

GTA | Guião de Trabalho Autónomo n.º 3

INGLÊS 11.º ANO

Tema 1: Rethinking resources and energy Subtema 1: Ameaças ao ambiente



WHY LEARN ABOUT... ?



WHAT AM I GOING TO LEARN?



HOW WILL I LEARN?



WHAT DID I LEARN?



HOW CAN I LEARN MORE ABOUT THIS TOPIC?



WHY LEARN ABOUT...?

Understanding natural resources and renewable energy is essential for all of us who live in a world facing serious environmental challenges. Learning about where our energy comes from, how it affects our planet, and what sustainable alternatives existing will help you become a more informed and responsible global citizen. It also encourages critical thinking about the choices you make as an individual and as a member of a larger community, and inspires action toward a cleaner, more sustainable future. By exploring these topics, you can connect science, ethics, and everyday life in meaningful and practical ways.



WHAT AM I GOING TO LEARN?

COMPETÊNCIA COMUNICATIVA

Compreensão oral

Compreender vários tipos de discurso e seguir linhas de argumentação dentro das áreas temáticas apresentadas, integrando a sua experiência e mobilizando conhecimentos adquiridos em outras disciplinas.

Compreensão escrita

Descodificar palavras-chave, ideias presentes no texto, marcas do texto oral e escrito que introduzem mudança de estratégia discursiva, de assunto e de argumentação.

Interação oral

Interagir com eficácia, participando em discussões, defendendo pontos de vista

Produção oral

Expressar-se de forma clara sobre as áreas temáticas apresentadas; produzir enunciados para descrever, narrar e expor informações e pontos de vista.

Produção escrita

Planificar e produzir, de forma articulada, enunciados para descrever, narrar e expor informações e pontos de vista.

COMPETÊNCIA ESTRATÉGICA

Comunicar eficazmente em contexto

Utilizar a língua inglesa no registo apropriado à situação, recorrendo a vocabulário e expressões idiomáticas, bem como estruturas frásicas diversas, revelando à-vontade na comunicação em situações reais.

Colaborar em pares e em grupos

Participar em atividades de par e grupo, revelando inteligência emocional em situações conhecidas e novas; interagir com o outro, pedindo clarificação e/ou repetição, aceitando feedback construtivo para atingir o objetivo proposto.

Utilizar a literacia tecnológica para comunicar e aceder ao saber em contexto

Demonstrar autonomia na pesquisa, compreensão e partilha dos resultados obtidos, utilizando fontes e suportes tecnológicos; contribuir para projetos de grupo interdisciplinares.



WHAT AM I GOING TO LEARN?

Pensar criticamente

Revelar atitude crítica perante a informação e o seu próprio desempenho, de acordo com a avaliação realizada.

Relacionar conhecimentos de forma a desenvolver criatividade em contexto

Relacionar o que ouve, lê e produz com o seu conhecimento e vivência pessoal, recorrendo ao pensamento crítico e criativo; elaborar trabalhos criativos sobre vários assuntos relacionados com as áreas temáticas apresentadas.



HOW WILL I LEARN?

GTA 1: Extreme weather events: Nature's fury

GTA 2: Traces we leave behind: Exploring pollution and our carbon footprint

GTA 3: Rethinking resources and energy

GTA 4: Every drop counts: The global water challenge

GTA 5: The 6 Rs of sustainable living

GTA 6: Speaking the language of the environment

Tema 1: O mundo à nossa volta

Subtema 1: Ameaças ao ambiente



GTA 3: Rethinking resources and energy

Learning objectives:

- Identify key types of natural resources and renewable energy sources
- Explain the importance of transitioning to renewable energy
- Use vocabulary related to sustainability, energy, and the environment
- Collaborate on a creative project to raise awareness

Working method: pairs, small groups, whole class

Resources and materials: printed cards, computer, internet, camera

TASK 1

Warm-up -Categorise the words

a. Look at the words below. In pairs, **decide** which ones are *natural resources* and which ones are *not*. Then, sort the natural resources according to renewable and non-renewable.

Word bank:

wind - sunlight - coal - plastic - cotton - glass - trees -
oil - sand - smartphone - water - steel - natural gas -
battery - gold - electricity - wind turbine

b. Justify two of your choices.



TASK 2

Key-concepts

a. In pairs, **match** the words in column A with their correct definition in column B.

| Column A | Column B |
|-------------------|--|
| a. Solar energy | 1. Dead plant and animal material suitable for using as fuel. |
| b. Wind power | 2. The quality of causing little or no damage to the environment and therefore able to continue for a long time. |
| c. Fossil fuels | 3. Said of an organisation, activity, etc. that does not add to the total amount of carbon dioxide in the atmosphere, for example by doing things such as planting trees to remove as much carbon dioxide as it creates. |
| d. Sustainability | 4. Energy that uses the power of the sun to produce electricity. |
| e. Geothermal | 5. Electricity produced using wind turbines. |
| f. Biomass | 6. Of or connected with the heat inside the earth. |
| g. Carbon-neutral | 7. Fuels, such as gas, coal, and oil, that were formed underground from plant and animal remains millions of years ago. |

a. ____; b. ____; c. ____; d. ____; e. ____; f. ____; g. ____

b. **Complete** the following text with the words from activity a.

Greener future

As the world faces the effects of climate change, more people are looking for 1. _____ in the way we produce and use energy. Traditionally, we have relied on 2. _____ like coal, oil, and natural gas. However, these are limited resources and release harmful gases into the atmosphere.

Today, many countries are investing in renewable energy sources. 3. _____ uses sunlight to produce electricity, while 4. _____ takes advantage of moving air to generate clean energy. Other sources include 5. _____, which comes from the heat under the Earth's surface, and 6. _____, which is made from organic materials like plants and waste.

These solutions help us move toward a more 7. _____ future, one where we produce less pollution and protect the planet for future generations.



TASK 3

Watch & React

a. **Print** and **post** the following 6 cards around your classroom.

Solar Energy

Definition:

Solar energy is generated by converting sunlight into electricity using photovoltaic (PV) cells, commonly found in solar panels.

Advantage:

It produces no harmful emissions during operation and helps reduce dependence on fossil fuels.

Challenge:

Its efficiency depends on weather conditions and daylight hours, and storing solar energy for nighttime use can be costly.

Wind Power

Definition:

Wind power is produced when wind turbines convert the kinetic energy of moving air into electrical energy.

Advantage:

It is a renewable, sustainable source of power that can significantly reduce carbon emissions.

Challenge:

Wind farms require large open spaces and can impact local wildlife, especially birds and bats.



TASK 3 (cont.)

Geothermal Energy

Definition:

Geothermal energy harnesses heat from beneath the Earth's surface to generate electricity or provide direct heating.

Advantage:

It offers a constant, reliable source of energy and has a low environmental impact when managed properly.

Challenge:

Initial installation costs are high and suitable locations are limited to areas with significant geothermal activity.

Hydropower

Definition:

Hydropower, or hydroelectric energy, is produced by capturing the energy of moving water - usually from rivers or dams - and converting it into electricity.

Advantage:

It is a reliable and flexible energy source that can produce large amounts of electricity with low greenhouse gas emissions.

Challenge:

Building dams can disrupt ecosystems, displace communities, and affect water quality and wildlife.



TASK 3 (cont.)

Biomass Energy

Definition:

Biomass energy is derived from organic materials - such as wood, crops, and animal waste - that are burned or converted into biofuels.

Advantage:

It makes use of waste materials and can help reduce landfill use while providing a renewable energy source.

Challenge:

If not managed sustainably, it can lead to deforestation and still produce carbon emissions when burned.

Tidal Energy

Definition:

Tidal energy harnesses the movement of ocean tides to turn turbines and generate electricity.

Advantage:

It is predictable and consistent, as tides follow regular patterns influenced by the moon and Earth's rotation.

Challenge:

Technologies are still developing, and building tidal power systems can be expensive and affect marine life.



TASK 3 (cont.)

- b. Walk** around the room in pairs and **read** at least three different cards. **Take notes** and **add** any information you consider interesting or relevant.
- c.** Back in your seats, **discuss** which energy source is the most interesting and why.
- d. Share** the most relevant ideas with the class.

TASK 5

Poster or Video Project

Main objectives: to work in small groups; to create a poster or a 5-minute video to raise awareness about the responsible use of natural resources and the importance of renewable energy.

Each project should include:

- A clear message or slogan
- 2–3 key facts or statistics
- A call to action (e.g., “Switch to solar!”, “Save water!”, “Use less plastic!”)
- Infographics, drawings, or real footage/photos

Groups decide:

- Poster or video?
- What will the main message be?
- Who is the audience? (e.g., schoolmates, families, social media viewers)





ANSWER KEY

TASK 1

a.

| Natural resources | Not natural resources |
|--|--|
| wind - sunlight - coal - cotton - trees - oil - sand - water - natural gas - gold | plastic - smartphones - steel - electricity - wind turbine - glass - battery |
| Renewable natural resources | Non-renewable natural resources |
| wind - sunlight - water | coal - cotton - trees - gold - oil - natural gas - sand |

b.

Steel is not a natural resource because it is a man-made material.

Wind is a renewable natural resource because it is constantly replenished by natural atmospheric processes.

Sand is a non-renewable natural resource primarily because of how slowly it forms and the high rate of consumption for industrial purposes. It has limited sources.

TASK 2

a.

a. 4; b. 5; c. 7; d. 2; e. 6; f. 1; g. 3

b.

Greener future

As the world faces the effects of climate change, more people are looking for sustainability in the way we produce and use energy. Traditionally, we have relied on fossil fuels like coal, oil, and natural gas. However, these are limited resources and release harmful gases into the atmosphere.




Today, many countries are investing in renewable energy sources. Solar energy uses sunlight to produce electricity, while wind power takes advantage of moving air to generate clean energy. Other sources include geothermal, which comes from the heat under the Earth's surface, and biomass which is made from organic materials like plants and waste.

These solutions help us move toward a more carbon-neutral future, one where we produce less pollution and protect the planet for future generations.



WHAT DID I LEARN?

Put a ✓ in the column that best reflects your understanding of each statement:

| Statement |  I'm confident about this |  I'm not sure |  I need help |
|--|--|--|---|
| I can identify renewable and non-renewable energy sources. | | | |
| I can understand why wind, solar, and biomass are renewable resources. | | | |
| I can explain why oil, coal, and natural gas are non-renewable. | | | |
| I can give examples of natural resources. | | | |
| I can understand the environmental impact of using fossil fuels. | | | |
| I can describe how wind energy is generated. | | | |
| I can understand the meaning of “sustainability” and “carbon-neutral.” | | | |
| I can say why sand and gold are non-renewable resources. | | | |
| I can explain the importance of transitioning to renewable energy. | | | |
| I can talk or write about natural resources and energy. | | | |
| I can work well in pairs and groups and contribute actively to creating the poster or video project. | | | |

❖ For all those statements you answered *I'm not sure* or *I need help*, look for texts and activities on the topic of renewable energies in your student's book. **Read** the text(s) and **solve** the exercises. In the end, **compare** your answers with those of your colleagues.



HOW CAN I LEARN MORE ABOUT THIS TOPIC?

If you are interested in learning more about renewable energies, watch the [Webinar: Ao lerne das energias](#) and answer the questions of the “Avalia” section to check what you’ve learned.



You can also improve your knowledge by solving these activities from the British Council website.



[School strike 4 climate](#)



[Homes of the future | LearnEnglish Teens](#)