YOUTH MWPE+

Multilingualism and Work Perspectives in Europe

MULTILINGUALISM AND WORK PERSPECTIVES IN EUROPE

'Youth, Multilingualism and Work Perspectives in Europe' Project

CLIL LESSONS

VOLUME I

INDUSTRY

Erasmus+

INDEX

ERASMUS + PROGRAMME

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‘YOUTH, MULTILINGUALISM AND WORK PERSPECTIVES IN EUROPE’ PROJECT

In a context with a rising unemployment among young people and early school leaving, our schools have an important role to play. Young people need to be flexible to a new labour market with quickly changeable skills. Multilingualism, e-skills and knowledge of the European labour market are essential for youth.

‘Youth, multilingualism and work perspectives in Europe’ project intended to reach this aim by emphasizing the importance of motivational strategies and ‘coaching’, both to promote academic excellence and to achieve a successful job profile, encouraging students in key skills to enter the workplace. Thus, we developed language competences and digital skills by promoting the use of Content and Language Integrated Learning (CLIL) in our schools and ICTs in the job search process. As a result, we enhanced learning and using foreign languages as a necessary means for integration into the European labour market and we analysed the possibilities to work abroad and raised awareness in the students about the importance of education and training in labour world. We also promoted the participation of socially disadvantaged students in the school's activities, giving them access to ICTs.

Our partnership worked to modernize our schools and adapt them to new ways of teaching and learning. It was about cultivating the notion of European citizenship through the study of laboral possibilities in Europe. The students were involved with activities that made them acquire knowledge on their labour market and the skills they need to find work in Europe. They developed skills in ICTs, language learning and speaking in public by presenting their tasks in English and they shared their material through eTwinning. Simultaneously, teachers prepared CLIL lessons about many areas: History, Science, Technology, Arts, ...

There were jointly produced products: the present e-book with CLIL lessons, a webpage with the study of the labour market in Europe and videos and all the products made by students. Throughout the two years, there were meetings in the different countries involved on the project where students showed their tasks and products. Finally, there was an evaluation plan with questionnaires, group discussions, observation and analysis, which was performed by students and teachers in progress of the project and in the end.

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LITHUANIA

INDUSTRY IN LITHUANIA

CLIL LESSON GENERAL LAYOUT

1.- TITLE OF THE UNIT

SECTORS AND JOBS IN THE FIELD OF IT INDUSTRY

2.- SUBJECT

IT industry in Lithuania

3.- STUDENTS' LEVEL/AGE

Secondary School (12 - 15) Pre-Intermediate, Mixed Ability Class
B1 according to CEF (Common European Framework)

4.- GROUP SIZE

25 students in class (3-6 pupils in a group)

5.- TIMING

40 – 45 minutes

6.- PLACE

Computers' Lab

7.- THE AIM

To provide information about one of the most important and innovative branches of Industry in Lithuania which is IT technologies.

8.- OBJECTIVES

• Becoming familiar with the disciplines associated with IT industry and by extension with the skills of workers required by this sector.

• Being able to reflect on the challenges that the sector of IT science and technology is facing today.

• Enriching vocabulary related to IT industry, clarifying the terminology: industry, discipline, working speciality, exercise the collaborative production of spoken and written language.

• Being able to discuss the concept of IT industry by considering the issue and benefits of IT technologies in different fields.

• Identifying the possibilities to use IT influence on developing modern industry nowadays.

• Being aware of the disciplines related to IT industry.

• Learning to use app programme (QR CODE) for effective internet search skills and selection of appropriate information.

9.- SUBJECT CONTENT

• Modern and human factors that influence the development of IT industry.

• Types of the disciplines related to IT industry.

• Youth organisations related to IT industry, practice and its development.

10.- ACTIVITIES

• Watching introduction and a video about IT industry in Lithuania, its development and growth in European content.

• Activity involved in the use of the tool of Google Apps (QR CODE): solving the crossword; defining vocabulary that constitute the sector of IT industry and the skills of workers associated with it.

11.- DETAILED SESSION

Presentation

Industry in Lithuania - Here you can see shared industry services in Lithuania. Also, you can see that Lithuania has second fastest productivity growth in the Europe between 2005-2013.

IT technology - IT technologies are the application of computers and telecommunications equipment to store, retrieve, transmit and manipulate data.

IT Technologies in Lithuania - With world-leading broadband speeds, and the most advanced ICT infrastructure in the CEE region, Lithuania is cementing its position as a regional centre of excellence for smaller software and games start-ups, and larger ICT operations.

IT technologies growth in Lithuania - The sector has experienced stellar growth, with the number of highly-skilled staff employed in Lithuania's range of ICT enterprises doubling since 2006. What's more, since 2008, foreign investment in the ICT sector has shown double digit growth.

Europe structural funds project - 'Technology and science for innovative enterprises' were taking place in Lithuania and invested more than 4 million euros in improving technology and science in Lithuania. Here you can see some of the project partners in Lithuania.

The most popular professions related to IT in Lithuania are:

IT specialists (Kaunas University of Technology);

Engineers (Vilnius Gediminas Technical University);

IT teacher (Vytautas Magnus University);

Bioinformatics (Vilnius University);

IT enginering (Klaipėda University);

The most demanding jobs in Lithuania

1. Assistant Chief Engineer (Engineering);
2. Systems Analyst (Information Technology);
3. Chief Executive Officer (Executive and Management);
4. Aircraft Maintenance Supervisor (Airlines Aviation/Aerospace/Defense);
5. Pilot (Airlines/Aviation/Aerospace/Defense)

Youth organisations - In Lithuania we have a lot of youth organisations which help to the same minded youth to join into groups. In Lithuania there are some youth organisations which bring together youth interested in IT. Some of the shown organisations work in robot, software and microchips creating, teaching how to use computers and new IT technologies.

Lasers - A laser is a device that emits light through a process of optical amplification based on the stimulated emission of electromagnetic radiation. The European Union's innovation scoreboard ranks Lithuania as a modest innovator, but there is one field in which this Baltic country of about 3 million people shines, literally: lasers.

Laser production in Lithuania - Half of all picosecond lasers sold worldwide are produced by Lithuanian companies, while Lithuanian-made femtosecond parametric light amplifiers account for as much as 80% of the world market. Lithuanian laser production company 'Ekspla' together with American company 'National Energetics' are making the strongest laser in the world which will be installed in the European Union research complex 'ELI- beamline' in Dolni Břežany town near Prague, Czech Republic.

Nanotechnology in Lithuania - Word 'nano' came from Greek language word, which means 'small'. Nanotechnology is a science which works with nano particles, which are measured in nanometers. If we compared ratio of the nano particle, the size is comparable to a soccer ball with the Earth.

First Lithuanian satellite - LitSat-1 is one of the two first Lithuanian satellites. It was launched aboard the second Cygnus spacecraft at the Mid-Atlantic Regional Spaceport on Wallops Island. The launch was scheduled to occur on December 2013, but later was rescheduled to 9 January 2014. Three Lithuanian words were broadcasted from space: 'Lietuva myli laisvę' ('Lithuania loves freedom').

Sunrise valley - 'Sunrise Valley' is a higher education and research institution, businesses, country and local authorities dynamic partnership which created the most favourable development of knowledge and business environment in Lithuania. Sunrise Valley's mission is to put Lithuania on the map as a location for world-class businesses engaged in knowledge intensive activities.

12.- TASK

•https://docs.google.com/document/d/1POokRhAOhg6n7YNGhTs1uJEzGlCP3xex8gHLBt0Xi88/edit?usp=sharing

13.- SOURCES

- https://prezi.com/v76iwgew7407/it-industry-in-lithuania/
- Google Docs
- Google Forms

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MULTILINGUALISM AND WORK PERSPECTIVES IN EUROPE

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POLAND

CHEMICAL INDUSTRY IN EUROPE AND ITS PRODUCTS

CLIL LESSON GENERAL LAYOUT

1.- TITLE OF THE UNIT

CHEMICAL INDUSTRY IN EUROPE AND ITS PRODUCTS

2.- SUBJECT

Chemistry, Geography, ICT

3.- STUDENTS' LEVEL/AGE

13-16 years old

4.- OBJECTIVES

4.1. Content objectives:

1) I know where is the chemical industry located in Europe, Poland and locally?

2) I know what are the main products of chemical industry?

3) I know what kinds of jobs are connected to the chemical industry?

4.2. Language objectives:

New vocabulary concerned with chemical industry, its products and kinds of occupations, new information computer technology - google documents vocabulary, www.instaling.pl - platform for language learning.

5.- ACTIVITIES

Individual work, group work, brainstorm, working on tablets, google documents, www.instaling.pl - platform of language learning.

6.- DETAILED SESSION

a) Aim - what for?

b) Brain storm

c) Activities 1-4.

d) Chemical experiment.

e) Revision - Summary of the lesson: What was the aim of the lesson?

DETAILED PLAN OF THE CLIL SESSION

PRESENTATION[1]

Welcoming the class

AIM. (PRESENTATION) - Give the objectives for the lessons:

a) I know where is the chemical industry located in Europe, Poland and locally.

b) I know what are the main products of chemical industry.

c) I know what kinds of jobs are connected to the chemical industry.

BRAINSTORM. (PRESENTATION) - What do you know about chemical industry? Make a list of words on the piece of paper connected to this subject. You have got 1 minute for it. After 1 min every student says the written words, but not more then 1 of them. They say words one by one but they are careful and cannot repeat the words said before.

[1] https://docs.google.com/presentation/d/17oH-fyslu5dyULMRRRNvjOoMsNxq9c9u5yw32jnq4hU/edit?usp=sharing

Activity 1. (PRESENTATION) - I would like to divide the class into 6 groups. So, could you please start counting from 1 to 6 and please remember your numbers. So, all groups sit together 1 - 6. (Point where the students should sit - You are in charge!) Every group receives a tablet and a helper from Polish team. Here every group writes down the words form the brainstorm in the opened google document: Group 1 - 6[2]

CLIL lesson Chemical Industry - vocabulary

	A	B	C	D	E	F
1	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
2	chemistry	soap	soap	antybiotics	calcite	cosmetic
3	antybiotics	drugs	cosmetics	soap	barge	antybiotics
4	chemicals	medicine	drugs	drug	oxygen	chemistry
5	medicine	chemistry	medicine	pharmacy	celestial	chemicals
6	drugs	pharmacy	factory	chemicals	uraninite	soap
7	soup	chemicals	oxygen	chemistry	ammonia	medicine
8	cosmetics	soap	air	scientist	nitroglycerin	science
9	pharmatics	cosmetics	oil	cosmetics	metallic barium	drug
10	science	antybiotics	water	medicine	lime and cement	pharmacy
11	pills	pills	minerals	pills	oil	scientist
12	factory	scientists	metals	oxygen	natural gas	pills
13	soap	antytoxynes	natural gas	factory	air	medicine
14	metals	placebo	basic chemicals	science	water	science

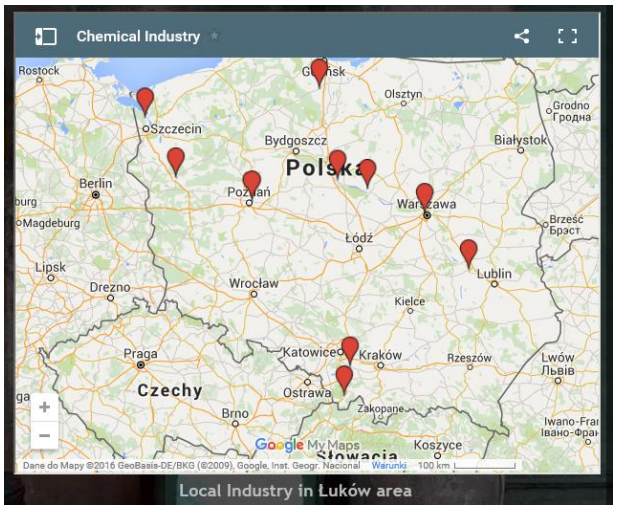
Activity 2. (PRESENTATION) - Take a look in one of the students presentation[3]:

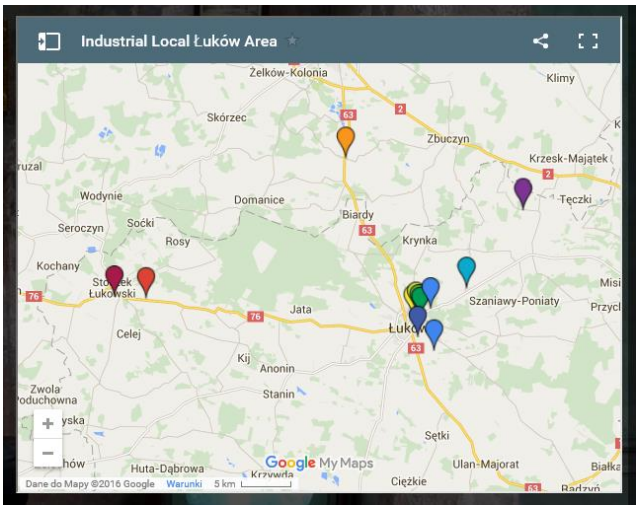
While watching please make some notes about:

- the resources used by chemical industry,
- kinds (types) of chemical factories,
- kinds of products manufactured by chemical industry,
- write new vocabulary[4] in the document linked above.

[2] https://docs.google.com/spreadsheets/d/1selZoTRYwHcr11ME70vkzqB-VTcKHTwAj6pt67ZhcEs/edit?usp=sharing
[3] https://docs.google.com/presentation/d/1PbTKq2oL1e3f1kqRatfh2KoRallwZMxzDPpDeUdgfUQ/edit?usp=sharing
[4] https://docs.google.com/spreadsheets/d/1selZoTRYwHcr11ME70vkzqB-VTcKHTwAj6pt67ZhcEs/edit?usp=sharing

Activity 3. (PRESENTATION) Google maps[5].





Take a look into the maps on a different scale and familiarize with few manufactures and be ready to answer for the question *what do they produce?* One student from the group gives an oral answer.

Activity 4. (PRESENTATION) JOBS - Match the given jobs that could appear in different levels (cooperation) of chemical industry[6].

[5] http://youthworkperspectivesineurope.blogspot.com/p/clil-lesson.html
[6] https://docs.google.com/presentation/d/1P6sVuRnbBT7Z6qUj873dGRn09WbZzB7ENq0GkufjB1Y/edit?usp=sharing

Activity 5. (optional) (PRESENTATION) Chemical experiment

Activity 6. (optional) (PRESENTATION) Installing Revision - One session, group work[7] on www.instaling.pl

Summary of the lesson - What was the aim of the lesson? Show the aims on presentation.

Activity 7. (PRESENTATION) JOBS - Short assessment test and evaluation[8] or Kahhot.

Presentation of the results. Google form - Summary.

7.- ASSESSMENT

Online test (google forms) show and give points, kahoot.it

[7] https://instaling.pl/
[8] https://docs.google.com/forms/d/1C8YHoNE2L9RNt8uDfJ_lntzGCr5UtgBGmTUIvFyMOJs/viewform?usp=send_form

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SPAIN

AUTOMOTIVE INDUSTRY

CLIL LESSON GENERAL LAYOUT

1.- TITLE OF THE UNIT

I LIKE CARS, YOU LIKE CARS, WE LOVE CARS – WHAT ABOUT BUILDING CARS?

2.- SUBJECTS

Technology; Specific Professional Training; Geography; Natural, Social and Cultural Environment; IT

3.- STUDENTS' LEVEL/AGE

15-year-old students

4.- OBJECTIVES

4.1. Content objectives:

1) Identifying and classifying the parts of a car.

2) Recognising the top global and European suppliers for major component systems for cars.

3) Identifying the most suitable global or European areas to find a job in the automotive industry according to the individual interests.

4) Knowing about the importance of the automotive industry in Europe and its relevance in the world.

5) Developing personal skills for interpreting graphical information.

6) Getting familiar with job application models and websites for job mobility.

4.2. Language objectives:

1) Acquiring specific vocabulary regarding the parts of a car and automotive industry.

2) Developing reading and listening comprehension in English.

3) Developing oral and written expression in English.

5.- ACTIVITIES

Vocabulary related to the automotive industry (filling in gaps, solving puzzles, …), reading comprehension (texts, graphics, …), listening comprehension (videos, auditions, …), searching for specific information, oral expression (individual and group speaking activities, debates, …), written expression (filling in forms, answering questions, …), using new technologies.

6.- DETAILED SESSIONS

The sessions we have planned cover two main contents: the first four sessions try to introduce pupils in everything related to the automotive industry, while the last two sessions try to create a further interest in them through the most recent innovations in the car of the future. They also contribute to developing students' language competence through the use of English in a language integrated learning context.

The detailed sessions are as follows:

DETAILED SESSIONS

Session 1.- ***Working on the highway*** **-** Introductory session - Video and basic vocabulary activities

Activity 1.- Do you think that it isn't possible to build a car in less than two minutes? Then watch this video[1]. What do you think about cars?

Activity 2.- Move your mouse around the screen to remember the words related to the basic car parts. After that, click on 'Test' when you are ready to check your knowledge. Do it through this interactive picture dictionary exercise[2]:

Activity 3.- Match each number with the corresponding part of a vehicle. Do it through this exercise[3]:

[1] www.bbc.co.uk/programmes/p035dk01
[2] http://www.parapal-online.co.uk/picture_dict/car.html
[3] http://busyteacher.org/16665-parts-of-a-car-matching-activity.html

Activity 4. Choose the right answer for each question regarding the [automobile vocabulary](#)[4]:

1. You see the road through it.
   a. windscreen
   b. carburetor
   c. ignition
   d. spark plugs
   e. timing chain
   a

2. When you want to go faster, you press this.
   a. brake pedal
   b. clutch
   c. gearbox
   d. accelerator
   e. carburetor
   d

3. You turn these on when it is dark so you can see the road.
   a. headphones
   b. headlights
   c. taillights
   d. panel lights
   e. spotlights
   b

4. Whenever you want to shift up or down, you press this down.
   a. gearbox
   b. gas
   c. accelerator
   d. clutch pedal
   e. brake pedal
   d

5. This cools down your engine.
   a. radiator
   b. battery
   c. distributor
   d. taillights
   e. pump
   a

6. This provides your battery with the electricity it needs.
   a. spark plugs
   b. ignition
   c. generator
   d. accumulator
   e. alligator
   c

7. If the road is bumpy, these help to dampen the bumps.
   a. fenders
   b. bumpers
   c. shock absorbers
   d. turn indicators
   e. steering wheel
   c

8. If you want to turn left or right, you put these on.
   a. headlights
   b. turn indicators
   c. horn
   d. steering wheel
   e. rack and pinion
   b

9. You use this when you start a cold engine.
   a. brakes
   b. choke
   c. amp meter
   d. fuel tank
   e. gearbox
   b

10. This lubricates your engine.
    a. grease
    b. fuel
    c. water
    d. oil
    e. cream
    d

Activity 5.- How many of the following car trademarks do you know? Can you imagine which country each one is from?

Picture found in http://2013-geneva-motor-show.blogspot.com.es/2013/02/all-car-logos.html

[4] http://a4esl.org/q/h/9901/pk-auto.html

Suggested development of the session:

The introductory video in activity 1 should not take more than 2 minutes. Then, pupils may debate about the topic proposed for a limit of 10 minutes. The teacher might ask them questions such as "*Who does like cars? Who has got a driving license right now? Who would like to know how to drive? How many motor vehicles do you know? Does anyone know of any motor race championship? How could we improve a car?, …*"

After that, the students would surf the web doing activities from 2 to 4. The aim is to refresh any basic vocabulary regarding car parts. Each activity should be done individually and they should not take more than 30 minutes (10 minutes for each one).

The last activity should take a limit of 5 minutes. This game can be played individually or in different groups. We would complete the 50 minutes for the session by giving the answer and proclaiming the first winner.

Finally, we would give an order to our students according with their results. This way, we suggest a conducting game to them: we would be starting a fictional championship with this session and all the way through the different sessions of our CLIL lesson at the end of which we would proclaim a fictional top three winners' podium. We would start the following lesson by announcing the order obtained in the previous lesson and the position that each participant has reached for the whole 'championship'. We can make a starting grid and a championship classification grid to be exhibited in any class board to persuade and encourage our students. This way, pupils could also check their progression in every session and in the whole CLIL lesson in order to strengthen the skills and knowledge that had not been achieved. The following format is only a suggestion:

Driver	**Position**	**Total Points**	**Session 1**	**Session 2**	**Session 3**	**Session 4**	**Session 5**	**Session 6**
Name 1								
Name 2								
Name 3								
Name 4								
Name 5								
…								

Session 2.- ***Let's talk about money*** **-** Reading comprehension - Text

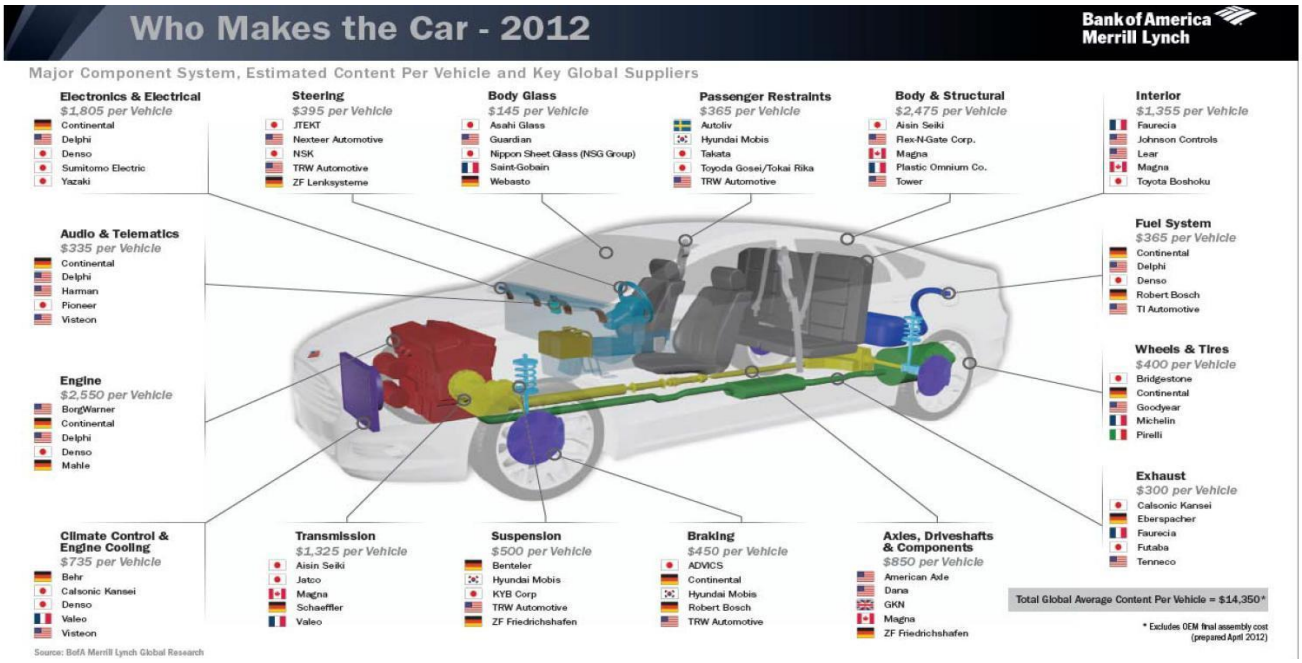
How much do the parts of a car cost?

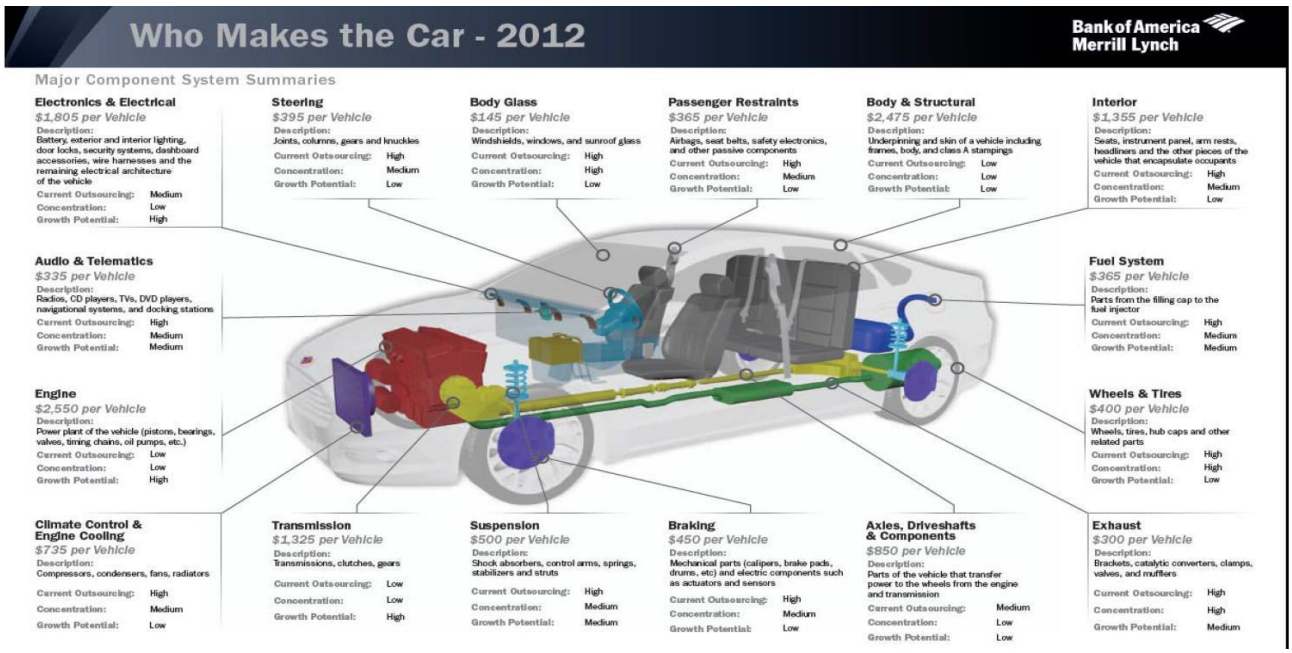
According to the Bank of America Merrill Lynch, the average cost of building a car was $14,350 in 2011. In 2000, it was estimated to be $11,100. Assembly costs were excluded from this figure.

But, why the increase?

Three reasons seem to have played a role in it: the cost of raw materials, tastes for electronics and safety/touch-point elements, and an interest in improved fuel economy.

The below handy graphics show the top five suppliers (by revenue) for 16 different component systems of a car, which makes for 80 possible slots. The suppliers are not ranked in them, but rather ordered alphabetically:





Putting that in tabular format…

Table 4: Component system profile summary

Component System	$ CPV	% of Total Content	Total Mkt. Size ($bn)	Outsourcing	Concentration	Growth
Engine	$2,550	17.8%	$195.9	Low	Low	High
Body & Structural	$2,475	17.2%	$190.1	Low	Low	Low
Electronics & Electrical	$1,805	12.6%	$138.7	Medium	Low	High
Interior	$1,355	9.4%	$104.1	High	Medium	Low
Transmission	$1,325	9.2%	$101.8	Low	Low	High
Axles, Driveshafts & Components	$850	5.9%	$65.3	Medium	Low	Low
Climate Control & Engine Cooling	$735	5.1%	$56.5	High	Medium	Low
Suspension	$500	3.5%	$38.4	High	Medium	Medium
Braking	$450	3.1%	$34.6	High	Medium	Low
Steering	$395	2.8%	$30.3	High	Medium	Low
Wheels & Tires	$400	2.8%	$30.7	High	High	Low
Fuel System	$365	2.5%	$28.0	High	Medium	Medium
Passenger Restraints	$365	2.5%	$28.0	High	Medium	Low
Audio & Telematics	$335	2.3%	$25.7	High	Medium	Medium
Exhaust	$300	2.1%	$23.0	High	High	Medium
Body Glass	$145	1.0%	$11.1	High	High	Low
Total	**$14,350**	**100.0%**	**$1,102**			

Source: BofA Merrill Lynch Global Research

* Total market size is calculated using global production of 77 million units as reported by J.D. Power-LMC.

Now you can easily notice where some of the greatest potential may be. In particular, three component systems have the most attractive growth profiles based on a combination of increasing content, current low levels of outsourcing, and potentials for consolidation, in our view (Table 4). These three systems are the engine, transmission and electronics.

As for general trends, back in 2001, American suppliers took up 54 per cent of those slots. Now they take up 34 per cent of them.

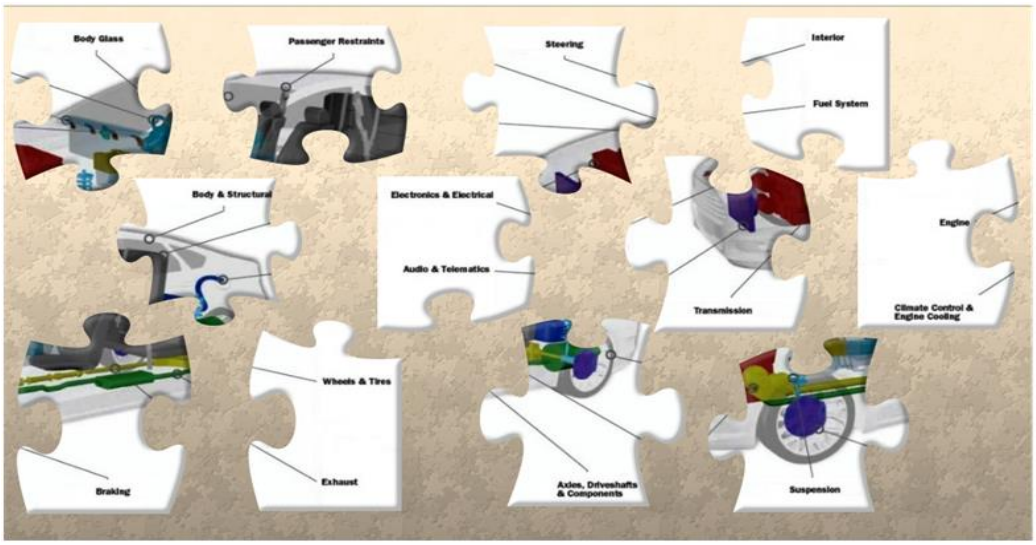
Here's something to think about, the next time you go for a drive: can you identify which suppliers made the component parts of your car?

Adaptation from http://ftalphaville.ft.com/2012/04/26/975171/the-sum-of-a-cars-parts/

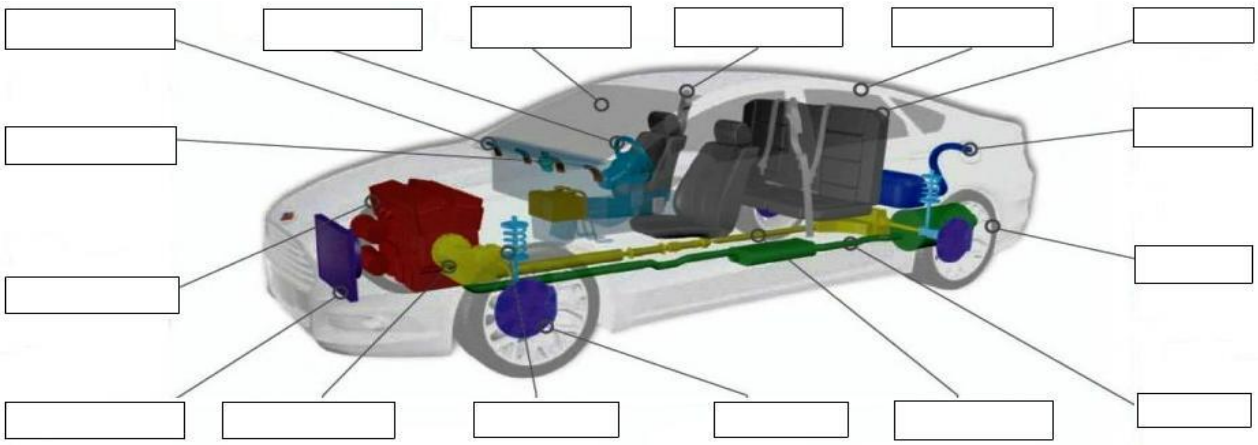
Activity 1.- Vocabulary related to the topic. The following words were in the text. It is important to make sure we are all familiar with this vocabulary.

Average cost	Assembly	Play a role in
Raw materials	Suppliers	Revenue
Slots	Growth profiles	Outsourcing

Activity 2.- Try to assemble this jigsaw puzzle[5] regarding the most important car component systems that are produced in the automotive industry:



Activity 3.- Put each component system in the correct balloon: *engine; axles, driveshafts and components; electronics and electrical; body glass; audio and telematics; climate control and engine cooling; transmission; suspension; steering; braking; passenger restraints; exhaust; wheels and tires; fuel system; interior; body and structural.*



[5] http://www.jigsawplanet.com/?rc=play&pid=3381b8d80b4c

Activity 4.- In which sector of the automotive industry would you classify these components?

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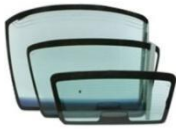

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Activity 5.- Which car component parts are produced in these countries?

 **Germany:**

 **France:**

 **United States:**

 **Japan:**

Activity 6.- Read the text and choose the correct answer:

According to the journalist, the increase in the sum of the average global car parts components:

a) has nothing to do with raw materials, tastes for bling safety and fuel economy.

b) has been influenced by raw materials, tastes for bling safety and fuel economy.

c) has only been influenced by raw materials because of the raise in the dollar value.

The top suppliers for different car components systems in the first chart:

a) are only ordered by their names.

b) are ordered by the name of the country that is represented by each flag.

c) are not ordered at all.

The most expensive component in a car is:

a) the steering system.

b) the engine system.

c) the body and structural system.

The most interesting car component systems are:

c) the engine, body and structural and interior.

a) the engine, transmission and electronics.

c) None of the above.

Suggested development of the session:

We would start making a summary of the points and positions achieved by pupils in our competition, prompting them to do their best in order to achieve the best possible results. No more than 2 or 3 minutes should be necessary for it.

After that, we would start doing activity 1 before reading the supporting text. The reason is that it is very important to make sure that we are all familiar with the vocabulary used in the text as a prior step to fully understand it. 5 minutes would be ideal to reach our aim: we would ask pupils if they know the meaning of each word or expression; if they don't, we would try to help them to find it out using related words, synonyms, paraphrases, pleonasms or any other useful method.

Then, pupils would read the text individually and the teacher would help them if they find any part difficult to be understood. The reading would take about 10 minutes and every student should be sure that he has completely understood it.

The aim of the next three activities (numbers 2, 3 and 4) is to strengthen some essential vocabulary to introduce our pupils in the automotive industry topic as it has to do with several car components that point to different elements produced in that industry. They should take about 5 minutes each.

Activity 5 tries to be the first contact of the students with the geography of automotive industry. It is useful to notice the countries in which most car component parts are produced and, consequently, where it would be easier to work mass-producing them. It would be necessary to read the text again, so this activity would take about 5 minutes.

Activity 6 is a reading comprehension exercise. It tries to develop skills concerning the understanding of a formal text written in English and containing a number of learned words and technical terms about the automotive industry. This way, pupils enlarge their language competence not only in English, but also in the topic of the automotive industry. Besides, the teacher can check their capacity to correctly interpret complex graphics. This activity would take about 10 minutes.

Finally, we would complete the 50 minutes for the session recounting the points achieved by each student through the activities. We would proclaim the top three pupils in this session and reorder the classification grid, communicating the top three places, giving honors to the corresponding students and encouraging the rest of the group to make their best to reach higher positions.

The automotive industry

The automotive industry is one of the world's most important economic sectors by revenue. 3% of Europe's GDP comes from it and it produces 2.2 million direct jobs in the EU (6.5% of total jobs in our Union). It is a wide range of companies and organizations involved in the design, development, manufacturing, marketing and selling of motor vehicles. On the other side, it does not include industries dedicated to the maintenance of automobiles following delivery to the end-user, such as automobile repair shops or petrol stations.

Below, you can see a list of top ten countries by motor vehicle production in the world. Unfortunately, BMW, Mercedes, Audi and JLR assembly data were not reported to OICA:

COUNTRY	Vehicles produced (last OICA data from 2014)	Vehicles in use per 1,000 people (last OICA data from 2013)
China	23,722,890	91 (126,701,000 vehicles in use)
United States	11,660,699	790 (over 252,715,000 vehicles in use)
Japan	9,774,558	603 (over 76,619,000 vehicles in use)
Germany	5,907,548	568 (over 47,015,000 vehicles in use)
South Korea	4,524,932	394 (over 19,401,000 vehicles in use)
India	3,840,160	20 (over 25,011,000 vehicles in use)
Mexico	3,365,306	285 (over 34,870,000 vehicles in use)
Brazil	3,364,890	198 (over 39,695,000 vehicles in use)
Spain	2,402,978	579 (over 27,155,000 vehicles in use)
Canada	2,393,890	635 (over 22,334,000 vehicles in use)

Countries in our project and the whole European Union were also referred by OICA:

COUNTRY	Vehicles produced (last OICA data from 2014)	Vehicles in use per 1,000 people (last OICA data from 2013)
Poland	593,904	599 (over 22,897,000 vehicles in use)
Romania	391,422	253 (over 5,500 ,000 vehicles in use)
Bulgaria	NA	460 (over 3,321,000 vehicles in use)
Lithuania	NA	651 (over 1,965,000 vehicles in use)
Greece	NA	558 (over 6,212,000 vehicles in use)
European Union	17,124,637	564 (over 295,113,000 vehicles in use)

Other countries' information can be consulted through http://www.oica.net/category/vehicles-in-use/ and http://www.oica.net/category/production-statistics/2014-statistics/

Activity 1.- Answer the following questions:

a) Which is the top vehicle producer in the world?

b) Which is the top vehicle producer in Europe?

c) Where is it more probable to find a job in the automotive industry in Europe?

d) In which three countries are there more vehicles in use?

e) Where have more people got vehicles?

Activity 2.- Investigate: what is OICA and why is it important to deal with the automotive industry?

Activity 3.- Debate on the topic *"The relationship between the vehicles produced in a country and the vehicles in use in that country".*

Suggested development of the session:

As in the previous session, we would start making a summary of the points and positions achieved by pupils in our competition, prompting them to do their best in order to achieve the best possible results. No more than 2 or 3 minutes should be necessary for it.

After that, we would make a group reading of the text and the teacher would only take part if any help is needed, especially regarding the interpretation of the data in the tables, or giving some extra information. As there are neither difficult words nor complex graphics, the reading should take about 5 minutes and every student should be sure that he has completely understood it.

Activity 1 is a reading comprehension exercise. It tries to develop skills concerning the understanding of a standard text about the automotive industry written in English. This way, pupils enlarge their language competence not only in English, but also in the topic of the automotive industry; besides, the teacher can check their capacity to correctly interpret tables containing a simple database. The second aim of the activity is to inform about where the top producers of vehicles are and where there are more vehicles in use, letting pupils identify where there would be more possibilities to find a job in the automotive industry, both in the whole world and in Europe. This activity should take about 10 minutes.

Activity 2 is the first researching exercise in the lesson. It would let the teacher check students' skills concerning the searching for information. The work to do in this activity is easy, but students would now take the leading role in their learning for the very first time and the teacher would act taking a supporting role and so providing self-learning skills. Obviously, the use of the internet is essential to do this exercise in class. We would give pupils 10 minutes to complete the activity.

The debate in activity 3 opens our lesson to oral expression skills development, thus improving pupils' language competence. In this first debate, we would prompt every student to express their own opinion about the suggested topic and to refute any other opposite judgment. Encouraging them to use arguments would be very important.

Finally, we would complete the 50 minutes for the session recounting the points achieved by each student through the activities. We would proclaim the top three pupils in this session and reorder the classification grid, communicating the top three places, giving honors to the corresponding students and encouraging the rest of the group to make their best to reach higher positions.

Session 4.- *What about a job?* -Reading comprehension and written expression - Text and research

Activity 1.- Read the following article[6] about jobs in the automotive industry. You can do it in *'Moving on'*, an English magazine specialised in giving information regarding choices after school:

"The automotive industry is HUGE! Automotive jobs include engineering and design, manufacture and production, maintenance and repair and sales and marketing.

As a major employer in this country, there are all sorts of job and careers available in the automotive industry for anyone with the right skills and qualifications. You could design Formula 1 cars, or work in a garage, fixing engines and bodywork. You could do sales in a luxury car showroom or race go-karts competitively. Even if cars aren't your big passion, the automotive industry has loads of exciting jobs on offer.

Why not consider a career in design or product development within the automotive industry? It's not just the external car body that needs to be designed to perfection. Every last detail – right down to the door handles and the fabric on the seats – needs to be designed from scratch!

A job as an engine designer requires specific qualifications in mechanical engineering and would suit someone with an analytical mind. If you're a mathematical whizzkid, analysing crash test data could be the dream automotive industry job for you!

The automotive industry is made up of many different businesses and companies, large and small, national and international. There are car manufacturers, parts manufacturers, importers and exporters, as well as small garages and workshops and car valeting companies, all of which offer exciting career opportunities for the right people with the right skills and qualifications.

Entry requirements for jobs in the automotive industry vary, depending on which kind of job you'd like to do. You could go to your local FE College to do a qualification in car maintenance and repair. You could do an automotive apprenticeship, try for an internship with a big car manufacturer. Alternatively, you could do a degree in mechanical engineering at university."

[6] http://movingonmagazine.co.uk/automotive-industry/

Activity 2.- Vocabulary related to the topic. The following words were in the text. It is important to make sure we are all familiar with this vocabulary.

Showroom	Go-karts	Loads of *(something)*
From scratch	Whizzkid	*(To be)* made up of *(something)*
Car valeting	FE College	Internship

Activity 3.- Research the different jobs you might develop in the automotive industry. You can consult the information through the European Commission's DG for Employment, Social Affairs & Inclusion[7]:

Objectives, scope and methodology

Scope of job profiles - the main occupations covered by ISCO

Corporate and General Managers (ISCO: 12)	Directors and Chief Executives, Production and operations department managers in manufacturing, Other Department Managers: Finance and administration, Personnel and industrial relations, sales and marketing, etc.
Engineers (214)	Electrical, electronics and telecommunication, mechanical, chemical, metallurgists, etc.
Technicians (311)	Electrical, electronics and telecommunication, mechanical, chemical, metallurgists, etc.
Associate Professionals (312, 315, 34)	Computer associate professionals, safety and quality inspectors, Finance and Sales (Commercial and buyers), Business agents and trade brokers, Administrative (bookkeepers etc.)
Office and customer services clerks (41,42)	Secretaries and keyboard-operating, numerical clerks, material-recording and transport, library, mail and related clerks, client information clerks
Craft and related trades workers (72-74)	Metal, machinery and related trades workers, Precision, handicraft, printing and related trades workers, Textile, garment and related trades workers
Operators and assemblers (81, 82)	Plant and machine operators and assemblers
Elementary occupations (9321)	Labourers in manufacturing

Activity 4.- Surf the European Job Mobility Portal[8] and search for a vacancy in a job related to the automotive industry. Find further information[9] regarding job mobility if needed.

[7] http://ec.europa.eu/social/BlobServlet?docId=3048&langId=en
[8] https://ec.europa.eu/eures/public/en/homepage
[9] http://ec.europa.eu/social/home.jsp?langId=en

Suggested development of the session:

As in the previous sessions, we would start making a summary of the points and positions achieved by pupils in our competition, prompting them to do their best in order to achieve the best possible results. No more than 2 or 3 minutes should be necessary for it.

Through activity 1, we would read the supporting text. It would be ideal to do it online in order to check students' IT skills, as it would be done in activity 3. The pupils would read it individually twice. 10 minutes would be enough for the activity.

After that, we would start doing activity 2, as it is very important to make sure that we are all familiar with the vocabulary used in the text as a prior step to fully understand it. The reason to do this activity after reading the text is that this method allows the teacher to check our students' skills to infer the meaning of unknown words or expressions from their context. 5 minutes would be ideal to reach our aim: we would ask pupils if they know the meaning of each word or expression; if they don't, we would try to help them to find it out using related words, synonyms, paraphrases, pleonasms or any other useful method. At the end of the activity, every student should be sure that he has completely understood the text.

Activity 3 tries to develop pupils' IT skills through a complex research in the jobs related to the automotive industry. As a possible source is pointed, this activity should take about 10 minutes.

The teacher should start activity 4 explaining what EURES is (the European job mobility portal) and that it is maintained by the European Commission's DG for Employment, Social Affairs & Inclusion. So, it might be a reference tool to find a job in the European Union. Then, students would surf the website in the next 20 minutes to get familiar with it.

Finally, we would complete the 50 minutes for the session recounting the points achieved by each student through the activities. We would proclaim the top three pupils in this session and reorder the classification grid, communicating the top three places, giving honors to the corresponding students and encouraging the rest of the group to make their best to reach higher positions.

Session 5.- *A propulsion towards the future* - Listening comprehension - Audition

"Fuel and propulsion technologies *[for cars]*

Most cars in use today are propelled by an internal combustion engine, fueled by deflagration of gasoline [...] or diesel. Both fuels are known to cause air pollution and are also blamed for contributing to climate change and global warming. Rapidly increasing oil prices, concerns about oil dependence, tightening environmental laws and restrictions on greenhouse gas emissions are propelling work on alternative power systems for cars. Efforts to improve or replace existing technologies include the development of hybrid vehicles, plug-in electric vehicles and hydrogen vehicles. Vehicles using alternative fuels such as ethanol flexible-fuel vehicles and natural gas vehicles are also gaining popularity in some countries."

Supporting text: https://en.wikipedia.org/wiki/Car#Fuel_and_propulsion_technologies

Activity 1.- Vocabulary related to the topic. The following words were in the text. It is important to make sure we are all familiar with this vocabulary.

Fuel	Propulsion	Propel
Combustion	Deflagration	*(To be)* blamed *(for)*
Concerns	tighten	hybrid

Activity 2.- Listen to the text twice and fill in the gaps:

Most cars in use today are propelled by an _____ (1), fueled by deflagration of _____ (2). Both fuels are known to cause _____ (3) and are also blamed for contributing to _____ (4) and global warming. Rapidly increasing oil prices, concerns about oil dependence, tightening environmental laws and restrictions on greenhouse gas emissions are propelling work on _____ (5) for cars. Efforts to improve or replace existing technologies include the development of _____ (6) vehicles, plug-in _____ (7) vehicles and _____ (8) vehicles. Vehicles using _____ (9) such as ethanol flexible-fuel vehicles and _____ (10) vehicles are also gaining popularity in some countries.

Activity 3.- Choose the correct answer:

Gasoline and diesel:

a) may fuel an internal combustion engine and natural gas car.

b) fuel the internal combustion engine.

c) are not important fuels at all for most cars nowadays.

Gasoline and diesel are criticised for:

a) the high cost of their production.

b) causing air pollution and contributing to climate change.

c) They are not criticised at all.

Alternative power systems for cars:

a) are propelled by the increasing oil and raw materials prices.

b) are propelled by the concern about oil, environmental laws and restrictions on gas emissions.

c) are only a passing fad.

Electricity and hydrogen:

c) are the only possible alternative power systems for cars.

a) are some of the possible alternative power systems for cars.

c) have nothing to do with alternative power systems for cars.

Activity 4.- Search for some information about alternative power systems for cars and try to explain them to the rest of the class in an easy way.

Suggested development of the session:

As in the previous sessions, we would start making a summary of the points and positions achieved by pupils in our competition, prompting them to do their best in order to achieve the best possible results. No more than 2 or 3 minutes should be necessary for it.

We would start doing activity 1 before listening to the supporting text. The reason is that it is very important to make sure that we are all familiar with the vocabulary used in the audition as a prior step to fully understand it. 5 minutes would be ideal to reach our aim: we would ask pupils if they know the meaning of each word or expression; if they don't, we would try to help them to find it out using related words, synonyms, paraphrases, pleonasms or any other useful method.

Activity 2 is a classic exercise about filling in the gaps that tries to assure that students fully understand the provided information. We would listen to the text twice, then we would do the activity and, finally, we would listen to the text a third time to check our answers. 5 minutes should be enough to be able to complete the activity.

After having understood the text through activity 2, activity 3 would be used to strengthen pupils' language competence in English by a listening comprehension exercise. This activity would take about 5 minutes.

Activity 4 has two steps to be completed: a search and an explanation. We could organize both steps either individually or in groups. First of all, students would do the search and after that they would explain an alternative power system for cars to the rest of the class; if we worked in groups, only one member of each would do the presentation. Feedback should be assured by prompting other pupils to ask questions to the person or group that has presented the information, or to find arguments for or against the explained alternative power system. The teacher could either allocate the alternative power systems to be searched and explained or not, according to his/her confidence about students' skills. We would use 10 minutes to do the search and 20 minutes to perform the presentations, for a maximum of 30 minutes for the whole activity.

Finally, we would complete the 50 minutes for the session recounting the points achieved by each student through the activities. We would proclaim the top three pupils in this session and reorder the classification grid, communicating the top three places, giving honors to the corresponding students and encouraging the rest of the group to make their best to reach higher positions.

Session 6.- *Return to the future* - Watching a video

Activity 1.- Vocabulary. The following words are related to the topic of driving and driveless cars. It is important to make sure we are all familiar with this vocabulary.

Vehicle	Pedestrian	Cyclists
Bike lane	Change lane	To cut in
Location	Accurate information	The environment
Laptop	Processors	To test
Eye contact	Shape	Size

Activity 2.- What do you expect to happen in the future with the automotive industry? What will the cars be like? What will change? What will remain the same?

Activity 3.- Do you imagine how the future of driveless cars will be? Watch this video[10].

Activity 4.- Exercises about the video: comprehension activities. The following topics have been developed in the video. Put them in order as they have been mentioned.

a) Informing the car developers to improve the project

b) Creating a driveless car for the real world

c) How to be a safe driver

d) How the car finds its location

e) Safety rules the car can follow

f) Differentiating the objects that the sensors detects

[10] https://www.youtube.com/watch?v=TsaES--OTzM

Activity 5.- Now, choose the correct answers in each case according to the information provided in the video.

What helps these cars to work properly?

a) GPS.

b) Laser sensors.

c) Both.

Is the car prepared for construction works?

a) It depends on the weather.

b) No. The driver must be careful to start driving if there are works on the road.

c) Yes. It can identify the signs and find an alternative lane.

The top priority for the engineers of these cars is:

a) The environment.

b) The social norms.

c) Safety.

Activity 6.- Match the colours to what they represent according to the google cars' code:

a) Red	Pedestrians
b) Yellow	Vehicles
c) Green or pink	Cyclists

Activity 7.- True or false?

a) First, the car needs to understand where it is located in the world.

b) The car has sensors that work separately and isolatedly.

c) The software inside understands the difference between people and bikes, for example.

d) The car cannot distinguish if a cyclist moves his hand to signal a turn.

e) The car can understand if another car is cutting in.

Activity 8.- Debate. Are driveless cars a realistic vehicle system for the future? Advantages and disadvantages.

Here you have some ideas you might use for a positive answer:

a) Everyone thought other inventions were crazy at first, until they proved to be a great help. We must accept the advances of technology.

b) Everybody can travel, even children, old people or disabled.

c) Everybody will follow the rules (because it is the car that drives!), so there will be less accidents.

d) We can take advantage of the time we spend in the car by reading, talking on the phone…

e) We do not need to learn how to drive.

These are some possible ideas for a negative answer:

a) Bad weather may cause problems for the sensors.

b) Safety, never 100% guaranteed.

c) Legal problems: who is responsible if there is an accident?

d) It may be scary because you feel you do not have the control.

e) We lose capacities: we will forget how to drive.

Other videos:

Only images, no words: https://www.youtube.com/watch?v=9CoyKEttxNk

A first drive in a google car: https://www.youtube.com/watch?v=CqSDWoAhvLU

Suggested development of the session:

As usual, we would start making a summary of the points and positions achieved by our pupils in our competition. This should take 2 minutes at the most.

In this session, we would be working with a video. We would start showing them a few words that they should be familiar with, which appear in the video. They can translate the words they know or try to guess. The teacher would give them the meaning if there is any they do not know. This can be done in 3 minutes.

Next, as a warming up activity and in order to introduce the topic and have the students focus on the ideas that they are going to hear, they will have to talk about the questions presented in the exercise. It would be useful to let the students think for a couple of minutes on the questions so they can build their own opinion on the topic. They can then discuss in small groups of two to four. It is free speaking but it should be focused on these questions. Finally, the groups would report back to the whole class about their conversations. Another option is to do this directly as a whole class conversation activity. However, it is important to try and have all students participate, and not only the most extrovert. The time devoted to this activity is 10 minutes.

The third activity is already the viewing of the selected video. It will be shown several times: the first time, we will play the video with subtitles. The idea is that they focus on the understanding of the information provided. Once they have a general idea, the second time they can watch while they enjoy better what they see, and they will surely also understand the words more easily.

Before playing it for the second time, which this time will be without the subtitles, it is important that the class reads through the activities 4 to 7. They are a series of exercises to check the students' understanding of the video. They are quite straight forward but have to be completed during the viewings, which will make it a little more complicated.

It may be useful to ask the students about the general idea of the video before playing it for the second time: what they understood, problems they may have found or extra vocabulary they might want to ask about. Once they know their task, it can be played two more times. Then, the exercises will be corrected.

Since the video lasts 3.32 minutes, with the three viewings, and the exercises and all, this task can take about 20 minutes in total.

Finally, there is a debate. The class is divided into two groups, and each group is assigned a position. They have to argue in favour of this position whether they agree with it or not. They have 5 minutes to prepare their arguments with the group, and then there will be a general debate lasting around 10 minutes. They have been given some ideas to help them.

There are a couple of links to other videos in case some students feel curious and want to know more about this topic. They can copy the addresses and watch them at home.

The last minutes of the session will be completed by recounting the points achieved by each student through the activities. We would proclaim the top three pupils in this session and reorder the final classification grid so as to communicate the top three winners for the whole lesson, giving honors to the corresponding students, giving thanks to all participants and encouraging them to improve their skills about the automotive industry if they have finally decided to find a job in it.

KEY SOLUTIONS

Session 1.- ***Working on the highway***

Activity 1.- Student's own answer.

Activity 2.- Interactive picture dictionary.

Activity 3.-

3. Seatbelt

19. Brake

5. Gear lever

15. Mirror

18. Ignition

6. Aerial

1. Air vent

4. Speedometer

11. Driver's seat

16. Engine

7. Wheel

2. Tyre

12. Boot

9. Steering wheel

20. Windscreen wiper

8. Windscreen

10. Number plate

13. Wing mirror

14. Headlight

17. Bumper

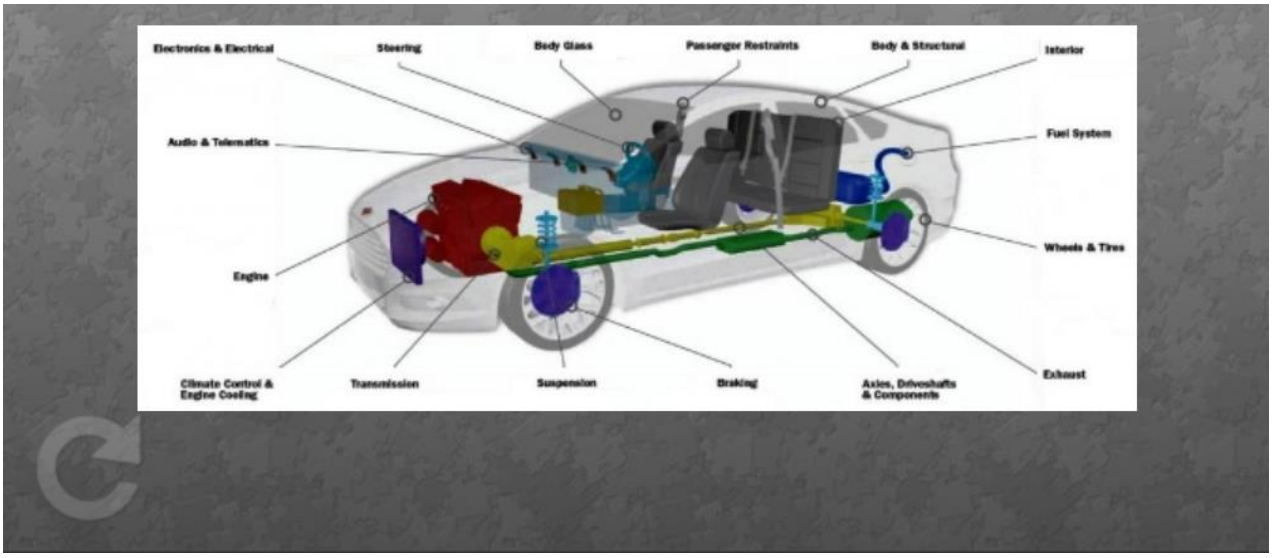
Activity 4.- Interactive activity

Activity 5.-

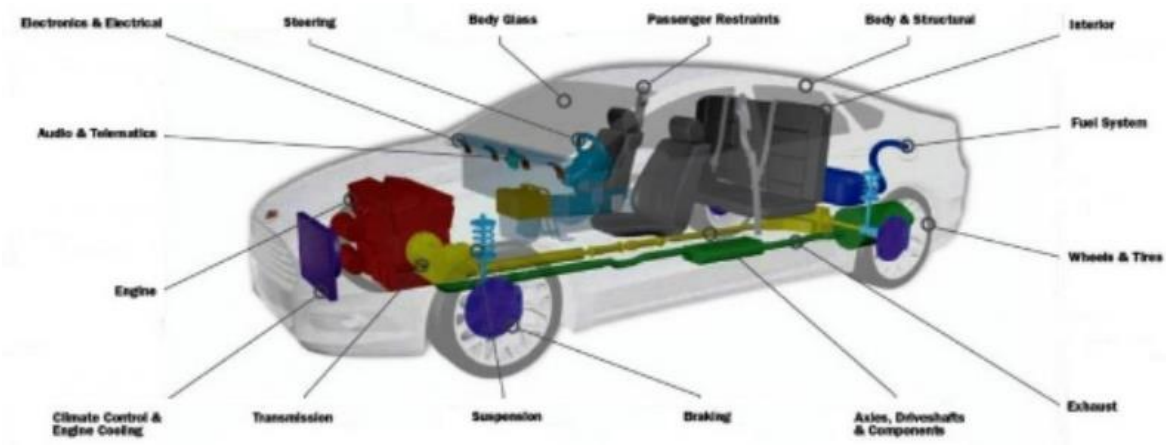
Fiat	**Rover**	**Ferrari**	**Maserati**	**Land Rover**	**Rolls-Royce**
Italy	UK	Italy	Italy	India/UK	Germany/UK
Bentley	**Nissan**	**Honda**	**Proton**	**Chrysler**	**Kia**
UK	Japan	Japan	Malaysia	USA	South Korea
Infinity	**GM**	**Suzuki**	**Smart**	**SsangYong**	**MG**
China/Japan	USA	Japan	Germany	South Korea	UK
Dodge	**Subaru**	**Daewoo**	**Lexus**	**Renault**	**Isuzu**
USA	Japan	South Korea	Japan	France	Japan
Lada	**Hyundai**	**BMW**	**Volvo**	**Mazda**	**Toyota**
Russia	South Korea	Germany	Sweden	Japan	Japan
Opel	**Citroën**	**Lamborghini**	**Audi**	**Jeep**	**Porsche**
Germany/US	France	Italy/Germany	Germany	USA	Germany
Lotus	**Daihatsu**	**Alfa Romeo**	**Ford**	**SAAB**	**Aston Martin**
UK	Japan	Italy	USA	Sweden	UK
Mercedes-Benz	**Jaguar**	**Volkswagen**	**Peugeot**	**Mitsubishi**	**Mini**
Germany	India/UK	Germany	France	Japan	Germany

Session 2.- *Let's talk about money*

Activity 2.-



Activity 3.-



Activity 4.-

	**Climate control and engine cooling**		**Axles, driveshafts and components**
	**Transmission**		**Engine**
	**Suspension**		**Fuel system**
	**Passenger restraints**		**Interior**
	**Audio and telematics**		**Braking**
	**Body and structural**		**Exhaust**
	**Wheels and tires**		**Body glass**
	**Steering**		**Electronics and electrical**

Activity 5.-

Germany: Electronics and electrical; steering; body glass; fuel system; wheels and tyres; exhaust; axles, driveshafts and components; braking; suspension; transmission; climate control and engine cooling; engine; audio and telematics.

France: Body glass; body and structural; interior; wheels and tyres; exhaust; transmission; climate control and engine cooling.

United States: Electronics and electrical; steering; body glass; passenger restraints; body and structural; interior; fuel system; wheels and tyres; exhaust; axles, driveshafts and components; braking; suspension; climate control and engine cooling; engine; audio and telematics.

Japan: Electronics and electrical; steering; body glass; passenger restraints; body and structural; interior; fuel system; wheels and tyres; exhaust; braking; suspension; transmission; climate control and engine cooling; engine; audio and telematics.

Activity 6.- Answer b) is always the right one.

Session 3.- *The world of the automotive industry*

Activity 1.- a) China; b) Germany; c) Germany and Spain; d) United States, China and Japan; e) United States, Canada and Japan.

Activity 2.- Student's own answer. *OICA* comes from French and means 'Organisation Internationale des Constructeurs d'Automobiles' (International Organization of Motor Vehicle Manufacturers).

Activity 3.- Students' own answers.

Session 4.- *What about a job?*

Activity 3.- Student's own answer.

Activity 4.- Student's own answer.

Session 5.- *A propulsion towards the future*

Activity 2.- (1) internal combustion engine; **(2)** gasoline or diesel; **(3)** air pollution; **(4)** climate change; **(5)** alternative power systems; **(6)** hybrid; **(7)** electric; **(8)** hydrogen; **(9)** alternative fuels; **(10)** natural gas.

Activity 3.- Answer b) is always the right one.

Activity 4.- Student's own answer.

Session 6.- *Return to the future*

Activity 2.- Student's own answers.

Activity 3.- Students' own answers.

Activity 4.- 1 b), 2 d), 3 f), 4 e), 5 a), 6 c).

Activity 5.- Answer c) is always the right one.

Activity 6.- Red – Cyclists; Yellow – Pedestrians; Green or pink – Vehicles.

Activity 7.- a) True, b) False, c) True, d) False, e) True.

Activity 8.- Students' own answers.

7.- ASSESSMENT

Self-assessment checklist

Can you do it? (1 = no; 2 = I have problems with this; 3 = Ok; 4 = I know this)

Vocabulary	1	2	3	4
I can identify the names of the parts of a car.				
I can name some parts of a car.				
I am familiar with the vocabulary related to cars: engines, trademarks, …				

Knowledge of the topic	1	2	3	4
I can recognize the main suppliers for car parts.				
I can recognize the costs of the different parts of a car.				
I can identify the countries where most car parts are built.				
I can identify the names of important organisms that can provide information and statistics about the industry sectors.				
I am familiar with the types of jobs related to the car industry.				

Reading and writing	1	2	3	4
I can read and understand a text about cars and related topics in a standard English.				
I can read and understand a text about cars and related topics with a more technical English vocabulary.				
I can read charts and graphics and interpret them.				

Listening and speaking	1	2	3	4
I can listen to a text about cars and understand it.				
I can watch a video about the car industry and understand it.				
I can speak about cars and say if I like them or not and why.				
I can speak about the cars of the future. I have an opinion about it.				
I can have an opinion on a topic related to the car industry and defend it before my other classmates.				
I can argue against other people's opinions.				
I can ask questions about other people's presentations.				

New technologies	1	2	3	4
I can use the internet to find activities and do them.				
If I want to know more, I can find information on the internet about the topic I like following links or through search engines.				
I can use the internet to find specific information.				

8.- SOURCES

- www.bbc.co.uk/programmes/p035dk01
- http://www.parapal-online.co.uk/picture_dict/car.html
- http://busyteacher.org/16665-parts-of-a-car-matching-activity.html
- http://a4esl.org/q/h/9901/pk-auto.html
- http://2013-geneva-motor-show.blogspot.com.es/2013/02/all-car-logos.html
- http://ftalphaville.ft.com/2012/04/26/975171/the-sum-of-a-cars-parts/
- http://www.jigsawplanet.com
- http://www.oica.net/category/vehicles-in-use/
- http://www.oica.net/category/production-statistics/2014-statistics/
- http://movingonmagazine.co.uk/automotive-industry/
- http://ec.europa.eu/social/BlobServlet?docId=3048&langId=en
- https://ec.europa.eu/eures/public/en/homepage
- http://ec.europa.eu/social/home.jsp?langId=en
- https://en.wikipedia.org/wiki/Car#Fuel_and_propulsion_technologies
- https://www.youtube.com/watch?v=TsaES--OTzM
- https://www.youtube.com/watch?v=9CoyKEttxNk
- https://www.youtube.com/watch?v=CqSDWoAhvLU
- https://prezi.com/3skfgdsmbmws/the-automotive-industry-clil-lesson/

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MULTILINGUALISM AND WORK PERSPECTIVES IN EUROPE

MULTILINGUALISM AND WORK PERSPECTIVES IN EUROPE

BULGARIA

FURNITURE AND PAPER INDUSTRY

CLIL LESSON GENERAL LAYOUT

1.- TITLE OF THE UNIT

FURNITURE AND PAPER INDUSTRY.

2.- SUBJECTS

Social Science – Geography

3.- STUDENTS' LEVEL/AGE

Level: B1.2. / Age: 12-15

4.- OBJECTIVES

CONTENT AIMS	LANGUAGE AIMS
-Learn about forest-based industries in EU. -Learn about the process of making paper. -Learn about the process of furniture manufacturing. -Get familiar with different kinds of furniture. -Reflect on the importance of paper industry and the challenges it faces.	-Review and enrich vocabulary on different kinds of trees. -Review Simple Passive constructions. -Boost S"s awareness of the benefit of taking part in discussions.

First five minutes:

Review: refresh the geographical location of the town of Velingrad and the surrounding area to provoke S's to think of possible branches of industrial production in the region.

Advance organizer: present the tasks for the lesson to get them ready and familiar with the topic.

Goal: Learn about the two industrial branches and their impact on the region.

Resources: presentation, video you tube, powerpoints.

5.- ACTIVITIES

Reading texts and answering questions; activities with the worksheets provided: true or false activities, filling in gaps with grammatical tasks, filling in gaps with lexical tasks, watching a video and editing a text

Anticipated problems/solutions: Internet access- not available or other technical problems

6.- DETAILED SESSIONS

Session 1.

Activity 1.- Video provoking S's thinking and discussing.

Activity 2.- Brainstorming about main industry in S's countries or regions: reflect on the resources supporting the industry.

Activity 3.- Introducing the new vocabulary about the two processes of paper making and furniture production (powerpoint illustration).

Session 2.

Activity 1.- Present a video on papermaking process.

Activity 2.- Read and complete a text on paper and pulp industry.

Activity 3.- Working in groups match the different aspects of importance, challenges and opportunities for pulp and paper industry and list the leading companies in Europe.

Session 3.

Activity 1.- Present a video on furniture production.

Activity 2.- Read and answer short questions on a text about furniture industry.

Session 4.

Activity 1.- Comprehension activity on 3 minute listening on furniture items. S's answer short questions on the listening. New words are introduced and the great variety of eco–friendly materials will be discussed and compared.

Activity 2.- Reading about the diversity of furniture at the European market nowadays

Session 5.

Activity 1.- Class-group activity: A debate on the future of paper and pulp and furniture industry.

Read carefully the statements and choose the correct answer.

1) To extract the moisture from wood it is
   a) drilled b) dried c) polished

2) To sort out the wood it is labeled according to
   a) size b) shape c) design

3) Cutting is done by means of
   a) drilling machines b) sawing machines c) packaging machines

4) CNC means
   a) Central Niche of Cutting b) Computer Numerical Control c) Cutting New Cotton

5) Drilling is necessary for
   a) providing pressure b) assembling pieces of wood together c) polishing the surface

6) Holes, gaps and cracks are touched-up with
   a) wood putty b) water c) nail polish

7) Sanding the wood helps
   a) cover the holes with sand b) create a smoother surface c) fill in the cracks with sand

8) Sanding machines are used for
   a) large flat surfaces b) transporting sand c) producing sand

9) Printing wood means
   a) to beautify the wood b) to write on the wood c) to produce wooden letters

10) Lamination is the process of
   a) joining two panels b) gluing veneer onto the core panels c) colouring the panels

11) Coating is done with
   a) varnish b) glue c) paint

12) Assembly is
   a) to collect parts b) to put the separate pieces together c) to stack parts

13) … are widely used for packaging.
   a) Tick paper boxes b) Card boxes c) Wooden boxes

Fill in the gaps with the correct verb.

The Paper making Process

Paper is manufactured from wood ***1)*** **……** in forests. The trees can be birch, poplar or spruce, fir and pine.

First the logs are put into a rotating drum, which removes the bark. Then the logs are ***2)*** **……** Of course industrial saw mills are the largest source of wood chips for paper making.

Then the wood chips are ***3)*** **……** to the pulp mill on a conveyor belt. A digester cooks the chips in an acid solution to dissolve the lignin and separate the plant fibres. After washing the fibres to remove the acid, the pulp becomes soft and fibrous. To make white paper, the pulp is ***4)*** **……** The treated pulp can be dried, baled and transported to other paper mills. Then the pulp is ***5)*** **……** with water.

The appearance of the paper can be ***6)*** **……** with dyes, optical brighteners and sizes. The most important process material is water: about 100 litres of fresh water are ***7)*** **……** to make one kilogram of paper.

The pulp is now a controlled mix of fibres, filters and colouring agents in water, ready to enter the paper machine.

The paper machine is the heart of the paper mill, which converts the pulp into the paper. At the beginning is the head-box. The pulp is ***8)*** **……** between two rotating wires. Then the excess water is ***9)*** **……** and it is ***10)*** **……** into a web of paper. It is still wet and fragile but contains the most important sheet properties. The press section carries away most of the water and stops the sheet from tearing. The longest section contains the drying cylinders, which dry the paper and give it strength.

Every process is continuously monitored to ensure the quality.

injected grown improved needed transported bleached turned drained mixed chipped

7.- SOURCES

All these links are the resources for the lesson:

- https://www.youtube.com/watch?v=x4t5jRGt3M0
- https://mail.google.com/mail/u/0/#inbox/150a431539774433?projector=1
- http://ec.europa.eu/growth/sectors/raw-materials/industries/forest-based/pulp-paper/index_en.htm
- https://en.wikipedia.org/wiki/Pulp_and_paper_industry_in_Europe
- http://www.paperindustryworld.com/tag/europe/

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MULTILINGUALISM AND WORK PERSPECTIVES IN EUROPE

MULTILINGUALISM AND WORK PERSPECTIVES IN EUROPE

ROMANIA

IRON INDUSTRY IN ROMANIA

CLIL LESSON GENERAL LAYOUT

1.- TITLE OF THE UNIT

IRON INDUSTRY IN ROMANIA

2.- SUBJECT

Industry

3.- STUDENTS' LEVEL/AGE

7th, 8th graders

4.- INTRODUCTION

This lesson has as a main aim studying the most important aspects about steel industry in Romania. Students will learn related phrases / expressions of this field and they will contemplate the impact of steel industry on environment.

5.- LEARNING OUTCOMES

- Defining industry;
- Identifying the factors which leaded to the appearance of industry;
- Awareness of the impact of industry on humanity;
- Defining steel industry;
- Identifying the factors which leaded to the appearance of steel industry in Romania;
- Identifying the main steel cities in România;
- Specifying the advantages and disadvantages of steel industry;

6.- SUBJECT CONTENT

• Industry: definition, period of appearance, factors which leaded to its appearance, impact on humanity;
• Steel industry in Romania: definition of siderurgy, steel works, mill; factors of steel industry appearance in Romania, the main steel companies in Romania;
• The story of steel industry development in Călăraşi, Martifer - the metalic constructions factory.

7.- LANGUAGE OBJECTIVES

• Knowledge and comprehension of scientific terms: iron ores, coke, cast iron, steel, steelworks, blast furnace, rollingmill, galvanisation;

8.- TASK

A presentation about advantages and disadvantages of steel industry, a bunch of specific expressions of iron industry.

9.- ACTIVITIES

• Students will read texts about industry;
• Students will watch a presentation about industry; they will watch a video about the appearance and development of industry;
• Students will watch a presentation about steel industry in Romania;
• Students will practise specific vocabulary;
• Students will make a scheme of steel industry advantages and disadvantages;
• Online tests.

10.- DETAILED SESSION

Motivating video[1]

Brainstorming - Students watch a video 'STEEL: From the Begining to the End'

Identifying key terms referring to steel industry - These are sticked by the students on a flipchart paper. Students read the word definition. Keywords[2]

IRON ORES - are rocks and minerals out of which metallic iron can be extracted.

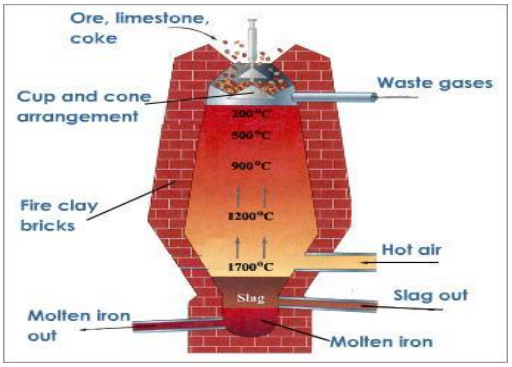
COKE - is a material obtained by thermal processing of coal.

CAST IRON - is a group of iron-carbon alloys with a carbon content higher than 2%.

STEEL - is an alloy of iron and other elements, primarily carbon; the carbon content of steel is between 0.002% and 2.1% .

[1] https://www.youtube.com/watch?v=9l7JqonyoKA
[2] https://docs.google.com/document/d/1u8GklswR6zBvDsDSEVqwaqt8nbIv4pUAxhiaUzaRypY/edit

STEELWORKS - is an industrial plant for the manufacture of steel.



BLAST FURNACE - is a type of metallurgical furnace used for smelting to produce industrial metals, generally iron.

ROLLINGMILL - is a metal forming process in which metal stock is passed through one or more pairs of rolls to reduce the thickness and to make it uniform.

GALVANISATION - is the process of applying a protective zinc coating to steel or iron, to prevent rusting.

Presenting a PowerPoint material about Steel Industry in Romania - Explaining/defining words like: iron works, steel works, mill; presenting the main steel centers in Romania. Iron Industry in Romania[3]

[3] https://docs.google.com/presentation/d/1SYf-LQYWOr7vEthBm57FGeu_Y63kudK4FCQ8ffW-7kI/edit#slide=id.p

Students answer to questions in an online test – Online Quiz[4]

a) *What does the iron industry produce?*

- ☐ fonte and steel
- ☐ furniture
- ☐ food
- ☐ cars

b) *What city in Romania hosts the oldest steeI mill?*

- ☐ Hunedoara
- ☐ Reşiţa
- ☐ Călăraşi
- ☐ Galaţi

c) *What company is the leader in all major global steel markets?*

- ☐ Nestle
- ☐ Continental Automotive
- ☐ ArcelorMittal
- ☐ Alro Slatina

d) *Where is the largest integrated steel plant in Romania?*

- ☐ Reşiţa
- ☐ Galaţi
- ☐ Hunedoara
- ☐ Călăraşi

e) *Steel is 100% recyclable!*

- ☐ Yes
- ☐ No

f) *The main chemical elements in steel composition are:*

- ☐ Copper and Aluminium
- ☐ Silver and Carbon
- ☐ Iron and Carbon
- ☐ Copper and Iron

g) *Coke, used in iron industry, is obtained of:*

- ☐ Iron ore
- ☐ Copper
- ☐ Coal
- ☐ Other Minerals

h) *The plant where the steel is produced is called:*

- ☐ textile factory
- ☐ steelworks
- ☐ fertilizer plant
- ☐ automobile factory

i) *Which is the mother country of Martifer Company?*

- ☐ Germany
- ☐ Romania
- ☐ Spain
- ☐ Portugal

j) *Galvanisation prevents:*

- ☐ breaking
- ☐ rusting
- ☐ sticking
- ☐ bending

[4] https://docs.google.com/forms/d/1so3byITElSn2si4gW4p192IHHBxgls0PlJ-NZgMuyFg/viewform

11.- ASSESSMENT[5]

Students are divided into four groups; the first three groups get a thematic text[6]:

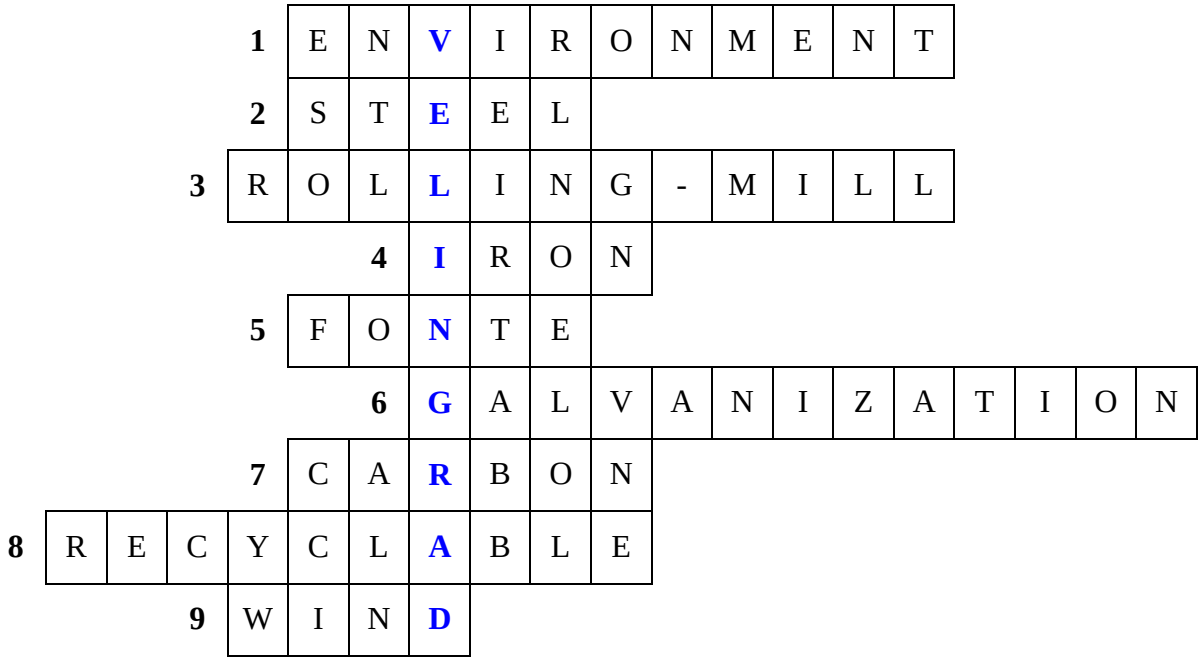
Steel is today one of the best sold materials in the world; it is used to produce everything: automobiles, railways, buildings. Iron (steel and fonte) is a 'green' product. It is also energetically efficient. Any excess material is 100% recyclable. Steel does not easily warp, buckle, twist or bend, and is therefore easy to modify and offers design flexibility. Iron (steel and fonte) allows improving the quality of construction and less maintenance, while offering improved safety and resistance.

Heavy and thus expensive to transport, susceptible to corrosion - steel bridges must be painted continuously, particularly in a salty environment. When metal is extracted from the ground, it creates a lot of negative impact to the environment. Metal extraction can drastically affect the quality of air in the surrounding areas, with the high levels of dust and gas in the area. There's also the noise pollution that it creates, which affects the natural habitat of animals. Last, metal extraction disfigures the landscape. Now, if companies continue extracting metal, the land will be disfigured forever, causing flooding and soil erosion in the area.

- Students in the first group will specify advantages of iron industry;
- Students in the second group will identify iron industry negative impact on environment;
- Students in the third group will identify disadvantages of iron industry;
- Students in the fourth group will complete a crossword puzzle about iron industry;

[5] https://docs.google.com/document/d/1-CO6Oz8u-7YE7iGth1IqogtmHKGnXWfvqPbq4luhV9s/edit
[6] https://docs.google.com/document/d/1-CO6Oz8u-7YE7iGth1IqogtmHKGnXWfvqPbq4luhV9s/edit?usp=sharing

Crossword[7]



1. *The Industry must protect ...*

2. *Iron alloy with < 2,11% carbon.*

3. *Process in which the metal is transformed into sheets.*

4. *The metal used to produce steel is ...*

5. *Other alloys of iron.*

6. *The process of applying a protection zinc coating to steel or iron to prevent rusting.*

7. *Chemical element that form alloys with iron.*

8. *Which can be recycled.*

9. *The steel is used in the construction of ... turbines.*

At the end all students will present their worksheets.

12.- SOURCES

- Motivation Video: https://www.youtube.com/watch?v=9l7JqonyoKA
- Google Presentation
- Google Form
- Google My Maps
- Google Docs

[7] https://docs.google.com/spreadsheets/d/128apooBRZLw-QEk2bbhdbYNFjtAYUCBZjmRvwDGpDl0/edit?ts=564c2a6f#gid=0

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MULTILINGUALISM AND WORK PERSPECTIVES IN EUROPE

MULTILINGUALISM AND WORK PERSPECTIVES IN EUROPE

GREECE

FOOD INDUSTRY

CLIL LESSON GENERAL LAYOUT

1.- TITLE OF THE UNIT

SECTORS AND JOBS IN THE FIELD OF FOOD INDUSTRY

2.- SUBJECT

Food Industry

3.- STUDENTS' LEVEL/AGE

Secondary School (12 - 15)
Intermediated, Mixed Ability Class
B1 according to CEF (Common European Framework)

4.- GROUP SIZE

25 students in class (3-6 pupils in a group)

5.- TIMING

40 – 45 minutes

6.- PLACE

Computers' Lab

7.- INTRODUCTION

This Didactic Unit aims at studying the origins of food industry in the context of a historical approach. Students will become familiar with the disciplines associated with food industry and by extension with the skills of workers required by this sector and will be able to reflect on the challenges that the sector of food science and technology is facing today.

8.- LEARNING OUTCOMES

• Being able to discuss the concept of food industry by considering the issue in its historical dimension.
• Identifying the factors that influenced the development of modern food industry over time.
• Being aware of the disciplines related to food industry.
• Recognizing the differences between disciplines related to this field.
• Developing effective internet search skills and selection of appropriate information.
• Exercising in producing speech and processing material (photos, video) with the means offered by technology.

9.- SUBJECT CONTENT

• Natural and human factors that influence the development of modern food industry over time.
• Types of the disciplines related to food industry.

10.- LANGUAGE OBJECTIVES

• Clarifying the terminology: industry, discipline, working specialty.
• Enriching their vocabulary.
• Exercising the collaborative production of spoken and written language.

11.- TASK

A final presentation on the concept of the food industry and the elements that compose it, the disciplines that constitute it and the skills of workers associated to it.

12.- ACTIVITIES

• Watching a video about food industry.

• Activities involved in the use of the tool of Google Slides: Answer short question about the video; defining vocabulary; labeling pictures about food industry; writing a short comparative text about the disciplines that constitute the sector of food industry and the skills of workers associated with it.

• Gathering information to make a presentation.

13.- DETAILED SESSION

Watching - Watch the motivating video[1].

Team presentation - Each team has to make a presentation in Google slides in which:

• On the first slide, they should write 2 – 3 sentences about: why food industry is the earliest science"

• On the second slide, they should write 5 words, related to food industry, about what they watched in the motivation video.

• On the third slide, they should find and insert one image for each one of the 5 words they wrote, in the same order. Such as:

[1] https://www.youtube.com/watch?v=i3ubChxYWos&feature=youtu.be

• They should choose a science related to food industry and write down what they believe the difference from the main science is. For example, engineering vs. food engineering (2 – 3 sentences). This will be the fourth slide of the Google slide.

Class presentation - Each team has to present the Google slide to the class:

• First, they present the reason that the food industry is the earliest science.

• After that, they present the 5 images, and they ask the other teams to find the word which matches to the image. The team writes down all the answers (every team gives one answer per image).

• Next, they reveal the words they choose.

• Finally, they present the differences between the food industry science and main science.

Remake - Each team has to remake the Google slide in which:

• On the second and third slide, they write next to every image all the answers provided by all the teams.

14.- SOURCES

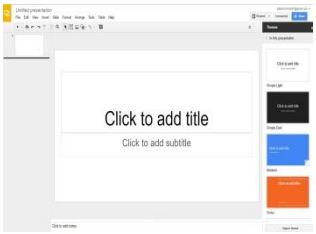
• Motivation Videos:

https://www.youtube.com/watch?v=i3ubChxYWos&feature=youtu.be

https://www.youtube.com/watch?v=RgsKHf7DrtA

• Google

• Google Slide



MULTILINGUALISM AND WORK PERSPECTIVES IN EUROPE

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MULTILINGUALISM AND WORK PERSPECTIVES IN EUROPE

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