



ANEXO 2

Títol:

Incorporación de la lengua inglesa en un módulo del CFGM de instalaciones de telecomunicaciones

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Electricidad y Electrónica

CFGM de Instalaciones de Telecomunicaciones

M01: Infraestructuras Comunes de Telecomunicación en Viviendas y Edificios

UF1: Instalaciones de Antenas

Activity 2: "TV and FM Antennas"

EXERCISE 0. Warm up activity!

A) We are going to play the "Hot Seat Game". Before we start, we have to learn some new vocabulary. Work in groups of four. The teacher will give you a card with the vocabulary and expressions that can help you understand this vocabulary. You have 5 minutes.

B) Let's start the game. Listen to your teacher, he will explain the instructions. Have fun!

EXERCISE 1. What we know!

Work in pairs and discuss your answers

A) Complete sentences 1-5 with phrases a) – e).

- 1) Telecommunication, also known as Telecom.....
- 2) Electromagnetic waves are energy waves that.....
- 3) Electromagnetic waves are classified according to.....
- 4) The electromagnetic spectrum is the name....
- 5) The radio frequency range is divided into...

- a)we give to the range of frequencies of electromagnetic waves.
- b)separate bands. We give different names and uses to each different band.
- c)their frequency and wavelength.
- d)is the exchange of information over long distances.
- e)have both an electric and magnetic field and can travel through an empty space.

B) Look at the list of words. Do you remember their meaning? Use the words in the list to give names to the different types of telecommunication signals? Do you know them in Spanish?

List Of Words	Telecom Signals	English Name
Digital	DTT	
Modulation	DAB	
Broadcast	FM	
Television	AM	
Amplitude		
Frequency		
Terrestrial		
Audio		

C) Fill in the blanks with the words in the list you used before.

FM broadcast is a method of _____ broadcasting using _____ modulation.

AM broadcast is a method of _____ broadcasting using _____ modulation.

DAB broadcast is a method of _____ broadcasting using _____ signals.

DTT broadcast is a method of _____ broadcasting using _____ signals.

d) Read the text in the box. Underline the words you don't understand and compare the words with your partner. When you understand the text, match sentences 1) - 4) with the radio frequencies bands a) - d).

REMEMBER!

The radio frequency range is also divided into separate bands. Every band has a different use and function. We use different bands for television, for radio and for mobile services. We also use different bands for DTT and Satellite TV.

1) The FM broadcast band is.....

a) 10'7 GHz - 12'7 GHz

2) The Satellite broadcast band is.....

b) 174 MHz - 230 MHz

3) The DAB Broadcast Band is.....

c) 470 MHz - 800 MHz

4) The DTT broadcast band is.....

d) 87 MHz - 108 MHz

EXERCISE 2. *Something New!*

A) Work in pairs. Listen to the first part of a conversation between a man and the employee of a shop. Use the expressions to discuss with your partners what they are talking about.

- I think the men wants.....
- In the shop they sell
- Yes, you are right / No, you are wrong
- What is the difference between...?

HELP!

Employee → Empleado

Between → Entre

To Buy → Comprar

To Sell → Vender

B) Listen to the second part of the conversation. Fill in the blanks with the words in the box. Check with your partners.

Reception	Satellite	Distance	Surroundings	Signal	DTT	Direction
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E: What kind of TV antenna do you need, DTT or Satellite?

M: I need a _____ antenna, I don't have _____ or cable TV.

E: OK, perfect. Do you live in the city?

M: Yes, I live in this neighbourhood, why?

E: Because it depends on the _____ you have of the TV _____.

M: And it depends on where I live?

E: Yes of course, it depends on the _____ and _____ from the broadcast tower. It also depends on the _____, if you live in front of a big building you will have problems.

M: I live in a house and I can see the broadcast tower from my house.



Collserola Broadcast Tower

C) Listen to the last part of the conversation. Are the statements true or false?

1) Multidirectional antennas receive signals from different directions.

- a) True b) False

2) If the TV reception signal is not good, you can buy a TV antenna with less signal gain

- a) True b) False

3) Antennas with high signal gain receive worst TV signals

- a) True b) False

HELP!

Statement → Sentencia

Worst → Peor

Less → Menos

Pointed at → Apuntando a

Brands → Marcas

D) Read the three parts of the conversation and check your answers.

M: Hello, good morning!

E: Hello, good morning, can I help you?

M: Yes, I would like to buy a TV antenna

E: Sorry, you mean an Aerial?

M: What is the difference?

E: Well, an antenna sends TV signals, but an Aerial receives TV signals

M: Oh, I didn't know, I'm sorry. Then yes, I need a TV aerial

E: (Laughs) don't worry everyone calls them antennas, there is no problem. You are in the perfect shop, we sell the best TV and Radio antennas

E: What kind of TV antenna do you need, DTT or Satellite?

M: I need a DTT antenna, I don't have satellite or cable TV.

E: OK, perfect. Do you live in the city?

M: Yes, I live in this neighbourhood, why?

E: Because it depends on the reception you have of the TV signal

M: And it depends on where I live?

E: Yes of course, it depends on the distance and direction from the broadcast tower. It also depends on the surroundings, if you live in front of a big building you will have problems.

M: I live in a house and I can see the broadcast tower from my house.

E: That is perfect, then you need a directional antenna.

M: A directional antenna?

E: Yes, directional antenna. Directional antennas must be pointed at the transmitter. We also have multidirectional antennas, which receive signals from different directions. But if you can see the broadcast tower from your house you can buy a directional antenna.

M: Aha, so the TV reception signal will be good?

E: Yes, but don't worry, if the TV reception signal is not good, you can buy a TV antenna with high signal gain

M: Oh, I'm sorry, but I don't know what gain is.

E: Antennas with high signal gain receive better TV signals

M: Oh perfect, then I want to buy a directional high signal gain antenna

E: Good, please follow me, I will show you different brands.

EXERCISE 3. *Let's Work!*

Work in pairs and do the following exercises

A) Look at the following antennas. Use the web pages to answer the questions.

Webpage: <http://www.richardfarrar.com/digital-tv-antennas/>

1) What is the name of this antenna? Is it for TV or Radio?

2) Write down the different parts of this antenna

3) Is it directional or multidirectional?

4) Is it a high gain antenna?



Webpage: <https://www.antennasdirect.com/store/FM-360-HD-Radio-Antenna.html>

1) What is the name of this antenna? Is it for TV or Radio?

2) Is it directional, multidirectional or omnidirectional?

3) Is it a high gain antenna? What is the maximum gain?

4) What is the frequency range?



EXERCISE 4. *Let's Work!*

Work in pairs and do the following exercises

A) Imagine you want to buy a new antenna. Choose the best antenna, or antennas, for every situation. Use the internet. You can use the web pages from the last exercise.

1) I live in a house next to a big building and there is a long distance to the broadcast tower. I want to watch the TV and listen to the Radio.

2) I live in a house with no buildings in the surroundings but there is a mountain between my house and the broadcast tower. The broadcast tower is a very long distance from my house. I don't want to listen to the radio but I like TV.

3) I live in a house with no buildings in the surroundings and very close to the broadcast tower. I love to listen to the radio and I don't like TV.

4) I live in a building in the city, but it is a very big building. There is a very long distance to the broadcast tower. Buildings have regulations.

5) I live in small building in a big city with very big buildings and there is a very long distance to the broadcast tower. Buildings have regulations.

B) Now that you have all the antennas. Fill in the following information for every antenna.

a) Type of antenna (name and use)

b) Brand and Reference

b) Frequency band

c) Gain

d) Range (short, long, medium)

e) Style (directional, multidirectional, omnidirectional)

f) Dimensions

HELP!

Fill in → Completar

REFERENCIAS:

Fotos: Wikipedia (CC) y páginas webs mencionadas

Textos: Elaborados por el autor de esta actividad