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PROGRAMA DE PÓS-GRADUAÇÃO EM EDUCAÇÃO BÁSICA
MESTRADO PROFISSIONAL EM EDUCAÇÃO BÁSICA
CAMPUS FARROUPILHA

Welson Dias de Oliveira
Lucilene Bender de Sousa
Elisangela Muncinelli Caldas Barbosa

ENGLISH AND STEAM: dream, create and transform!

Farroupilha – RS

2026

APRESENTAÇÃO

O presente Produto Educacional, intitulado *English and STEAM: Dream, Create and Transform!*, foi desenvolvido no âmbito do Mestrado Profissional em Educação Básica do Instituto Federal do Rio Grande do Sul (IFRS), *Campus Farroupilha*, como desdobramento da pesquisa intitulada “(Multi)letramentos e abordagem STEAM: caminhos para o ensino de língua inglesa”. O estudo teve como objetivo investigar de que forma a articulação entre as abordagens dos Multiletramentos e STEAM pode promover o desenvolvimento de competências linguísticas, culturais e científicas, contribuindo para uma aprendizagem significativa e crítica. De natureza qualitativa, com caráter exploratório e descritivo, a pesquisa compreendeu etapas de revisão de literatura, elaboração e aplicação de um questionário diagnóstico, análise dos dados obtidos e desenvolvimento do produto educacional que integra as abordagens investigadas. A investigação foi realizada no IFRS – Campus Veranópolis, envolvendo turmas do 1º ano do curso Técnico em Informática para Internet e do 2º ano do curso Técnico em Administração, totalizando 55 estudantes. Os resultados, a partir da aplicação do Produto Educacional, evidenciaram que a articulação entre os multiletramentos e a abordagem STEAM favorece a participação ativa dos estudantes como sujeitos transformadores, amplia o letramento científico e potencializa a aprendizagem interdisciplinar mediada por práticas multimodais. Nesse contexto, o produto educacional foi concebido como uma proposta pedagógica que materializa os princípios investigados, contribuindo para uma educação crítica, inclusiva e transformadora, alinhada às demandas contemporâneas de uma formação integral e omnilateral.

O material tem como público-alvo estudantes do Ensino Médio, especialmente aqueles inseridos em contextos de educação pública, e também se destina a professores de Língua Inglesa interessados em práticas pedagógicas interdisciplinares e metodologias ativas.

Trata-se de uma sequência didática estruturada a partir da integração entre o ensino de Língua Inglesa, a abordagem STEAM (*Science, Technology, Engineering, Arts and Mathematics*) e a Pedagogia dos Multiletramentos. O produto propõe o desenvolvimento de competências linguísticas, científicas e críticas por meio de práticas de leitura multimodal, resolução de problemas e produção colaborativa de conhecimento.

A fundamentação teórico-metodológica do material baseia-se nos pressupostos da Pedagogia dos Multiletramentos (New London Group, 1996; Cope; Kalantzis 2015), que compreende a linguagem como prática social e multimodal, e na abordagem STEAM (Yakma, 2008), que valoriza a aprendizagem baseada em projetos, a interdisciplinaridade e a resolução de problemas reais. Além disso, o produto dialoga com a Agenda 2030 da Organização das

Nações Unidas (ONU), sobretudo com os Objetivos de Desenvolvimento Sustentável (ODS): a) 7 (energia limpa e acessível); b) 9 (indústria, inovação e infraestrutura); c) 11 (cidades e comunidades sustentáveis); e d) 12 (consumo e produção responsáveis), promovendo o letramento científico e a formação cidadã.

O desenvolvimento do material ocorreu a partir da elaboração de uma sequência didática organizada em etapas de pré-leitura, leitura e pós-leitura, articuladas a estratégias como *skimming*, *scanning*, inferência e análise de textos multimodais, incluindo infográficos, vídeos e diagramas, conforme evidenciado ao longo do material. Para embasar a construção da sequência didática, foi realizada previamente uma pesquisa diagnóstica com os estudantes, por meio da aplicação de questionários, cujos resultados e análises encontram-se detalhados no artigo de conclusão de curso. As atividades propostas também contemplam momentos de reflexão crítica, discussão em grupo e produção oral e escrita, culminando em um projeto STEAM que incentiva os estudantes a propor soluções para problemas reais relacionados à sustentabilidade.

A aplicação do Produto Educacional foi pensada para contextos de sala de aula do Ensino Médio, podendo ser adaptada conforme a realidade dos estudantes e da instituição. O papel do professor, conforme indicado no material, é de mediador do processo de aprendizagem, promovendo a participação ativa dos estudantes, o trabalho colaborativo e a construção significativa do conhecimento, com avaliação centrada no processo e não apenas no produto final.

O Produto Educacional contém uma unidade didática completa para o ensino de Língua Inglesa integrada à abordagem STEAM e aos Objetivos de Desenvolvimento Sustentável, incluindo:

- ✓ atividades de pré-leitura, leitura e pós-leitura;
- ✓ exploração de textos multimodais (infográficos, vídeos e diagramas);
- ✓ desenvolvimento de vocabulário técnico;
- ✓ estratégias de leitura (*skimming*, *scanning* e inferência);
- ✓ atividades de *listening*, *speaking* e *writing*;
- ✓ proposta de projeto STEAM (*Transformed Practice*);
- ✓ foco nos ODS 7, 9, 11 e 12;
- ✓ incentivo à reflexão crítica e à resolução de problemas reais.

Na próxima página, apresentamos a sequência didática na íntegra.

English and



Dream, create and transform!

Welson Dias de Oliveira
Lucilene Bender de Sousa
Elisangela Muncinelli Caldas Barbosa

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Welson Dias de Oliveira
Lucilene Bender de Sousa
Elisangela Muncinelli Caldas Barbosa

English and STEAM

Dream, create and transform!

FICHA TÉCNICA
Ministério da Educação
Secretaria de Educação Profissional e Tecnológica
Instituto de Educação, Ciência e Tecnologia do Rio Grande do Sul

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Pró-reitor de Desenvolvimento Institucional Lucas Coradini

Diagramação: Ativa Criação

Capa: Carlos Augusto de Sousa Ferreira Júnior

PRESENTATION

Dear student,

Before beginning the unit, the instructor should familiarize themselves with all materials, paying close attention to the infographics, texts, and videos related to SDGs 7, 9, 11, and 12. It is essential to understand how each multimodal element contributes to meaning-making and how it can be used to expand students' linguistic and critical repertoire. The instructor should also organize any resources needed for the practical activities, ensuring that the class has access to materials required for the STEAM project that concludes the unit.

During the lessons, the instructor should guide the reading of multimodal texts in stages, starting with questions that activate students' background knowledge and connect the content to their everyday experiences. The presentation of the material should encourage students' curiosity, allowing them to observe, describe, and analyze the visual elements of infographics, diagrams, and videos. The instructor should lead skimming and detailed reading activities, supporting the learning of technical vocabulary and the comprehension of main ideas, providing clear examples that help students interpret the scientific concepts involved.

In the practical activities, it is essential to foster collaborative work and encourage students to propose creative solutions to real problems related to the SDGs. The instructor may circulate among the groups, offering linguistic and conceptual support, helping them organize ideas, and ensuring that all members engage in the process. Mediation should be inclusive and meaningful, promoting a safe environment for experimentation, expression, and problem-solving. If difficulties arise, the instructor can revisit parts of the text, model strategies, or introduce complementary examples to aid understanding.

Assessment should focus on the process rather than solely on the final product. The instructor should consider participation, engagement during discussions, ability to interpret multimodal texts, application of the studied concepts, and commitment to the STEAM project. It is important to provide encouraging and constructive feedback, highlighting strengths and suggesting paths for improvement. At the end of the unit, it is recommended that the class engage in a synthesis moment, revisiting the SDGs and discussing how their work and learning can contribute to transforming their school and community, reinforcing the role of education in building a more sustainable and innovative future.

INSTRUCTIONS



SCAN ME

PRESENTATION

Dear educator,

This unit was designed to integrate English language learning with discussions on sustainability and technological innovation, connecting Sustainable Development Goals 7, 9, 11, and 12 through activities that promote student protagonism, multimodal reading, and the STEAM approach. The educator's role is to accompany students as they construct knowledge, fostering an environment of inquiry, dialogue, and active participation. The unit encourages students to understand global issues by starting from their own realities, stimulating critical thinking about clean energy, smart cities, responsible consumption, and innovation processes, while recognizing that multilingual and scientific competencies develop progressively and in an interconnected way.

Throughout the lessons, the educator should guide students in exploring the infographics, videos, diagrams, and texts presented in the unit, inviting them to observe visual elements, identify communicative purposes, and understand how language connects to scientific content. It is important to support students in meaning-making by offering mediation strategies such as glossaries, scaffolded explanations, and vocabulary reinforcement. The educator should promote moments of discussion, encourage hypothesis-making, help students relate the SDGs to their daily lives, and support collaborative work as an essential part of the learning process.

The unit also proposes hands-on inquiry through STEAM activities, in which students are invited to create solutions, prototypes, visual panels, or campaigns related to the topics studied. It is the educator's responsibility to encourage creativity and ensure that each group can explore, in an original way, concepts of sustainability, innovation, and conscious consumption, valuing both the process and the final product. In addition, it is essential to monitor the progress of the groups and adapt the instructional approach whenever needed so that all students can participate effectively and advance in their learning.

Assessment should occur continuously, considering interactions, engagement, comprehension of multimodal texts, the ability to connect English with scientific content, and the quality of the final STEAM product. The educator should observe how students use different languages and forms of representation to express ideas and propose solutions, fostering autonomy and critical participation. At the end of the unit, it is important to revisit the objectives, encourage reflection on the learning process, and reinforce the importance of sustainable and innovative practices both inside and outside the school environment.

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SUSTAINABLE DEVELOPMENT GOALS



Hello!

Today we will talk about a very important topic: The Sustainable Development Goals (SDGs).

But... what are the SDGs?



In this first moment, Let's talk about energy! Goal 7 wants clean and safe energy for everyone — energy that doesn't harm the planet!

What do the goals want?

The goals want to:


- ✓ End poverty
- ✓ Protect the planet
- ✓ Help people live better




Watch the following video to understand better:

Aponte a camera para QR code

But how did it all begin?

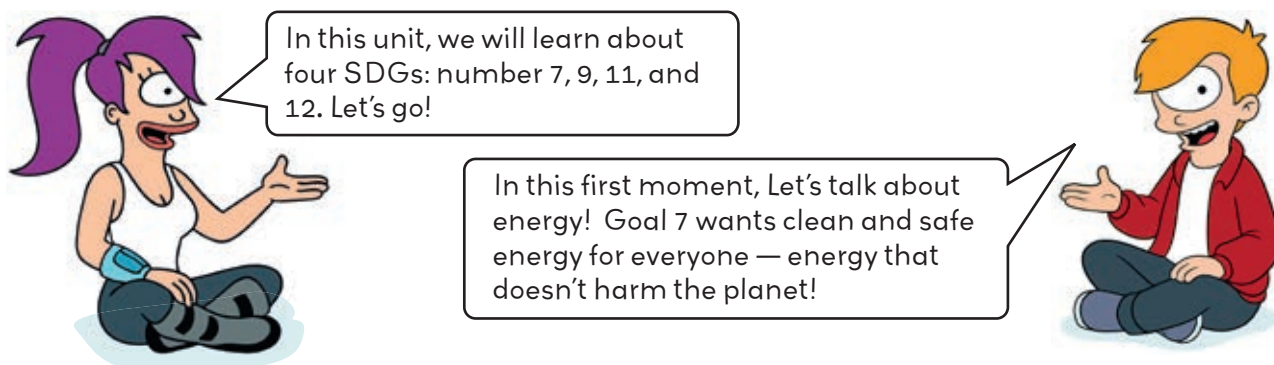
 **1992** – At the *Earth Summit* in Rio de Janeiro, countries started working together for a better planet.

 **2000** – The Millennium Goals (MDGs) were created to fight extreme poverty.

 **2012** – At *Rio+20*, countries decided to make new goals for all people and the planet.

 **2015** – The **17 SDGs** were officially adopted.

This was also the year of the Paris Agreement on Climate, and other important decisions. Today, the SDGs are a global mission. Every year, countries meet to talk about progress and future actions. Together, we can build a more just, equal, and sustainable world!



1) SDG 07 – Affordable and clean energy

A) Pre-Reading

Look at the pictures below. What energy-related problems or solutions do they show? Write the correct option in your notebook



- power outage
- renewable energy



- clean air
- pollution



- energy access
- water scarcity



- fossil fuel
- wind power

B) Food for thought

Answer the questions and discuss with your classmates:

1. What do you use electricity for every day?
2. What do you use to cook food in your home?
3. How do you feel when the power goes out (no electricity) in your home?
4. Why is electricity important for you or your family?
5. Do you see any solar panels or wind turbines near your home or school? Where?

C) Reading and Thinking

Fill the chart next to the infographic :

READING STRATEGY 2 Inference

Use pistas do texto (palavras, imagens, gráficos) para descobrir ideias que não estão escritas diretamente, mas podem ser deduzidas.

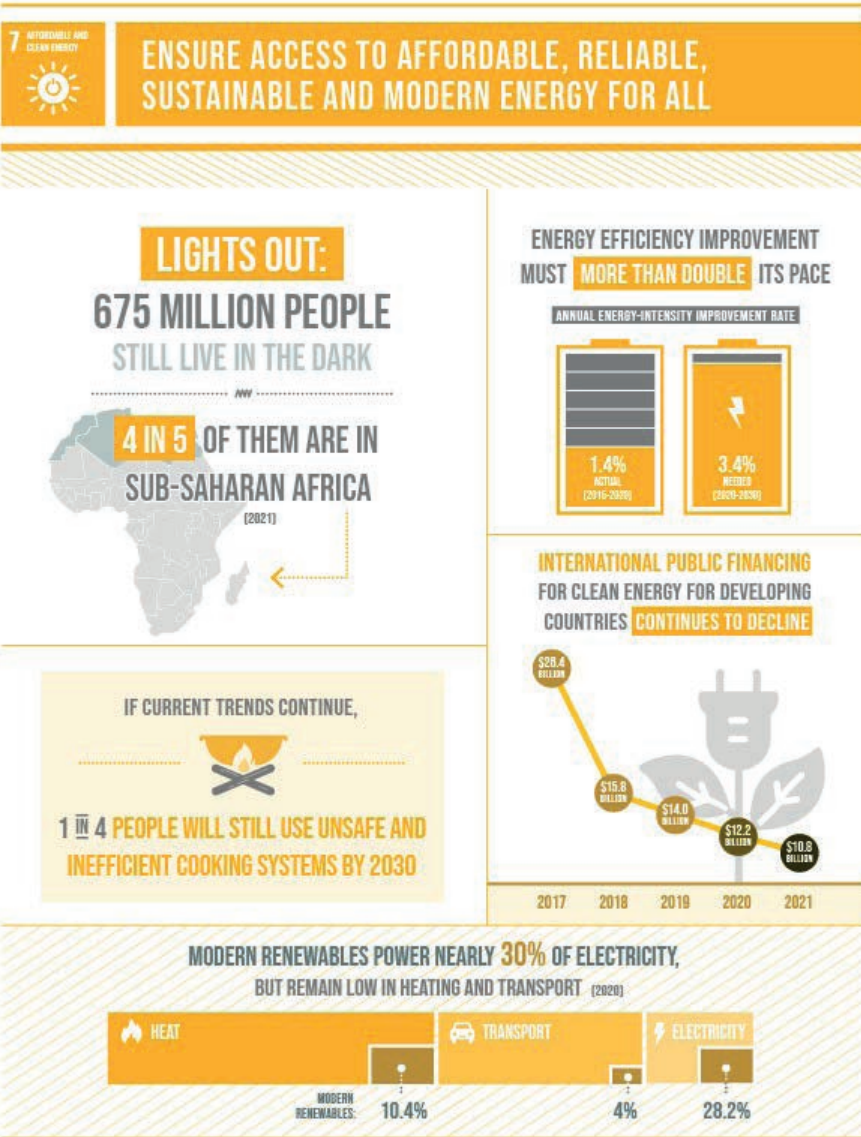
READING STRATEGY 3: Scanning

Scanning é uma técnica de leitura rápida usada para encontrar informações específicas no texto, sem ler tudo.

Glossário:

Ensure access → Garantir acesso;
Affordable → Acessível;
Reliable → Confiável;
Lights out → Sem luz / Apagão;
Live in the dark → Viver na escuridão;
Renewable → Renovável;
Developing → Desenvolvimento;
Energy-intensity improvement rate → Taxa de melhoria da intensidade energética
Unsafe → não seguro
Heating → aquecer

Aspect	Complete
Genre	
Purpose	
Audience	
Language	
Visual Elements	



D) Post-reading

Mark the correct statements with an X. Use inference to decide.

1. () A large portion of the world still does not have access to electricity, especially in developing regions.

[Hint: Check the number of people living in the dark and their location]

2. () Public investment in clean energy for developing countries has increased every year since 2017.

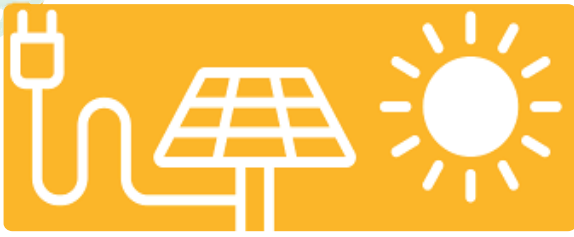
[Hint: Look at the financing trend line]

3. () If nothing changes, many families will still be cooking with dangerous and polluting systems by 2030.

[Hint: Think about what “unsafe and inefficient” cooking means]

4. () Even though modern renewable energy powers part of electricity, it is still not widely used for heating and transportation.

[Hint: Compare the percentage bars for each energy use]

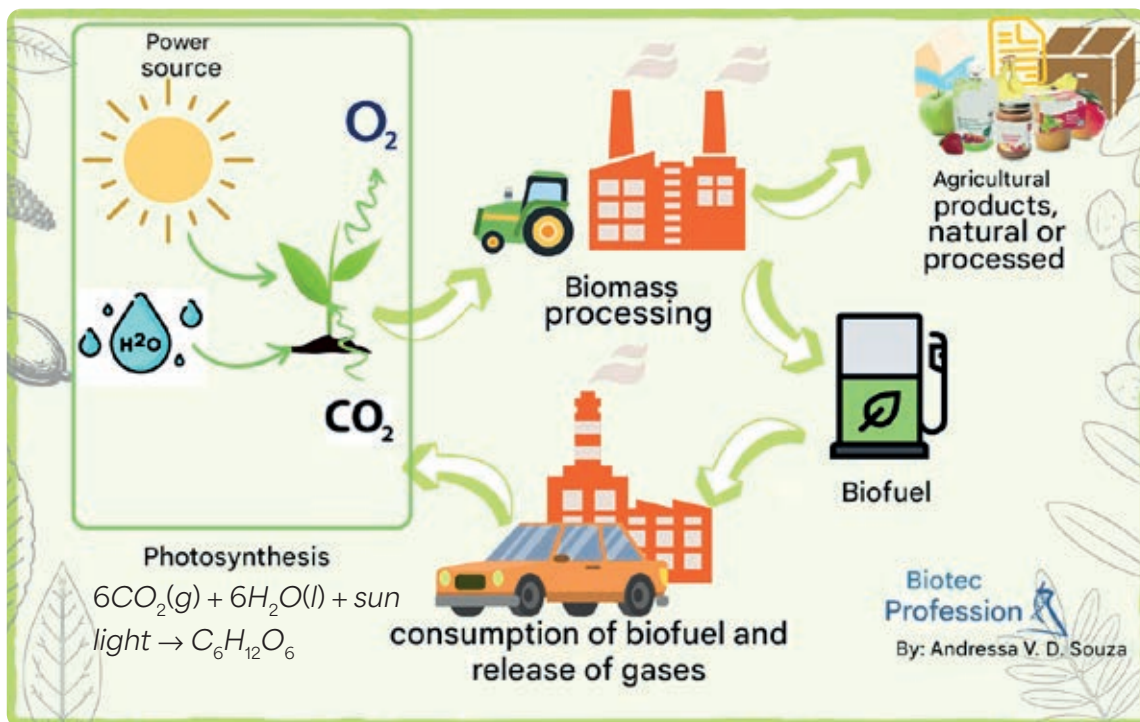


Now that we've explored Goal 9 and how innovation helps build a better world, let's move on to Goal 11! It's all about making our cities safer, greener, and more inclusive. And guess what? This time, we'll learn through a video!



II) SDG 09 - Infrastructure, industrialization and innovation.

Look at the diagram below:



This diagram shows how technology and innovation help transform plants into clean fuel! That's exactly what Goal 9 is about: building smart industries and sustainable solutions!

It all starts with photosynthesis! Plants grow using sunlight, water, and CO_2 . Then, they become biomass, which is processed into biofuel. When we use this fuel, it releases gases, but it's cleaner and renewable!



A) Scanning - R

READING STRATEGY 3: Scanning

Scanning é uma técnica de leitura rápida usada para encontrar informações específicas no texto, sem ler tudo.

Look at diagram and answer the questions:

1. What elements are essential for photosynthesis, according to the diagram?

2. What product is created after the biomass is processed?

3. What is released when biofuel is consumed?

B) True or False – R

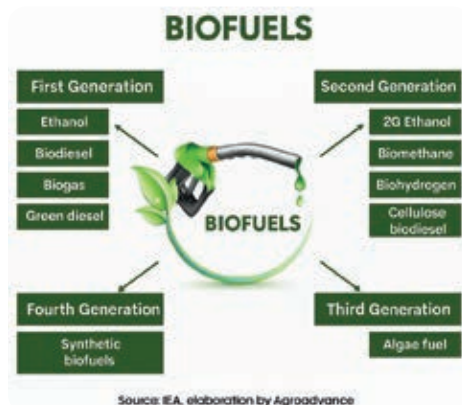
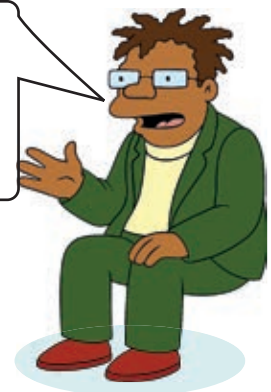
Read the diagram and mark T (True) or F (False) for each sentence:

1. () Biomass is processed before becoming a biofuel.
2. () Vehicles use water as fuel in the biofuel system.
3. () The diagram shows the emission of gases after the consumption of biofuel.
4. () Biofuel is produced directly from sunlight without any processing.



There are different types of biofuels — from plants, algae, and even synthetic materials. Let's explore the four generations of biofuels!

Watch the video below and learn more about the biofuel production process.



Biofuel Classification by Generation:

Aponte a camera para QR code

I. First Generation (1G):

Derived from sugars, starches, or fats.

Examples: Ethanol, biodiesel, biogas, green diesel.

II. Second Generation (2G):

Produced from biomass rich in cellulose or from agricultural and industrial waste.

Examples: 2G ethanol, biomethane, biohydrogen.

III. Third Generation (3G):

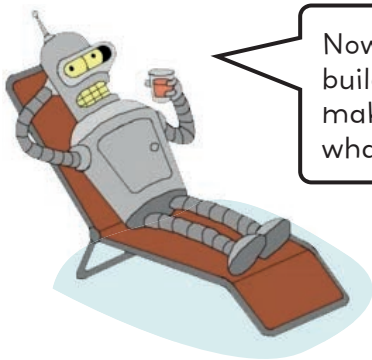
Obtained from algae.

Example: Algae-based biofuels.

IV. Fourth Generation (4G):

Resulting from genetically modified organisms or crops (e.g., engineered microalgae).

Examples: Synthetic biofuels.



Now that we've explored Goal 9 and how innovation helps build a better world, let's move on to Goal 11! It's all about making our cities safer, greener, and more inclusive. And guess what? This time, we'll learn through a video!



III) SDG 11 – Sustainable cities and communities

Watch the following video and note keywords.

READING STRATEGY 4:

Keywords

Keywords são as palavras mais importantes de um texto ou pergunta. Elas ajudam você a entender o tema ou encontrar informações rápidas.



A) Choose



Watch the video again: “What is SDG 11?” Then, answer the questions below.

Aponte a camera para QR code

<p>1. The main goal of SDG 11 is to:</p> <p>a) Promote industrial growth</p> <p>b) Improve global transportation</p> <p>c) Make cities inclusive, safe, resilient, and sustainable</p> <p>d) Reduce school dropout rates</p>	<p>2. According to the video, what challenges do cities face today?</p> <p>a) Overpopulation, pollution, and lack of housing</p> <p>b) Animal extinction and ocean pollution</p> <p>c) Low tourism and deforestation</p> <p>d) War and political instability</p>	<p>3. The video says public spaces should be:</p> <p>a) Replaced with buildings</p> <p>b) Removed to increase traffic</p> <p>c) Safe, accessible, and inclusive</p> <p>d) Privatized for better use</p>
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B) Fill in ▶ •|||• 3:17

Task: Listen to the video and fill in the blanks with the correct words.

Complete the sentences below:

Protect – safe - effort- development - communities - environment – environmental – growth

Hello friends!

Today we're going to talk some more about the Sustainable Development Goals. We're on the 11th one now: Sustainable Cities and _____ (1).

Let's jump right in! As you might already know, sustainability means meeting people's needs today in a way that allows people in the future to also meet their needs. It means that we need to grow the economy without hurting the _____ (2).

So what does Sustainable Cities and Communities mean?

It means cities and communities that give their people a good quality of life but do not put the environment at risk. Sustainable cities _____ (3) the rights of their people, such as the right to housing, access to green spaces, quality public transportation, and protecting cultural heritage, to name a few.

Our world is becoming more and more urbanized. Today, more than half of the population lives in cities, and 70% of the planet's harmful carbon emissions come from cities. For this reason, the United Nations believes it is a key sustainable _____ (4) objective for communities and cities to be more respectful of the environment. It's very important to take care of the planet we live on. Rapid urbanization causes millions of people to live in neighborhoods with weak infrastructure and inadequate services. This increases air pollution and leads to uncontrolled urban _____ (5). Although cities occupy only 3% of the Earth, they represent between 60 and 80% of energy consumption.

That's a lot, don't you think?

Countries need to provide access to adequate, _____ (6) housing with basic services for all people. Housing needs to be in places with good transportation systems

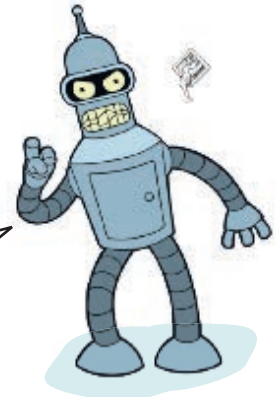
and must adapt to the needs of the most vulnerable people. It is also important to care for the planet's cultural and natural heritage. Respect for monuments, as well as nature, is essential for building sustainable communities.

Making cities and communities sustainable is the key to reducing their _____ (7) impact. It requires an _____ (8) from all government administrations and from all of us as a global community. Surely you can help make your city more sustainable. Can you think of a way to do your part?



This task was awesome! We learned that cities need to be safe, green, and fair for everyone! Just like Goals 7 and 9, Goal 11 is about smart ideas and clean energy to build a better world for people and the planet!

Now that we have learned how to make our cities better, it's time to think about how we use things every day. Let's explore Goal 12...



IV) SDG 12 – Ensure sustainable consumption and production patterns

A) Pre-Reading

Write numbers (1–6) in the correct order based on what you already know:

- (1) Climate change
- (4) Food waste
- (2) Biodiversity loss
- (5) E-waste
- (3) Pollution
- (6) Natural resources



B) Food for thought

Answer the questions and discuss with your classmates:

1. Do you sometimes waste food at home or in a restaurant? Why?
2. Why do you think people and companies waste so much food and natural resources every day?
3. What can you and your community do to reduce waste and protect the planet?

C) Reading and thinking

Using the skimming technique, fill in the table above with aspects of the text you read.

ENSURE SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS

UNSUSTAINABLE PATTERNS

OF CONSUMPTION AND PRODUCTION ARE ROOT CAUSE OF

TRIPLE PLANETARY CRISES



CLIMATE CHANGE



BIODIVERSITY LOSS



POLLUTION

OUR RELIANCE ON NATURAL RESOURCES IS INCREASING

RISING OVER 65% GLOBALLY FROM 2000 TO 2019



TOO MUCH FOOD IS BEING LOST OR WASTED

IN EVERY COUNTRY EVERY DAY



HARVESTING



TRANSPORT



STORAGE



PROCESSING

13.3%

OF THE WORLD'S FOOD IS LOST AFTER HARVESTING AND BEFORE REACHING RETAIL MARKETS



HOUSE



GROCERY STORE



HOUSEHOLD



RESTAURANT

17%

OF TOTAL FOOD IS WASTED AT THE CONSUMER LEVEL

VAST MAJORITY OF THE WORLD'S ELECTRONIC WASTE IS NOT BEING SAFELY MANAGED

E-WASTE COLLECTION RATES (2019)



LATIN AMERICA AND THE CARIBBEAN



SUB-SAHARAN AFRICA



EUROPE AND NORTHERN AMERICA



GLOBAL AVERAGE

Glossário:

Root cause → Causa principal;
 Change → mudança
 Loss → perda;
 Harvesting → colheita
 Storage → armazenamento
 Average → média
 Rates → taxa
 Waste → lixo
 Patterns → Padrões
 Rising over → Aumentando
 Vast → grande
 Managed → gerenciado
 Harvesting → colheita

Aspect	Complete
Genre	
Purpose	
Audience	
Language	
Visual Elements	





THE SUSTAINABLE DEVELOPMENT GOALS REPORT 2022: UNSTATS.UN.ORG/SDGS/REPORT/2022/

D) Post Reading

Look at the infographic about SDG 12. Use the images and information to fill in the chart below and add your opinion about possible solutions in the last column.

Multimodal reading: use texts, numbers, symbols and visuals to complete it.

Problem	Evidence from the Infographic	Visual Clue	Possible Solution (your idea)
Food Waste (at production level)		(harvesting, transport, storage, processing)	

Food Waste (at consumer level)		 (home, store, household, restaurant)	
Natural Resource Overuse		 pickaxe/ mining)	
Electronic Waste Mismanagement		 (bins with % and region labels)	
Main Environmental Crises Caused by Consumption		 (climate, biodiversity, pollution)	

D) Speaking

Objective: Discuss real-world problems and solutions based on the SDG 12 infographic.

Skills: Oral expression, vocabulary use, argumentation.

INSTRUCTIONS:

1. Observe the infographic carefully.
2. Choose two of the topics below to talk about with a classmate or in a small group.
3. Use the guiding questions and vocabulary from the glossary.
4. Speak for 1–2 minutes and take turns.

TOPICS & GUIDING QUESTIONS:

A. Food Waste

- ✓ Do you think people in your community waste food?
- ✓ How can we avoid wasting food at home or at school?

B. E-Waste (Electronic Waste)

- ✓ What do you usually do with old cell phones or electronics?
- ✓ How can we improve electronic waste collection in your city?

C. Overuse of Natural Resources

- ✓ Why do you think people overuse natural resources?
- ✓ What could we do to use fewer materials in our daily lives?

D. Environmental Crises

- ✓ Which of the three crises (climate change, biodiversity loss, pollution) do you worry about the most? Why?
- ✓ What can young people do to help the environment?

LANGUAGE SUPPORT (USEFUL EXPRESSIONS):

- ✓ *In my opinion...*
- ✓ *We should / We shouldn't...*
- ✓ *One solution could be...*
- ✓ *It's important because...*
- ✓ *For example...*



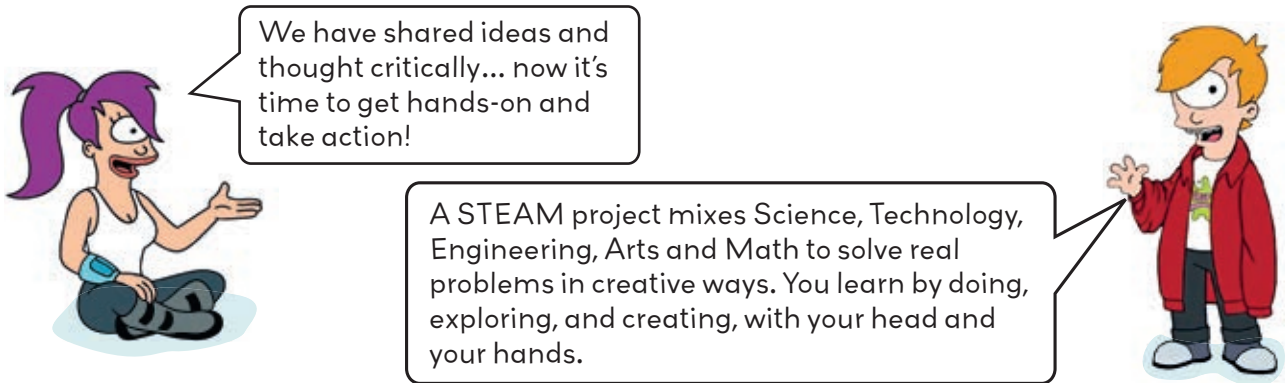
Review the meaningful of some important words related to the SDGs:

VERB	MEANING (PT)	EXAMPLE IN CONTEXT
reduce	Reduzir	We must reduce energy consumption at home.
reuse	Reutilizar	You can reuse glass jars instead of throwing them away.
recycle	Reciclar	It's important to recycle paper, plastic, and metal.
build	Construir	Engineers build more sustainable cities.
design	Projetar	They designed a system to filter waste water.
generate	Gerar	Solar panels generate clean electricity.
install	Instalar	We installed a solar water heater last year.
waste	desperdiçar	People waste a lot of food every day.
consume	Consumir	The world consumes too many natural resources.
transport	transportar	Biofuels are used to transport goods sustainably.
improve	Melhorar	We need to improve waste collection in the city.
support	apoiar, promover	Governments support eco-friendly innovations.
protect	Proteger	Our actions help protect the environment.

A) Choose the correct verb in parentheses to complete each sentence.

- Engineers are working hard to _____ (build / recycle) smart and sustainable cities.
- It is important to _____ (reduce / waste) the amount of plastic we use every day.
- My school started to _____ (protect / recycle) paper and plastic materials.
- Scientists want to _____ (generate / throw) clean energy from wind and sunlight.
- We must _____ (reuse / support) glass containers to avoid unnecessary trash.
- The community helped to _____ (design / consume) a green public square.

5. Many factories still _____ (consume / protect) too much water during production.
6. The city needs to _____ (improve / install) its public transportation system.
7. My father will _____ (support / install) solar panels on our roof.
8. Governments must _____ (support / waste) eco-friendly innovation projects



VII) Transformed Practice – STEAM PROJECT

SUSTAINABLE CITIES CHALLENGE: Create the Future You Want!

A) Challenge:

Have you ever stopped to think about what it would be like to live in a cleaner, safer, more organized and sustainable city? In this project, you will imagine, plan and propose a creative solution to improve some aspect of your city or school, using ideas related to sustainability, innovation and responsible consumption.

B) Problem-question:

How can we make our city or school more sustainable, inclusive, and efficient using clean energy, smart infrastructure, and responsible consumption practices?

GROUP	SDG	THEME	PROBLEM-QUESTION
1	SDG 7	Clean and Affordable Energy	<i>How can we expand the use of clean energy (like solar or wind) in our community or school?</i>
2	SDG 9	Industry, Innovation & Infrastructure	<i>How can we use innovation and smart infrastructure to solve a local problem?</i>
3	SDG 11	Sustainable Cities and Communities	<i>How can we make our city or school more inclusive, safe, and sustainable for everyone?</i>
4	SDG 12	Responsible Consumption and Production	<i>How can we reduce waste and promote conscious consumption at school or at home?</i>

C) Project Stages:

Stage	Description
Define the problem	What is the problem? What are the needs or requirements? What are the limitations
Imagine (PRODUTC)	What do we know about the problem? What do we need to learn? Brainstorm ideas to plan a solution.
Plan(DRAWING)	Choose the best idea. Make a model or draw a sketch. Make a list of the materials you will need
Create (PROTOTYPE)	Follow the plan. Build your prototype. Test it!
Improve	What works? What doesn't work? What could work better? Modify the design to improve it. Test again.

D) Working with STEAM

You will apply your knowledge in several areas:

S: Study the environmental impact of waste and energy use.

T: Create ideas using apps, sensors, or QR codes.

E: Build models or prototypes using recycled materials.

A: Design posters, videos, or visual presentations.

M: Collect and analyze data, create graphs and tables.

E) Final product

You and your group will create a **PROTOTYPE** (physical or digital model) and a presentation explaining how your idea solves the proposed problem.

F) Writing

Create a group infographic based on the prototype you developed, connected to one of the SDGs studied in class (SDG 7, 9, 11, or 12).

Your infographic must:

1. Present the problem identified. (Show clearly what the issue is.)
2. Collect and organize information. (Use text, numbers, icons, drawings, photos, and colors to show why this is a real problem. Connect it to the SDGs (Sustainable Development Goals).)
3. Show your project/your proposal. (Present the solution you created (your prototype). Explain how it works.)
4. Conclude with impact. (Show how your project helps to solve or reduce the problem.)

G) Group Plan

Group Members	
Project Title	
Main SDG(s)	
Problem we want to solve	
Context (local/school issue)	
Our proposed solution	
Prototype idea (maquete, vídeo, app, etc.)	
STEAM Areas Involved	()S()T()E()A()M
Materials we need	
What each member will do	
Date for final presentation	



This journey was amazing! We learned a lot about the planet, people, and how small actions can make a big difference!

Let's keep exploring the SDGs together — there's so much more to learn, build, and change! See you in the next mission!



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