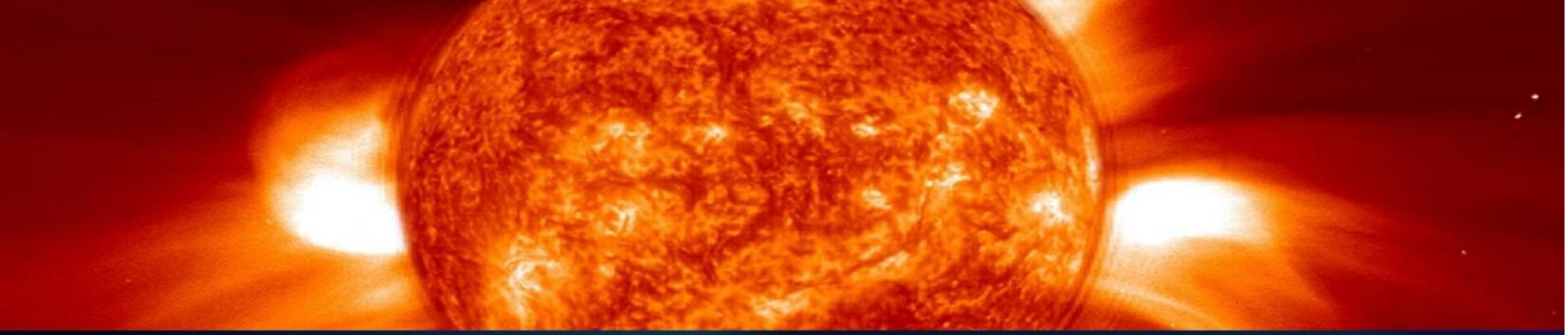

VIII. Speaking:

In pairs or small groups, talk about these questions. Use **superlative words** (e.g., "the most important," "the least dangerous") to share your ideas.

The Sun vs. Earth

- Why is the Sun the most important thing for life on Earth?
- Why is the Sun the least safe place for humans to live?

The Sun vs. Other Stars

- Do you think the Sun is the most useful star for life on Earth? Why?
- Is the Sun the safest star compared to other stars? Why or why not?

The Sun vs. Other Objects in Space

- Is the Sun the most powerful thing in the Solar System? Why?
- Which is the most helpful for life: the Sun, planets, or moons? Why?

Your Choice

- If you could visit any star or planet, which one would you choose? Why?
- Why is it the most interesting or important to you?

Let's Discover!

- The Sun is the largest object in our solar system, containing more than 99% of its total mass.
- The Sun is about 4.6 billion years old, making it a middle-aged star.

After this unit....	Of course	I need more practice	Not yet
I can compare and describe the Sun using superlative structures.			
I can use the superlative structure to show the highest degree of a quality.			
I can talk about the unique features of the Sun in our solar system using superlatives.			

Teacher's Guide - Unit 1

Unit Title: *The Solar System*

Target Language Level: A2
Unit Goal: Teach students about the solar system while developing their comparative language skills in reading, writing, listening, and speaking.

Section I: Warm-Up

Objective: Activate prior knowledge and introduce key vocabulary.

Teacher Instructions:

1. **Part A**: Write the warm-up questions on the board or display them on a slide.
   - Organize students into pairs or small groups to discuss the questions.
   - Encourage all students to share at least one idea, even if they're unsure of the answers.
   - After 5–10 minutes, review responses with the class.
   - Example prompts for support:
     - "The solar system is a group of planets around the Sun."
     - "The Milky Way is our galaxy."
2. **Part B**: Distribute the vocabulary matching activity.
   - Explain that these words will appear in the reading, so students should try to guess their meanings.
   - Once the reading is complete, allow students to revisit their answers and correct them.

Answer Key for Part B:
a) orbit - to go in a circle around something else
b) debris - loose, broken materials often made of rock
c) distance - how far two objects or places are from each other
d) astronomer - a person who studies stars and planets
e) classify - to put something into a category or group
f) gas - an air-like substance that moves around

Section II: Reading

Objective: Build comprehension skills while introducing factual information about the solar system.

Teacher Instructions:

1. Pre-teach key vocabulary (e.g., "orbit," "asteroid belt," "dwarf planet") to prepare students for the text.
2. Use a reading strategy:
    - **First read**: Students skim the passage for general meaning.
    - **Second read**: Students underline key facts about the solar system, such as the number of planets and the composition of celestial bodies.
3. After reading, ask a few comprehension check questions:
    - "How many planets are in our solar system?"
    - "What is the asteroid belt made of?"

Section III: Comprehension Questions

Objective: Test understanding of the text through pair discussions and written responses.

Teacher Instructions:

1. Have students work in pairs to discuss the questions.
    - Encourage them to refer back to the text to find evidence for their answers.
2. Once the pair discussion is complete, ask students to write their answers in their notebooks.
3. Review answers as a class. Correct misconceptions and explain any unclear points.

Answer Key:

1. There are eight planets in our solar system.
2. Mercury is very close to the Sun.
3. Astronomers decided Pluto wasn't a planet because it is too small.
4. The planets farthest away from the Sun are made of gas, like hydrogen and helium.

Section IV: Practice

Objective: Reinforce vocabulary with contextual examples.

Teacher Instructions:

1. Introduce the matching activity by explaining that they need to connect the words to the correct example sentences.

1. Allow students to work in pairs or small groups to complete the task.
2. Walk around the room, offering hints as needed (e.g., "Think about what 'gas' might be in space").
3. Review the answers as a class, and ask students to explain why they chose certain matches.

Answer Key:

1. orbit - The moon takes 27 days to travel around the Earth.
2. gas - This birthday balloon is full of helium.
3. debris - After the explosion, the city was full of broken pieces of buildings.
4. astronomer - Galileo studied the stars and planets.
5. distance - Mercury is 36 million miles from the Sun.

Section V: Grammar Practice

Objective: Teach students how to use comparative structures effectively.

Teacher Instructions:

1. **Introduction**:
    - Write example sentences on the board:
        - "Mercury is closer to the Sun than Earth."
        - "Jupiter is more massive than Mars."
    - Highlight the comparative structures ("-er," "more").
    - Explain when to use each structure:
        - Add "-er" for short adjectives (e.g., "closer").
        - Use "more" for longer adjectives (e.g., "more massive").
2. **Activity**:
    - Students reread the passage to find and underline comparative adjectives.
    - Discuss the rules for forming comparatives.
    - Use the provided exercises to practice forming comparative sentences.
3. **Extension**: Challenge students to write three original comparative sentences about planets in the solar system.

Answer Key:

- a) "Lighter" shows that some particles of gas are not as heavy.
- b) "Closer" shows some particles were nearer to the Sun.
- c) "More massive" describes planets larger than Jupiter.

Exercise Key:

1. closer
2. as hot
3. less important
4. more beautiful
5. worse

Section VI: Listening

Objective: Improve listening comprehension and reinforce solar system facts.

Teacher Instructions:

1. Play the National Geographic video.
   - Before playing, introduce the true/false questions so students know what to listen for.
   - Play the video twice: once for general understanding and once for answering the questions.
2. Review answers with the class. Discuss any incorrect answers to ensure understanding.
3. Ask follow-up questions to encourage deeper thinking, such as:
   - "Why do you think Mercury is hotter than Earth?"

Answer Key:
a) True
b) True
c) False
d) True
e) False

Section VII: Writing

Objective: Develop students' ability to compare planets using written English.

Teacher Instructions:

1. Brainstorm as a class:
   - Write "Earth," "Mars," and "Moon" on the board.
   - Ask students to list features of each (e.g., atmosphere, water, distance from Sun).
2. Provide a framework for their essays:
   - **Introduction**: Introduce the topic of planetary colonization.
   - **Body**: Compare Earth, Mars, and another celestial body. Use comparative language.
   - **Conclusion**: Summarize which planet is the most suitable for colonization.
3. Assign the essay as an in-class activity or homework.
4. Provide feedback, focusing on correct use of comparative language and logical organization.

Section VIII: Speaking

Objective: Practice speaking fluency while using comparative language.

Teacher Instructions:

1. Organize students into pairs or small groups.
2. Provide sentence starters to help students get started:
   - "Earth is better than Mars because..."
   - "The Moon is less habitable than Mars because..."
3. Rotate around the room, listening for correct use of comparative structures. Offer guidance as needed.
4. After discussions, have a few groups share their answers with the class.

Pronunciation Practice

Objective: Improve articulation of the /θ/ sound in key vocabulary.

Teacher Instructions:

1. Demonstrate the /θ/ sound (e.g., "thin"). Emphasize tongue placement between the teeth.
2. Practice the provided word list as a class. Focus on clear pronunciation.
3. Group students in pairs to classify words into **voiced** and **unvoiced** sounds.
4. Encourage peer feedback to ensure accuracy.

Answer Key for Voiced/Unvoiced:

Unvoiced	Voiced
Earth	This
Thin	That
Thirty	Other
Math	Weather
Thick	Breathe

Assessment & Reflection

Objective: Evaluate learning and encourage self-reflection.

Teacher Instructions:

1. Use the final checklist to help students self-assess their progress.
2. Offer additional support for students who select "I need more practice" or "Not yet."
3. Assign extra exercises or suggest practice materials for areas of difficulty.

This guide ensures clarity in teaching, while the embedded answer key helps streamline lesson preparation and execution. Let me know if you need additional modifications!

Teacher's Guide - Unit 2

Unit Title: *The Sun*

Target Language Level: A2
Unit Goal: Teach students about the Sun while developing their superlative language skills in reading, writing, listening, and speaking.

Section I: Warm-Up

Objective: Activate prior knowledge and introduce key vocabulary about the Sun.

Teacher Instructions:

1. **Part A**: Write the warm-up questions on the board or display them on a slide.
   - Organize students into pairs or small groups to discuss the questions.
   - Encourage students to brainstorm answers based on their prior knowledge.
   - Review responses as a class after 5-10 minutes, clarifying misconceptions.
2. **Part B**: Distribute the vocabulary matching activity.
   - Students work individually or in pairs to match words with their meanings.
   - Revisit this activity after the reading to confirm answers.

Answer Key for Part B:
a) star - a large ball of burning gas in space.
b) brightest - having the most light.
c) sphere - a round object in the shape of a ball.
d) massive - very big.
e) gas - an air-like substance that moves around.
f) planet - a sphere-shaped object in space that moves around a star.

Section II: Reading

Objective: Build comprehension skills while introducing factual information about the Sun.

Teacher Instructions:

1. Pre-teach key vocabulary (e.g., "sphere," "gravity," "essential") to prepare students for the text.
2. Read the text as a class or in small groups. Use guiding questions to focus students' attention:
   - "What is the Sun made of?"
   - "Why is the Sun important for Earth?"
3. After reading, lead a class discussion to summarize the key points.

Section III: Comprehension Questions

Objective: Test understanding of the text through pair discussions and written responses.

Teacher Instructions:

1. Have students discuss the questions in pairs.
2. Students write answers in their notebooks.
3. Review answers as a class and provide corrections or additional explanations as needed.

Answer Key:

1. The Sun is at the center of our solar system.
2. The Sun is a massive ball of hot gases and a star.
3. About 1.3 million Earths could fit inside the Sun.
4. The Sun is about 4.5 billion years old.
5. We need the Sun for heat, light, and energy to support life on Earth.

Section IV: Practice

Objective: Reinforce vocabulary by focusing on opposites.

Teacher Instructions:

1. Introduce the matching activity by explaining opposites.
2. Allow students to complete the activity individually or in pairs.
3. Go over the answers as a class, asking students to explain their reasoning.

Answer Key:

1. brightest - darkest
2. closest - farthest
3. hottest - coldest
4. biggest - smallest
5. oldest - youngest

Section V: Grammar Practice

Objective: Teach students how to identify and use superlative adjectives effectively.

Teacher Instructions:

1. **Introduction**:
   - Write example sentences on the board:
     - "The Sun is the closest star to Earth."
     - "It is the most important source of heat and light."
   - Highlight the superlative structures ("-est," "most").
2. **Activity**:
   - Students reread the passage to identify superlative adjectives.
   - Discuss the rules for forming superlatives and provide examples.
3. **Extension**: Challenge students to write three original superlative sentences about the Sun or other celestial objects.

Answer Key:

a) "Most essential" shows that the Sun is the most important.
b) "Largest" shows the Sun is the biggest in size.
c) "Strongest" indicates the Sun's gravity is the most powerful.

Rule Summary:

- Add "-est" for short adjectives (e.g., "closest").
- Use "most" for longer adjectives (e.g., "most essential").

Section VI: Listening

Objective: Improve listening comprehension while reinforcing knowledge about the Sun.

Teacher Instructions:

1. Play the NASA podcast.
   - Before playing, introduce the true/false statements to guide students' focus.
   - Play the podcast twice, pausing if needed.
2. Review answers with the class and clarify any confusing points.

Answer Key (True/False Statements):

a) False

b) True

c) True

d) False

e) True

Gap-Fill Answer Key:

a) highest / most active

b) closest / outermost

c) strongest / most powerful

Section VII: Writing

Objective: Develop students' writing skills by encouraging critical thinking and creativity.

Teacher Instructions:

1. Provide context for the writing assignment:
   - Explain that students will write a letter to a NASA scientist, Joe Westlake, either agreeing or disagreeing with his view of the Sun.
   - Review the podcast notes to help students organize their ideas.
2. Encourage students to include:
   - Superlative adjectives to highlight the Sun's unique qualities.
   - Examples from the podcast and text to support their opinion.
3. Collect and review the letters, providing constructive feedback on language and structure.

Section VIII: Speaking

Objective: Practice speaking fluency while using superlative language.

Teacher Instructions:

1. Organize students into small groups.
2. Provide sentence starters to help students get started:
   - "The Sun is the most important for life because..."
   - "The Sun is less safe for humans because..."
3. Rotate around the room, listening for correct use of superlative structures. Offer corrections or suggestions as needed.
4. Have a few groups share their answers with the class.

Let’s Discover!

Objective: Share fun facts about the Sun to reinforce learning and encourage curiosity.

Teacher Instructions:

1. Read the listed facts aloud to the class.
2. Ask students to choose one fact and explain why they find it the most interesting using superlative language.
    - Example: “The fact about the Sun converting hydrogen to helium is the most fascinating because it shows how powerful the Sun is.”

Synthesizing

Objective: Evaluate learning and encourage self-reflection.

Teacher Instructions:

1. Distribute the self-assessment checklist to students at the end of the unit.
2. Ask students to reflect on their progress and identify areas for improvement.

RATIONALE

Introduction: Exploring the Universe and Its Connection to Learning

Studying the universe is an awe-inspiring journey that touches the very essence of human curiosity. For centuries, people have looked to the stars to seek answers about existence, our place in the cosmos, and the mysteries of life itself. For school-age students, this vast subject can be both captivating and educational.

By tying scientific exploration to language learning, educators can create a bridge that inspires curiosity while fostering essential skills. Topics like the Solar System and the Sun are not just about facts; they open doors to imagination and critical thinking, making them ideal for engaging learners.

The From Lab to Language curriculum capitalizes on this natural curiosity by using scientific themes to introduce English in meaningful contexts. To enhance this connection, I chose authentic materials from NASA and National Geographic. NASA's resources provide direct access to groundbreaking research and real-world applications of science, offering a glimpse into the wonders of ongoing discoveries.

Meanwhile, National Geographic excels in translating complex ideas into visually engaging and accessible content. Together, these sources add depth and relevance to the curriculum, ensuring that students engage with both language and content in ways that feel purposeful and exciting.

The From Lab to Language curriculum is a thoughtfully structured program designed to introduce A2-level English learners to basic scientific concepts through English language learning. Following the CLIL (Content and Language Integrated Learning) approach, this curriculum aims to develop both language proficiency and content knowledge. Specifically, the curriculum focuses on the Solar System and the Sun, leveraging themes that naturally engage students and align with established educational frameworks.

This rationale explores the theoretical underpinnings, pedagogical choices, and contentbased strategies that inform the curriculum's design, highlighting how each element fosters language acquisition, vocabulary development, and critical thinking in learners.

Theoretical Framework of CLIL

Content and Language Integrated Learning (CLIL) is an educational approach that simultaneously develops language skills and subject knowledge by using the target language as a medium to learn non-linguistic content (Coyle, Hood, & Marsh, 2010). The From Lab to Language curriculum applies CLIL by incorporating science topics—

specifically, the Solar System and the Sun—into English instruction. This dual focus allows learners to acquire essential language skills while exploring fundamental scientific concepts.

According to Krashen’s (1985) Input Hypothesis, learners acquire language more effectively when exposed to input slightly above their current proficiency level but still within their capacity to understand. By using accessible scientific content, the curriculum provides “comprehensible input” (Krashen, 1985) that pushes students to expand their vocabulary and linguistic structures. This program is grounded in theories like Vygotsky’s Zone of Proximal Development (ZPD), which emphasizes learning as a socially mediated process, achievable when supported by scaffolding or assistance from others (Vygotsky, 1978).

The instructional design provides such scaffolding through structured vocabulary exercises, targeted grammar activities, and teacher-guided discussions that encourage critical thinking.

In addition, Cummins’ (1979) theory on Cognitive Academic Language Proficiency (CALP) informs the curriculum’s objective of enabling students to engage with academic concepts and language. CALP is crucial in CLIL because learners must develop specific vocabulary and structures to understand and discuss the subject matter effectively. As Cummins (1979) states,

> “Cognitive Academic Language Proficiency (CALP) refers to the language ability required for academic achievement in a context-reduced environment such as classroom lectures and textbook reading. It contrasts with Basic Interpersonal Communication Skills (BICS), which relate to conversational fluency in everyday contexts.”

By embedding vocabulary instruction within a meaningful science context, the curriculum enables students to develop CALP alongside BICS, promoting language development that is both practical and academically enriching.

The curriculum's primary goals are twofold: to foster English language acquisition and introduce students to scientific concepts related to the Solar System and the Sun. These topics are inherently engaging and encourage curiosity, creating a natural interest in the language of science. The curriculum objectives include

Introducing Key Vocabulary: Terms such as “orbit,” “debris,” “galaxy,” “planet,” and “star” are integral to discussing the Solar System. Vocabulary-building exercises help students grasp and use these concepts in context, aligning with Nation's (2001) perspective that vocabulary acquisition is essential for effective language learning.

Developing Grammar Skills: By focusing on comparative and superlative adjectives, the curriculum enables students to describe and differentiate astronomical objects. This reinforces grammatical understanding in a way that is meaningful to the subject

Fostering Critical Thinking: CLIL promotes higher-order thinking by asking students to analyze, compare, and express opinions about the Solar System. This approach echoes Bloom's Taxonomy, which advocates moving beyond rote memorization toward analysis, synthesis, and evaluation.

Building Pronunciation Skills: Attention to the correct pronunciation of key terms such as "Mercury," "Venus," and "orbit" supports effective communication in scientific contexts and builds students' confidence.

Engaging in Contextualized Writing: By guiding students through writing activities related to their reading and listening exercises, the curriculum supports the practical application of new vocabulary and concepts.

Writing assignments such as letters and summaries are scaffolded to encourage students to organize their thoughts and express opinions about scientific topics, integrating language skills with content knowledge.

Pedagogical Strategies and Learning Activities

Vocabulary Building with Pedagogically Adapted Texts

A significant component of this curriculum is vocabulary acquisition, which is developed through adapted texts designed for instructional use. Unlike authentic texts—texts created for native speakers—pedagogically adapted texts prioritize clarity and simplicity to align with the language proficiency of A2-level learners. As Krashen (1985) explains,

> "Comprehensible input is language input that can be understood by learners despite them not understanding all the words and structures in it. It is this input that allows learners to acquire language naturally when it is slightly beyond their current level of competence (i+1)."

Simplified language ensures that content remains accessible, fostering confidence and facilitating learning, while also pushing learners toward gradual improvement in their language skills.

The curriculum uses carefully crafted texts to introduce scientific vocabulary in accessible ways, enabling students to build their lexical knowledge in an organized, structured manner. Words like "massive," "sphere," "orbit," and "distance" are repeated across multiple activities to ensure students encounter them in various contexts.

This repetition supports Nation’s (2001) view that repeated exposure to vocabulary enhances retention and understanding. Additionally, the adaptation of texts allows for gradual introduction to scientific terms, helping students build a foundation for more complex language use in scientific discourse.

The Role of Simplified Texts in Vocabulary Acquisition

Authentic texts are often celebrated for exposing students to real-world language, but they can present challenges for A2 learners, especially in a content-heavy field like science. For this reason, the curriculum relies on pedagogically modified texts to avoid overwhelming students with excessive jargon and complexity.

Widdowson (1978) supports this approach, noting that simplified texts allow learners to grasp essential concepts and language structures without the cognitive overload that often accompanies authentic materials. By simplifying vocabulary and sentence structure, these texts bridge the gap between learners’ existing knowledge and the target content, aligning with Vygotsky’s (1978) ZPD and offering just enough challenge to support learning.

Vocabulary Acquisition through Repetition and Contextualization

The curriculum employs strategies such as repetition and contextualization to reinforce vocabulary learning. Scientific terms are embedded in meaningful activities that prompt students to use and review them consistently. For instance, terms like “planet,” “star,” and “gravity” appear across exercises, helping learners to internalize meanings through repeated, contextualized exposure.

Schmitt (2008) highlights that vocabulary learning is more effective when students encounter words in diverse contexts, as it fosters deeper understanding and retention. As Schmitt (2008) states,

> “Vocabulary knowledge is incremental, and learners need repeated exposure to words in varied contexts to fully understand their meaning and usage. The more frequently a learner encounters a word in different situations, the deeper their understanding of that word becomes.”

This curriculum incorporates such practices, ensuring that vocabulary is both contextualized and reinforced through various activities, allowing students to engage with new terms in meaningful and varied ways.

Scaffolding Language and Content through Simplified Texts

In the context of CLIL, scaffolding is essential to help students manage complex content while developing language skills. By using simplified texts, the curriculum supports incremental learning, allowing students to build on previous knowledge and gradually acquire more advanced concepts. This scaffolding aligns with Wood, Bruner, and Ross's (1976) work on guided learning, where instructional support is gradually removed as students gain proficiency. Simplified texts ensure that learners can process new information and vocabulary without becoming overwhelmed, fostering independence as they advance through the curriculum.

Grammar Instruction in Context

Comparative and Superlative Adjectives within Scientific Contexts

A key aspect of the curriculum's grammar instruction is its focus on comparative and superlative adjectives. In the context of the Solar System, these grammatical structures are particularly useful, allowing students to describe and compare celestial objects. The grammar lessons are integrated within the content, with students learning comparative forms like "closer," "bigger," and "smaller" and superlatives such as "largest" and "most massive."

By situating grammar instruction within meaningful contexts, the curriculum aligns with Halliday's (1985) functional grammar perspective, which asserts that language learning is most effective when it serves a communicative purpose.

Structured activities encourage students to use comparative and superlative adjectives to make meaningful statements about the planets and the Sun, reinforcing their understanding of these grammatical forms. For example, students learn to create sentences like "Jupiter is the largest planet" or "Mercury is closer to the Sun than Venus." By contextualizing grammar within content, the curriculum ensures that language learning serves a functional purpose, supporting both content comprehension and linguistic development.

Encouraging Higher-Order Thinking through Content-Based Learning

The curriculum fosters critical thinking by integrating questions that encourage students to analyze and compare scientific information. Activities such as identifying similarities and differences among planets, discussing the importance of the Sun, and writing letters to experts like Joe Westlake require students to engage in higher-order thinking. This approach aligns with Bloom's Taxonomy (1956), which advocates for activities that move beyond mere recall to include analysis, evaluation, and synthesis.

For instance, students might be asked to evaluate whether the Sun is an "average" star or whether it has unique qualities that make it essential to life on Earth. Such questions promote reflective thinking and personal engagement with the content, making science more relevant and encouraging students to apply their language skills in meaningful ways.

Listening and Pronunciation Practice

Developing Listening Skills through Authentic Audio Materials

Listening activities based on podcasts, such as NASA's Curious Universe, provide students with exposure to authentic language input in a controlled, accessible manner. Students practice comprehension of complex ideas in simplified English by listening to simplified segments on topics like solar flares and coronal mass ejections.

Field (2008) asserts that listening comprehension improves when learners are exposed to authentic speech at appropriate proficiency levels, as it encourages them to parse natural language patterns.

Reinforcing Pronunciation through Vocabulary Practice

Pronunciation activities help students develop confidence and accuracy in their speech, focusing on the correct pronunciation of key terms like "Mercury," "Saturn," and "gravity." Modeling and repetition are used to ensure learners can accurately produce these words, supporting effective communication in scientific contexts. Pronunciation practice aligns with Thornbury's (2005) emphasis on the importance of phonological accuracy in language learning, as it enables learners to use new vocabulary confidently in both spoken and written contexts.

Why NASA and National Geographic?

The choice to use materials from NASA and National Geographic was deliberate. NASA offers unparalleled access to cutting-edge scientific research, providing learners with realworld content that reflects ongoing discoveries and advancements. Podcasts, videos, and articles from NASA serve as authentic input, showing students how science is practiced and communicated in the real world.

Meanwhile, National Geographic excels at making complex ideas accessible through storytelling and visuals. Its ability to present scientific concepts in engaging, relatable ways make it a perfect complement to NASA’s technical resources. Together, these sources provide a balanced mix of authenticity and accessibility, ensuring that students are both informed and inspired.

Conclusion

The "From Lab to Language" curriculum represents a personal milestone, merging my childhood fascination with science, inspired by Carl Sagan's "Cosmos," with my teaching career. This integration of English instruction and scientific exploration has created an engaging learning experience that aligns with my passions and professional goals.

The Graduate Course in English (CEI) at UFMG provided the theoretical and practical tools necessary to design a curriculum based on CLIL. This program deepened my understanding of the relationship between language and content learning, equipping me with strategies to promote critical thinking and curiosity among students.

Witnessing students engage with topics that once sparked my curiosity, using English to explore the Solar System and the Sun, has been incredibly rewarding. This curriculum not only develops essential language skills but also encourages critical thinking about the universe, fostering a lasting sense of curiosity.

In summary, the "From Lab to Language" curriculum demonstrates how personal passions can evolve into impactful educational practices. I am grateful to the CEI program at UFMG for its pivotal role in my development as an educator. As I continue to refine my teaching methods, I am committed to nurturing curiosity, critical thinking, and linguistic proficiency in my students, preparing them for success both inside and outside the classroom.

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