

SCIENCE LESSON PLAN

SUBJECT	Science	GRADE:	Eleventh
TOPIC	Environmental Issues	LENGTH:	4 hours
AIMS			
MAIN AIMS			
<p>By the end of the lesson the students will design an action plan to save the planet after having read, listened and observed practices in favor of the environment and their advantages.</p> <p>SUBSIDIARY AIM: The students will also ...</p> <ul style="list-style-type: none"> ● Get familiarized with the environment vocabulary ● Describe their daily actions against and in favor of the environment ● Apply a survey ● Classify good actions into the three Rs category 			
TEACHING OBJECTIVES			
Content <ul style="list-style-type: none"> ✓ The biggest environmental concerns ✓ Ecological Imperatives ✓ 3 Rs: reducing, reusing and recycling 	Cognition <ul style="list-style-type: none"> ✓ Categorizing actions against the environment ✓ Evaluating your daily actions which damage the environment ✓ Formulating possible solutions to some environmental problems 	Culture <ul style="list-style-type: none"> ✓ Classifying environmental practices in some developed countries ✓ Discussing in a round table contrasting people actions in your city with people actions in other cities ✓ Applying a survey to measure the classroom environmental awareness level 	
Communication <i>(What and how)</i>			
Language of Learning Language <ul style="list-style-type: none"> Imperative verbs Natural disasters vocabulary Environmental problems Present simple Adverbs of frequency 	Meaning <ul style="list-style-type: none"> Verbs which give us orders or commands Adverse events resulting from natural processes of the Earth. Examples include firestorms, duststorms, floods, hurricanes Harmful effects of human activities on the environment. A tense used to talk about condition or habitual actions. 	How do you support learners with this language? <ul style="list-style-type: none"> I will provide them some posters with examples of imperatives They will have a worksheet with pictures and definitions to get familiarized with the vocabulary I will stop here to answer questions and clarify doubts 	

	Adverbs which describe how often an action happens.	The students will be given a piece of reading about bad and good habits in people daily routine
<p>Language <i>for</i> Learning</p> <p>How often do you ...?</p> <p>Turn of the lights</p> <p>Don't waste water</p> <p>Don't throw away rubbish</p> <p>Recycle plastics and glass</p> <p>I never pollute river</p> <p>My older sister sometimes wastes energy</p> <p>My mother hardly ever saves wáter</p>	<p>Meaning</p> <p>Surviving your partners</p> <p>Giving orders or commands to others to take care of the environment</p> <p>Answering questions about your daily actions in favor of our invironment</p>	<p>How you support learners with this language</p> <p>The students will be given a conversation which includes some of this phrases to practice and model the pronunciation.</p> <p>The students are led to use this language when applying a survey given by the teacher</p>

Language *through* learning

The teacher will model and give examples of what the students are supposed to do and give feedback so that students improve their performance.

The teacher will require that students use the target language to ask questions, ask for permission, and correct any mistake they do.

Warm- up unscrambling statements

BDA 11^º: CIENCIAS NATURALES

5. Analiza cuestiones ambientales actuales como el calentamiento global, la contaminación, tala de bosques y minería desde una visión sistemática (económico, social, ambiental y cultural)



LET'S SAVE OUR PLANET

Warm- up: Sentences Scramble

Timing: 10 minutes

Procedure: Start by organizing the class in groups of 4 or 5 students. Come up to each group with pieces of papers which contain some words to form a sentence. Ask the members of each group to organize the words and form the sentences. The first group to unscramble the words and read the sentences aloud correctly wins that round.

While the students are working in groups, the teacher monitors what they are doing and see what strategies are used to unscramble the hidden sentence.

Activity # 1

Unscramble the following sentences and read them aloud in front of the whole class.

1. Climate [] → a great [] ← change [] → concern [] ↑ is [] → nowadays [] ↑

2. Deforestation [] → the depletion [] ← trees [] ↑ rate [] ↑ at an [] → alarming [] ↑ is [] → []

3. Support [] → friendly [] ← practices [] ↑ We [] → [] ↑ environmental [] ↑

4. paper [] → of [] ← shoud [] ↑ the overuse [] ← avoided [] → [] ↑ [] ↑

5. Changes [] → Environmental [] → several [] ↑ have [] ← impacts [] → [] ↑ [] ↑

Activate prior knowledge

Vocabulary

Timing: 15 minutes

Procedure: The students are going to work individually. They are given a worksheet with a list of environmental problems and their definitions. The idea is that they have to read all the definitions and match them with the corresponding word as shown **in the example**.

Activity 2: Match the following words with its corresponding definition as in the example. Use your dictionary if it is necessary.

Environmental problem	Meaning
1. Air pollution 	An increase in the earth's temperature causing environmental changes (4)
2. Extinction 	The introduction of harmful substances into rivers, oceans, lakes and ponds, which changes the physical, chemical or biological condition of the water ()

3. Deforestation		It is the result of emissions from industries, automobiles, and the increasing use of fossil fuels ()
4. Global warming		The earth's drastic population increase which causes a shortage of resources ()
5. Overpopulation		The loss of a species of animal, bird, plant, etc for all time ()
6. Water pollution		The depletion of trees and forests at an alarming rate ()

Reading

Timing: 30 minutes

Procedure: The teacher gives to the students a piece of paper with a reading comprehension activity. They are supposed to read it in pairs and then answer some questions based on it. The teacher walks around the classroom and visits the groups to answer questions or doubts.

Once time is over, the students are led to participate answering the questions orally.

After that, the teacher asks the students to underline some simple sentences in **present simple** and write those on the board. Then, the teacher writes the same examples changing the subject or some time expressions to see if the students notice the difference.

Activity # 3: Read the following with one of your classmates and answer the questions. Then, underline the statements written in present simple.

SAVING THE PLANET

Years ago there wasn't a problem with rubbish because things like plastic and disposable nappies hadn't been invented. There wasn't so much packaging on items you bought either. But now with everything so over packaged wrapped and disposable we are suffering the consequences of far too much waste. The trouble is not everything can be recycled or will rot away. You used to be able to get a refund on glass bottles when you took them back to the shop. Now they are either collected from your house by the council or you can take them to a bottle bank.



The fact that paper can be recycled and is easy to dispose is great, but remember paper is made from trees, which are important to the environment. The rainforests have been slowly disappearing for a

while now. We need them not just because it helps with the climate. They are important as like all plants they give us oxygen. They are also a home to many animals who rely on them for their survival.

The best waste is organic, dead leaves; carrot tops, onion skins and so on all rot down and make fertile soil. This in turn will help the plants and vegetables giving them much needed food. So if you are able to have a compost heap in your garden you'll be helping the environment and your garden will love you for it.

Acid rain is another serious problem. It is damaging to plants and is caused by pollutants such as sulfur dioxide and nitrogen oxides. These come from the burning of coal, oil and gas.

Dropping litter is not just a lazy thing to do, it makes work for other people, is bad for the environment and looks ugly. So think before you drop litter either bin it or keep it and then bin it.

When rivers and seas are polluted by waste we are not only stealing their beauty but we are spoiling it for ourselves too. Our health can also suffer. Sadly accidents do occur; oil slicks sometimes happen and wreck the environment. Animals tend to suffer the most from these incidents. We should really have in place something that will prevent so much destruction, rather than just waiting for it to happen, then trying to clean up the damage.

Nuclear waste has been the cause of controversy over the years. Radioactive material leaking out would be very serious indeed, it can cause real harm. This is why it is the most worrying.

Although we are trying to stop the hole in the ozone layer getting any bigger, nuclear waste is still a serious problem. The ozone layer protects us from harmful ultra - violet rays. Its hole has been caused by chlorofluorocarbons (cfc's) a chemical that was found in some products. Refrigerators used to contain them. So do we care enough about the earth we have inherited and our passing onto future generations? Or is it now all too late to do anything? Each one of us can make a difference and each and every one of us is responsible to the environment. It takes care of us; we should take care of it.

Source: <http://www.childrenswebmagazine.com/Environment.htm> (slightly adapted)

A) Go through the text and enumerate 5 of the environmental problems mentioned in it.

- ✓ _____
- ✓ _____
- ✓ _____
- ✓ _____
- ✓ _____

B) Say if the following statements are True or False. Correct the false ones.

1. Some years ago diapers weren't used. -----
2. Nowadays products are over packaged. -----
3. Some products are difficult to destroy. -----
4. Both animals and humans need trees to survive. -----
5. Acid rain is caused by organic waste. -----
6. Ozone layer depletion and nuclear waste are two most serious problems. -----
7. It's useless for us to try and make a healthier environment. -----

C) Protecting the environment is our own responsibility. What do you do to make our planet a better place?

Introducing the Three Rs

Timing: 20 minutes

Procedure: The teacher writes down some actions on the board and asks the students to classify them into the three categories: **reducing, reusing recycling**. Once the students

completed this task, the teacher asks them to go to the board to share what they do with the class. While they are fulfilling the chart, the teacher corrects mistakes and gives feedback. The teachers take advantage of this to explain that all these sentences start with an **imperative verb** and she also says what it means and when we need to use imperatives.

Activity 4: Write down the following statements in the correct column from the chart below.

- ✓ Turn off the lights when you don't use it
- ✓ Don't throw away rubbish
- ✓ Use things many times
- ✓ Take quick showers
- ✓ Use plastic bottles to make vases
- ✓ Bring a reusable shopping bag



Listening

Timing: 20 minutes

Procedure: The students are supposed to listen to some people in developed countries talking about what they do in order to contribute to healing the environment. After having understood, they must complete a chart giving specific details. This activity is checked by the teacher on the board, errors are corrected and feedback is given immediately.

Activity 5: Listen to some teenagers in different countries talking about the environment: <https://english-practice.net/english-listening-exercises-for-b1-our-environment/> . What does each person talk about? Choose from these topics and write them in column B, and give some examples in column C.

Word Box

electricity transport recycling

heating packaging food waste

A: Name	B: Topic	C: Example
June	Recycling	paper

Delia		
Henry		
Olivia		

Applying a survey

Timing: 40 minutes

Procedure: The teacher organizes the class since in this activity the students must work in pairs. The idea is that they are going to apply a survey to one of their classmates and also to another friend from another city. Then, the students have to analyze the results since some of them are supposed to present them briefly to the whole class pointing out cultural differences in the cities of our country.

Before applying the survey the teacher writes down some of the **adverbs of frequency** that are used in the survey questions and asks for their meaning. At the end, the teacher explains their importance when talking about our daily actions.

Activity # 6: Work in pairs. Ask the following questions to one of your partners in the class and another friend who lives in another city. Then, report the results in front of the class in a round table contrasting the results to see if there is any difference.

HOW GREEN ARE YOU?

Do the quiz and find out if you behave in a proper way to help save our planet

1. Do you sort out glass, paper, plastic bottles and cans ?

a Yes , always.
b Sometimes.
c Never.



8. Do you switch off other electric appliances at night? (TV ,computer..)

a Yes , always.
b Sometimes.
c Never



2. Do you buy fair trade products or organic or local food.

a Yes , always..
b Sometimes.
c Never, it's too expensive.



9. Do you put on warmer clothes when it's cold instead of putting on the heating ?

a Yes , always.
b Sometimes.
c Never, I prefer putting the heating on more.



3. Do you use your own shopping bags?

a Yes , always
b Often
c Once in a while



10. Do you have showers instead of baths?

a Yes , always.
b Often .
c Never



4. Do you recycle light bulbs and used batteries?

a Yes , always.
b Sometimes.
c Never.



11. Do you close the tap while you brush your teeth?

a Yes , always.
b Sometimes.
c Never, I never think about it.



5. Do you always dispose of garbage in a proper way?

a Yes , always of course.
b Most of the times
c Sometimes I don't pay attention!

12. Do you leave the fridge door open when you do the cooking?

a No, never., I always close it.
b Sometimes.
c Yes , it often happens

6. Do you bother picking up other people's litter?

a Yes , always.
b Sometimes.
c Never



13. Do you use public transport or a bike or walk when possible?

a Yes , always.
b Sometimes.
c Never



7. Do you switch off the lights when

Action Plan Design

Timing: 40 minutes

Procedure: After having analyzed the results of the survey, the teacher asks the students to think about actions which may help to care for the environment from the school in order to create an action plan to be followed at the school. The action plan must be written individually but the students have to share it with a partner who checks the first draft and gives some recommendations to improve it. After including the recommendations, the students are supposed to give it to the teacher to be evaluated.

Activity # 7: Writing

Write down a brief action plan you consider will help us to save our planet from the school. Include at least 6 different actions and explain how everyone will apply them in the school. Once you finish, work with another student from the class. Give your first draft to him and ask him to give you recommendations in terms of grammar, content, spelling, coherence, among others. Then, give it to the teacher.