

Lesson 5 Teaching Procedure

Eco-Cars

(Allotment)

- 1st period :
 - Introduction of the material
 - Using the Supplementary Handout, Teacher explains idioms, phrases and structures covered in the text, along with pronunciation check of the example sentences.
 - Have students become accustomed to the usage of the expressions in the Handout. Teacher prepares various types of activities.
 - 2nd period :
 - Continuation of the previous lesson
 - 3rd period :
 - Continuation of the previous lesson
 - 4th period :
 - Prior to teaching with the text-handout, Teacher gives students background information on "Global Warming." (through question-and-answers)
 - 5th period :
 - Students' silent reading of the text
 - Reading of the text and pronunciation check
 - Have students guess the content with the teacher's assistance.
 - Explanation of the content by the teacher
 - 6th period :
 - Continuation of the previous lesson
 - 7th period :
 - Continuation of the previous lesson
 - 8th period :
 - **Simplification of the passage and presentation on 'Global Warming'** by students
(This is not for evaluation.)
 - * Teacher instructs on how to express thoughts and how to write a passage using easy English expressions.
- The teacher gives out a passage on "Global Warming." Students are to simplify the passage so that even a 7-year-old can understand the content. This is group work. Each group makes a presentation and answers questions from the teacher and must give their opinion about "Global Warming." The use of a dictionary is not allowed as a small reference sheet is provided.
- 9th period :
 - Continuation of the previous lesson
 - 10th period :
 - Presentation and the question-and-answer session
 - 11th period :
 - Continuation of the previous lesson

< 1st+2nd+3rd Period >

I. Introduction of the material

The title of this lesson is "Eco-Cars." We see and hear the word "eco" almost every day. Does anybody know what "eco" means? When you hear the word "eco," what does it remind you of? (Ask students.) Maybe "eco" comes from the word ecology. (Write it on the board.) Ecology is the relationship between living things and their surroundings or environment. For example, ecology is the relationship between us and nature, between you and the trees, flowers and wind that blows through your hair. In this lesson, we'll learn about cars that are eco-friendly, cars that are friendly to the earth. And at the end of the lesson we will discuss "Global Warming." By the way, are you eco-friendly?

II. Teacher explains idioms, phrases and structures covered in the text. (using a Supplementary Handout)

Look at your Supplementary Handout. Let's read the example sentences. (Teacher model-reads the example sentences and has students repeat several times, checking the pronunciation of the new words in the sentences.)

(Teacher goes on, following the same reading procedure. Ask easy questions so that students can answer using the expressions in the target example sentence.) Do you like fruit? What kinds of fruit do you like? (Pick some students, reminding them to include the

expression "such as.") Do you like animals? What kinds of animals do you like?

Line 6, "be friendly to ~." (After reading, ask the following questions reminding them again to use the key expression.) Is a bicycle friendly to the environment? Is a car friendly to the environment? (Don't ask for the reasons.)

Line 11, "go for a drive." What would you like to do on a fine day like today (on a cloudy day like today), go for a drive or study in your room?

Now, look at the box in the Handout. I'll give you 5 minutes for silent reading to understand the rules of this grammar. (When the time is up, have students repeat each example sentence after the teacher.) Let's practice how to use this expression. Referring to the example sentences numbered from ① to ⑥, make 5 new sentences. (Give time for this task. When the time is up, pick a couple of students from each row to write their sentences on the board. Teacher corrects mistakes with the rest of the class watching.)

Line 16, "as ~ as possible." (Follow the same reading procedure with pronunciation check.)

Line 18. look at the box. You have 3 minutes for silent reading to understand the rule. (When the time is up, have students repeat the example sentences.)

Line 26, "take a look at ~." (After reading the example sentence, say the following ;) Take a look at my pants! They are from UNIQLO. It's the biggest size available at UNIQLO. Say something to me using this expression. (Pick some students.)

(As for the next 3 expressions "make use of", "make good use of" and "come to a stop," the teacher reads the example sentences for students to repeat along with pronunciation check.)

Line 42, "get ~." (Just read the example sentence and have students repeat.)

Look at the box. You have 3 minutes for silent reading. (When the time is up, have students repeat the example sentences.)

(As for the next 2 expressions, follow the same reading procedure.)

Look at the last box. You have 4 minutes for silent reading. (When the time is up, have students repeat the example sentences.) Let's practice how to use this expression. I want everybody to make one sentence using this expression. You have 5 minutes. (Pick some students to write their sentences on the board for the teacher to check.)

(For the next 7 expressions, follow the same reading procedure.)

Line 67, "play a ~ role in ---." (After reading the example sentence, ask the following questions;) Who played an important role in the Meiji Restoration? (Write 明治維新 on the board.) (Write several people's names on the board to make it a multiple-choice quiz. Names to be written on the board are; 夏目漱石・福沢諭吉・坂本龍馬・坂本金八) (Have students answer the question above in a full sentence.) In this class who is going to play an important role in planning a Christmas party? When it comes to planning a party, who will lead the class?

Line 68, "in order to ~", "in order not to ~." (After reading the example sentences, ask why-questions and have students answer using "in order to" or "in order not to.") Now, I'll ask questions. You must answer using either "in order to" or "in order not to." Why do you study English? Why do you have a cell phone? Why do you set your alarm clock in the morning?

< 4th Period >

1. Prior to teaching with the text handout, Teacher gives students background information on 'Global Warming.'

Before we read the text, we need to know about "Global Warming." When we have learned about "Global Warming," it will be easier to understand the text. (Write "Global Warming" on the board.) What does "globe" mean? Does anybody know? (If there is no reaction, have students use a dictionary.) Yes, the globe means the earth, the planet earth. Now that everybody knows what globe means, then what is "Global Warming"? Can anybody explain what "Global Warming" is? (If one student cannot give a full explanation, have other students help.) (Eventually, the teacher explains it in easy English.) In recent years, it's hotter in summer and it doesn't get so cold in winter. It is because of "Global Warming." What's "Global Warming" in Japanese? Does anybody know?

Now, I want you and the person next to you to think; "If the effect of Global Warming became really bad in Hokkaido, what would happen to your life and life styles?" You have 5 minutes. (Pick some pairs to present their ideas and discuss it with the rest of the class.)

< **5th+6th+7th Period** >

I. Students' silent reading of the text

(Give students 15 minutes to read and understand the passage. The use of a dictionary is not allowed until the last 5 minutes.)

II. Reading of the text and pronunciation check (led by the teacher)

First, I'll read the whole passage a little slow. You listen carefully and try to guess the content. For the second reading, everybody repeat after me. We'll check pronunciation as well.

III. Have students guess the content with the teacher's assistance.

Explanation of the content by the teacher

(From Line 1 to Line 12, Teacher just goes on as he or she reads the sentences as the part is easy to understand.)

Line 12 says "when we drive, our cars emit gases." "Emit" means "give off." For example, kame-mushi (a kind of bug) emits a bad smell when you touch it. A lightning bug, or hotaru in Japanese emits light.

Line 14, "exhaust" is gas that comes out of a car. For an explanation on the different gases, look at the glossary at the bottom of the handout.

(Go on as you read.)

(Teacher helps students better understand the content by simplifying or rephrasing the sentence, or by giving specific examples or by asking answer-inducing questions.)

Line 15. "An eco-car is a car developed to emit as little of these harmful gases as possible." can be rephrased into "People have made a car which emits very little harmful gases. The car is called an eco-car."

Line 18. "A number of improvements are being made to the typical gasoline cars." means "We are improving gasoline cars in many ways." At the same time, we are making cars which don't use gasoline.

(Go on as you read, clarifying the differences between "natural gas cars", "hybrid cars" and "electric cars.") (Ask questions about the drawbacks of each car.)

Line 43, "the fuel-cell car." Can anybody explain how the fuel-cell car runs? What does it emit when it runs? What drawbacks does the fuel-cell car have? There are two drawbacks.

(Go on as you read.)

(From Line 56 to Line 62, give students 10 minutes to refer to the Supplementary Handout to understand the content, since this part is beyond understanding even with the help of the teacher's simplification or rephrasing.)

(Go on as you read.)

< **8th+9th+10th+11th Period** >

I. Simplification of the passage and presentation on 'Global Warming' (by students)

* Teacher instructs on how to express thoughts and how to write a passage using easy English expressions.

(This is not for evaluation.)

The teacher gives out a passage on "Global Warming." Students are to simplify the passage so that even a 7-year-old can understand the content. This is group work. Each group makes a presentation and answers questions from the teacher and must give their opinion about "Global Warming." The use of a dictionary is not allowed as a small reference sheet is provided.

[the passage to give out]

Global warming

It's a hot, sunny summer day. Your family's car has been sitting in a parking lot for several hours. The windows are closed, and there's no shade in sight. Are you eager to get inside?

Probably not, because the car is a small example of the greenhouse effect. It will be very hot. The sun's rays pass through the glass and warm the inside of the car. (The sun also bakes the metal surfaces of the car.) The heat doesn't escape very easily from the closed interior. The glass, for example, is much less transparent to heat than it is to light.

A greenhouse for plants works about the same way. That's how the name 'greenhouse effect' was given to a special quality of the earth's atmosphere. Light rays from the sun pass through the atmosphere and strike the ground. This energy from the sun warms up the ground. The warm earth then radiates that heat back toward space (you've seen that happen before when waves of heat rise from hot tarmac).

But the heat doesn't escape to space. Why not? There's no glass enclosing the earth, but there are many invisible gases in the earth's atmosphere that behave a bit like greenhouse glass. Water vapour and carbon dioxide are two such gases. They allow sunlight to pass through, but they trap heat and prevent it from escaping to space.

It's a good thing for life on earth that there is a greenhouse effect. Without it, the earth would be about 60 degrees colder on average.

So, a little greenhouse effect is good for life on earth. But as more and more heat-trapping gases are added to the atmosphere, the greenhouse effect gets stronger. The earth could warm up several degrees by the middle or end of the next century.

[a reference sheet]

Glossary

greenhouse (n) – a building made of glass, which gets very hot inside. You use it to make plants grow faster.

surface (n) – the *surface* of something is the outside of it (e.g. the surface of an egg is hard, but the inside is soft).

transparent (adj) – if something is *transparent*, heat or light can go through it.

the earth (n) – the world (the planet earth)

atmosphere (n) – all the gases (for example, oxygen and CO₂) that surround the planet earth.

light rays (n) – light moves in straight lines. These lines are called 'rays.'

radiate (vt) – if you *radiate* something, you send it out, from the centre to the outside. For example, a fire *radiates* heat and light.

tarmac (n) – the hard black stuff we use to make a road; the surface of a road.

enclose (vt) – to surround; to cover with; to put something inside something (for example, you can *enclose* a letter in an envelope, or you can *enclose* a house with a fence.)

invisible (adj) – if something is *invisible*, you can't see it

water vapour (n) – water is normally liquid; if it gets hot, it turns into gas. This gas is called 'vapour.' (For example, clouds are made of water vapour.)

carbon dioxide (n) – CO₂ gas. When we breathe out, our breath is mostly CO₂. When we burn some fuels (e.g. coal or oil), they make heat and CO₂.

prevent (vt) – to stop

[the simplified passage to give out after the presentation]

Global warming

It's a hot, sunny day. The sun is shining. It's very hot outside. Do you enjoy getting into your car?

Probably not, because your car will be very hot. On a sunny day, a car easily gets very hot, because the sun's heat gets trapped inside, and it takes a long time for the heat to leave through the window glass.

A greenhouse for plants is similar. Just like in a car, a greenhouse traps the sun's heat inside.

The 'greenhouse effect' is like this too. Light and heat from the sun come to the Earth, and make the ground warm. Then the heat goes back, from the Earth, into space.

But with the greenhouse effect, the heat *doesn't* escape. It's like in a car or in a greenhouse. Of course, there is no glass around the Earth, but there is a lot of gas - for instance, CO₂ and steam - and this stops the heat from leaving the Earth.

A little greenhouse gas is ok: it keeps the earth warm. But if there is too much greenhouse gas, the greenhouse effect becomes too strong, and this makes the Earth become too hot. In 50 or 100 years, the Earth could get a lot hotter than it is now.

[questions to ask]

- Why is the earth getting hotter ?
- What are the causes of Global Warming ?
- What human activities are to blame ?
- Are you helping to accelerate Global Warming ?
- What can you do to stop it ?