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ACADEMIC UNIT OF ADMINISTRATIVE AND HUMANISTIC
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“THE ENGLISH TEACHING LEARNING PROCESS FOR TECHNICAL PURPOSES IN THE AUTOMOTIVE FIELD WITH THE STUDENTS OF 4TH AND 5TH LEVELS AT "JUAN ABEL ECHEVERRÍA " EDUCATIVE UNIT DURING THE ACADEMIC CYCLE APRIL - AUGUST 2015.”

Thesis submitted previous obtaining the Sciences of Education Degree with Major in the English language.

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RESPONSIBILITY

The criteria said in this present investigation “THE ENGLISH TEACHING LEARNING PROCESS FOR TECHNICAL PURPOSES IN THE AUTOMOTIVE FIELD WITH THE STUDENTS OF 4TH AND 5TH LEVELS AT "JUAN ABEL ECHEVERRÍA” EDUCATIVE UNIT DURING THE ACADEMIC CYCLE APRIL - AUGUST 2015.” is the author responsibility.

Bustillos Acurio Carlos Vicente

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THESIS DIRECTOR' ENDORSEMENT

As a director of this investigation work about:

“THE ENGLISH TEACHING LEARNING PROCESS FOR TECHNICAL PURPOSES IN THE AUTOMOTIVE FIELD WITH THE STUDENTS OF 4TH AND 5TH LEVELS AT "JUAN ABEL ECHEVERRÍA " EDUCATIVE UNIT DURING THE ACADEMIC CYCLE APRIL - AUGUST 2015”. , of BUSTILLOS ACURIO CARLOS VICENTE, applicant of the English career, I consider this investigative report contains the methodological and scientific requirement, those are enough to be evaluated by the thesis validation court that Honorable Academic Board from the Academic Unit of Administrative and Humanistic Science designs for its own study and qualification.

Latacunga, August 27TH, 2015

Lic. Encalada Trujillo Edgar Guandia.

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COURT APPROVAL

As members of the Court of Grade we agree with the present Investigation Report in accordance with the regulations emitted by the Technical University of Cotopaxi, and the Academic Unit of Administrative Sciences and Humanities; therefore, the postulant: **Bustillos Acurio Carlos Vicente** with the title of thesis: **“THE ENGLISH TEACHING LEARNING PROCESS FOR TECHNICAL PURPOSES IN THE AUTOMOTIVE FIELD WITH THE STUDENTS OF 4TH AND 5TH LEVELS AT "JUAN ABEL ECHEVERRÍA " EDUCATIVE UNIT DURING THE ACADEMIC CYCLE APRIL - AUGUST 2015.”**has considered the recommendations made opportunely and meets sufficient merit to be submitted to the Thesis Defense act.

By the above, we authorize the corresponding pasted, as institutional norms.

Latacunga, November 27, 2015

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First, I would like to thank to god for all the blessing that I have receive. Thanks to my mother because she has supported me at every moment during my academic training.

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Finally, thanks all the people who help me to accomplish this dream. Thank you so much.

Bustillos Acurio Carlos Vicente

DEDICATORY

This thesis work “the English teaching learning process for technical purposes in the automotive field” is dedicated for all students and teachers who are learning or teaching into automotive field. This manual is a guide and it is the most relevant tool for technical English teaching creating a better educative process in the acquisition of technical vocabulary.

For them my sincere respect.

Bustillos Acurio Carlos Vicente



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ABSTRACT

For the development of this researching work, the following topic had been taken in mind: “The English teaching learning process for technical purposes in the automotive field with the students of 4th and 5th levels at "Juan Abel Echeverría " Educative Unit”, this topic had been developed by the next headings: taking into account the English language like point of starting because this language is the most spoken around the world. Nevertheless, the main point of this researching work is facilitating the teaching of technical English immersed in the automotive field into this institution. Thus, the goal of this investigation is contribute with a technical manual which is conformed with several funny strategies and activities helping to become more productive and dynamic the teaching learning process to the student. Furthermore, through this manual the teacher has a particular manner of increasing the acquisition of technical English into their students due to that this Project has included pictures and simple definitions within each unit for applying in the automotive field with its students. In conclusion, as teachers as students have a lot of advantages with the use of the technical manual because students will learn technical vocabulary in a dynamic way whereas teachers will make an interesting class using this manual which has awesome activities for the technical English learning.



TEMA: “EL PROCESO ENSEÑANZA APRENDIZAJE DEL IDIOMA INGLÈS PARA FINES TÈCNICOS DENTRO DEL CAMPO AUTOMOTRÌZ CON LOS ALUMNOS DE 4º Y 5º NIVEL DENTRO DE LA UNIDAD EDUCATIVA “JUAN ABEL ECHEVERRIA” DURANTE EL CICLO ACADEMICO ABRIL – AGOSTO 2015”

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RESUMEN

Para el desarrollo de este trabajo de investigación, el siguiente tema ha sido tomado en cuenta: "El proceso de enseñanza aprendizaje del idioma Inglés para fines técnicos dentro del campo automotriz con los alumnos de 4º y 5º nivel dentro de la " "Unidad Educativa" Juan Abel Echeverría, este tema ha sido desarrollado por los siguientes contextos: teniendo en cuenta el idioma Inglés como punto de partida porque es el idioma más hablado en el mundo. Sin embargo, el punto principal de este trabajo de investigación es facilitar la enseñanza de inglés técnico inmerso en el campo automotriz en esta institución. Por lo tanto, el objetivo de esta investigación es contribuir con un manual técnico que está conformado con varias estrategias y actividades divertidas que ayudaran a ser más productivo y dinámico el proceso de enseñanza-aprendizaje para el estudiante Por otra parte, a través de este manual, el profesor tiene una manera particular de aumentar la adquisición de inglés técnico en sus estudiantes debido a las imágenes que este proyecto ha incluido y las definiciones simples dentro de cada unidad de aplicación, dentro de la campo automotriz con sus estudiantes. En conclusión, tanto profesores como estudiantes tienen muchas ventajas con el uso del manual técnico, porque los estudiantes aprenderán vocabulario técnico de una manera dinámica, mientras que los profesores harán una clase interesante utilizando este manual, que tiene increíbles actividades para el aprendizaje de Inglés técnico.

INTRODUCTION

For treating the English language as a subject of study which take part in the student's shape within a technical institution is essential to know the main characteristics of this language. Without doubt, the languages are communication sources which grew through human's needs because they needed to interact with their peers, but English language has been growing through time being nowadays the principal language used around the world. That's why, it is so important that students have a great knowledge about this language.

Inside technical institutions teach technical English to their students is seriously necessary because they need to unfold in a correct way in their professional life. Thus, technical vocabulary learning in this institutions where there are technical careers especially talking about the automotive field that has a great variety of technical words written in English language which the students do not know. Moreover, it helps to the students' integral formation. So as to they get a specific vocabulary that will be of great support in the future or in his academic life. For this reason students must learn technical vocabulary according their technical careers. This will be the base for the students' individual development. Consequently, it is necessary the design of a technical manual which will contain useful and interesting activities to the teachers and students creating a nice interaction and a good environment of study.

This research delimitation is directed at "Juan Abel Echeverria" Educative Unit in Cotopaxi province, Latacunga canton, Eloy Alfaro parish during the academic cycle April – August 2015.

The objective of this researching work is encourage the technical vocabulary teaching - learning, through creative activities and innovate exercises applied to the automotive field.

In the first chapter it discusses about the theoretical foundation in which are the backgrounds of this investigation, after that we have the main categories in where there are important topics for the development of this researching work. Describing, the English language, English teaching learning process and English for specific purposes with their topics and subtopics respectively. After that, we continue with the other topics technical vocabulary development and automotive manual (supporting guide); these talk about the importance of learning technical English and an investigation about as design a technical manual to the integral students' formation.

The second chapter is announced a brief historical review of "Juan Abel Echeverria" Educative Unit. Continuously, it puts in manifest the analysis and outcomes obtained in the interviews as the principal as students of this considered institution, also surveys applied to students of this educative unit. After analysis of this information one proceeds to take the percentage, graphic representation and analysis and interpretation of these. Finally, the chapter with the conclusions and recommendation formulation according survey's answers.

To conclude in the last chapter exposed the proposal made about an automotive technical manual for increasing the students' technical English knowledge into the automotive field based on technical exercises and activities to after talk of proposal design, the informative data of this institution, the importance of this research, the justification, the foundations (scientific, methodological, psychological and pedagogical foundations), the objectives; a general and three specific and the last to realize the proposal description.

Finally, it will be designed a technical manual written into English language with new strategies and pedagogical activities in a dynamic and fun way in order to students get the technical vocabulary in an easy way.

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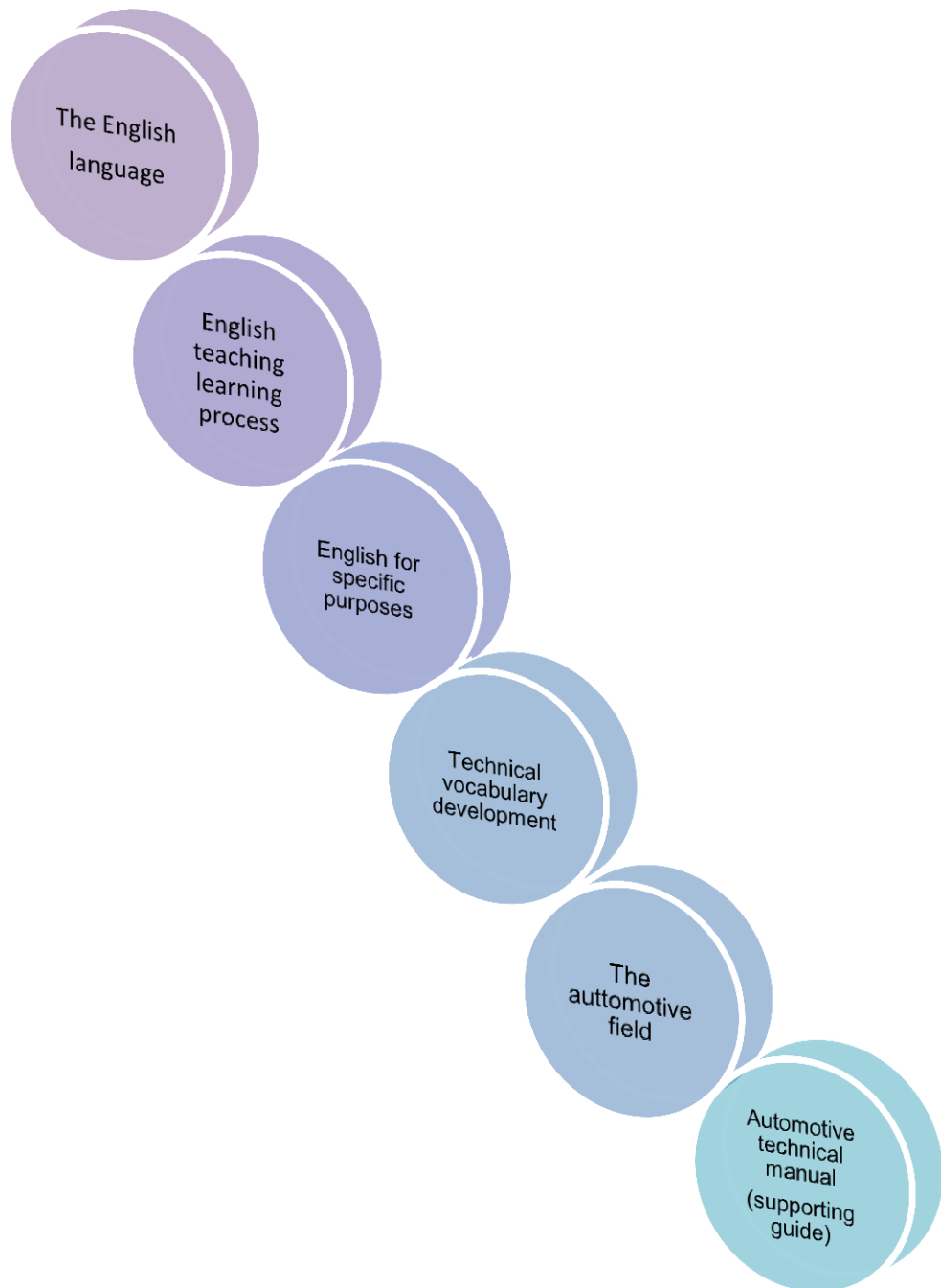
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MAIN CATEGORIES



BACKGROUNDS

The difference between creative learning and the traditional learning has obstructed the correct development of the teaching learning process of some important things. That's why, this research is about new methods and strategies of learning in which students feel more comfortable in the moment of learning, so they can eliminate the possible that appear, when teachers do not use a correct tool of teaching. Thus, this researching work has some examples where different researchers are giving new methods of learning; in which they are using a technical manual with interactive activities.

According to the investigation of Faculty of Mechanical Engineering University in Malaysia Pahang, about manual transmission in November 2007 shows the benefits which contains a technical manual in the moment of teaching technical vocabulary, the researcher did an investigation of manual transmission whose purpose was train final year student for hands on and automotive investigation experience. In this investigation about manual transmission there are two analyses. The first analysis shows how gear ratio influence vehicle performance curve. The researcher's investigation about manual transmission needed documentation because it was best reference for student who is involved in fabrication of manual transmission. Moreover, this investigation has explained how to use calculation for produce vehicle performance curve from gear ratio.

This investigation was made with great responsibility through internet, books, supervisor, journal and other relevant academic materials that related to the topic investigation. So, the researcher recollected data for a manual transmission when get all of the data, vehicle performance curve can be cerate from specification of gear ratio.

Another investigation is about An Interactive Electronic Technical Manual for an Advanced Aerospace Assembly Machine in School of Industrial and Manufacturing Science, Cranfield University, Bedford, USA in 2005 where the

use of this manual with students who receive a technical subject without doubt create a real teaching learning process, so in this investigation demonstrates and evaluates the use of electronic manuals to support the operation of advance manufacturing technology. Moreover this investigation has shown how the use of conventional information technology from the service sector can have benefits in manufacturing. This electronic technical manual is composed from the start by an author using an automated authoring system designed and formatted for luminous screen display and which is made interactive so that the user can take full advantage of the capability of a computer controlled display system for guidance in the performance of his task.

Consequently, this research describes the design and evaluation of a pilot information system to ease the burden of manual configuration management for an aerospace manufacturer. This is an investigation that comprised the content of the system is used to control manual activities associated with a large automated machine tool, such as machine setup, test piece checking and maintenance.

This investigation demands several dedication and effort a long of the researching work that he will be doing according to the university planning between teachers and students in order to get the best advantages of these new technique and method of teaching learning process promising the most effective and efficient method in improving their learning.

New methods of learning are broadening new educational horizons. A lot of students struggle with problems of learning for various reasons. That`s why, the researcher are creating a new strategy of study in where students can get a better way of study and they catch the information correctly.

The implementation of a technical manual onto the automotive field at the Juan Abel Echeverria Educative Unit will help improving and developing the student`s English skills. Thus, the technical manual will aid to accomplish a better way of English teaching - learning process among teacher and student.

CHAPTER 1

1. THEORETICAL FRAMEWORK

1.1 THE ENGLISH LANGUAGE

The language is a way to communicate in several dialects so, the English language is an association with an international standard for the language. Also, the English language is the principal language in which people can communicate around the world. This language is similar to other languages because it has been turned into grammar rules, structure and context. Without doubt, it is a difficult language to learn for people who want to learn as a second language. The result is that a lot of people are discouraged from learning this language.

The English language is considered a powerful tool which help people to abroad their mind and jobs. Moreover, English is a language most spoken around the world. It is an official language of almost 60 states, the most commonly spoken language in United Kingdom, the United States, Canada, Australia, Ireland, New Zealand and other countries. So, it is the third most common native language in the world, after Mandarin and Spanish. It is learned as a second language and is an official language of the United Nations, of the European Union, and of many other world and regional international organizations.

(NORDQUIST, 2015) "The English language has official or special status in at least 75 countries with a combined population of two billion people. It is estimated that one out of four people worldwide speak English with some ``degree of competence." Pag.5

The author mentions that the English language is the most spoken language around the world due to that a lot of people use this language for business and the others use it like their native language. So, several people learn this English

language like a second language because of that this language is pretty necessary in all parts in which people speak English.

The English language is essential for jobs or international business. People who want to travel to other countries need to know English. That's why, it is important that people learn English if they want to grow professionally overcome and knows other countries, they must dominate English language so they will be successful people.

1.1.1 Importance of the English Language

According to Muslim Torpor (TORPOR, 1992), English is more and more popular in the world. It interests in the people due to the interestingness in the structure. However, the structure of this language is learned and studied by a higher number of people because of its importance. The first importance of English language is that it is a medium for communication in the interconnected and interdependent world. Nowadays, English is called International language and it is also the second language of many countries in the world. That's why, we can realize the importance in communication of this language. When we know English, we can come to and communicate with the people in this globe, without any confusion in expressing their feeling and thinking.

1.1.2 The history of English language.

According to the English Club magazine (CLUB, 2008), mentions, a short history of the origins and development of English

Old English

The invading Germanic tribes spoke similar languages, which in Britain developed into what we now call Old English. Old English did not sound or look like English today. Native English speakers now would have great difficulty understanding Old English. Nevertheless, about half of the most commonly used

words in Modern English have Old English roots. The words be, strong and water, for example, derive from Old English. Old English was spoken until around 1100.

Middle English

In 1066 William the Conqueror, the Duke of Normandy invaded and conquered England. The new conquerors brought with them a kind of French, which became the language of the Royal Court, and the ruling and business classes. For a period there was a kind of linguistic class division, where the lower classes spoke English and the upper classes spoke French. In the 14th century English became dominant in Britain again, but with many French words added. This language is called Middle English. It was the language of the great poet Chaucer (c1340-1400), but it would still be difficult for native English speakers to understand today.

Modern English

Towards the end of Middle English, a sudden and distinct change in pronunciation started, with vowels being pronounced shorter and shorter. From the 16th century the British had contact with many people from around the world.

This, and the Renaissance of Classical learning, meant that many new words and phrases entered the language. The invention of printing also meant that there was now a common language in print. Books became cheaper and more people learned to read. Printing also brought standardization to English. Spelling and grammar became fixed, and the dialect of London, where most publishing houses were, became the standard. In 1604 the first English dictionary was published.

Varieties of English

From around 1600, the English colonization of North America resulted in the creation of a distinct American variety of English. Some English pronunciations and words "froze" when they reached America. In some ways, American English

is more like the English of Shakespeare than modern British English is. Some expressions that the British call "Americanisms" are in fact original British expressions that were preserved in the colonies while lost for a time in Britain. Spanish also had an influence on American English, with words like canyon, ranch, stampede and vigilante being examples of Spanish words that entered English through the settlement of the American West. French words and West African words also influenced American English.

Today, American English is particularly influential, due to the USA's dominance of cinema, television, popular music, trade and technology, but there are many other varieties of English around the world, including for example Australian English, New Zealand English, Canadian English, South African English, Indian English and Caribbean English.

1.1.2 Skills of the English language

According to Helen Lee (LEE, 2013), the English language, there are four skills in order to communicate. When we learn our native language. When we usually learn to listen first, then to speak, then to read, and finally to write. These are called the four language skills.

1.1.3.1 Listening skill

"Listening" is receiving language through the ears. Listening involves identifying the sounds of speech and processing them into words and sentences. When we listen, we use our ears to receive individual sounds (letters, stress, rhythm and pauses) and we use our brain to convert these into messages that mean something to us. On the other hand, it also helps the learners improve their listening comprehension. For instance, people know that the largest difference between mother language learning and foreign language learning is the environment. For a foreign language, we can meet it only in formal places and classes. Training and practicing the oral reading is not a day's work. Practice is important. Only through the practice can the learners improve their listening comprehension.

1.1.3.2 Speaking skill

Speaking is the productive skill. It could not be separated from listening. When we speak we produce the text and it should be meaningful. In the nature of communication, we can find the speaker, the listener, the message and the feedback. Speaking could not be separated from pronunciation as it encourages learners to learn the English sounds. So, speaking skill is the delivery of language through the mouth. To speak, we create sounds using many parts of our body, including the lungs, vocal tract, vocal chords, tongue, teeth and lips. This vocalized form of language usually requires at least one listener. When two or more people speak or talk to each other, the conversation is called a "dialogue". Speech can flow naturally from one person to another in the form of dialogue. It can also be planned and rehearsed, as in the delivery of a speech or presentation. Of course, some people talk to themselves! In fact, some English learners practice speaking standing alone in front of a mirror. Speaking is probably the language skill that most language learners wish to perfect as soon as possible. It used to be the only language skill that was difficult to practice online. This is no longer the case. English learners can practice speaking online using voice or video chat. They can also record and upload their voice for other people to listen to.

1.1.3.3 Reading skill

Reading is a multitude process involving word recognition, comprehension, fluency, and motivation. Also, Reading is an important way of gaining information in language learning and it is a basic skill for a language learner. So learners are asked to read them correctly and with a certain speed. For instance, someone reads word by word.

1.1.3.4 Writing skill

Writing skills are an important part of communication. Good writing skills allow you to communicate your message with clarity and ease to a far larger audience

than through face-to-face or telephone conversations. Moreover, Writing is one way of providing variety in classroom procedures. It provides a learner with physical evidence of his achievements and he can measure his improvement. It helps to consolidate their grasp of vocabulary and structure, and complements the other language skills.

1.2 ENGLISH TEACHING LEARNING PROCESS

It is the essential part of the education because it is the most relevant tool into the education to achieve the wished results in the students, but it depends of accomplishment of educational objectives whose purpose is contribute in the education for student's mind development into teaching learning process from a human perspective. Moreover, in the teaching learning process also people learn through lived experiences in all their life, but it needs to involve the multidimensional processes so that students can go with the educational changes so they will give sense to their lives and inviting to dialogue for knowing more about environment which is around them.

(MOHR, 2003) "In the teaching learning process individual students may be better suited to learning in a particular way, using distinctive modes for thinking, relating and creating. The notion of students having particular learning styles has implications for teaching strategies". pag.57

The author says that in the teaching learning process students need to learn in a specific way because they need thinking, creating and relating in educational environment which help them to develop all their capacities. They will develop their own learning styles and learning strategies with the support of teachers so students will become to get an excellent outputs in their teaching learning process. The high level of learning and knowledge into the students depend of teachers if teachers find good methods of teaching, students will get good methods of learning.

(TASLIMAN, 2015). "The teaching-learning process as a lived experience of engaging with others in coming to know involves the multidimensional processes

of expanding imagine margins, naming the new, going with content-process shifts, abiding with paradox, giving meaning, inviting dialogue, noticing the now, and growing story”.pag.1

The author mentions that teaching learning process is as a lived experience because through experience people learn of different ways. People do not only learn into school they also learn in their homes with their friends. It is also part of teaching learning process. People learn of their daily routines too. It means that people have an open mind in which can catch a lot of information of their lives. However, teaching learning process needs to achieve all aims into the education in order to that students have a good education.

1.2.1 Learning

Abell; D, Smith (Abell, et al., 1994). “Learning can be defined as the relatively permanent change in an individual's behavior or behavior potential as a result of experience or practice”. Pag.2

The author claims, learning can be defined as process of progressive change from ignorance to knowledge, from inability to competence, and from indifference to understanding. In much the same manner, instruction or education can be defined as the means by which we systematize the situations, conditions, tasks, materials and opportunities by which learners acquire new or different ways of thinking, feeling and doing. The process of learning is valued and varied. Learners bring a range of preferred learning styles that are recognized and where appropriate, stretched and challenged. Active participation in learning task through group words, discussion, debate, role- play and it involvement in authentic problem solving help to develop skills for citizenship and employability.

According to Cristopher Macgivney (MACGIVNEY, 1999), presented a survey on the definitions of informal learning. They extracted 20 criteria to discriminate informal from formal learning and arrived at the following continuum:

Informal learning.- No teacher involved, non-education premises, learner control.

Formal learning.- Teacher as authority, educational premises, teacher control.

1.2.1.1 Formal learning

It is always organized and structured, and has learning objectives. From the learner's standpoint, it is always intentional: i.e. the learner's explicit objective is to gain knowledge, skills and/or competences.

1.2.1.2 Informal learning

It is never organized, has no set objective in terms of learning outcomes and is never intentional from the learner's standpoint. Often it is referred to as learning by experience or just as experience.

1.2.2 Teaching

(BABELAN, 2010), teaching is defined as an interactive process, primarily involving classroom talk, which takes place between teacher and pupil and occurs during certain definable activities. Pag.2

The author says that teaching is an interactive process which is developed into a classroom where as teacher as student play an important role during the teaching learning process. Moreover, during the teaching must have participation between teacher-student so teacher will be able to know the student's advance. Furthermore, teaching is the process of providing opportunities for students to produce relatively permanent change through the engagement in experiences provided by the teacher.

Teaching is an arrangement and manipulation of situation in which there are gaps and obstructions which an individual will seek to overcome and we will learn and the courses of doing so. Also it is a system of action involving an agent, an end in view, and a situation including two sets of factors those over which the agent has no and those that it can modify. Teaching is defined as interactive process primarily involving classroom talk, which takes place on teachers and learners

occurring during certain definable activities. Teaching is a task of a teacher, which is performed for development of a student. Teaching is not indivisible from learning. We can be good teachers only if we know what we know what we expect our learners to achieve. If our goal is to prepare our students to pass an exam, then this will affect the way in which we teach.

1.2.3 Essential aspects of the teaching-learning process

According to the Code of Ethics of Professional Teachers (WARD, 2012), the different approaches differ in the level of teacher and student participation from that approach with the highest to the lowest level of teacher direction or from the lowest to the highest level of student participation.

Reflection.-It can be based on the performance by the teacher and learner. It can be considered as educational style. For example, a text book represents a one-way of knowledge from the teacher's conceptual knowledge to the students. A lecture or tutorial may be seen the same way, but there is a possibility of meaningful discussion between teacher and learner.

Interaction. - Between the learner and some aspect of the world defined by the teacher.

Discussion. - Between the teacher and learner.

Adaptation.-By the teacher and action by the learner

1.2.4 Teaching-learning techniques

1.2.4.1 Didactic technique

It is the way that to allow the application of the method, procedures and resources used in the didactic process of the classes.

1.2.4.2 Individuals' technique

This is a technique that can be:

- Expositive

- Interrogative
- By observation.

1.2.4.3 Groups' technique

Contains the following:

- Discussion
- Debate
- Round table

1.2.5 Teaching - Learning Environment

According to Robin Rooney (ROONEY, 2004), Create a positive teaching - learning environment in your classroom will allow your students to feel comfortable, safe and engaged something that all students deserve. In a classroom where values and roles remain constant and focus is placed on the positive aspects of learning, students will be more open to actively participating in class.

- Teaching can become effective only by relating it to process of learning.
- Teaching objective cannot be realized without being related to learning situation.
- We may create and use teaching aids to create some appropriate learning situation.
- The strategies and devices of teaching may be selected in such a manner that the optimal objectives of learning are achieved.
- To understand principles, goals, objectives of education in right perspective. Appropriate learning situation condition may be created for congenial and effective teaching.

1.3 ENGLISH FOR SPECIFIC PURPOSES

ESP means English for specific purposes. It has become in an important field in Applied Linguistic. Also, ESP is concerned with learners' needs for a specific field of academics or occupation. Restricted skills of words and expressions, purposes of learning the language are the areas to be considered in ESP.

Moreover, ESP was classified based in the need it was supposed to achieve. It is only a process and a better inclination in language teaching that suppose not the structure of language, but the kinds in which the language is actuality used in real communication. Everything about it is learner or learning-centered due to this was discovered that learner's needs have manner in their motivation. It is predictable that a lot of efforts have to be obtained toward discovering the characteristics of specifics situations and then doing these characteristics the basis of the learner's course if the language varies according to situation. Into ESP has a major part of communicative language teaching general which is based in language need of learners. ESP has been like a process of language teaching with no specialized materials or methods.

(CARTER, 1999). "ESP as a restricted language, e.g. of a pilot, or a waiter. Only used for specific contexts."pg.7

The author mention that ESP is used for specific contexts because it is necessary to use a specific vocabulary where the people can communicate. For example a pilot need to know a specific English in other to understand the message if the pilot know this type of English, he can communicate of an effectively inside the specific context.

According to Mohammed Tahir (MOHAMMED, 1984). "Language, which is used to communicate effectively in an original setting of a very specific environment, such as the language used by air traffic controllers or by waiters".

The author claims that, it refers that knowing a restricted language would not allow the speaker to communicate effectively in context outside the occupational environment. For example when the language is used by air traffic controllers or by waiters this refers a English a restricted language.

1.3.1 Absolute Characteristics

According to Shahla Simin (SIMIN, 2012), mention the following characteristics:
ESP consists of English language teaching which is:

- Designed to meet specified needs of the learner;
- Related in content (i.e. in its themes and topics) to particular disciplines, occupations and activities;
- Centered on the language appropriate to those activities in syntax, lexis, discourse, semantics, etc., and analysis of this discourse; in contrast with general English.
- ESP is defined to meet specific needs of the learner;
- ESP makes use of the underlying methodology and activities of the discipline it serves;
- ESP is centered on the language (grammar, lexis, and register), skills, discourse and genres appropriate to these activities.

1.3.1.1 Variable characteristics

ESP may be, but is not necessarily:

- Restricted as to the language skills to be learned.
- Taught according to any pre-ordained methodology.
- ESP may be related to or designed for specific disciplines.
- ESP may use, in specific teaching situations, a different methodology from that of general English.
- ESP is likely to be designed for adult learners, either at a tertiary level institution or in a professional work situation. It could, however, be for learners at secondary school level.
- ESP is generally designed for intermediate or advanced students.

Most ESP courses assume some basic knowledge of the language system, but it can be used with beginners.

1.3.2 Is ESP different to General English?

According to Hutchinson Tom (HUTCHINSON, 1987), the difference between ESP and general English.

At the time, teachers of General English courses, while acknowledging that students had a specific purpose for studying English, would rarely conduct a needs analysis to find out what was necessary to actually achieve it. Teachers nowadays, however, are much more aware of the importance of needs analysis, and certainly materials writers think very carefully about the goals of learners at all stages of materials production. Perhaps this demonstrates the influence that the ESP approach has had on English teaching in general. Clearly the line between where General English courses stop and ESP courses start has become very vague indeed.

Rather ironically, while many General English teachers can be described as using an ESP approach, basing their syllabi on a learner needs analysis and their own specialist knowledge of using English for real communication, it is the majority of so-called ESP teachers that are using an approach furthest from that described above. Instead of conducting interviews with specialists in the field, analyzing the language that is required in the profession, or even conducting students' needs analysis, many ESP teachers have become slaves of the published textbooks available, unable to evaluate their suitability based on personal experience, and unwilling to do the necessary analysis of difficult specialist texts to verify their contents.

1.3.3 Types of English for Specific Purposes

According to Bracaj Morena (BRACAJ, 2014), the types of English for specific purposes each study in particular. Regarding to the expectations, learners have at least three kinds of expectations:

- 1. Cultural-educational**
- 2. Personal and individual**
- 3. Academic/occupational**

The first two have a close relationship with the learner's own background and his view of himself as a learner, his expectation of success, his optimism or pessimism about the ESP course in terms of what he expects to learn. The last ones relate to the branch of ESP, which represents the type of ESP. These sets of

expectations (academic or occupational) are the ones most commonly expressed in advance, when a needs-analysis is carried out.

1.3.4 English for Occupational Purposes (EOP)

Rodriguez, Xinia (RODRIGUEZ, 2006) “English for Occupational Purposes examines the field of teaching English in occupational settings as a particular instance of general workplace training and development.”pg. 26-36

The author mentions that English for occupational purposes is focused in the study about business organizations where English has become a vital part of business in different workplace for negotiations and in professional training. Moreover, English for occupational purposes is taught in such a situation in which pupils need to use English as part of their profession. There will be differences in some parts depending on whether the learners are learning English before; during or after the time they are being trained in their job or profession

1.3.5 English for Academic Purposes

According to Accelerated University English Program magazine (HYLAND, 2007), English for Academic Purposes (EAP) courses provide language instruction for academic study in American universities. Language skills addressed include: listening comprehension, fluency development, oral intelligibility, reading, grammar, writing, and vocabulary development. Academic study skills addressed include: test taking and note taking skills, academic vocabulary usage, critical reading and writing, comprehending academic lectures, research and library skills, formal composition forms and development, including research papers. EAP is taught generally within educational institutions to students requiring English in their studies. The language taught may be based on particular disciplines at higher levels of education when the student is specializing or intends to specialize in a particular subject. In cases such as an overseas student studying in university level, the learning of study skills listening to lectures, taking notes, writing reports, reading textbooks will probably form a major part of

the student's English course. Frequently in such a situation it is common to find the aims and methods of the English language department at variance with the requirements of science and technology departments, the former still concerned with drilling conversational English and manipulating structural patterns while the latter require swift and effective reading skills. However, in these situations, there is a need to see the role of English basically in terms of its providing accessibility to knowledge contained in textbooks, periodicals, and journals, reports, and abstracts. Further they will have to involve in presentation of new knowledge such as papers, university theses, longer reports, articles in scientific journals, and others.

1.3.6 Growth of ESP

According to Laurence Anthony (LAURENCE, 1997), English for specific purposes has grown to become one of the most prominent of English Foreign Language teaching today.

In Japan too, the ESP movement has shown a slow but definite growth over the past few years. In particular, increased interest has been spurred by the Ministry of Education's decision in 1994 to largely hand over control of university curriculums to the universities themselves. This has led to a rapid growth in English courses aimed at specific disciplines, e.g. 'English for Chemists, in place of the more traditional 'General English' courses. The ESP community in Japan has also become more defined, with the Japan Association of College English Teachers ESP set up in 1996 and the Japan Association of Language Teachers to be formed shortly. Finally, in November 1997, the ESP community came together as a whole at the first Japan Conference on English for Specific Purposes held at Aizu University in Fukushima Prefecture.

1.3.7 The ESP approach

According to Tony Dudley (DUDLEY, 1998), ESP has had a relatively long time to mature and so we would expect the ESP community to have a clear idea about

what ESP means. Strangely, however, this does not seem to be the case. In October of 1997, for example, a heated debate took place on the TESP-L e-mail discussion list about whether or not English for Academic Purposes could be considered part of ESP in general. At the Japan Conference on ESP also, clear differences in how people interpreted the meaning of ESP could be seen. Some described ESP as simply being the teaching of English for any purpose that could be specified. Others, however, were more precise describing it as the teaching of English used in academic studies, or the teaching of English for vocational or professional purposes. The main speaker at the Japan Conference on ESP is very aware of the current confusion amongst the ESP community, and set out in his one hour speech to clarify the meaning of ESP, giving an extended definition in terms of absolute and variable characteristics.

1.3.7.1 People

In an industry based on identifying the best people for the role, knowing who the key players are is paramount to success. ESP's approach is under-pinned by a commitment to developing and maintaining strong relationships with industry leaders and candidates. We invest considerable time tracking and recording what the key players in our target industries are doing, as well as researching industry trends. And because our industry specialists have extensive experience in their respective industries, you can rest assured that we understand the operational, cultural and strategic challenges facing you and your business.

1.3.7.2 Partnership

At ESP we aim to work in partnership with a select number of clients to form a productive long-term relationship where we become an integral part of your team. We don't approach executive recruitment as a numbers game. We work with the majority of our clients on an ongoing basis to provide guidance and strategic advice on building and developing high-performance teams in a constantly changing business landscape. Similarly, we strive to build strong relationships

with our candidates throughout the selection process and beyond, offering a sounding board for career advice and feedback on their future career path.

1.3.7.3 Performance

Our results speak for themselves. We pride ourselves on being able to locate, nurture and place the most qualified, quality candidates every time. We deliver high-performance teams through a carefully structured methodology that we apply to every assignment. This methodology ensures that we leave no stone unturned in the quest to match the perfect candidates to the client's brief. This approach has proved so successful, in many cases a brief for one candidate has resulted in multiple hires due to the high quality of the talent put forward.

1.3.8 The Future of ESP

According to Dudley Tony (DUDLEY, 1998) ESP community hopes to grow and flourish in the future, it is vital that the community as a whole understands what ESP actually represents. Only then, can new members join with confidence, and existing members carry on the practices which have brought ESP to the position it has in EFL teaching today. In Japan in particular, ESP is still in its infancy and so now is the ideal time to form such a consensus.

1.4 TECHNICAL VOCABULARY DEVELOPMENT

Technical vocabulary development is focused on a need to develop a technical vocabulary in the teaching profession. It contains concept mapping, a technique of clearly representing concepts and their classified interrelationships along two magnitudes, was used to examine the growth of student teachers' knowledge about planning on three sequenced courses. Moreover, quantitative and content analysis of the maps indicated that students developed a more shared, technical vocabulary reflecting course content and evidencing better classified organization. The study provides information about the nature of and growth of student

teachers' thinking, and demonstrates a means of monitoring the growth of student teachers' conceptual development on a course.

Lynne T. Diaz Rico (DIAZ RICO, 2008)" Technical vocabulary are words or phrases that are used primarily in a specific line of work or profession". pg. 8

The author claims that technical vocabulary is used for specific fields into a workplace or teaching place where the technical vocabulary are words phrases, sentences which have a specific structure for the communication between members of an organization. For example, people who work the steel industry often use words like "Rockwell", "Olsen". These words have special meanings affecting to the manufacture of steel. Similarly, an electrician needs to know technical words such as capacitor, impedance, and surge capacity, these are words which most of the people outside of the industry never use.

Chung Teresa (CHUNG, 2003) "Technical vocabulary development is a major concern for learners who have special purposes in language learning".pg.2

The author says that technical vocabulary development is a vital part of all contents learning. The relation between vocabulary knowledge and comprehension is unquestionable. While wide reading increases a student's vocabulary must also occur in all classrooms. Students into school with much different levels of word knowledge. Teachers must built word rich environment in which involve students and teach model good word learning strategies because search show that having students look up words and write definitions in the least effective way to increase their vocabulary.

1.4.1 Technical Vocabulary

According to Learning English Online at Motteram magazine (MOTTERAM, 2013), technical vocabulary is a requirement of many academic disciplines. Often in the fields of Science, Engineering and Medicine, amongst others, there will be a need to manipulate technical language with ease and fluency. In Arts, Humanities and Social science disciplines, there will also be a requirement to use what may be

termed specialized vocabulary, though this will not usually be deemed to be technical.

1.4.2 Vocabulary levels

According to Paul Nation (NATION, 2012), there are various levels of vocabulary with the goal of designing the vocabulary component of a language course divides vocabulary into four levels: high frequency words; academic vocabulary; technical vocabulary; and low frequency words.

High frequency words are the most frequent 2,000 words of English. Called these words a general service vocabulary because they were of use no matter what the language was being used to do. This vocabulary typically covers around 80% of the running words of academic texts and newspapers, and around 90% of conversation and novels. It includes virtually all of the function words of English around 176 words, but by far the majority of high frequency words are content words. For learners with academic goals, the 570 word family Academic Word List is like a specialized extension of the high frequency words. It covers on average 8.5% of academic text, 4% of newspapers and less than 2% of the running words of novels.

This vocabulary has been called academic vocabulary sub-technical vocabulary or semi-technical vocabulary. There has been a lot of discussion and some research on academic vocabulary. This vocabulary is common to a wide range of academic fields but is not what is known as high frequency vocabulary and is not technical in that it is not typically associated with just one field. It is however more closely related to high frequency vocabulary than to technical vocabulary. It was thought that the third level of vocabulary, technical words, covered about 5% of the running words in specialized texts, and was made up of words that occurred frequently in a specialized text or subject area but did not occur or were of very low frequency in other fields. Technical vocabulary is largely of interest and use to people working in a specialized field. The fourth level of vocabulary consists of all the remaining words of English, the low frequency words. There are thousands of these words and they typically cover around 5% of the running words in texts.

1.4.3 How to improve the technical vocabulary?

Using technical vocabulary can be a formidable task, and the English tutor may not necessarily be an expert in your subject area. It is reassuring to remember, however, that not even a native speaker can know all the words in his or her own language, and that technical vocabulary is generally used only by specialists in the field, who work within a particular academic community. Also, one solution to the difficulty of using technical vocabulary is to consult some of the many on-line dictionaries and glossaries of specialized words in the English language. For example you can consult on-line dictionaries in a range of specialisms, from forestry to shipping, and from rhetoric to paleontology. These resources are particularly useful for translators and academic writers, but are also of interest to the general reader.

1.4.3.1 Recognizing technical words

- Despite the difficulty of learning and acquiring technical vocabulary, many technical words have Greek or Latin base forms, and these can be easy to recognize.
- Some technical words are the same across a range of different languages.
- Many writers provide clues about whether a word is technical or not, for example, they may define the word in the text, write the word in bold, inverted commas or italics, or in a diagram.
- Often, technical vocabulary is repeated within specialized text, indicating its importance.
- The technical use of a word can be better understood by looking up the full definition of the word, with all its uses, in a good English-English dictionary.
- Some technical words are used outside the academic area with little change in meaning.

1.4.4 How big is a technical vocabulary?

According to Teresa Mihwa (MIHWA, 2003), the texts were of different lengths and were probably intended for different kinds of audiences the anatomy text being largely intended for those new to the field while the applied linguistics text may have been intended for those who already have some knowledge of applied linguistics. These differences undoubtedly affected the results. However, the primary purpose of the research was to see if technical vocabulary could be reliably distinguished from other vocabulary, and to gain some indication of the size and density of technical vocabularies. A word type is a single word form, such as agree or agrees. When types are counted, agree and agrees are counted as different types. A word family, on the other hand, includes a collection of formally related and semantically related word types. So, the agree family could include agree, agrees, agreed, agreeing, agreement, disagree, disagreement.

1.4.5 Learning technical words

According to Chung, Teresa Mihwa (CHUNG, 2003), when a word is met and it is used in a way which is different from previously met uses, it is worthwhile for the teacher to draw attention to the way that this particular use relates to other uses of the word. Where technical terms are extensions of words in general use, it is useful for learners to see how the technical sense of the words relates to the core meaning of the word, as in girdle and cavity.

- supports the pectoral girdle
- the contents of the thoracic cavity

This is most easily done by getting the learners to look at all the senses of the word in a dictionary and see what core meaning they have in common. It would see this as an application of the "monosemic principle", that is that it is always good to assume that formally related words have related meanings. For example the entry for girdle in the Collins English Dictionary has the following senses:

- A woman's elastic corset
- Anything that surrounds or encircles

- A belt or sash
- The outer edge of a gem
- Any encircling structure or part (Anatomy)
- The mark left on a tree after the removal of a ring of bark
- To surround or encircle

The core meaning in this example is the second item in the entry and can be found in all the other senses listed. There are other activities which encourage learners to relate senses of words to each other. The value of seeing how particular uses relate to a core meaning is that it makes later meetings with the word easier to understand, and brings under one concept items that may be represented by different concepts in the first language.

It is also useful to note if the technical use of the word involves a collocation or a grammatical form that differs from its other uses. Most technical vocabulary needs to be learned productively by learners specializing in that area and learning common collocations and grammatical patterns helps this.

There are two major problems for teachers in helping learners deal with technical vocabulary. Firstly, the English teacher does not usually have specialist knowledge of the learners' technical areas. Secondly, technical vocabulary needs to be worked on while getting on top of the specialized field. However, in spite of these limitations, teachers can play a small but useful role in preparing learners for coping with technical vocabulary. This can be done by helping learners gain the more general skills of recognizing technical words, interpreting definitions, relating senses to a core meaning, and learning word parts. Teachers can provide learners with the tools for dealing with technical words. In this way teachers need not get involved in trying to teach in a technical area, but can direct their attention to vocabulary strategies.

This research has used a scale especially developed for the study to examine the nature and amount of technical vocabulary in two quite different technical texts. The study shows that while some subject areas are likely to have very heavy technical vocabulary loads, a significant amount of this vocabulary is not necessarily new for beginners in the field. This is largely because some technical

words are used outside the technical area with much the same if not identical meanings. Moreover, some words which are typically high frequency words or academic words can function as technical words in certain fields. Technical vocabularies can be large, and they can also account for a very large proportion of the running words or tokens in a text. The present piece of research has looked at two texts to examine something of the nature of technical vocabulary. A much larger, representative corpus of a technical field would be needed to come near to listing a definitive technical vocabulary for that field.

1.5 THE AUTOMOTIVE FIELD

(PEREZ, 2009), Automotive engineering is one of the most exciting professions you can choose. From the global concerns of sustainable mobility, and teaching cars to drive themselves, to working out how we'll get around on the surface of Mars, automotive engineering is all about the future. (pag21)

The author mentions that in the automotive field students need to learn in a specific way because they have to relate in educational environment which help them to develop all their capacities. They will develop their own learning styles and learning strategies with the support of an expert so students will become to get an excellent outputs in their teaching learning process. They can get works in which will be able to achieve the excellence into their professional life.

1.5.1 AUTOMOTIVE INDUSTRY

The automotive industry is a wide range of companies and organizations involved in the design, development, manufacturing, marketing, and selling of motor vehicles. It is one of the world's most important economic sectors by revenue. The automotive industry does not include industries dedicated to the maintenance of automobiles following delivery to the end-user, such as automobile repair shops and motor fuel filling stations

1.5.2 HISTORY

The automotive industry began in the 1890s with hundreds of manufacturers that pioneered the horseless carriage. For many decades, the United States led the world in total automobile production. In 1929 before the Great Depression, the world had 32,028,500 automobiles in use, and the U.S. automobile industry produced over 90% of them. At that time the U.S. had one car per 4.87 persons. After World War II, the U.S. produced about 75 percent of world's auto production. In 1980, the U.S. was overtaken by Japan and became world's leader again in 1994. In 2006, Japan narrowly passed the U.S. in production and held this rank until 2009, when China took the top spot with 13.8 million units. With 19.3 million units manufactured in 2012, China almost doubled the U.S. production, with 10.3 million units, while Japan was in third place with 9.9 million units. From 1970 over 1998 to 2012 the number of automobile models in the U.S. has grown exponentially.

1.5.3 SAFETY

After is a state that implies to be protected from any risk, danger, damage or cause of injury. In the automotive industry, safety means that users, operators or manufacturers do not face any risk or danger coming from the motor vehicle or its spare parts. Safety for the automobiles themselves implies that there is no risk of damage. Safety in the automotive industry is particularly important and therefore highly regulated. Automobiles and other motor vehicles have to comply with a certain number of norms and regulations, whether local or international, in order to be accepted on the market. The standard ISO 26262 is considered as one of the best practice framework for achieving automotive functional safety. In case of safety issues, danger, product defect or faulty procedure during the manufacturing of the motor vehicle, the maker can request to return either a batch or the entire production run. This procedure is called product recall. Product recalls happen in every industry and can be production-related or stem from the raw material.

Product and operation tests and inspections at different stages of the value chain are made to avoid these product recalls by ensuring end-user security and safety and compliance with the automotive industry requirements. However, the automotive industry is still particularly concerned about product recalls, which cause considerable financial consequences.

1.5.4 ECONOMY

Around the world, there were about 806 million cars and light trucks on the road in 2007, consuming over 980 billion litres of gasoline and diesel fuel yearly. The automobile is a primary mode of transportation for many developed economies. The Detroit branch of Boston Consulting Group predicts that, by 2014, one-third of world demand will be in the four BRIC markets. Meanwhile, in the developed countries, the automotive industry has slowed down. It is also expected that this trend will continue, especially as the younger generations of people (in highly urbanized countries) no longer want to own a car anymore, and prefer other modes of transport.^[9] Other potentially powerful automotive markets are Iran and Indonesia. Emerging auto markets already buy more cars than established markets. According to a J.D. Power study, emerging markets accounted for 51 percent of the global light-vehicle sales in 2010. The study, performed in 2010 expected this trend to accelerate. However, more recent reports confirmed the opposite; namely that the automotive industry was slowing down even in BRIC countries. In the United States, vehicle sales peaked in 2000, at 17.8 million units.

1.5.5 AUTOMOTIVE TEACHING INTO EDUCATIVE UNIT “JUAN ABEL ECHEVERRIA”

This institution is located in Eloy Alfaro parish, Latacunga canton from 1995 it is in charged to form students of Latacunga city and its surrounds. Students can choose two specialties such as: electricity and automotive. These are the unique careers which offer this institution, so each specialty has its respective curricular

plan in where students receive specific hours each school year getting a good scholar formation all his college life.

In the automotive field there are two major problems for teachers in helping learners deal with technical vocabulary. Firstly, the English teacher does not usually have specific knowledge of the learners' technical areas. Secondly, technical vocabulary in the automotive field needs to be worked on while getting on top of the specialized field. However, in spite of these limitations, teachers can play a small but useful role in preparing learners for coping with technical vocabulary. This can be done by helping learners gain the more general skills of recognizing technical words, interpreting definitions, relating senses to a core meaning, and learning word parts. Teachers can provide learners with the tools for dealing with technical words. In this way teachers need not get involved in trying to teach in a technical area, but can direct their attention to vocabulary strategies.

1.6 AUTOMOTIVE TECHNICAL MANUAL

Automotive technical manuals are written by anyone specialized into specific automotive field so who write a particular document according to the purpose to the manual which will contain automotive technical vocabulary translate to our mother tongue. There are also specialists who employ full time to produce technical manuals. Technical writers specialized in producing scientific and technical specific information readable for people who need to increase their vocabulary through technical so technical writer translate special terminology into a technical field.

Terry Bebbington (BEBBINGTON, 2004) “Automotive technical manual is a document which contain instructions for installation, operation, use, maintenance, parts list, and support, for the effective deployment of a vehicle”.pg. 1

The author says that an automotive technical manual is similar to a dictionary where it contains technical words which help for a good installation of your vehicles. It will be an effective tool for people who do not have a high level knowledge about automotive parts which are written in English language.

Terry Bebbington (BEBBINGTON, 2004) “Automotive technical manual is an investment in maintaining and repairing your vehicle, just like buying special tools you might need to work on your car or truck”.pg.3

The author mentions that automotive technical manual is a document with technical words or phrases with a concrete idea for the communication into a technical field. This technical manual contains specific grammar for getting a correct information which the people need so they can use special tools or materials which he will need to repair a vehicle all this will be written in the manual.

1.6.1 Importance of an automotive technical manual

An automotive technical manual is useful for all people who do not have a lot of knowledge of technical words in the automotive field through a technical manual these people will be able to understand and guide for repairing a vehicle. The best way ensure the maintenance your car in a good form is consulting in your owner’s automotive technical manual. That’s why, an automotive technical manual is very important for people who is involve in the automotive field.

1.6.2 Process of writing a technical manual

According to Ron Kurtus (2006) (KURTUS, 2006), the process of producing a technical manual regularly is a great effort. In most situations a technical communicator is just given one portion of the whole project. Whether someone is doing the whole job, have been assigned a critical part of the project or are managing the production of the technical manual, you need to know the process involved.

1.6.3 Tasks for a technical manual

A standard technical manual is one that is text-based with illustrations. It is usually delivered on paper, although it may also be an online manual. Technical

manuals are usually considered user, service and training manuals or guides. Marketing material may follow the same steps or tasks as a technical manual.

The tasks required in producing a standard technical manual are typically:

- Research and interview to get information
- Outline and organize technical material
- Draw or obtain pictures and graphics
- Transform technical material into common language
- Edit written material
- Print and bind manual
- Deliver final product

1.6.3.1 Draw or obtain pictures and graphics

A graphic artist or the technical writer may gather pictures and gather or draw illustrations and graphics for the document. In software user manuals, screen shots are often captured and inserted in the document. For hardware, photographs may be taken and digitized. A photograph may be used as is or it may even be changed into a line drawing through the use of graphics software. In engineering environments, drawing may be obtained from engineering drawing and computer-aided design software. Defense projects follow military specification for the drawing formats. One important thing is that you should have a good system for naming and filing your graphics files.

1.6.3.2 Common mechanical engineering terms

According to Michael Giesa (2000), shows in the next chart the common terms used in the automotive field.

Bearing	The part of a machine within which a rotating or sliding shaft is held.
Bell crank	A pivoting double lever used to change the direction of applied motion.
Boss	A cylindrical projection, as on a casting or a forging. Usually provides a contact surface around a hole.
Broach	To finish the inside of a hole to a shape other than round, as in a keyway
Burnish	To smooth or polish by a rolling or sliding tool under pressure.
Bushing	A smooth walled bearing (AKA a plain bearing). Also a tool guide in a jig or fixture
Cam	A mechanical device consisting of an eccentric or multiply curved wheel mounted on a rotating shaft, used to produce variable or reciprocating motion in another engaged or contacted part
Casting	Any object made by pouring molten metal into a mold
Chamfer	A flat surface made by cutting off the edge or corner of an object (bevel) (v) the process of creating a chafer

CHAPTER II

FIELD WORK

2.1 BRIEF CHARACTERIZATION OF THE “JUAN ABEL ECHEVERRIA” EDUCATIVE UNIT.

Juan Abel Echeverria” Educative unit “is located in Latacunga city, Eloy Alfaro parish. At the beginning “Juan Abel Echeverria” Educative Unit was founded in the 2014 with the unification of some institutions which were surrounding this institution. Moreover, this educative unit was created to educate infants and teens which live near this educative unit.

Likewise “Juan Abel Echeverria” Educative Unit was founded in 2014 and is designed to educate girls and boys of the parish. This institution provides basic education and high school programs to support children and teens’ needs. This educative unit has 30 classrooms which is directed by their teachers / as the same as presented the necessary facilities for the teaching – learning process. In addition, there are an auditorium and two large courtyards recreation.

Nowadays, this establishment serves to 1279 students from rural and urban areas, of middle and low socio-economic status, its teaching staff is made up of 55 teachers which work as matutinal as vespertine journeys.

2.2 INFORMATIVE DATA:

INSTITUTE: “JUAN ABEL ECHEVERRIA” EDUCATIVE UNIT

PROVINCE: COTOPAXI

CANTON: LATACUNGA

PARISH: ELOY ALFARO

HEADMASTER: REINOSO TAPIA HECTOR DAVID

RESEARCHER: BUSTILLOS ACURIO CARLOS VICENTE

DIRECTOR: ENCALADA TRUJILLO EDGAR GUANDIA

2.3 ANALYSIS OF THE INTERVIEW APPLIED TO TEACHERS AND AUTHORITIES AT “JUAN ABEL ECHEVERRIA” EDUCATIVE UNIT

Can students improve their English language skills through technical vocabulary teaching?

Yes, students can improve their English language skills because they are going to know new words which are necessary for their career. They will be motivated and encouraged to know new words so they will be able to improve their English language skills. English technical vocabulary is most used in technical institutions; this is because the majority of things come written in English language.

How important is the technical vocabulary teaching in English applied to the automotive field?

Definitely, students must know technical vocabulary in English especially if they are following a technical career. That's why, it is important that students learn technical vocabulary because nowadays all car parts come written in English so teacher should teach technical vocabulary to their students.

Which do you think that are the benefits of an automotive technical manual written in English language?

The benefits of an automotive technical manual written in the English language would be great because students would have a guide where they can consult or investigate some words which they do not know so they can find some technical words easily. Without doubt, a technical manual written in English language would be a fantastic support in the students' teaching learning process.

Do you believe that the use of a technical manual is necessary in the teaching learning process?

It is not so necessary the use of technical manuals in the teaching learning process of some students but on the other hand if the students are in a technical career in their institution, in this case they consider that it is necessary the use of a technical manual.

Do you think that the elaboration of an automotive technical manual help to rise the students´ knowledge in the English technical field?

Without doubt, the elaboration of an automotive technical manual for technical students would be essential in the teaching learning process so these students will be able to know more technical words in their technical field.

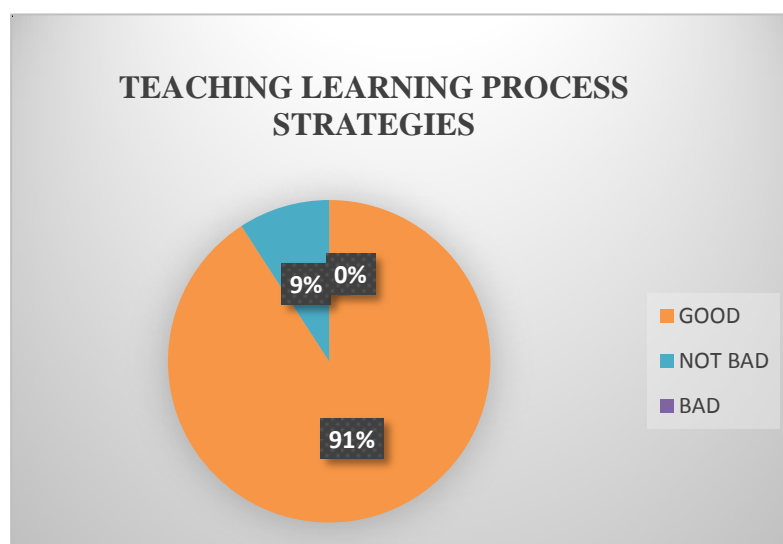
2.4 ANALYSIS THE SURVEY`S APPLICATION TO STUDENTS OF 4TH AND 5TH COURSES AT “JUAN ABEL ECHEVERRIA” EDUCATIVE UNIT.

- 1. The strategies used by your teacher in the teaching learning process of the English language are:**

Chart N. - 1

Option	Frequency	Percent
GOOD	109	91%
NOT BAD	11	9%
BAD	0	0%
Total	120	100%

Graphic N. - 1



Source: survey. “Juan Abel Echeverria” educative unit.
Elaborated by: Carlos Bustillos

In this question, 109 students who represent a 91% mentioned that the strategies used by their teacher is good, while a 9% which corresponds to 11 students think that these strategies are not so bad in their learning process.

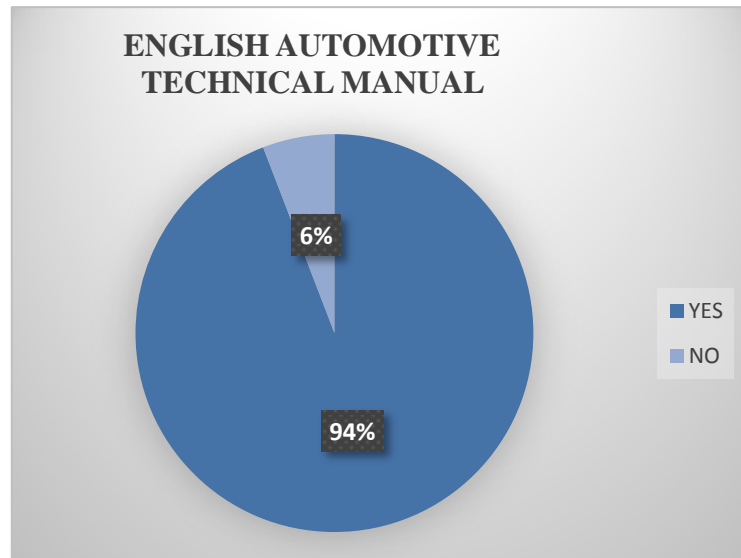
It can be determined that the majority of surveyed students accept that the strategies used by their teacher are good enough for them to learn the English language.

2. - Do you think that it is necessary the elaboration of an automotive written technical manual in English language into your institution?

Chart N.-2

Options	Frequency	Percent
YES	113	94%
NO	7	6%
Total	120	100%

Graphic N.-2



Source: survey. "Juan Abel Echeverria" educative unit.
Elaborated by: Carlos Bustillos

In this question, 113 students who represent a 94% mentioned that is necessary the elaboration of a technical manual, while a 6% which corresponds to 7 students think it is not necessary the elaboration the a technical manual in their institution.

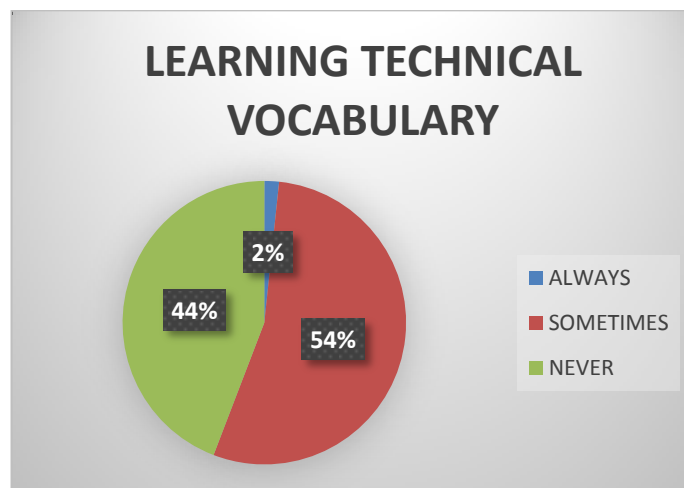
It can be determined that the majority of surveyed students accept the elaboration of an automotive technical manual in their institution.

3. How often do you learn technical vocabulary in your English class?

Chart N.-3

Option	Frequency	Percent
ALWAYS	2	2%
SOMETIMES	65	54%
NEVER	53	44%
TOTAL	120	100%

GraphicN.-3



Source: survey. "Juan Abel Echeverria" educative unit.
Elaborated by: Carlos Bustillos

In the next question, 2 students who represent a 2% said they always learn technical vocabulary, a 54% which corresponds to 65 students mentioned they learn technical English sometimes, while a 44% which corresponds to 53 students expressed they never learn technical vocabulary in their English classes.

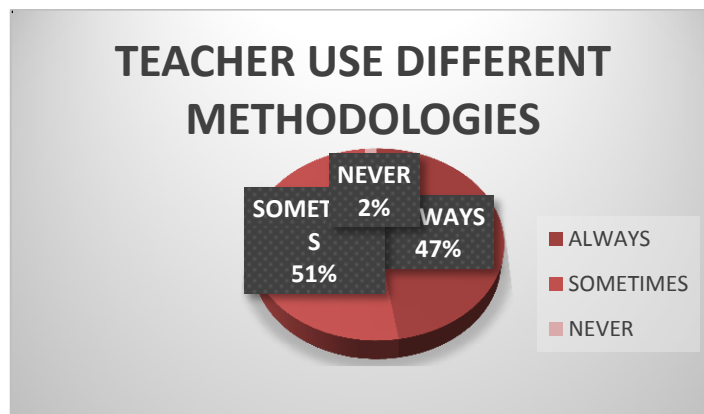
Then, according to this survey a good number of students mentioned they sometimes learn technical English, which is considered acceptable for students to be in contact with the technical vocabulary.

4. How often does your teacher use different methodologies for teaching technical vocabulary?

Chart N.-4

Option	Frequency	Percent
ALWAYS	57	47%
SOMETIMES	61	51%
NEVER	2	2%
TOTAL	120	100%

Graphic N.-4



Source: survey. "Juan Abel Echeverria" educative unit.
Elaborated by: Carlos Bustillos

In this data set, 51% of students which correspond to 61 students indicated that the teacher sometimes applied different methodologies for teaching technical vocabulary .while a 2% which corresponds to 2 students said that teacher never use different methodologies for teaching technical vocabulary.

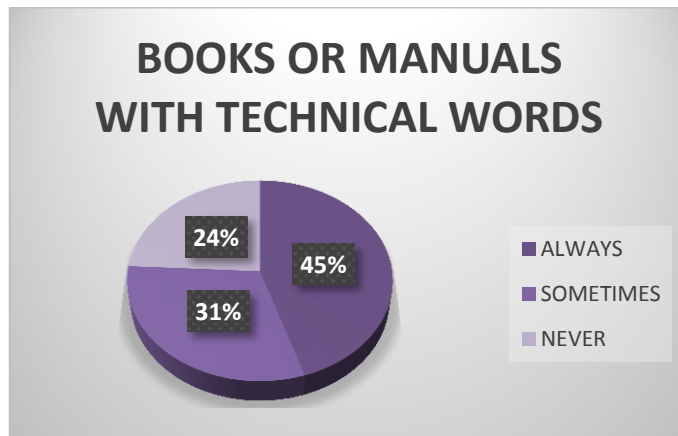
Then, according to this survey a part of the students mentioned that the teacher has always used this methodology which is favorable to their learning. Then it's important for teachers use a great variety of activities to promote the learning of technical vocabulary

5. How often do you use books or manuals that contain technical words for your learning?

Chart N.-5

Option	Frequency	Percent
ALWAYS	54	45%
SOMETIMES	37	31%
NEVER	29	24%
TOTAL	120	100%

Graphic N.-5



Source: survey. "Juan Abel Echeverria" educative unit.
Elaborated by: Carlos Bustillos

After the survey, the researcher defines that 45% of students which correspond to 54 students mentioned that the teacher always used books or manuals which contain technical words for their learning, while a 31% of students represented by 37 students mentioned that sometimes their teacher uses books or manuals for their learning, the other 24% with 29 students expressed that the teacher has never used books and manuals in the class.

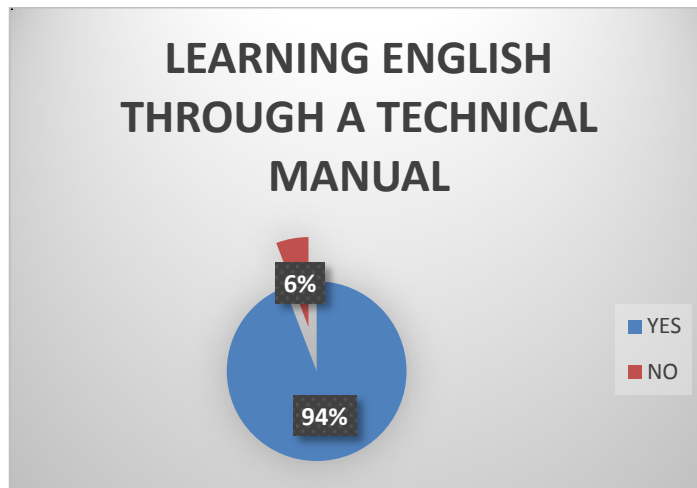
Then, it is necessary to emphasize that some students affirm that their teacher use books or manuals which contain technical words, but on the other hand some students say that teacher never use books or manuals with technical words.

6. Would you like learning English through a technical manual with a variety of activities?

Chart N.-6

Option	Frequency	Percent
YES	112	94%
NO	8	6%
Total	120	100%

Graphic N.-6



Source: survey. "Juan Abel Echeverria" educative unit.
Elaborated by: Carlos Bustillos

The percentages suggest that 94% which correspond to 112 students would like to learn English through a technical manual with a variety of activities while a 6% which represent to 8 students reject this idea.

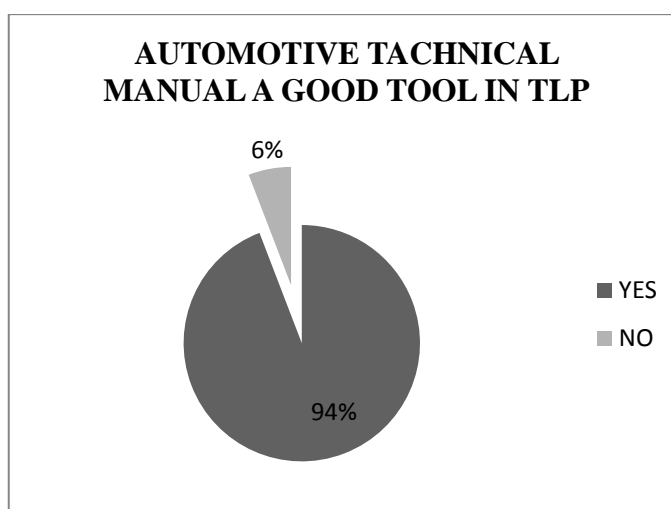
The majority of students consider that is a great idea learns English through a technical manual with a variety of activities so they can learn technical English language with more facility.

7. - Do you think that an automotive technical manual would be a good tool in the teaching learning process of the English language?

Chart N.-7

Option	Frequency	Percent
YES	113	94%
NO	7	6%
Total	120	100%

Graphic N.-7



Source: survey. "Juan Abel Echeverria" educative unit.
Elaborated by: Carlos Bustillos

In this question, one hundred-thirteen students who represent the 94% said that, a technical manual would be a good tool in the teaching learning process of the English language , on the other hand, seven students who represent a 6% manifest that wouldn't be so good use a technical manual in the teaching learning process of the English language.

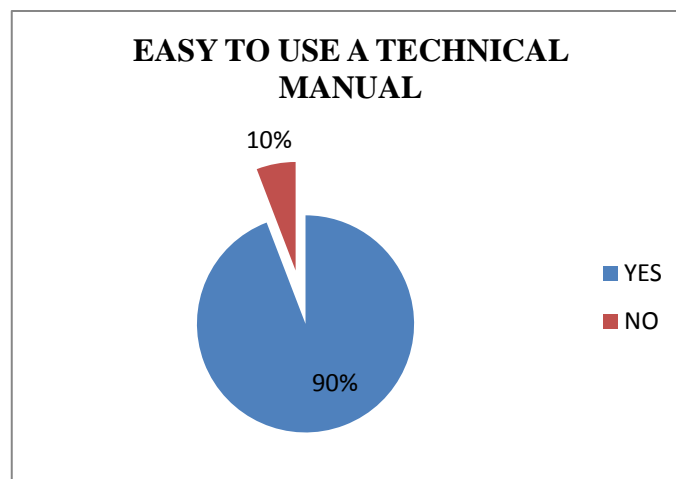
Then, some students believe that a technical manual would be a good tool in the teaching learning process of the English language but other students think that a technical manual wouldn't be a good tool for them.

8. - Do you consider that it would be easy to use an automotive technical manual written in the English language?

Chart N.-8

Option	Frequency	Percent
YES	12	10%
NO	108	90%
Total	120	100%

Graphic N.-8



Source: survey. "Juan Abel Echeverria" Educative Unit.
Elaborated by: Carlos Bustillos

The answers to this question shows that 94% which represent to 108 students express that would be easy use a technical manual, the other 6% which correspond to 12 students said that would be hard use a technical manual.

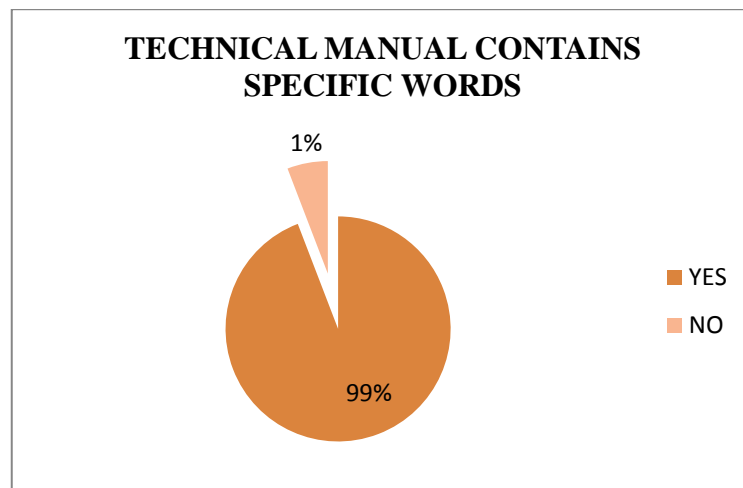
A great number of students think that use a technical manual would easy because it will contain pictures, words and other alternatives where they will have many facilities for learning technical words students can learn in a funny and interesting way through interactive activities the students acquire better habits of study.

9. Do you believe that a technical manual contain the specific words which you need to know in your technical career?

Chart N.-9

Option	Frequency	Percent
YES	119	99%
NO	1	1%
Total	120	100%

Graphic N.-9



Source: survey. "Juan Abel Echeverria" educative unit.
Elaborated by: Carlos Bustillos

The majority of students one hundred nineteen ninety three who represent the 94% express that a technical manual contains specific technical words which they need to know in their technical career while 1 student who represent the 1% said that a technical manual does not contain specific technical words which he need to know.

Most of the student express that a technical manual contains specific words which they need to know so a technical manual will have many advantages to learn the English language.

10. According to your personal point of view, will an English automotive manual help to improve your language skills?

Chart N.-10

Option	Frequency	Percent
YES	113	94%
NO	7	6%
Total	120	100%

Graphic N.-10



Source: survey. "Juan Abel Echeverria" educative unit.
Elaborated by: Carlos Bustillos

According to the answers 94% which represent to 113 students consider that an automotive technical manual would help to improve their language skills, while a 6% which correspond to 7 students manifest that an automotive technical manual wouldn't help to improve their language skills.

About this information student consider that an automotive technical manual would be an important tool which helps to improve their English language skills inside the classes but few student consider that not is important an automotive technical manual for improve their English language skills.

2.5 CONCLUSIONS

- The strategies used by teachers of “Juan Abel Echeverria” Educative Unit are good the majority of students are satisfied with their strategies of teaching.
- Students rarely learn technical vocabulary in their English classes. It is a great weakness which the institution has because students need to learn technical vocabulary because of they are into a technical institution.
- Into “Juan Abel Echeverria” Educative Unit there is not a guide, book or manual where students can learn technical vocabulary so they do not have sufficient information about technical English which they need to know due to that they are following a technical career.
- Students believe that would be an excellent idea creates an automotive technical manual written in English into their institution because this manual would be of great support for them.
- The majority of students believe that an automotive technical manual contain the specific words which they need to learn.

2.6 RECOMMENDATIONS

- Although teachers' strategies in the teaching learning process are good, they need to improve in some parts a few more because a part of students think that these teaching strategies are not so good.
- It is necessary that English teachers teach technical vocabulary to their students in their English classes because they are studying a technical career and need to know technical words according their career.
- It necessary creates a technical manual into "Juan Abel Echeverria" Educative Unit because students need to know technical vocabulary according their career.
- Students must learn to use an automotive technical manual in order to they have the facility of getting the correct information which they will need.
- An automotive technical manual must have concrete words according to the field which students are studying so it will be a great help for them.

CHAPTER III

3. PROPOSAL DESIGN

“AN AUTOMOTIVE TECHNICAL MANUAL FOR INCREASING THE STUDENTS’ TECHNICAL ENGLISH KNOWLEDGE INTO THE AUTOMOTIVE FIELD BASED ON TECHNICAL EXERCISES AND ACTIVITIES FOR the ENGLISH TEACHING LEARNING PROCESS IN STUDENTS FROM FOURTH AND FIFTH LEVELS AT “JUAN ABEL ECHEVERRIA” EDUCATIVE UNIT DURING THE ACADEMIC CYCLE MARCH-AUGUST 2015”

3.1 IMPORTANCE

This manual is pretty important for high schools with technical careers involved with the automotive field. That is the reason why, this automotive manual will have great information for easy technical English learning which will be developed of a form creative and dynamic. For years, the English language has been taught through the same methodology so it was impossible that students raise their knowledge of English language mainly technical students due to that they need to increase their knowledge of technical English into automotive field.

Apart from all this, an automotive technical manual will be an educational instructive which all teacher should have so teacher will be more efficient because he is going to teach basic knowledge and interesting in the automotive field which the students need to know in his technical career. This consult tool will be easy to use because it will have specific vocabulary and exercises that will serve like guide as for teachers as students.

Basically, the objective of this manual is to foment in a dynamic and creative manner the technical English learning in the automotive field.

3.2 JUSTIFICATION

The idea of creating this manual is for encourage the learning of English language in the students of “JUAN ABEL ECHEVERRIA” high school mainly into the automotive field due to that it will be a practical tool which will work as a guide and support to the teacher so he will go shaping and feeding the knowledge of technical vocabulary in these students because it is important that these teens have a correct academic formation as inside as outside of the institution.

Throughout this purpose will be possible design an automotive manual to be used as a practical guide in students of fourth and fifth levels of “JUAN ABEL ECHEVERRIA” high school with the goal of teaching technical vocabulary in English. This institution not only has a theoretical learning but also a practical instruction in the automotive field thus students use their learnt knowledge which they execute and put in practice. Therefor would be excellent and innovator that these guys learn English technical vocabulary not only inside the classroom also outside of it with the purpose of achieving a better knowledge of this language which will be a great support for their professional lives.

Considering all expressed before, we may develop a new way of learning in order to the student will be able to acquire an extensive English technical vocabulary. A technical manual would be the best educative resource for getting a high level of technical words. Thus, this manual would have a great variety of activities and exercises which students will develop of a dynamic form. A part from this, it will have a CD with listening activities. Besides, these teens will achieve to interact with new study forms with this manual so they will be able to develop the manual’s activities through the Cd and all exercises into the manual. To sum up, this manual will permit them pronounce and learn of an excellent way a new vocabulary in each unit.

3.3 FOUNDATIONS

3.3.1 SCIENTIFIC FOUNDATION

Into the English teaching learning process, English vocabulary is pretty important. That's why; this purpose is very interesting due to that this theme is not doing applied in other institutions. Moreover, learning vocabulary is the central part in teaching any language because without sufficient vocabulary students cannot understand or express their own ideas. Thus, this guide is necessary as for teachers as students because it permits that they improve their English technical vocabulary also this manual will be a guide into the classroom with the objective of improving the education because this manual will develop the class in an interactive way.

3.3.2 METHODOLOGICAL FOUNDATION

Through this manual teachers will be able to incorporate some pedagogical activities which are useful and necessary to make the English teaching learning process easier. This project has as goal to achieve that students who are engage in an automotive career can learn technical vocabulary faster.

3.3.3 PSYCHOLOGICAL FOUNDATION

The main aspect of this automotive manual is create an interactive and dynamic class to the students because they need to be motived for teaching learning of the English language in a right manner specially if students are going to learn technical vocabulary. Besides, the teachers must apply the pedagogical activities in a correct way to the students can understand without any problem. Therefore, the students will learn vocabulary for which it is necessary teachers use the right methods to develop this technical vocabulary.

3.3.4 PEDAGOGICAL FOUNDATION

This automotive manual has the objective of creating a dynamic English teaching learning process where students have the facility of learning technical vocabulary within the automotive field. Thus, this guide will contribute student encourage when they are immersed with technical English because they will have an educative tool where can find several English technical vocabulary when they will need to know something automotive written in English language.

In conclusion, this manual has planned teaching techniques where the student will have new and good manners of learning technical vocabulary due to that this guide is based on exclusively in didactic resources which will motivate to these students. In fact, with this manual teachers must create a real learning with a correct pedagogical process in the English teaching learning process.

3.4 OBJECTIVES

3.4.1 GENERAL

To enable the teaching and learning of technical vocabulary in the students of fourth and fifth levels through creative activities and innovative exercises applied to the automotive field.

3.4.2 SPECIFICS

- To choose the best activities to be included in the technical manual for vocabulary teaching and learning.
- To encourage the students' technical vocabulary learning with dynamic activities and exercises.
- To create an automotive technical manual with specific vocabulary for technical students of "JUAN ABEL ECHEVERRIA" high school.

3.5 PROPOSAL DESCRIPTION

This manual contains a lot of educative activities which will be a guide in the English teaching learning process within the classroom; this purpose promotes the permanent motivation in students and a significant teaching of technical English. Besides, the teacher can have a new educative resource which will permit to create a positive atmosphere achieving the active participation of students inside the classroom. In addition, the teacher will have others ways of teaching which won't be so traditional and improve the students' catchment and learning, thus it will be most interesting and less monotonous the catchment of English technical vocabulary.

On the other hand, this manual will have predesign activities for each English skill with the objective that students acquire a technical vocabulary through these task, thus this tool will give a clear explanation of each unit. Also, this guide will arrange of an audio CD so as to help to improve the student's pronunciation in each section. Therefore, it is divided into six units which will be engage with the four English skills achieving an active participation of the students so they will be able to improve their pronunciation of English technical vocabulary fulfill an active participation between teacher and student.

Finally, the educative impact of this manual will be wonderful in each student because they will feel motivated and encouraged for the technical vocabulary learning, thus they will be able to develop their professional life in a better way.

TECHNICAL MANUAL



EASY MECHANIC



BY CARLOS BUSTILLOS



INTRODUCTION

This manual is designed for students of fourth and fifth levels of "JUAN ABEL ECHEVERRÍA" High School located in Latacunga city who compact with a dynamic learning in the automotive field. It carries students a specific knowledge of automotive components creating a good learning about technical vocabulary during their student life. Thus, students are going to learn new technical words through this manual, also they will have a lot of opportunities of receiving good jobs in the future because of these students will receive all this knowledge into English language.

Then, the goal of this manual is to afford knowledge about technical vocabulary engaged to automotive field with reference to automotive works through dynamic exercises which will be of great help for both teacher and students encouraging in this manner an excellent teaching - learning process of English technical vocabulary into the automotive field. Moreover, students will have a comfortable atmosphere at the moment to learn. With this manual students learn not only learn to recognize component parts of an automobile, also students acquire technical vocabulary in a more expressive manner. In fact, they will be able to pronounce difficult words in English language improving their pronunciation in a better way. For this reason, it is pretty important that these guys learn all English skills together with several activities so as to give a real learning. From this point of view, this manual is conformed into five units concentrated on interesting topics about basic automotive components useful for the daily life of learner. Each unit provides the essential information for each automotive element. Additionally, interactive activities which will facilitate the learning and reinforce the knowledge previously learned. Then, these exercises and activities are embracing the four skills into English language such as: listening, reading, writing, and speaking which are distributed alternatively in each unit giving sense to this manual. Besides, this guide is provided a CD of audio for the listening activities in which students can practice the pronunciation of the vocabulary of each unit.

Finally, there is a section of vocabulary in each unit containing the key words used in each section so that facilitate the use of this manual.



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UNIT ONE

CAR EXTERNAL PARTS



1. READING

1.1 READ THE NEXT CONCEPTS ABOUT THE EXTERNAL PARTS OF AN AUTOMOBILE.

MIRRORS: Mirrors are found on the exterior of motor vehicles for the purposes of helping the driver see areas behind and to the sides of the vehicle, outside of the driver's peripheral vision.



TAILGATES TRUNK LIDS: The tailgates trunk lids or boot of a car is the vehicle's main storage compartment. The trunk or luggage compartment is most often located at the rear of the vehicle. Early designs included an exterior rack mounted on the rear of the vehicle to which it was possible to attach a real luggage trunk.

TAIL LIGHTS: A red light at the back of a road vehicle that makes it possible for the vehicle to be seen in the dark

STEP BUMPERS: A bumper is a structure attached or integrated in the rear part of an automobile to absorb impact in a minor collision, ideally minimizing repair costs

DOORS: A vehicle door is a type of door, typically hinged, but sometimes attached by other mechanisms such as tracks, in front of an opening which is used for entering and exiting a vehicle. A vehicle door can be opened to provide access to the opening, or closed to secure it.

RADIATORS: Radiators are heat exchangers used to transfer thermal energy from one medium to another for the purpose of cooling and heating. The majority of radiators are constructed to function in automobiles, buildings, and electronics. The radiator is always a source of heat to its environment, although this may be for either the purpose of heating this environment, or for cooling the fluid or coolant supplied to it, as for engine cooling.

FENDER: It is the American English term for the part of an automobile, motorcycle or other vehicle body that frames a wheel well. Its primary purpose is to prevent sand, mud, rocks, liquids, and other road spray from being thrown into the air by the rotating tire.

HEADLIGHTS: Lights with a reflector and lens mounted on the front of a car, automobile, or other vehicle. Also called headlamp.

BUMPERS: A bumper is a structure attached or integrated to the front and rear of an automobile to absorb impact in a minor collision, ideally minimizing repair costs

GRILLES: It is a metal frame with bars running across it that is used to cover or protect something

HEADER AND NOSE PANELS: The header panel in a car is located in the very front on the outside, just ahead of the hood. Also called a headlight-mounting panel, the part is where the grill and the headlights are



attached. The header panel does not affect the car's performance, but is an integral part of the vehicle and must be replaced if it becomes severely damaged.

HOODS : The hood or bonnet is the hinged cover over the engine of motor vehicles that allows access to the engine compartment for maintenance and repair.

1.2 COMPREHENSION



WRITE TRUE OR FALSE BEFORE EACH STATEMENT.

1.-The radiator is used to transfer thermal energy from one medium to another for the purpose of cooling and heating.

2.-Mirrors are found inside of motor vehicles for the purposes of helping the driver see areas behind and to the sides of the vehicle.

3.-A bumper is a structure attached or integrated to the front and rear of an automobile to absorb impact.

_____ 4.-Grill is a metal frame with bars running across it that is used to move something

5.-The Hood allows access to the engine compartment for maintenance and repair.



2.-LISTENING

2.1 LISTEN AND REPEAT THE NEXT AUTOMOTIVE PARTS.



Mirror



Tailgates trunk lids



Tail lights





Step bumpers



Doors



Radiators



Fenders



Headlights



Bumpers



Grilles



Header and nose panels



Hoods



3.-SPEAKING

3.1 TALK IN GROUPS. LOOK AT THE PICTURES AND DISCUSS THE FOLLOWING QUESTIONS. YOU CAN USE SOME OF WORDS IN THE BOX.

- *What do you think about these pictures?*
- *What do you think about the tuning?*
- *Do you believe that this activity is an obsession or a hobby?*
- *How do you think they feel?*
- *Would do you like to tune your car?*





PLEASURE

LESS MONEY

RELAX

A LOT OF MONEY

CHEAPER

MODIFY

MORE EXPENSIVE

MANY PEOPLE

HAPPINESS

FANATICS





4.-WRITING

4.1 LOOK AT THE PICTURES. FIND AND CIRCLE THEM IN THE WORDS SOUP.

H	E	A	D	E	R	A	N	D	N	O	S	E	P	A	N	E	L	S
Z	P	A	S	R	A	S	D	N	V	B	H	J	W	D	T	I	O	U
W	R	A	V	H	O	O	D	S	T	Y	U	I	O	P	A	S	D	P
Z	X	E	R	T	G	H	Y	O	P	O	Ñ	L	K	J	H	G	F	H
T	A	I	L	G	A	T	E	S	T	R	U	N	K	L	I	D	S	Z
M	K	L	Y	U	I	R	T	Y	H	G	A	Q	E	R	T	U	P	S
G	R	T	Y	A	S	E	R	T	Y	O	H	Q	A	R	G	Y	A	E
X	F	M	I	R	R	O	R	S	T	J	E	U	O	P	R	B	X	Q
F	W	C	V	G	H	Y	U	I	Z	O	A	P	A	S	I	R	N	W
E	A	S	D	C	E	V	B	H	R	T	D	E	R	W	L	Q	M	E
N	Z	X	A	S	W	E	R	S	V	T	L	B	N	Y	L	Ñ	K	R
D	E	R	N	M	L	K	R	Ñ	P	Ñ	I	Q	W	O	E	R	K	T
E	Q	R	T	Y	D	O	O	R	S	F	G	Q	C	J	S	Y	L	Y
R	W	E	N	F	T	A	S	Y	U	I	H	S	D	F	R	O	Q	U
S	E	W	R	A	Z	U	Y	T	X	S	T	S	R	D	G	V	B	N
F	R	S	I	P	O	I	U	Y	T	R	S	W	Q	G	F	D	S	A
D	T	D	A	W	R	T	Y	U	H	F	V	B	N	M	Ñ	O	P	T
S	A	X	C	F	R	T	Y	U	I	O	P	L	Ñ	L	P	Q	T	R
R	W	Q	E	R	T	Y	U	W	S	T	H	G	I	L	L	I	A	T



MIRRORS



HEADER AND



RADIATORS



DOORS



TAIL LIGHTS

NOSE PANELS



HEADLIGHTS



GRILLES



TAILGATES TRUNK LIDS



HOODS



FENDERS



4.2 WRITE THE WORDS IN THE PUZZLE USING TECHNICAL VOCABULARY WHICH YOU LEARNT.

CROSSWORD

The crossword puzzle grid consists of 10 numbered squares. Each square is accompanied by a small image of a car part and a blue arrow indicating the direction of the word. The images include: a fender, a mirror, a tailgate, a grille, a headlight, a tail light, a door, a radiator, a hood, and a nose panel.

- DOWN**
- 6. Mirrors
 - 7. Hoods
 - 8. Fenders
 - 9. Radiators
 - 10. Header and nose panels

- ACROSS**
- 1. Tailgates trunk lids
 - 2. Grilles
 - 3. Headlights
 - 4. Tail lights
 - 5. Doors



5. VOCABULARY

Bumpers: A usually metal or rubber bar attached to either end of a motor vehicle, such as a truck or car, to absorb impact in a collision.

Outside: The outer side, surface, or part; exterior: The outside of the house needs painting. See more.

Luggage: The bags and suitcases that a person carries when traveling.

Headlamp: It is a lamp attached to the front of a vehicle to light the road ahead.

Fenders: A guard over each wheel of a motor vehicle, for example, that is shaped and positioned so as to block the splashing of water or mud.

Grilles: A grating or openwork barrier, as for a gate, usually of metal and for admitting air to cool the engine of an automobile or the like.



UNIT TWO



CAR INTERNAL PARTS



1. - LISTENING

1.1 LISTENING AND REPEAT THE NEXT WORDS

INTERNAL PARTS OF A CAR

MEANING

Accelerator

Acelerador

Air bag

Bolsa de aire

Back seat

Asiento trasero

Booster seat

Asiento elevador

Bucket seat

Asiento de cubo

Dashboard

Tablero

Dimmer

Regulador de intensidad

Driving seat

Asiento del conductor

Emergency brake

Freno de emergencia

Footrest

Reposapiés

Gearshift

Palanca de cambios



<i>Glove compartment</i>	<i>Guantera</i>
<i>Handbrake</i>	<i>Freno de mano</i>
<i>Headrest</i>	<i>Reposacabezas</i>
<i>Headroom</i>	<i>Espacio para la cabeza</i>
<i>Horn</i>	<i>Bocina</i>
<i>Ignition</i>	<i>Ignición</i>
<i>Instrument panel</i>	<i>Tablero de instrumentos</i>
<i>Mileometer</i>	<i>Cuentakilómetros</i>
<i>Panel</i>	<i>Panel</i>
<i>Passenger seat</i>	<i>Asiento de pasajero</i>
<i>Platform</i>	<i>Plataforma</i>
<i>Rear-view mirror</i>	<i>Espejo retrovisor</i>
<i>Safety belt</i>	<i>Cinturón de seguridad</i>
<i>Speedometer</i>	<i>Velocímetro</i>
<i>Steering wheel</i>	<i>Volante</i>
<i>Stick shift</i>	<i>Caja de cambios</i>
<i>Stowage</i>	<i>Estiba</i>
<i>Sunscreen</i>	<i>Protector solar</i>
<i>Visor</i>	<i>Visera</i>
<i>The wheel</i>	<i>La rueda</i>



1.2 COMPLETE THE SENTENCES WITH WORDS FROM THE TABLE ABOVE.

1. - *The purpose of an/a is to help the passenger in the car reduce their speed in collision without getting injured.*
2. - *Anis a separate brake system in a vehicle for use in case of failure of the regular brakes and commonly used as a parking brake in automobiles.*
3. - *Ais a compartment built into the dashboard, located over the front-seat passenger's footwell in an automobile.*
4. - *The job of the is to hold the passenger in place so the passenger is almost part of the car which prevents the passenger from flying forward as the car stops abruptly in the case of a collision.*





2. WRITING

2.1 WRITE THE PICTURES IN WORDS.

a)



c)



b)



d)



2.2. FILL IN THE MISSING LETTERS TO COMPLETE THE WORDS ABOUT INTERNAL PARTS OF A CAR.

INTERNAL PARTS OF A CAR

R _ _ r vi w m rr_r

P_sse_g__s_at

_t_er_ng_he_l

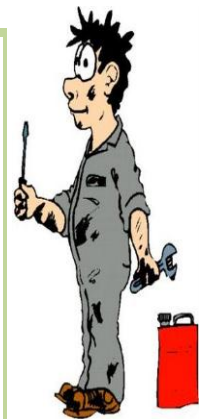
H_n_br_k_

S_n_cr_en

G_a_s_i_t

S_ee_d_m_te_

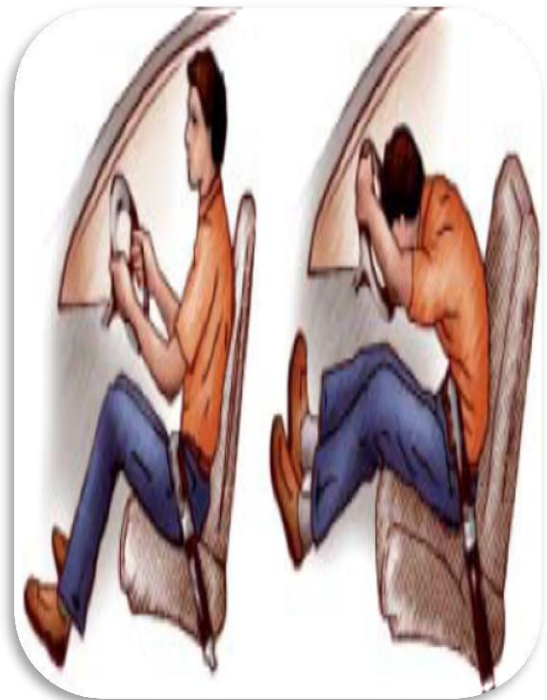
Dr_v__gs_a_





3. SPEAKING

3.1 TALK IN PAIRS. LOOK AT THE PICTURES BELOW AND DECIDE WHICH IT IS THE MOST INTERNAL PART OF A CAR. YOU CAN USE SOME OF THE WORDS AND EXPRESSIONS IN THE BOXES.



3.2 DISCUSSION

- *What are the advantages of using the Airbag?*
- *Do you believe that a safety belt Is enough to protect your life during a car accident?*
- *What can people do to prevent a car accident?*

Safe less accidents
dangerous protect

- *I believe that.....*
- *I thinkis better because it will give us more security in*
- *I agreebecause.....*
- *I disagreebecause.....*





4. READING

4.1 READ THE TEXT QUICKLY AND ANSWER THE QUESTIONS BELOW?

What is the purpose of this article?

- a. - to educate the reader.
- b. - to inform and entertain the reader.
- c. - to encourage people to use the handbrake.

WHAT DOES A CAR HANDBRAKE ACTUALLY DO?

A car's handbrake is the lever to a completely mechanical braking system, which will bypass the primary hydraulic system if it fails. When the handbrake is applied, the brake cable passes through an intermediate lever, to increase the force of your pull; this force is then split evenly between your brakes by an equalizer. Typically, a mechanical lever is added to the existing disc or drum brakes on the car. In drum brakes, the handbrake cable runs directly to a lever on the brake shoes. In disc brakes an additional lever and corkscrew is added to the existing calliper piston. When the handbrake is pulled, the lever forces the corkscrew against the piston, which would normally be activated by the hydraulic foot pedal system.

Although it is reassuring to have a secondary braking system for emergencies, the primary use of the handbrake tends to be when parking as they remain engaged until a release button is pressed; stopping your car potentially rolling away. This is good practice, as it keeps your brake cable from seizing up, ready for when you really need it. In fact, using your handbrake to stop a moving car can actually damage the brake system, so it is best to save this for real emergencies.

4.2 READ THE TEXT AGAIN. DECIDE WHETHER THE FOLLOWING STATEMENTS ARE TRUE OR FALSE IN THE TEXT. WRITE T, F IN THE BOXES.

- 1. - A car's handbrake can be pulled with the hydraulic foot pedal system.
- 2. - When the handbrake is pulled a car potentially rolling away.
- 3. - If we use the handbrake exaggeratedly can damage the brake system.



5. VOCABULARY

Failure: *an act or instance of failing or proving unsuccessful; lack of success: His effort ended in failure.*

Dashboard: *A panel under the windshield of a vehicle, containing indicator dials, compartments, and sometimes control instruments*

Almost: *as there is only a little way to go to reach a certain point. An example of almost is being on the brink of bankruptcy*

Boxes: *A container typically constructed with four sides perpendicular to the base and often having a lid or cover*

Enough: *Sufficient to meet a need or satisfy a desire; adequate: enough work to keep us all busy.*

Calliper: *A tool that has two narrow legs which can be adjusted to measure the thickness or width of something*

Damage: *Destruction or a loss in value, usefulness, or ability resulting from an action or event*

Foot well: *It is a recessed compartment in front of the seats of a vehicle.*

Abruptly: *It refers an activity which is done quickly and without warning.*

Safe: *An activity free from danger or injury.*

Corkscrew: *A device for drawing corks from bottles, consisting of a pointed metal spiral attached to a handle.*

Reassuring: *It helps to make one feel less worried about something.*



UNIT THREE

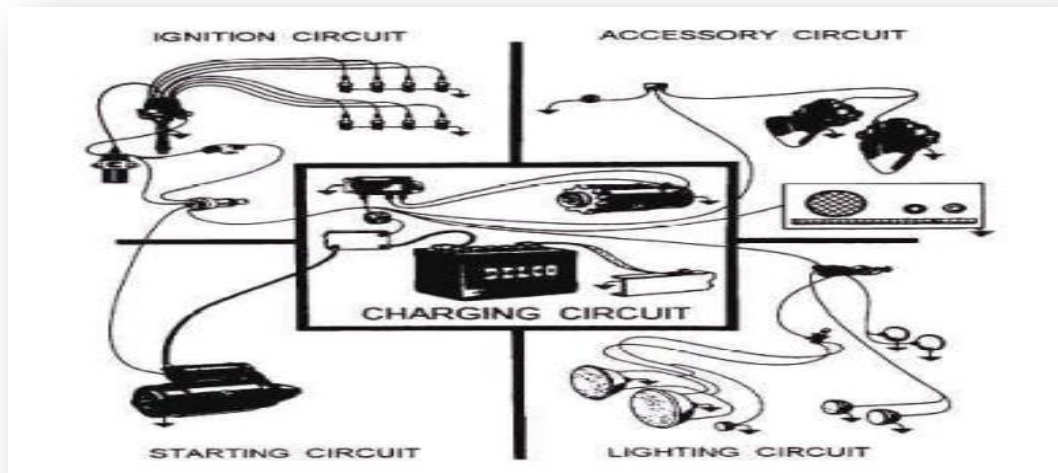
CAR ELECTRICAL SYSTEM





1. - READING

1.1 READ THE CONCEPTS BELOW ABOUT CAR ELECTRICAL SYSTEM THEN COMPLETE THE ACTIVITIES.



ELECTRICAL TERMS

Voltage: A volt is the measure of voltage or pressure pushing electrons. Compare this to a faucet in your home. When the faucet is off there is still potential to flow, but the valve holds back the pressure. Voltage is the electrical pressure that causes current to flow.

Current: Amperage is the unit used to measure electrical current. Current can be described as the quantity of electrons moving through a conductor. There are two types of electrical current: Direct Current (DC) and Alternating Current (AC). In DC systems the electrons are moving through the conductor in one direction. In AC systems the electrons change direction at a given rate of time.

Resistance: An ohm is a measure of electrical resistance. The resistance in a circuit is usually a load such as a light, radio, electrical motor, or sensor. For example, there needs to be resistance in the filament of a light bulb for it to produce light.



STARTING SYSTEM

Battery: *The purpose of the battery in a vehicle is to store chemical energy, supply electrical energy to the starter when the engine is cranking, and supplement the alternator in running various accessories (e.g., lights, radio, etc.).*

Key Switch: *A switch is a unit that can connect or disconnect electrical current from flowing. The key switch is the unit that is turned to start the engine. Usually located on the steering column, the key switch completes the circuit of electrical current to the starter solenoid.*

Solenoid: *A solenoid is another type of switch. It is called an electromechanical switch. The key switch sends electrical current to the solenoid. Without the solenoid large amounts of current would have to go through the key switch. The solenoid is placed in the electrical circuit to switch from a low current to a high current.*

Starter: *After the current goes through the solenoid it reaches the starter. The starter is an energy converter. The starter converts electrical energy to mechanical energy to crank over the engine. The starter uses a small gear that meshes with the vehicle's flywheel gears.*

Neutral Safety Switch: *The neutral safety switch only allows current to flow in the starting system if the clutch is depressed (manual transmission) or if the vehicle is in park or neutral (automatic transmission). This prevents the possibility of the vehicle being started while in gear.*

CHARGING SYSTEM

Alternator Drive Belt: *The alternator drive belt turns the pulley on the alternator. Sometimes also referred to as a fan belt, the alternator drive belt may or may not be connected to other accessories such as the power steering pump, water pump, fan, air conditioning, and air pump.*

Battery: *The battery is part of the charging system as well as the starting system. It is called a 12-volt DC battery, but actually should maintain about 12.6 volts when fully charged. The battery converts electrical energy to chemical energy (and vice versa). The battery stores energy for future use.*



Alternator: The drive belt rotates the alternator pulley, which then turns a shaft in the alternator. The alternator converts mechanical energy to electrical energy.

Voltage Regulator: The voltage regulator is commonly located in or near the alternator. It does basically what the name suggests; it regulates the electrical pressure (voltage). Common voltage from the regulator while the engine is running is 14.5 volts. If the regulator does not hold electrical pressure at or near 14.5 volts, the battery could be overcharged or undercharged by the alternator.

LIGHTS

Lights are an important safety feature in a vehicle. Without them we could not see at night or notice when someone is braking or turning ahead. The activity on the attached CD will guide you in replacing and testing bulbs and headlamps. Lights burn out with age.

1.2 UNSCRAMBLE THE LETTERS TO FORM THE TECHNICAL VOCABULARY.

1.- v o l t a g e

g t a e v o l

2.- _____

e y k t c h i s w

3.- _____

t e s a t r

4.- _____

u l r a t e n y t e f s a

5.- _____

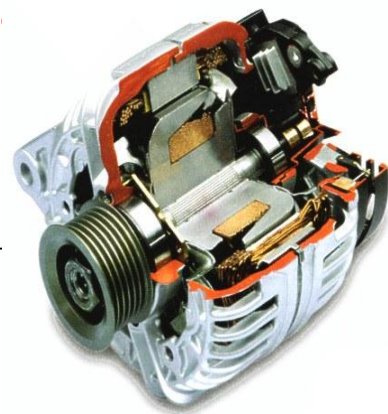
r t a l t o r n e a

6.- _____

t v o l e g a g r u e t r o a l

7.- _____

t b t a e y r





2. - LISTENING

2.1 LISTEN AND REPEAT THE NEXT ELEMENTS AS IN ENGLISH AS IN SPANISH.

CAR ELECTRICAL SYSTEM ELEMENTS

ENGLISH	SPANISH
<i>VOLTAGE</i>	<i>VOLTAJE</i>
<i>CURRENT</i>	<i>CORRIENTE</i>
<i>RESISTANCE</i>	<i>RESISTENCIA</i>
<i>BATTERY</i>	<i>BATERIA</i>
<i>KEY SWITCH</i>	<i>CONMUTADOR DE LA LLAVE</i>
<i>SOLENOID</i>	<i>ELECTROVÁLVULA</i>
<i>STARTER</i>	<i>ARRANQUE</i>
<i>NEUTRAL SAFETY SWITCH</i>	<i>INTERRUPTOR DE SEGURIDAD NEUTRAL</i>
<i>ALTERNATOR DRIVE BELT</i>	<i>ALTERNADOR CORREA DE IMPULSION</i>
<i>ALTERNATOR</i>	<i>ALTERNADOR</i>
<i>VOLTAGE REGULATOR</i>	<i>REGULADOR DE VOLTAJE</i>
<i>BULBS</i>	<i>BOMBILLAS</i>
<i>HEADLIGHTS</i>	<i>FAROS</i>



2.2 WRITE THE WORDS IN THE PUZZLE USING TECHNICAL VOCABULARY ABOUT CAR ELECTRICAL SYSTEM.

ACROSS

- 1** It is a switch that can be activated only by the use of a key?
- 2** It is an attachment for starting an internal-combustion engine without hand cranking?
- 3** It is an electrical generator that converts mechanical energy to electrical energy in the form of alternating current?
- 4** It relates to current and voltage?
- 5** It will make sure your car's alternator gets the right amount of electricity?
- 6** is a malleable rubber belt that helps the alternator operate in a motor vehicle?
- 7** It is a flow of electrical charge carriers

DOWN

- 1** It is a type of motor vehicle transmission that can automatically change gear ratios as the vehicle moves
- 2** It is used for headlamps, turn signals and brake lamps
- 3** It is the energy required to start your car
- 4** It is the part of an automobile which switches a large electric current to the starter motor
- 5** It is a lamp attached to the front of a vehicle to light the road ahead





3. WRITING

3.1 PUT THE CORRECT LETTER IN EACH BLANK.

1.- ____ *VOLTAGE*

2.- ____ *CURRENT*

3.- ____ *RESISTANCE*

4.- ____ *BATTERY*

5.- ____ *KEY SWITCH*

6.- ____ *SOLENOID*

7.- ____ *STARTER*

8.- ____ *NEUTRAL SAFETY SWITCH*

9.- ____ *ALTERNATOR DRIVE BELT*

10.- ____ *ALTERNATOR*

11.- ____ *VOLTAGE*

12.- ____ *REGULATOR*

13.- ____ *BULBS*

14.- ____ *HEADLIGHTS*

a) *BATERIA*

b) *INTERRUPTOR DE SEGURIDAD NEUTRAL*

c) *RESISTENCIA*

d) *VOLTAJE*

e) *CONMUTADOR DE LA LLAVE*

f) *FAROS*

g) *BOMBILLAS*

h) *CORRIENTE*

i) *ALTERNADOR CORREA DE IMPULSION*

j) *ALTERNADOR*

k) *REGULADOR DE VOLTAJE*

l) *ARRANQUE*

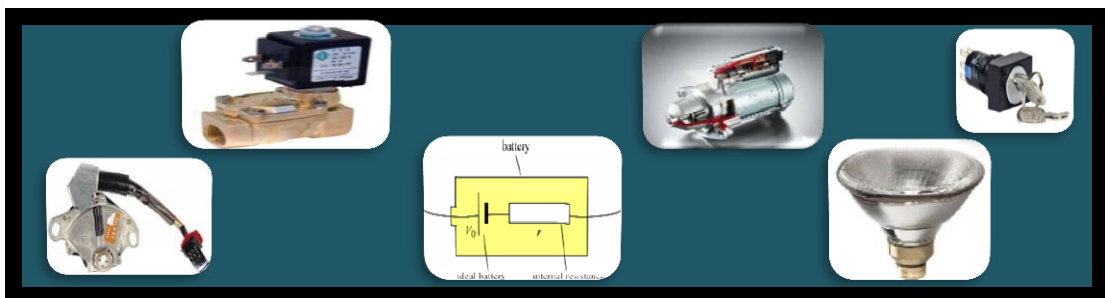
m) *ELECTROVÁLVULA*



3.2 FIND AND CIRCLE THE TECHNICAL VOCABULARY ABOUT CAR ELECTRICAL SYSTEM IN THE WORD SOUP.



B	Q	W	E	R	T	Y	U	I	O	P	Ñ	L	M	K	N	B	J	D
A	U	W	Z	C	X	E	R	T	Y	V	O	L	T	A	G	E	Z	H
Z	A	L	D	H	M	L	T	Y	U	O	I	P	L	Ñ	A	S	C	Q
M	Q	W	B	E	Q	C	U	R	R	E	N	T	W	R	Y	T	M	B
Z	X	C	V	S	B	N	M	R	T	W	Q	R	T	O	I	Z	S	X
H	E	A	D	L	I	G	H	T	S	A	S	D	F	W	G	H	J	A
Z	X	C	V	B	N	M	L	Ñ	Q	W	E	R	S	T	Y	U	I	L
R	Q	B	A	T	T	E	R	Y	P	D	O	Y	Q	E	R	T	Y	T
E	Q	W	E	R	T	Y	U	I	O	P	T	A	S	D	F	G	H	E
S	A	S	F	G	H	J	K	L	Ñ	E	O	P	Z	X	C	V	B	R
I	Q	W	E	R	T	Y	U	I	F	A	Q	S	W	D	E	F	R	N
S	Z	X	C	V	B	N	M	A	Q	Z	P	D	G	H	P	K	Ñ	A
T	Q	E	A	S	T	Y	S	W	A	D	Z	Q	D	F	G	T	Y	T
A	Z	X	C	V	B	L	S	N	I	M	K	R	L	Ñ	O	P	Y	O
N	A	Q	W	E	A	R	Z	O	A	S	R	T	E	Z	Q	P	E	R
C	X	E	R	R	Q	Z	N	N	M	B	K	L	Ñ	T	P	Ñ	O	P
E	A	Z	T	H	Y	E	Y	P	Q	Z	X	C	R	T	R	Q	P	Y
C	Z	U	F	B	L	K	L	Ñ	A	S	D	F	G	H	Y	A	Y	U
W	E	C	V	O	L	J	Q	W	E	R	T	Y	U	I	O	P	T	Ñ
N	Z	X	S	Z	X	K	E	Y	S	W	I	T	C	H	A	S	D	S





4. - SPEAKING

4.1 DISCUSS THE TOPIC

- *How much do you know about car electrical system?*
- *How important is the car electrical system in the automobile?*
- *What are the main elements of car electrical system?*

TIP

When answering questions, try to justify your answers, given examples and relate your answers, to your personal experiences or background knowledge.

5.- VOCABULARY

Faucet:

A device for regulating the flow of a liquid from a reservoir such as a drum.

Filament: *it is a fine or very thin thread or fiber.*

Flywheel: *A heavy-rimmed rotating wheel used to minimize variations in angular velocity and revolutions per minute.*

Diodes: *A device, as a two-element electron tube or a semiconductor, through which current can pass freely in only one direction.*



UNIT FOUR

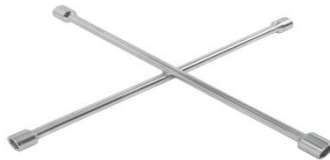
CHANGING A FLAT TIRE ON A CAR

TOOLS TO CHANGE A FLAT TIRE

A JACK



A LUG NUT WRENCH



A SPARE TIRE



A WHEEL LOCK



WHEEL ALIGNMENT STUDS



EXTENSION BARS FOR LOWERING THE SPARE TIRE



PROCEDURE

- STEP 1:** SPECULATE ABOUT HOW LONG IT'LL TAKE TO FIX THE TIRE.
- STEP 2:** BREAK THE NUTS
- STEP 3:** PLACE THE JACK
- STEP 4:** JACK UP THE CAR
- STEP 5:** REMOVE THE NUTS
- STEP 6:** REMOVE THE WHEEL
- STEP 7:** PUT ON THE SPARE
- STEP 8:** HAND-TIGHTEN THE NUTS





1.-WRITING

1.1 WRITE THE CORRECT TOOL NEXT TO EACH ACTIVITY.

- a) *Up the car* = *A jack*
- b) *It serves for lowering the spare tire* =
- c) *Remove the nuts* =
- d) *Serve as a replacement* =
- e) *Tire ensures* =



1.2 MATCH EACH PICTURE ACCORDING TO THE TOOLS.

1



A jack

2



Extension bars for lowering the spare tire

3



A wheel lock

4



A spare tire

2.-SPEAKING

2.1 WORK IN PAIRS

Take turns. Ask and answer the following.



Why it is important to check the tire pressure of your vehicles tires regularly?

Have you ever used a iack?

What should you do if you have a flat tire?

Have you ever changed a flat tire?

How many tools you need to change a flat tire?



3. - LISTENING

3.1 LISTEN AND REPEAT. YOU WILL HEAR THE BASIC TOOLS WHICH USE TO CHANGE A FLAT TIRE.

	<i>A jack</i>
	<i>A lug nut wrench</i>
	<i>A spare tire</i>
	<i>A wheel lock</i>
	<i>Extension bars</i>





3.2 LISTEN TO THE CONVERSATION ABOUT HOW TO CHANGE A FLAT TIRE.

DIALOGUE

BRIAN: Hi, Andy.

ANDY: Hi, Brian. What happen?

BRIAN: I need to change this flat tire .Can you heln me. nlease?

ANDY: Of course, but you must find a safe place to change your tire.

BRIAN. This seems a safe place.

ANDY: Yup, do you have the tools required?

BRIAN: I don't know. What are the tools?

ANDY. Ok, you need: A jack, A lug nut wrench, A spare tire, A wheel lock and Extension bars.

BRIAN: Ooh, I don't have some tools.

ANDY: seriously, don't worry; I will lend you the other tools.

BRIAN: well, yeah. It will be a hard work.

ANDY. Come on, Brian. It is an easy job.

BRIAN. Ok, let's start.



3.3 COMPREHENSION

ANSWER THE QUESTIONS.

- Why Andy need helping?
- Why Andy need to find a safe place?
- Which are the tools that Andy requires to change a flat tire?

3.4 SPEAKING

DISCUSS THE TOPIC

- Why is important find a safe place to change a flat tire?
- Which tool you think that would be most complicated to use?
- Do you believe that change a flat tire is an easy job?





4. - SPEAKING

4.1 READ THE FOLLOWING STORY ABOUT A FLAT TIRE.

FLAT TIRE STORY

*I was leaving work today with a female **co-worker**, and when we got to her car a male coworker informed us that she had a **flat tire**. We got to her car and found her **spare** and the equipment to change her tire. Despite the fact that there were 2 guys there, I did the majority of the work.*

*OK, now that I am done picking on them, I have to jump to their defense. They were both wearing nice clothes and I was wearing jeans, so it was easier for me to do, since it did not matter if I got **dirty**. If I had not been there, either one of them would have been happy to do it. I also kind of did it to show her that it is possible for a woman to **change** a tire. It is a nice **skill** to have if no-one is around to help. No I am not trying to be a feminist, I am happy to accept help from men when I change my own tire.*

4.2 MATCH THE WORDS HIGHLIGHTED IN THE TEXT WITH THEIR MEANINGS A-H. THERE ARE TWO EXTRA MEANINGS WHICH YOU DO NOT NEED TO USE.

- | | | |
|----------------|--------------------------|----------------|
| 1. - co-worker | <input type="checkbox"/> | a) replacement |
| 2. - flat tire | <input type="checkbox"/> | b) grungy |
| 3.-spare | <input type="checkbox"/> | c) modify |
| 4. - dirty | <input type="checkbox"/> | d) help |
| 5.-change | <input type="checkbox"/> | e) low wheel |
| 6.-skill | <input type="checkbox"/> | f) colleague |
| | | g) favorite |
| | | h) ability |



4.3 SPEAKING

DISCUSS

- a) Do you think that a woman is able to change a flat tire? Why? / Why not?
- b) Have you ever helped to change a flat tire?

5. 5 VOCABULARY

Jack: *Jack* A mechanical lifting device incorporating an external lever to which force is applied to cause a small internal piston to pressurize the fluid, usually oil, in a chamber. The pressure exerts force on a larger piston, causing it to move vertically upward and raise the bearing plate above it.

A lug nut wrench: *A lug wrench is the name for a type of socket wrench used to loosen and tighten lug nuts on automobile wheels. In the United Kingdom and Australia, this tool is commonly known as a wheel brace.*

A spare tire: *A spare tire or spare tyre is an additional tire carried in a motor vehicle as a replacement for one that goes flat, a blowout, or other emergency. Spare tire is generally a misnomer, as almost all vehicles actually carry an entire wheel with a tire mounted on it as a spare, as fitting a tire to a wheel would require a motorist to carry additional, specialized equipment.*

Nuts: *A lug nut or wheel nut is a fastener, specifically a nut, used to secure a wheel on a vehicle. Typically, lug nuts are found on automobiles, trucks, and other large vehicles using rubber tires*

Hand-tighten:

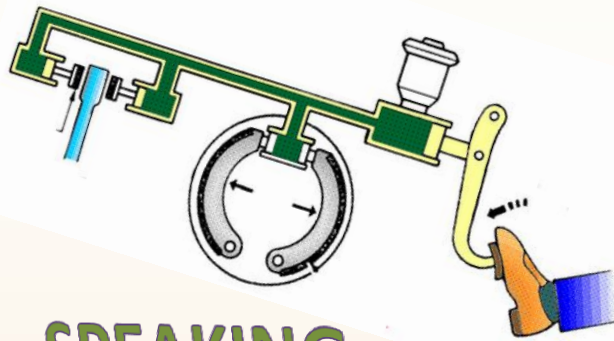
As tight as can be made by the hand; as, to tighten the nut hand-tight

Tire pressure: *A tire-pressure gauge is a pressure gauge used to measure the pressure of tires on a vehicle. Since tires are rated for specific loads at certain pressure, it is important to keep the pressure of the tire at the optimal amount.*



UNIT FIVE

AUTOMOTIVE BRAKE SYSTEM



1.-SPEAKING

1.1 TALK IN GROUP. LOOK AT THE PICTURES AND DISCUSS THE FOLLOWING QUESTIONS.

- *What do you understand is an automotive braking system?*
- *In your opinion, are they important?*
- *Have you ever had an accident car describe what happened?*





2.-WRITING

2.1 PUT THE NUMBERS TO WHAT THEY REFER TO.

1. Disc Brakes

2. Brake

3. Drum Brakes

4. Brake fluid

___ It is a mechanical device which inhibits motion, slowing or stopping a moving object.

___ They are comprised of a disc or rotor, a caliper assembly, disc brake pads and the wheel bearings.

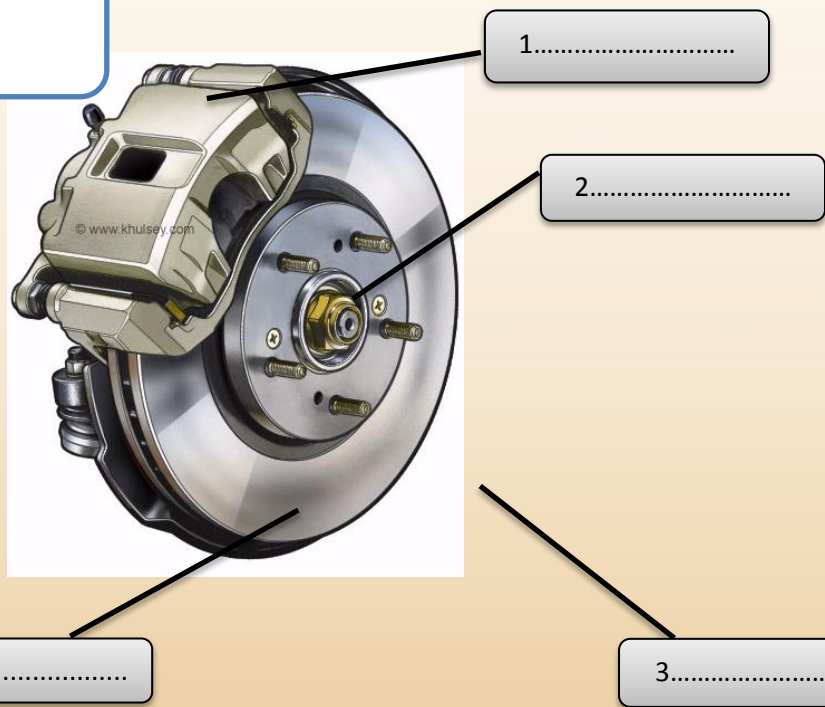
___ they are comprised of a drum & backing plate, a hub or axle assembly, brake shoes, wheel cylinder, wheel bearings.

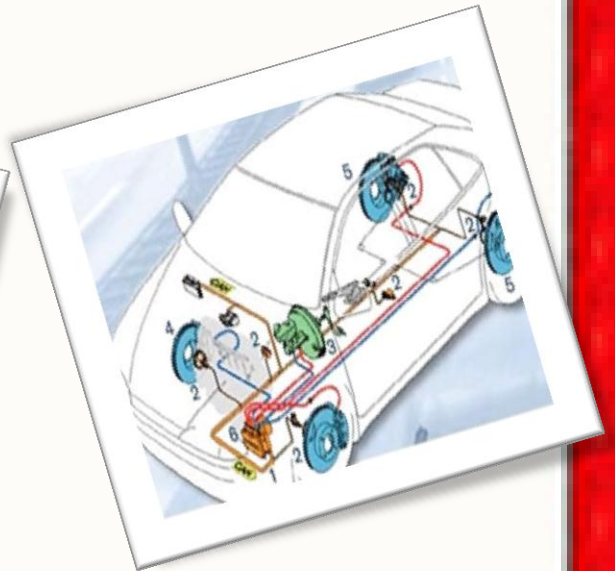
___ It is a type of hydraulic fluid used in brake applications for automobiles and light trucks.



2.2 WRITE THE PARTS OF THE DISC BRAKES. USE THE TECHNICAL WORDS FROM THE BOX.

Wheel braking, wheel studs, caliper assembly, disc

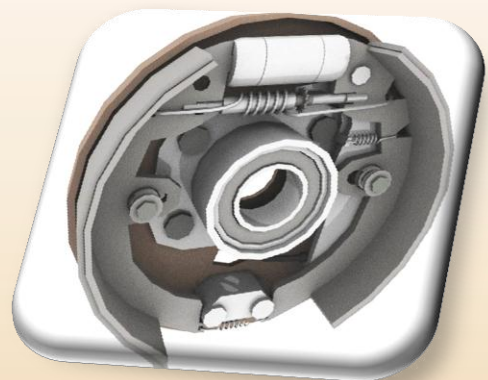




3. LISTENING

3.1 LISTEN AND REPEAT THE PARTS OF THE DRUM BRAKE.

- *Wheel cylinder*
- *Hardware and springs*
- *Backing plate*
- *Brake shoes*
- *Self-adjuster*
- *Parking brake cable*



3.2 LISTEN AGAIN AND MATCH THE WORDS WITH THEIR MEANINGS.

1. *Wheel cylinder*
2. *Hardware and springs*
3. *Backing plate*
4. *Brake shoes*



a. It is a rigid plate, usually of steel in the shape of an arc of a cylinder, coated on the outside of its curved surface with a friction-producing material.

b. It is the mechanical equipment necessary for conducting an activity. (to rise, leap, move).

c. It is made of polyurethane to dampen the vibration and reduce the transfer of heat from the polisher.

d. It is located inside the brake drum, and bolted to the backing plate.

4.-READING

4.1 READ THE PARAGRAPHS A, B, AND C, THE TEXT THAT FOLLOW.

a

Disc Brakes are comprised of a disc or rotor, a caliper assembly, disc brake pads and the wheel bearings and hardware necessary to mount the components on the vehicle.

b

Drum Brakes are comprised of a drum & backing plate, a hub or axle assembly, brake shoes, wheel cylinder, wheel bearings and hardware necessary to mount these components on the vehicle.

C

Brake fluid is a type of hydraulic fluid used in brake applications for automobiles and light trucks. It is used to transfer force under pressure from where it is created through hydraulic lines to the braking mechanism near the wheels.

4.2 DISCUSS.

- *What do you understand in the paragraph a?*
- *Do you know about of this kind of tools?*



5.-VOCABULARY

Backing plate: *It is made of polyurethane to dampen the vibration and reduce the transfer of heat from the polisher.*

Brake shoe: *It is a rigid plate, usually of steel in the shape of an arc of a cylinder, coated on the outside of its curved surface with a friction-producing material.*

Wheel cylinder: *It is located inside the brake drum, and bolted to the backing plate.*

Hardware and springs: *It is the mechanical equipment necessary for conducting an activity.*

Hub: *It is the most basic networking device that connects multiple computers or other network devices together.*

REVISION QUIZ

Questionnaire of diagnostic evaluation about this technical manual

Student`s name:

Level:

1. - Match with lines.

- | | |
|-----------------------|---------------------|
| 1) GATO HIDRAULICO | a) A lug nut wrench |
| 2) LLAVE DE TUERCAS | b) A spare tire |
| 3) LLANTA DE REPUESTO | c) A wheel lock |
| 4) BLOQUEO DE RUEDAS | d) A jack |

2. - Complete the procedure to change a flat tire on a car.

We must break the, place the after that, jack up the car and remove the So we will put on the finally, hand-tighten the nuts.

3. - Write 10 internal parts of a vehicle.

- | | |
|----|-----|
| 1) | 6) |
| 2) | 7) |
| 3) | 8) |
| 4) | 9) |
| 5) | 10) |

4. - Select the correct meaning.

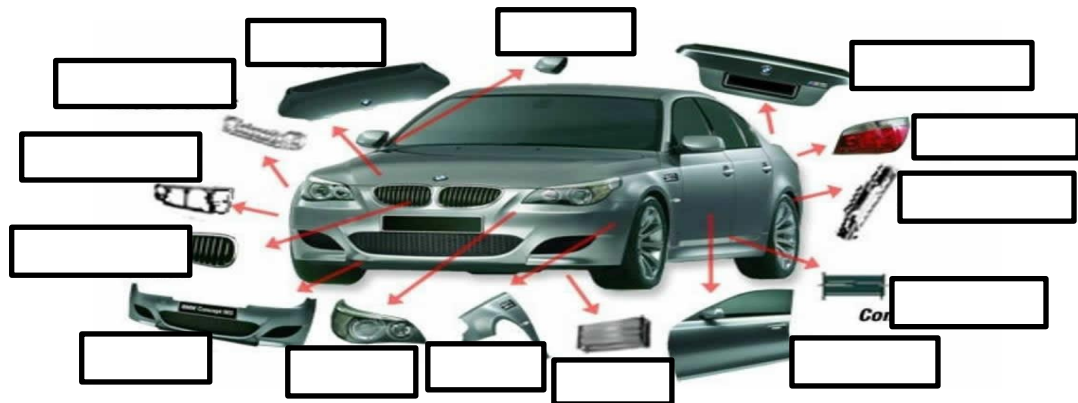
AIRBAG

- a) It is an inflatable plastic bag mounted in the passenger compartment of a motor vehicle: it cushions the driver and passengers by inflating automatically in the event of a collision.***
- b) It is an airbag that protects the vehicle tires.***
- c) It is an airbag that protects the driver's seat.***

SAFETY BELT

- a) It is a part of the vehicle which is used to move objects.***
- b) It is a belt which serves to protect pets.***
- c) It is a belt that is used to prevent someone from falling or getting injured by holding that person in place***

5.- Put the names of the next external parts.



6.- Complete

Mirrors are found on the for the purposes of helping see areas behind and to of the vehicle.

- a) The sides
- b) Exterior of the motor vehicle
- c) The driver

7.- Match with lines.

- a) It converts electrical energy to mechanical energy to crank the engine
- b) The purpose of this part into the vehicle is to store chemical energy.
- c) This part inside a circuit is usually a load a such as an electrical motor.
- d) It is the electrical pressure that causes current to flow

VOLTAGE

BATTERY

RESISTANCE

STARTER

SOUP OF WORDS

8. - Find the next words

1. - battery 2. - key switch 3.- starter 4.- alternator 5.- regulator

H	C	T	I	W	S	Y	E	K	X	R
S	X	R	Z	X	V	G	I	P	L	O
Q	W	O	E	P	T	H	P	I	J	T
S	D	F	G	T	H	Y	C	T	Y	A
D	F	T	Z	Y	R	Q	W	E	R	L
X	C	V	B	E	N	A	M	K	L	U
Y	K	N	T	P	F	D	T	S	R	G
P	O	T	I	U	K	F	D	S	T	E
Z	A	L	T	E	R	N	A	T	O	R
B	Z	X	C	V	B	N	M	O	E	Z

9. - Match with lines and fill the crossword.

DISC BRAKES

a) They are comprised of a drum and backing plate.

BRAKE FLUID

b) It is a mechanical device which inhibit notion.

DRUM BRAKES

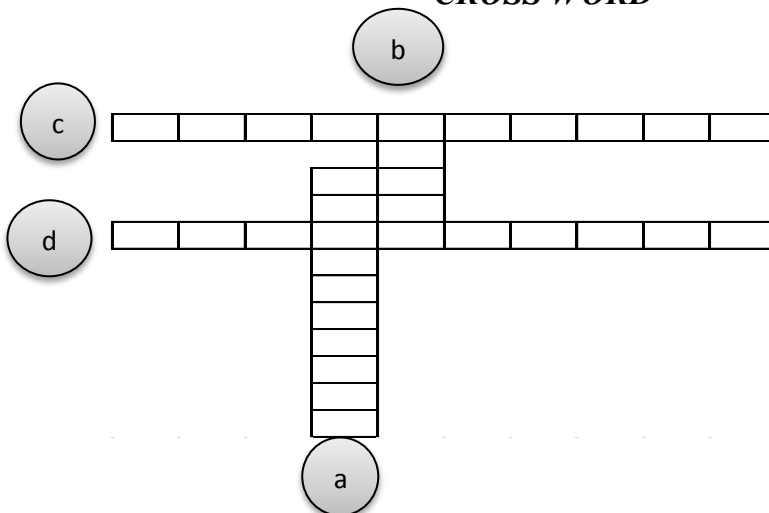
c) They are comprised of a disc or rotor.

BRAKE

d) It is a type of hydraulic fluid used in brake applications.

CROSS WORD

CROSS WORD



UNIT PLAN 1

GENERAL INFORMATION

AREA: English as a foreign language

HIGH SCHOOL: “JUAN ABEL ECHEVERRIA” EDUCATIVE UNIT

TARGET GROUP: Fourth and fifth years

CLASS SCHEDULE: Afternoon

EDUCATIONAL TRACK: B.G.U

LEARNING MODE: ON –SITE

UNIT TITLE: <i>Changing a flat tire on a car.</i>	
TIME DURATION: <i>1 month</i>	
<p>GOAL</p> <ul style="list-style-type: none"> ➤ <i>To obtain technical vocabulary about tools that use to change a flat tire on a car.</i> <p>COMMUNICATIVE COMPETENCE</p> <ul style="list-style-type: none"> ➤ Vocabulary: <i>verbs and nouns</i> 	
<p>LEARNING ACIVITIES</p> <ul style="list-style-type: none"> ➤ <i>To ask to some students previous information about tools used to change a flat tire on a car.</i> ➤ <i>To present students a list of technical words used in this unit.</i> ➤ <i>To show flashcards with each tool used in this unit.</i> ➤ <i>To ask to different students the meaning and function of each tool.</i> ➤ <i>To achieve that students recognize and repeat a lot of times the technical words in a correct way.</i> 	
DIDACTIC RESOURCES: <i>Cd player, flashcards, blackboard, markers, a technical manual.</i>	
CONTENT: <i>Nouns, Verbs, Adjectives.</i>	
<p>OBJECTIVE: <i>To acquire vocabulary related to this unit.</i></p> <p>Reading. - <i>Students will be able to discriminate the vocabulary.</i></p> <p>Writing. - <i>Students will practice with new vocabulary.</i></p> <p>Speaking. - <i>Students will pronounce the technical vocabulary in a correct way.</i></p> <p>Listening. - <i>Students will be able to recognize correctly the vocabulary.</i></p>	
<p style="text-align: center;">EXERCISES</p> <p>Writing. - <i>Students will fill the blanks and match the pictures with its meaning.</i></p> <p>Listening. – <i>Students will work in groups and answer some questions.</i></p> <p>Reading. - <i>Students will read a short story then they will complete some exercises about it.</i></p> <p>Speaking. - <i>Students will discuss the topic.</i></p>	<p>PERIODS</p> <p><i>5 per week</i></p>

UNIT PLAN 2

GENERAL INFORMATION

AREA: English as a foreign language

HIGH SCHOOL: “JUAN ABEL ECHEVERRIA” EDUCATIVE UNIT

TARGET GROUP: Fourth and fifth years

CLASS SCHEDULE: Afternoon

EDUCATIONAL TRACK: B.G.U

LEARNING MODE: ON –SITE

UNIT TITLE: <i>Internal parts of a car.</i>	
TIME DURATION: <i>1 month</i>	
<p>GOAL</p> <ul style="list-style-type: none"> ➤ <i>To recognize and identify the internal parts of a car.</i> <p>COMMUNICATIVE COMPETENCE</p> <ul style="list-style-type: none"> ➤ Vocabulary: <i>verbs and nouns.</i> 	
<p>LEARNING ACTIVITIES</p> <ul style="list-style-type: none"> ➤ <i>To activate your previous knowledge about the topic by looking into sets of related words and ideas.</i> ➤ <i>To get familiar with the new topic before entering to the unit.</i> ➤ <i>To use your knowledge to associate the technical vocabulary.</i> ➤ <i>To ask to different students the meaning and function of each part.</i> ➤ <i>To ask to record words they are studying when they encounter them in reading and speech.</i> 	
DIDACTIC RESOURCES: <i>Cd player, flashcards, blackboard, markers, and a technical manual.</i>	
CONTENT: <i>Nouns, Verbs.</i>	
<p>OBJECTIVE: <i>To acquire vocabulary related to this unit.</i></p> <p>Reading. - <i>Students will be able to discriminate the vocabulary.</i></p> <p>Writing. - <i>Students will practice with new vocabulary.</i></p> <p>Speaking. - <i>Students will pronounce the technical vocabulary in a correct way.</i></p> <p>Listening. - <i>Students will be able to recognize and speak correctly the new vocabulary.</i></p>	
<p style="text-align: center;">EXERCISES</p> <p>Listening. – <i>Students will listen and repeat the new vocabulary several times then they will complete some sentences with it.</i></p> <p>Writing. - <i>Students will write the pictures in words and they will complete some words related to this unit.</i></p> <p>Speaking. - <i>Students will work in pairs answering some questions.</i></p> <p>Reading. - <i>Students will read a little article and resolve some exercises.</i></p>	<p>PERIODS</p> <p><i>5 per week</i></p>

UNIT PLAN 3

GENERAL INFORMATION

AREA: English as a foreign language
CLASS SCHEDULE: Afternoon

HIGH SCHOOL: “JUAN ABEL ECHEVERRIA” EDUCATIVE UNIT
EDUCATIONAL TRACK: B.G.U

TARGET GROUP: Fourth and fifth years
LEARNING MODE: ON –SITE

UNIT TITLE: <i>External parts of a car.</i>	
TIME DURATION: <i>1 month</i>	
<p>GOAL</p> <ul style="list-style-type: none"> ➤ <i>To learn the technical vocabulary written in English about external parts of a car.</i> <p>COMMUNICATIVE COMPETENCE</p> <ul style="list-style-type: none"> ➤ Vocabulary: <i>verbs and nouns.</i> 	
<p>LEARNING ACTIVITIES</p> <ul style="list-style-type: none"> ➤ <i>To provide to students a previous knowledge about this topic.</i> ➤ <i>To better, organize and develop your new knowlegde obtained.</i> ➤ <i>To show flashcards with each external part of a car.</i> ➤ <i>To teach technical words related to this unit with its respective explanation and definition.</i> ➤ <i>To sum up all learnt in a short conclusion.</i> 	
DIDACTIC RESOURCES: <i>Cd player, flashcards, blackboard, markers, a technical manual.</i>	
CONTENT: <i>Nouns, Verbs.</i>	
<p>OBJECTIVE: <i>To acquire vocabulary related to this unit.</i></p> <p>Reading. - <i>Students will be able to discriminate the vocabulary.</i></p> <p>Writing. - <i>Students will practice with new vocabulary.</i></p> <p>Speaking. - <i>Students will pronounce the technical vocabulary in a correct way.</i></p> <p>Listening. - <i>Students will be able to recognize correctly the vocabulary.</i></p>	
<p style="text-align: center;">EXERCISES</p> <p>Reading. - <i>Students will read some concepts about external parts of a car then they will resolve some exercises.</i></p> <p>Listening. - <i>Students will listen and repeat the technical vocabulary used in this unit.</i></p> <p>Speaking. - <i>Students will work in groups and discuss the topic.</i></p> <p>Writing. - <i>Students will resolve a word soup and a crossword.</i></p>	<p>PERIODS</p> <p><i>5 per week</i></p>

UNIT PLAN 4

GENERAL INFORMATION

AREA: English as a foreign language

HIGH SCHOOL: “JUAN ABEL ECHEVERRIA” EDUCATIVE UNIT

TARGET GROUP: Fourth and fifth years

CLASS SCHEDULE: Afternoon

EDUCATIONAL TRACK: B.G.U

LEARNING MODE: ON –SITE

UNIT TITLE: <i>Car electrical system.</i>	
TIME DURATION: <i>1 month</i>	
GOAL <ul style="list-style-type: none"> ➤ <i>To identify and gain the technical vocabulary about car electrical system.</i> ➤ Vocabulary: <i>verbs and nouns.</i> 	
LEARNING ACTIVITIES <ul style="list-style-type: none"> ➤ <i>To have students develop a personal standard of this topic.</i> ➤ <i>To present students a list of technical words used in this unit then each student will write this list in their notebook.</i> ➤ <i>To show flashcards with each electrical part used in this unit.</i> ➤ <i>To ask to different students the meaning and function of each electrical part.</i> ➤ <i>To make learning new technical vocabulary fun using different activities.</i> 	
DIDACTIC RESOURCES: <i>Cd player, flashcards, blackboard, markers, a technical manual.</i>	
CONTENT: <i>Nouns, Verbs, Adjectives.</i>	
OBJECTIVE: <i>To acquire vocabulary related to this unit.</i> Reading. - <i>Students will be able to discriminate the vocabulary.</i> Writing. - <i>Students will practice with new vocabulary.</i> Speaking. - <i>Students will pronounce the technical vocabulary in a correct way.</i> Listening. - <i>Students will be able to recognize correctly the vocabulary.</i>	
<p style="text-align: center;">EXERCISES</p> <p>Reading. - <i>Students will read the concepts about this unit then they will complete the exercises.</i></p> <p>Listening. - <i>Students will listen and repeat the new technical vocabulary.</i></p> <p>Writing. - <i>Students will resolve a word soup using this vocabulary.</i></p> <p>Speaking. - <i>Students will work in groups and discuss some questions.</i></p>	<p>PERIODS <i>5 per week</i></p>

UNIT PLAN 5

GENERAL INFORMATION

AREA: English as a foreign language

HIGH SCHOOL: “JUAN ABEL ECHEVERRIA” EDUCATIVE UNIT

TARGET GROUP: Fourth and fifth years

CLASS SCHEDULE: Afternoon

EDUCATIONAL TRACK: B.G.U

LEARNING MODE: ON –SITE

UNIT TITLE: <i>Automotive brake system</i>	
TIME DURATION: <i>1 month</i>	
<p>GOAL</p> <ul style="list-style-type: none"> ➤ <i>To know the technical terms used into the English language to refer to automotive brake system.</i> 	
<p>COMMUNICATIVE COMPETENCE</p> <ul style="list-style-type: none"> ➤ Vocabulary: <i>verbs and nouns.</i> 	
<p>LEARNING ACTIVITIES</p> <ul style="list-style-type: none"> ➤ <i>To ask to some students previous information about this topic.</i> ➤ <i>To present students a list of technical words used in this unit.</i> ➤ <i>To show flashcards with technical words used to mark the automotive brake system.</i> ➤ <i>To ask to different students the meaning and function of each part.</i> ➤ <i>To achieve that students recognize and repeat a lot of times the technical words in a correct way.</i> 	
DIDACTIC RESOURCES: <i>Cd player, flashcards, blackboard, markers, a technical manual.</i>	
CONTENT: <i>Nouns, Verbs, Adjectives.</i>	
<p>OBJECTIVE: <i>To acquire vocabulary related to this unit.</i></p> <p>Reading. - <i>Students will be able to discriminate the vocabulary.</i></p> <p>Writing. - <i>Students will practice with new vocabulary.</i></p> <p>Speaking. - <i>Students will pronounce the technical vocabulary in a correct way.</i></p> <p>Listening. - <i>Students will be able to recognize correctly the vocabulary.</i></p>	
<p style="text-align: center;">EXERCISES</p> <p>Speaking. - <i>Students will work in groups and discuss some questions.</i></p> <p>Writing. - <i>Students will complete some activities using technical words.</i></p> <p>Listening. - <i>Students will listen and repeat the parts of the drum brake.</i></p> <p>Reading. - <i>Students will read some paragraphs then they will discuss it.</i></p>	<p>PERIODS</p> <p><i>5 per week</i></p>

CONCLUSIONS:

- This manual is going to develop a better teaching learning process so it will help us to gain a great student's attention.
- Moreover, this manual will serve as a reference guide in which students will be able to investigate some information into the automotive field being a useful tool for students in all moment.
- Without doubt, this guide will also help us to the improvement of technical vocabulary into automotive field.

RECOMMENDATIONS:

- Teacher must do a good use of this manual so as to students catch the information in a fun way.
- It is so important pay attention in each activity that is included inside this manual in order to have a clear interpretation of it.
- Teacher must elaborate new practical and theoretical works in order to improve the technical vocabulary with his students.

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ANNEXES



**ACADEMIC UNIT OF ADMINISTRATIVE AND HUMANISTIC
SCIENCE**

ENGLISH MAJOR

OBJECTIVE:

To get as much information as possible from the students interviewing so researchers will do questions about English teaching learning process through an interview with specific questions related to the research plan.

INSTRUCCIONES:

Read carefully the following questions and answer.

- 1. Can students improve their English language skills through the teaching of technical vocabulary?**

.....

- 2. How important is the teaching of technical vocabulary in English applied to the automotive field?**

.....

- 3. Which do you think that are the benefits of an automotive technical manual written in English language?**

.....

- 4. Do you believe that the use of a technical manual is necessary in the teaching learning process?**

.....

- 5. Do you think that the elaboration of an automotive technical manual help to rise the students' knowledge in the English technical field?**

.....



ACADEMIC UNIT OF ADMINISTRATIVE AND HUMANISTIC
SCIENCE

ENGLISH MAJOR

Survey addressed to students at “Juan Abel Echeverria” high school

Objective:

To get as much information as possible from the students survey so researchers will do questions about English teaching learning process with a comparative study of their methodologies used in class through a survey with specific questions related to the research plan.

Instructions:

Read carefully the following questions and answer.

1. - The strategies used by your teacher in the teaching learning process of the English language are:

GOOD

Not bad

BAD

2. - Do you think that it is necessary the elaboration of an automotive technical manual written in English language into your institution?

YES

NO

3. - How often do you learn technical vocabulary in your English class?

ALWAYS

SOMETIMES

NEVER

4. - How often does your teacher use different methodologies for teaching technical vocabulary?

ALWAYS

SOMETIMES

NEVER

5. - How often do you use books or manuals that contain technical words for your learning?

ALWAYS

SOMETIMES

NEVER

6. - Would you like learning English through a technical manual with a variety of activities?

YES

NO

7. - Do you think that an automotive technical manual would be a good tool in the teaching learning process of the English language?

YES

NO

8. - Do you consider that it would be easy to use an automotive technical manual written in the English language?

YES

NO

9. - Do you believe that a technical manual contain the specific words which you need to know in your technical career?

YES

NO

10. - According to your personal point of view, will an English automotive manual help to improve your language skills?

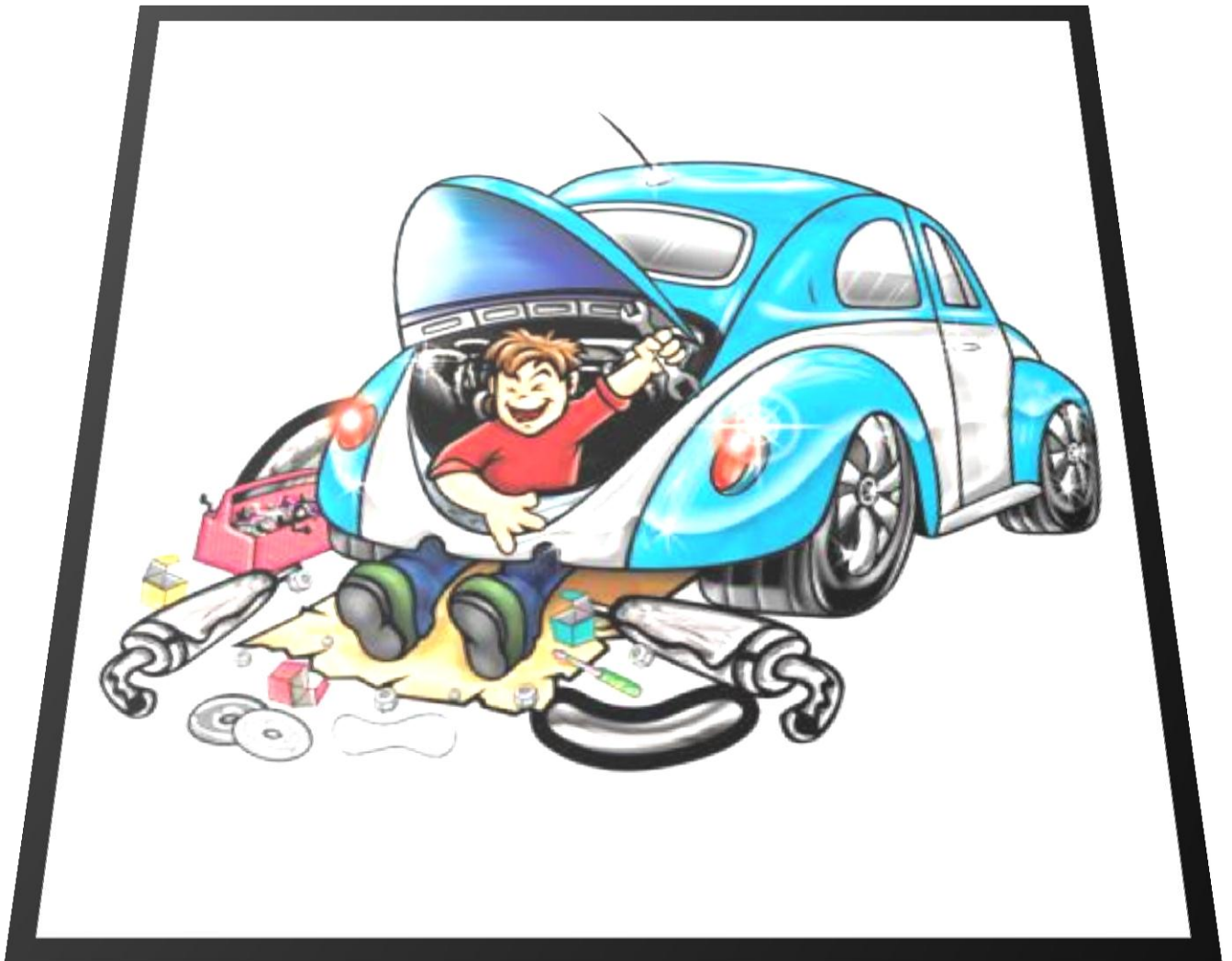
YES

NO

Thanks for your cooperation!



EASY MECHANIC



BY CARLOS BUSTILLOS

INTRODUCTION

This manual is designed for students of fourth and fifth levels of "JUAN ABEL ECHEVERRÍA" High School located in Latacunga city who compact with a dynamic learning in the automotive field. It carries students a specific knowledge of automotive components creating a good learning about technical vocabulary during their student life. Thus, students are going to learn new technical words through this manual, also they will have a lot of opportunities of receiving good jobs in the future because of these students will receive all this knowledge into English language.

Then, the goal of this manual is to afford knowledge about technical vocabulary engaged to automotive field with reference to automotive works through dynamic exercises which will be of great help for both teacher and students encouraging in this manner an excellent teaching - learning process of English technical vocabulary into the automotive field. Moreover, students will have a comfortable atmosphere at the moment to learn. With this manual students learn not only learn to recognize component parts of an automobile, also students acquire technical vocabulary in a more expressive manner. In fact, they will be able to pronounce difficult words in English language improving their pronunciation in a better way. For this reason, it is pretty important that these guys learn all English skills together with several activities so as to give a real learning. From this point of view, this manual is conformed into five units concentrated on interesting topics about basic automotive components useful for the daily life of learner. Each unit provides the essential information for each automotive element. Additionally, interactive activities which will facilitate the learning and reinforce the knowledge previously learned. Then, these exercises and activities are embracing the four skills into English language such as: listening, reading, writing, and speaking which are distributed alternatively in each unit giving sense to this manual. Besides, this guide is provided a CD of audio for the listening activities in which students can practice the pronunciation of the vocabulary of each unit.

Finally, there is a section of vocabulary in each unit containing the key words used in each section so that facilitate the use of this manual.

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UNIT ONE

CAR EXTERNAL PARTS



1. READING

1.1 READ THE NEXT CONCEPTS ABOUT THE EXTERNAL PARTS OF AN AUTOMOBILE.

MIRRORS: Mirrors are found on the exterior of motor vehicles for the purposes of helping the driver see areas behind and to the sides of the vehicle, outside of the driver's peripheral vision.

TAILGATES TRUNK LIDS: *The tailgates trunk lids or boot of a car is the vehicle's main storage compartment. The trunk or luggage compartment is most often located at the rear of the vehicle. Early designs included an exterior rack mounted on the rear of the vehicle to which it was possible to attach a real luggage trunk.*

TAIL LIGHTS: *A red light at the back of a road vehicle that makes it possible for the vehicle to be seen in the dark*

STEP BUMPERS: *A bumper is a structure attached or integrated in the rear part of an automobile to absorb impact in a minor collision, ideally minimizing repair costs*

DOORS: *A vehicle door is a type of door, typically hinged, but sometimes attached by other mechanisms such as tracks, in front of an opening which is used for entering and exiting a vehicle. A vehicle door can be opened to provide access to the opening, or closed to secure it.*

RADIATORS: *Radiators are heat exchangers used to transfer thermal energy from one medium to another for the purpose of cooling and heating. The majority of radiators are constructed to function in automobiles, buildings, and electronics. The radiator is always a source of heat to its environment, although this may be for either the purpose of heating this environment, or for cooling the fluid or coolant supplied to it, as for engine cooling.*

FENDER: *It is the American English term for the part of an automobile, motorcycle or other vehicle body that frames a wheel well. Its primary purpose is to prevent sand, mud, rocks, liquids, and other road spray from being thrown into the air by the rotating tire.*

HEADLIGHTS: *Lights with a reflector and lens mounted on the front of a car, automobile, or other vehicle. Also called headlamp.*

BUMPERS: *A bumper is a structure attached or integrated to the front and rear of an automobile to absorb impact in a minor collision, ideally minimizing repair costs*

GRILLES: *It is a metal frame with bars running across it that is used to cover or protect something*

HEADER AND NOSE PANELS: *The header panel in a car is located in the very front on the outside, just ahead of the hood. Also called a headlight-mounting panel, the part is where the grill and the headlights are attached.*

The header panel does not affect the car's performance, but is an integral part of the vehicle and must be replaced if it becomes severely damaged.

HOODS : The hood or bonnet is the hinged cover over the engine of motor vehicles that allows access to the engine compartment for maintenance and repair.

1.3 COMPREHENSION



WRITE TRUE OR FALSE BEFORE EACH STATEMENT.

TRUE 1.-The radiator is used to transfer thermal energy from one medium to another for the purpose of cooling and heating.

FALSE 2.-Mirrors are found inside of motor vehicles for the purposes of helping the driver see areas behind and to the sides of the vehicle.

TRUE 3.-A bumper is a structure attached or integrated to the front and rear of an automobile to absorb impact.

TRUE 4.-Grill is a metal frame with bars running across it that is used to move something

TRUE 5.-The Hood allows access to the engine compartment for maintenance and repair.



2.-LISTENING

2.1 LISTEN AND REPEAT THE NEXT AUTOMOTIVE PARTS.



Mirror



Tailgates trunk lids



Tail lights



Step bumpers



Doors



Radiators



Fenders



Headlights



Bumpers



Grilles



Header and nose panels



Hoods



3.-SPEAKING

3.1 TALK IN GROUPS. LOOK AT THE PICTURES AND DISCUSS THE FOLLOWING QUESTIONS. YOU CAN USE SOME OF WORDS IN THE BOX.

- *What do you think about these pictures?*
- *What do you think about the tuning?*
- *Do you believe that this activity is an obsession or a hobby?*
- *How do you think they feel?*
- *Would do you like to tune your car?*





PLEASURE

LESS MONEY

RELAX

A LOT OF MONEY

CHEAPER

MODIFY

MORE EXPENSIVE

MANY PEOPLE

HAPPINESS

FANATICS





4.-WRITING

4.1 LOOK AT THE PICTURES. FIND AND CIRCLE THEM IN THE WORDS SOUP.

H	E	A	D	E	R	A	N	D	N	O	S	E	P	A	N	E	L	S
Z	P	A	S	R	A	S	D	N	V	B	H	J	W	D	T	I	O	U
W	R	A	V	H	O	O	D	S	T	Y	U	I	O	P	A	S	D	P
Z	X	E	R	T	G	H	Y	O	P	O	Ñ	L	K	J	H	G	F	H
T	A	I	L	G	A	T	E	S	T	R	U	N	K	L	I	D	S	Z
M	K	L	Y	U	I	R	T	Y	H	G	A	Q	E	R	T	U	P	S
G	R	T	Y	A	S	E	R	T	Y	O	H	Q	A	R	G	Y	A	E
X	F	M	I	R	R	O	R	S	T	J	E	U	O	P	R	B	X	Q
F	W	C	V	G	H	Y	U	I	Z	O	A	P	A	S	I	R	N	W
E	A	S	D	C	E	V	B	H	R	T	D	E	R	W	L	Q	M	E
N	Z	X	A	S	W	E	R	S	V	T	L	B	N	Y	L	Ñ	K	R
D	E	R	N	M	L	K	R	Ñ	P	Ñ	I	Q	W	O	E	R	K	T
E	Q	R	T	Y	D	O	O	R	S	F	G	Q	C	J	S	Y	L	Y
R	W	E	N	F	T	A	S	Y	U	I	H	S	D	F	R	O	Q	U
S	E	W	R	A	Z	U	Y	T	X	S	T	S	R	D	G	V	B	N
F	R	S	I	P	O	I	U	Y	T	R	S	W	Q	G	F	D	S	A
D	T	D	A	W	R	T	Y	U	H	F	V	B	N	M	Ñ	O	P	T
S	A	X	C	F	R	T	Y	U	I	O	P	L	Ñ	L	P	Q	T	R
R	W	Q	E	R	T	Y	U	W	S	T	H	G	I	L	L	I	A	T



MIRRORS



HEADER AND



RADIATORS



DOORS



TAIL LIGHTS

NOSE PANELS



HEADLIGHTS



GRILLES



TAILGATES TRUNK LIDS



HOODS



FENDERS

4.2 WRITE THE WORDS IN THE PUZZLE USING TECHNICAL VOCABULARY WHICH YOU LEARN'T.

CROSSWORD

The crossword puzzle grid is filled with the following words:

- DOWN**
 - 11. HEADERS
 - 12. HOODS
 - 13. FENDERS
 - 14. RADIATORS
 - 15. MIRRORS
 - 16. TRUNK LIDS
 - 17. GRILLES
 - 18. HEADLIGHTS
 - 19. TAIL LIGHTS
 - 20. DOORS
- ACROSS**
 - 16. TAILGATES TRUNK LIDS
 - 17. GRILLES
 - 18. HEADLIGHTS
 - 19. TAIL LIGHTS
 - 20. DOORS

DOWN

- 11. Mirrors
- 12. Hoods
- 13. Fenders
- 14. Radiators
- 15. Header and nose panels

ACROSS

- 16. Tailgates trunk lids
- 17. Grilles
- 18. Headlights
- 19. Tail lights
- 20. Doors

5. VOCABULARY

Bumpers: *A usually metal or rubber bar attached to either end of a motor vehicle, such as a truck or car, to absorb impact in a collision.*

Outside: *The outer side, surface, or part; exterior: The outside of the house needs painting. See more.*

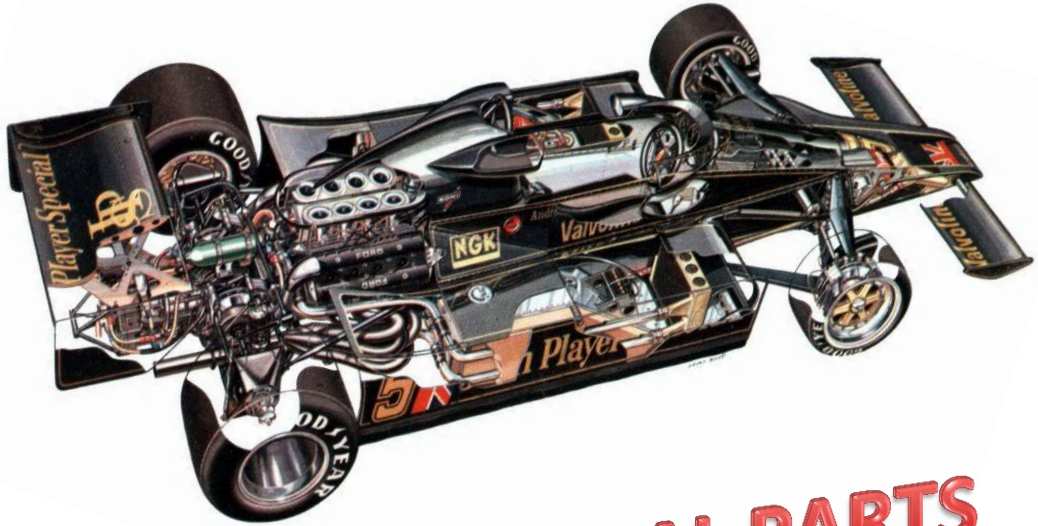
Luggage: *The bags and suitcases that a person carries when traveling.*

Headlamp: *It is a lamp attached to the front of a vehicle to light the road ahead.*

Fenders: *A guard over each wheel of a motor vehicle, for example, that is shaped and positioned so as to block the splashing of water or mud.*

Grilles: *A grating or openwork barrier, as for a gate, usually of metal and for admitting air to cool the engine of an automobile or the like.*

UNIT TWO



CAR INTERNAL PARTS



1. - LISTENING

1.1 LISTENING AND REPEAT THE NEXT WORDS



INTERNAL PARTS OF A CAR

MEANING

Accelerator

Acelerador

Air bag

Bolsa de aire

Back seat

Asiento trasero

Booster seat

Asiento elevador

Bucket seat

Asiento de cubo

Dashboard

Tablero

Dimmer

Regulador de intensidad

Driving seat

Asiento del conductor

Emergency brake

Freno de emergencia

Footrest

Reposapiés

Gearshift

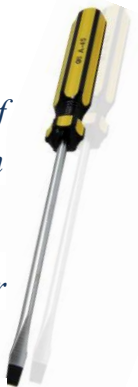
Palanca de cambios

<i>Glove compartment</i>	<i>Guantera</i>
<i>Handbrake</i>	<i>Freno de mano</i>
<i>Headrest</i>	<i>Reposacabezas</i>
<i>Headroom</i>	<i>Espacio para la cabeza</i>
<i>Horn</i>	<i>Bocina</i>
<i>Ignition</i>	<i>Ignición</i>
<i>Instrument panel</i>	<i>Tablero de instrumentos</i>
<i>Mileometer</i>	<i>Cuentakilómetros</i>
<i>Panel</i>	<i>Panel</i>
<i>Passenger seat</i>	<i>Asiento de pasajero</i>
<i>Platform</i>	<i>Plataforma</i>
<i>Rear-view mirror</i>	<i>Espejo retrovisor</i>
<i>Safety belt</i>	<i>Cinturón de seguridad</i>
<i>Speedometer</i>	<i>Velocímetro</i>
<i>Steering wheel</i>	<i>Volante</i>
<i>Stick shift</i>	<i>Caja de cambios</i>
<i>Stowage</i>	<i>Estiba</i>
<i>Sunscreen</i>	<i>Protector solar</i>
<i>Visor</i>	<i>Visera</i>
<i>The wheel</i>	<i>La rueda</i>



1.2 COMPLETE THE SENTENCES WITH WORDS FROM THE TABLE ABOVE.

1. - The purpose of an **airbag** is to help the passenger in the car reduce their speed in collision without getting injured.
2. - An **handbrake** is a separate brake system in a vehicle for use in case of failure of the regular brakes and commonly used as a parking brake in automobiles.
3. - A **speedometer** is a compartment built into the dashboard, located over the front-seat passenger's footwell in an automobile.
4. - The job of the **safety belt** is to hold the passenger in place so the passenger is almost part of the car which prevents the passenger from flying forward as the car stops abruptly in the case of a collision.





2. WRITING

2.1 WRITE THE PICTURES IN WORDS.

a)



safety belt

c)



dashboard

b)



speedometer

d)



passenger seat

2.2. FILL IN THE MISSING LETTERS TO COMPLETE THE WORDS ABOUT INTERNAL PARTS OF A CAR.

INTERNAL PARTS OF A CAR

Rear view mirror

Passenger seat

Steering wheel

Handbrake

Sunscreen

Gearshift

Speedometer

Driving seat





3. SPEAKING

3.1 TALK IN PAIRS. LOOK AT THE PICTURES BELOW AND DECIDE WHICH IT IS THE MOST INTERNAL PART OF A CAR. YOU CAN USE SOME OF THE WORDS AND EXPRESSIONS IN THE BOXES.



3.2 DISCUSSION

- *What are the advantages of using the Airbag?*
- *Do you believe that a safety belt Is enough to protect your life during a car accident?*
- *What can people do to prevent a car accident?*

Safe less accidents
dangerous protect

- *I believe that.....*
- *I thinkis better because it will give us more security in*
- *I agreebecause.....*
- *I disagreebecause.....*



4. READING

4.1 READ THE TEXT QUICKLY AND ANSWER THE QUESTIONS BELOW?

What is the purpose of this article?

- a. - to educate the reader.
- b. - to inform and entertain the reader.
- c. - to encourage people to use the handbrake.

WHAT DOES A CAR HANDBRAKE ACTUALLY DO?

A car's handbrake is the lever to a completely mechanical braking system, which will bypass the primary hydraulic system if it fails. When the handbrake is applied, the brake cable passes through an intermediate lever, to increase the force of your pull; this force is then split evenly between your brakes by an equalizer. Typically, a mechanical lever is added to the existing disc or drum brakes on the car. In drum brakes, the handbrake cable runs directly to a lever on the brake shoes. In disc brakes an additional lever and corkscrew is added to the existing calliper piston. When the handbrake is pulled, the lever forces the corkscrew against the piston, which would normally be activated by the hydraulic foot pedal system.

Although it is reassuring to have a secondary braking system for emergencies, the primary use of the handbrake tends to be when parking as they remain engaged until a release button is pressed; stopping your car potentially rolling away. This is good practice, as it keeps your brake cable from seizing up, ready for when you really need it. In fact, using your handbrake to stop a moving car can actually damage the brake system, so it is best to save this for real emergencies.

4.2 READ THE TEXT AGAIN. DECIDE WHETHER THE FOLLOWING STATEMENTS ARE TRUE OR FALSE IN THE TEXT. WRITE T, F IN THE BOXES.

1. - A car`s handbrake can be pulled with the hydraulic foot pedal system.
2. - When the handbrake is pulled a car potentially rolling away.
- 3.-If we use the handbrake exaggeratedly can damage the brake system.

5. VOCABULARY

Failure: *an act or instance of failing or proving unsuccessful; lack of success: His effort ended in failure.*

Dashboard: *A panel under the windshield of a vehicle, containing indicator dials, compartments, and sometimes control instruments*

Almost: *as there is only a little way to go to reach a certain point. An example of almost is being on the brink of bankruptcy*

Boxes: *A container typically constructed with four sides perpendicular to the base and often having a lid or cover*

Enough: *Sufficient to meet a need or satisfy a desire; adequate: enough work to keep us all busy.*

Calliper: *A tool that has two narrow legs which can be adjusted to measure the thickness or width of something*

Damage: *Destruction or a loss in value, usefulness, or ability resulting from an action or event*

Foot well: *It is a recessed compartment in front of the seats of a vehicle.*

Abruptly: *It refers an activity which is done quickly and without warning.*

Safe: *An activity free from danger or injury.*

Corkscrew: *A device for drawing corks from bottles, consisting of a pointed metal spiral attached to a handle.*

Reassuring: *It helps to make one feel less worried about something.*

UNIT THREE

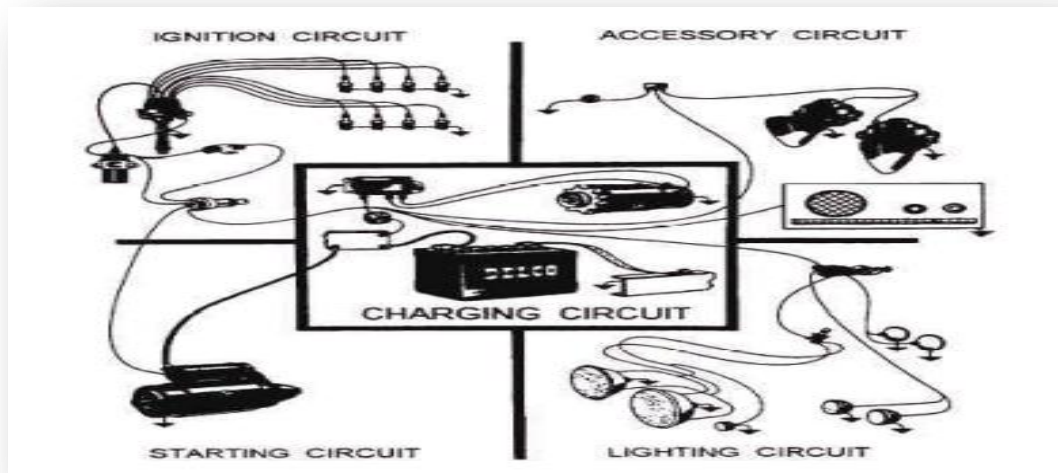
CAR ELECTRICAL SYSTEM





1. - READING

1.1 READ THE CONCEPTS BELOW ABOUT CAR ELECTRICAL SYSTEM THEN COMPLETE THE ACTIVITIES.



ELECTRICAL TERMS

Voltage: A volt is the measure of voltage or pressure pushing electrons. Compare this to a faucet in your home. When the faucet is off there is still potential to flow, but the valve holds back the pressure. Voltage is the electrical pressure that causes current to flow.

Current: Amperage is the unit used to measure electrical current. Current can be described as the quantity of electrons moving through a conductor. There are two types of electrical current: Direct Current (DC) and Alternating Current (AC). In DC systems the electrons are moving through the conductor in one direction. In AC systems the electrons change direction at a given rate of time.

Resistance: An ohm is a measure of electrical resistance. The resistance in a circuit is usually a load such as a light, radio, electrical motor, or sensor. For example, there needs to be resistance in the filament of a light bulb for it to produce light.

STARTING SYSTEM

Battery: *The purpose of the battery in a vehicle is to store chemical energy, supply electrical energy to the starter when the engine is cranking, and supplement the alternator in running various accessories (e.g., lights, radio, etc.).*

Key Switch: *A switch is a unit that can connect or disconnect electrical current from flowing. The key switch is the unit that is turned to start the engine. Usually located on the steering column, the key switch completes the circuit of electrical current to the starter solenoid.*

Solenoid: *A solenoid is another type of switch. It is called an electromechanical switch. The key switch sends electrical current to the solenoid. Without the solenoid large amounts of current would have to go through the key switch. The solenoid is placed in the electrical circuit to switch from a low current to a high current.*

Starter: *After the current goes through the solenoid it reaches the starter. The starter is an energy converter. The starter converts electrical energy to mechanical energy to crank over the engine. The starter uses a small gear that meshes with the vehicle's flywheel gears.*

Neutral Safety Switch: *The neutral safety switch only allows current to flow in the starting system if the clutch is depressed (manual transmission) or if the vehicle is in park or neutral (automatic transmission). This prevents the possibility of the vehicle being started while in gear.*

CHARGING SYSTEM

Alternator Drive Belt: *The alternator drive belt turns the pulley on the alternator. Sometimes also referred to as a fan belt, the alternator drive belt may or may not be connected to other accessories such as the power steering pump, water pump, fan, air conditioning, and air pump.*

Battery: *The battery is part of the charging system as well as the starting system. It is called a 12-volt DC battery, but actually should maintain about 12.6 volts when fully charged. The battery converts electrical energy to chemical energy (and vice versa). The battery stores energy for future use.*

Alternator: The drive belt rotates the alternator pulley, which then turns a shaft in the alternator. The alternator converts mechanical energy to electrical energy.

Voltage Regulator: The voltage regulator is commonly located in or near the alternator. It does basically what the name suggests; it regulates the electrical pressure (voltage). Common voltage from the regulator while the engine is running is 14.5 volts. If the regulator does not hold electrical pressure at or near 14.5 volts, the battery could be overcharged or undercharged by the alternator.

LIGHTS

Lights are an important safety feature in a vehicle. Without them we could not see at night or notice when someone is braking or turning ahead. The activity on the attached CD will guide you in replacing and testing bulbs and headlamps. Lights burn out with age.

1.2 UNSCRAMBLE THE LETTERS TO FORM THE TECHNICAL VOCABULARY.

1.- v o l t a g e

g t a e v o l

2.- KEY SWITCH

e y k t c h i s w

3.- STARTER

t e s a t r

4.- NEUTRAL SAFETY SWITCH

u l r a t e n y t e f s a c h t s w I

5.- ALTERNATOR

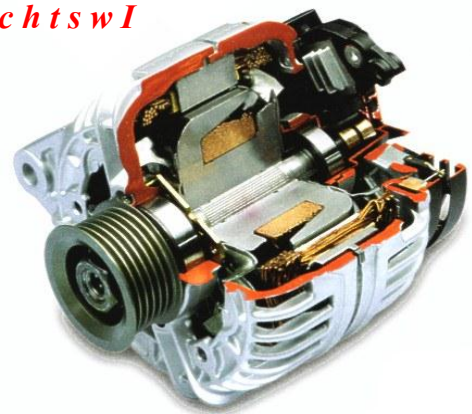
r t a l t o r n e a

6.- VOLTAGE REGULATOR

t v o l e g a g r u e t r o a l

7.- BATTERY

t b t a e y r





2. - LISTENING

2.1 LISTEN AND REPEAT THE NEXT ELEMENTS AS IN ENGLISH AS IN SPANISH.

CAR ELECTRICAL SYSTEM ELEMENTS

ENGLISH	SPANISH
<i>VOLTAGE</i>	<i>VOLTAJE</i>
<i>CURRENT</i>	<i>CORRIENTE</i>
<i>RESISTANCE</i>	<i>RESISTENCIA</i>
<i>BATTERY</i>	<i>BATERIA</i>
<i>KEY SWITCH</i>	<i>CONMUTADOR DE LA LLAVE</i>
<i>SOLENOID</i>	<i>ELECTROVÁLVULA</i>
<i>STARTER</i>	<i>ARRANQUE</i>
<i>NEUTRAL SAFETY SWITCH</i>	<i>INTERRUPTOR DE SEGURIDAD NEUTRAL</i>
<i>ALTERNATOR DRIVE BELT</i>	<i>ALTERNADOR CORREA DE IMPULSION</i>
<i>ALTERNATOR</i>	<i>ALTERNADOR</i>
<i>VOLTAGE REGULATOR</i>	<i>REGULADOR DE VOLTAJE</i>
<i>BULBS</i>	<i>BOMBILLAS</i>
<i>HEADLIGHTS</i>	<i>FAROS</i>



3. WRITING

3.1 PUT THE CORRECT LETTER IN EACH BLANK.

1.- D VOLTAGE

2.- H CURRENT

3.- C RESISTANCE

4.- A BATTERY

5.- E KEY SWITCH

6.- M SOLENOID

7.- L STARTER

8.- B NEUTRAL SAFETY SWITCH

9.- I ALTERNATOR DRIVE BELT

10.- J ALTERNATOR

11.- K VOLTAGE REGULATOR

12.- G BULBS

13.- F HEADLIGHTS

a) BATERIA

b) INTERRUPTOR DE SEGURIDAD NEUTRAL

c) RESISTENCIA

d) VOLTAJE

e) CONMUTADOR DE LA LLAVE

f) FAROS

g) BOMBILLAS

h) CORRIENTE

i) ALTERNADOR CORREA DE IMPULSION

j) ALTERNADOR

k) REGULADOR DE VOLTAJE

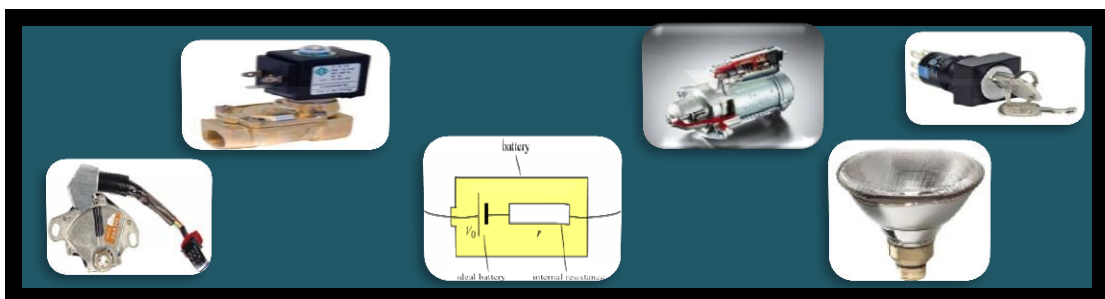
l) ARRANQUE

m) ELECTROVÁLVULA

3.2 FIND AND CIRCLE THE TECHNICAL VOCABULARY ABOUT CAR ELECTRICAL SYSTEM IN THE WORD SOUP.



B	Q	W	E	R	T	Y	U	I	O	P	Ñ	L	M	K	N	B	J	D
A	U	W	Z	C	X	E	R	T	Y	V	O	L	T	A	G	E	Z	H
Z	A	L	D	H	M	L	T	Y	U	O	I	P	L	Ñ	A	S	C	Q
M	Q	W	B	E	Q	C	U	R	R	E	N	T	W	R	Y	T	M	B
Z	X	C	V	S	B	N	M	R	T	W	Q	R	T	O	I	Z	S	X
H	E	A	D	L	I	G	H	T	S	A	S	D	F	W	G	H	J	A
Z	X	C	V	B	N	M	L	Ñ	Q	W	E	R	S	T	Y	U	I	L
R	Q	B	A	T	T	E	R	Y	P	D	O	Y	Q	E	R	T	Y	T
E	Q	W	E	R	T	Y	U	I	O	P	T	A	S	D	F	G	H	E
S	A	S	F	G	H	J	K	L	Ñ	E	O	P	Z	X	C	V	B	R
I	Q	W	E	R	T	Y	U	I	F	A	Q	S	W	D	E	F	R	N
S	Z	X	C	V	B	N	M	A	Q	Z	P	D	G	H	P	K	Ñ	A
T	Q	E	A	S	T	Y	S	W	A	D	Z	Q	D	F	G	T	Y	T
A	Z	X	C	V	B	L	S	N	I	M	K	R	L	Ñ	O	P	Y	O
N	A	Q	W	E	A	R	Z	O	A	S	R	T	E	Z	Q	P	E	R
C	X	E	R	R	Q	Z	N	N	M	B	K	L	Ñ	T	P	Ñ	O	P
E	A	Z	T	H	Y	E	Y	P	Q	Z	X	C	R	T	R	Q	P	Y
C	Z	U	F	B	L	K	L	Ñ	A	S	D	F	G	H	Y	A	Y	U
W	E	C	V	O	L	J	Q	W	E	R	T	Y	U	I	O	P	T	Ñ
N	Z	X	S	Z	X	K	E	Y	S	W	I	T	C	H	A	S	D	S





4. - SPEAKING

4.1 DISCUSS THE TOPIC

- *How much do you know about car electrical system?*
- *How important is the car electrical system in the automobile?*
- *What are the main elements of car electrical system?*



TIP

When answering questions, try to justify your answers, given examples and relate your answers, to your personal experiences or background knowledge.

5.- VOCABULARY

Faucet:

A device for regulating the flow of a liquid from a reservoir such as a drum.

Filament: *it is a fine or very thin thread or fiber.*

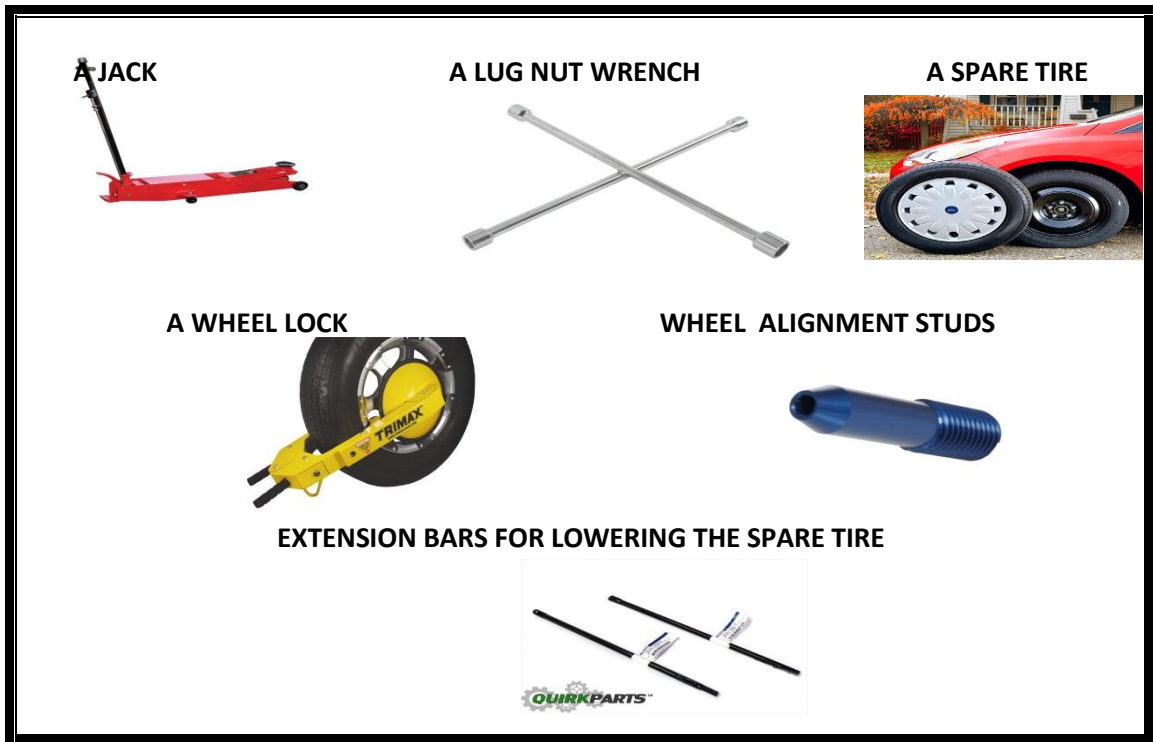
Flywheel: *A heavy-rimmed rotating wheel used to minimize variations in angular velocity and revolutions per minute.*

Diodes: *A device, as a two-element electron tube or a semiconductor, through which current can pass freely in only one direction.*

UNIT FOUR

CHANGING A FLAT TIRE ON A CAR

TOOLS TO CHANGE A FLAT TIRE



PROCEDURE

STEP 1: SPECULATE ABOUT HOW LONG IT'LL TAKE TO FIX THE TIRE.

STEP 2: BREAK THE NUTS

STEP 3: PLACE THE JACK

STEP 4: JACK UP THE CAR

STEP 5: REMOVE THE NUTS

STEP 6: REMOVE THE WHEEL

STEP 7: PUT ON THE SPARE

STEP 8: HAND-TIGHTEN THE NUTS





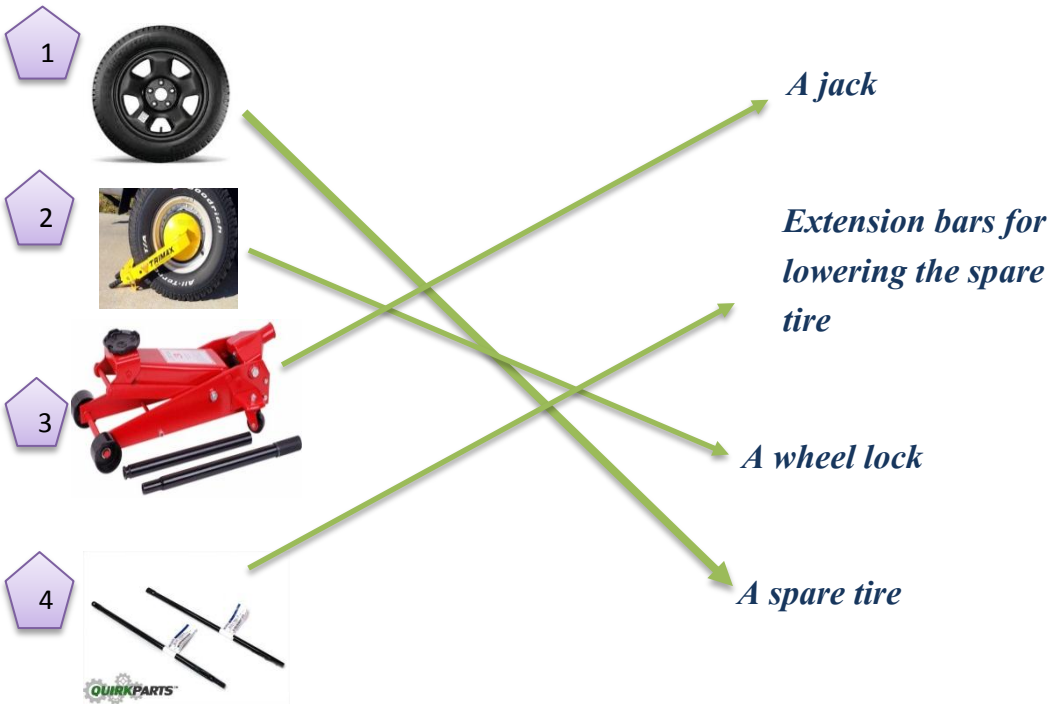
1.-WRITING

1. 1 WRITE THE CORRECT TOOL NEXT TO EACH ACTIVITY.

- f) *Up the car* = *A jack*
- g) *It serves for lowering the spare tire* = *Extension bars*
- h) *Remove the nuts* = *A lung nut wrench*
- i) *Serve as a replacement* = *A spare tire*
- j) *Tire ensures* = *A wheel lock*



1.2 MATCH EACH PICTURE ACCORDING TO THE TOOLS.



2.-SPEAKING

2.1 WORK IN PAIRS

Take turns. Ask and answer the following.

Why is it important to check the tire pressure of your vehicles tires regularly?

Have you ever used a iack?

What should you do if you have a flat tire?


Have you ever changed a flat tire?

How many tools you need to change a flat tire?



3. - LISTENING

3.1 LISTEN AND REPEAT. YOU WILL HEAR THE BASIC TOOLS WHICH USE TO CHANGE A FLAT TIRE.

	<i>A jack</i>
	<i>A lug nut wrench</i>
	<i>A spare tire</i>
	<i>A wheel lock</i>
	<i>Extension bars</i>





3.2 LISTEN TO THE CONVERSATION ABOUT HOW TO CHANGE A FLAT TIRE.

DIALOGUE

BRIAN: Hi, Andy.

ANDY: Hi, Brian. What happen?

BRIAN: I need to change this flat tire .Can you heln me. nlease?

ANDY: Of course, but you must find a safe place to change your tire.

BRIAN. This seems a safe place.

ANDY: Yup, do you have the tools required?

BRIAN: I don't know. What are the tools?

ANDY. *Ok*, you need: A jack, A lug nut wrench, A spare tire, A wheel lock and Extension bars.

BRIAN: Ooh, I don't have some tools.

ANDY: seriously, don't worry; I will lend you the other tools.

BRIAN: well, yeah. It will be a hard work.

ANDY. Come on, Brian. It is an easy job.

BRIAN. Ok, let's start.



3.3 COMPREHENSION

ANSWER THE QUESTIONS.

- Why Andy need helping?
- Why Andy need to find a safe place?
- Which are the tools that Andy requires to change a flat tire?

3.4 SPEAKING

DISCUSS THE TOPIC

- Why is important find a safe place to change a flat tire?
- Which tool you think that would be most complicated to use?
- Do you believe that change a flat tire is an easy job?





4. - SPEAKING

4.1 READ THE FOLLOWING STORY ABOUT A FLAT TIRE.

FLAT TIRE STORY

*I was leaving work today with a female **co-worker**, and when we got to her car a male coworker informed us that she had a **flat tire**. We got to her car and found her **spare** and the equipment to change her tire. Despite the fact that there were 2 guys there, I did the majority of the work.*

*OK, now that I am done picking on them, I have to jump to their defense. They were both wearing nice clothes and I was wearing jeans, so it was easier for me to do, since it did not matter if I got **dirty**. If I had not been there, either one of them would have been happy to do it. I also kind of did it to show her that it is possible for a woman to **change** a tire. It is a nice **skill** to have if no-one is around to help. No I am not trying to be a feminist, I am happy to accept help from men when I change my own tire.*

4.2 MATCH THE WORDS HIGHLIGHTED IN THE TEXT WITH THEIR MEANINGS A-H. THERE ARE TWO EXTRA MEANINGS WHICH YOU DO NOT NEED TO USE.

1. - *co-worker*

f

a) replacement

2. - *flat tire*

e

b) grungy

3. - *spare*

a

c) modify

4. - *dirty*

b

d) help

5. - *change*

c

e) low wheel

6. - *skill*

h

f) colleague

g) favorite

h) ability



4.3 SPEAKING

DISCUSS

- a) Do you think that a woman is able to change a flat tire? Why? / Why not?
- b) Have you ever helped to change a flat tire?

5. 5 VOCABULARY

Jack: *Jack* A mechanical lifting device incorporating an external lever to which force is applied to cause a small internal piston to pressurize the fluid, usually oil, in a chamber. The pressure exerts force on a larger piston, causing it to move vertically upward and raise the bearing plate above it.

A lug nut wrench: *A lug wrench is the name for a type of socket wrench used to loosen and tighten lug nuts on automobile wheels. In the United Kingdom and Australia, this tool is commonly known as a wheel brace.*

A spare tire: *A spare tire or spare tyre is an additional tire carried in a motor vehicle as a replacement for one that goes flat, a blowout, or other emergency. Spare tire is generally a misnomer, as almost all vehicles actually carry an entire wheel with a tire mounted on it as a spare, as fitting a tire to a wheel would require a motorist to carry additional, specialized equipment.*

Nuts: *A lug nut or wheel nut is a fastener, specifically a nut, used to secure a wheel on a vehicle. Typically, lug nuts are found on automobiles, trucks, and other large vehicles using rubber tires*

Hand-tighten:

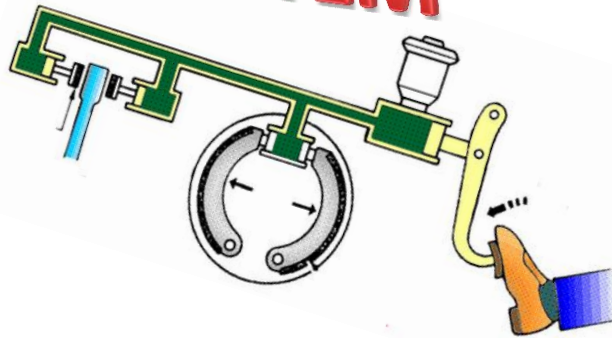
As tight as can be made by the hand; as, to tighten the nut hand-tight

Tire pressure: *A tire-pressure gauge is a pressure gauge used to measure the pressure of tires on a vehicle. Since tires are rated for specific loads at certain pressure, it is important to keep the pressure of the tire at the optimal amount.*

UNIT FIVE

AUTOMOTIVE BRAKE

SYSTEM



1.-SPEAKING

1.2 TALK IN GROUP. LOOK AT THE PICTURES AND DISCUSS THE FOLLOWING QUESTIONS.

- *What do you understand is an automotive braking system?*
- *In your opinion, are they important?*
- *Have you ever had an accident car describe what happened?*





2.-WRITING

2.1 PUT THE NUMBERS TO WHAT THEY REFER TO.

1. Disc Brakes

4 It is a mechanical device which inhibits motion, slowing or stopping a moving object.

2. Brake

1 They are comprised of a disc or rotor, a caliper assembly, disc brake pads and the wheel bearings.

3. Drum Brakes

3 they are comprised of a drum & backing plate, a hub or axle assembly, brake shoes, wheel cylinder, wheel bearings.

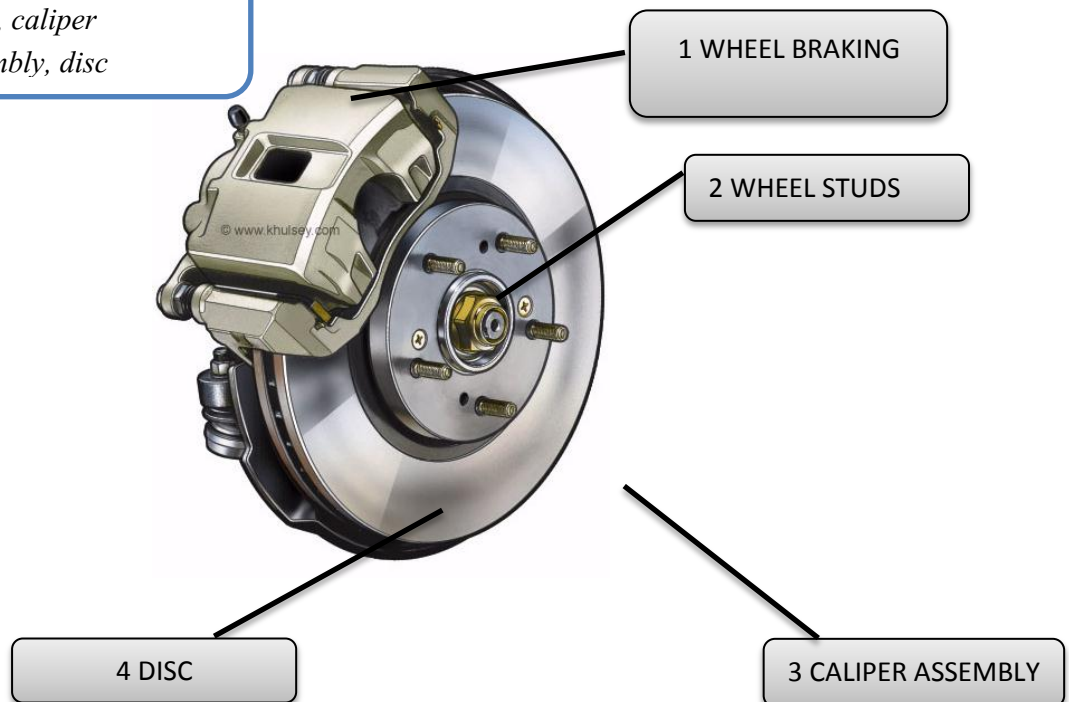
4. Brake fluid

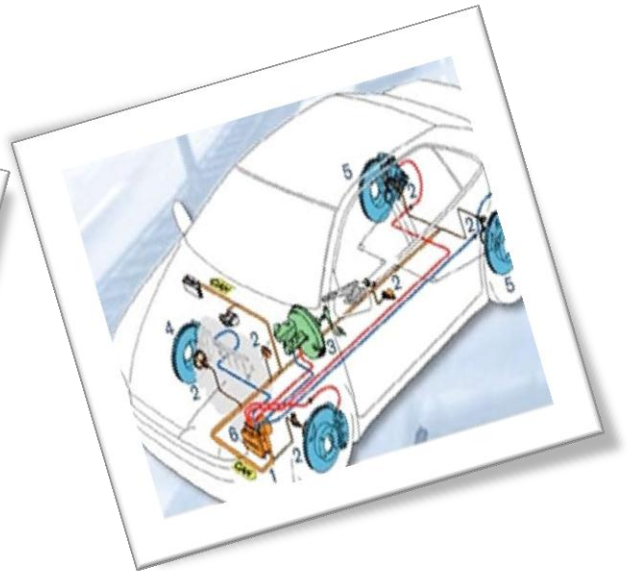
2 It is a type of hydraulic fluid used in brake applications for automobiles and light trucks.



2.2 WRITE THE PARTS OF THE DISC BRAKES. USE THE TECHNICAL WORDS FROM THE BOX.

Wheel braking, wheel studs, caliper assembly, disc





3. LISTENING

3.1 LISTEN AND REPEAT THE PARTS OF THE DRUM BRAKE.

- *Wheel cylinder*
- *Hardware and springs*
- *Backing plate*
- *Brake shoes*
- *Self-adjuster*
- *Parking brake cable*



3.2 LISTEN AGAIN AND MATCH THE WORDS WITH THEIR MEANINGS.

5. *Wheel cylinder*

A

6. *Hardware and springs*

B

7. *Backing plate*

D

8. *Brake shoes*

C



a. It is a rigid plate, usually of steel in the shape of an arc of a cylinder, coated on the outside of its curved surface with a friction-producing material.

b. It is the mechanical equipment necessary for conducting an activity. (to rise, leap, move).

c. It is made of polyurethane to dampen the vibration and reduce the transfer of heat from the polisher.

d. It is located inside the brake drum, and bolted to the backing plate.

4.-READING

4.1 READ THE PARAGRAPHS A, B, AND C, THE TEXT THAT FOLLOW.

a

Disc Brakes are comprised of a disc or rotor, a caliper assembly, disc brake pads and the wheel bearings and hardware necessary to mount the components on the vehicle.

b

Drum Brakes are comprised of a drum & backing plate, a hub or axle assembly, brake shoes, wheel cylinder, wheel bearings and hardware necessary to mount these components on the vehicle.

C

Brake fluid is a type of hydraulic fluid used in brake applications for automobiles and light trucks. It is used to transfer force under pressure from where it is created through hydraulic lines to the braking mechanism near the wheels.

4.2 DISCUSS.

- *What do you understand in the paragraph a?*
- *Do you know about of this kind of tools?*



5.-VOCABULARY

Backing plate: *It is made of polyurethane to dampen the vibration and reduce the transfer of heat from the polisher.*

Brake shoe: *It is a rigid plate, usually of steel in the shape of an arc of a cylinder, coated on the outside of its curved surface with a friction-producing material.*

Wheel cylinder: *It is located inside the brake drum, and bolted to the backing plate.*

Hardware and springs: *It is the mechanical equipment necessary for conducting an activity.*

Hub: *It is the most basic networking device that connects multiple computers or other network devices together.*

REVISION QUIZ

Questionnaire of diagnostic evaluation about this technical manual

Student`s name:

Level:

1. - Match with lines.

- | | | |
|-----------------------|---|---------------------|
| 1) GATO HIDRAULICO | → | a) A lug nut wrench |
| 2) LLAVE DE TUERCAS | → | b) A spare tire |
| 3) LLANTA DE REPUESTO | → | c) A wheel lock |
| 4) BLOQUEO DE RUEDAS | → | d) A jack |

2. - Complete the procedure to change a flat tire on a car.

We must break the **nuts**, place the **jack** after that, jack up the car and remove the **nuts wheel**. So we will put on the **spare tire**. Finally, hand-tighten the nuts.

3. - Write 10 internal parts of a vehicle.

- | | |
|--------------|-------------------|
| 1) Air bag | 6) Horn |
| 2) Back seat | 7) Steering wheel |
| 3) Dashboard | 8) Stick shift |
| 4) Dimmer | 9) Safety belt |
| 5) Handbrake | 10) Accelerator |

4. - Select the correct meaning.

AIRBAG

a) It is an inflatable plastic bag mounted in the passenger compartment of a motor vehicle: it cushions the driver and passengers by inflating automatically in the event of a collision.

b) It is an airbag that protects the vehicle tires.

c) It is an airbag that protects the driver's seat.

SAFETY BELT

a) It is a part of the vehicle which is used to move objects.

b) It is a belt which serves to protect pets.

c) It is a belt that is used to prevent someone from falling or getting injured by holding that person in place

5.- Put the names of the next external parts.



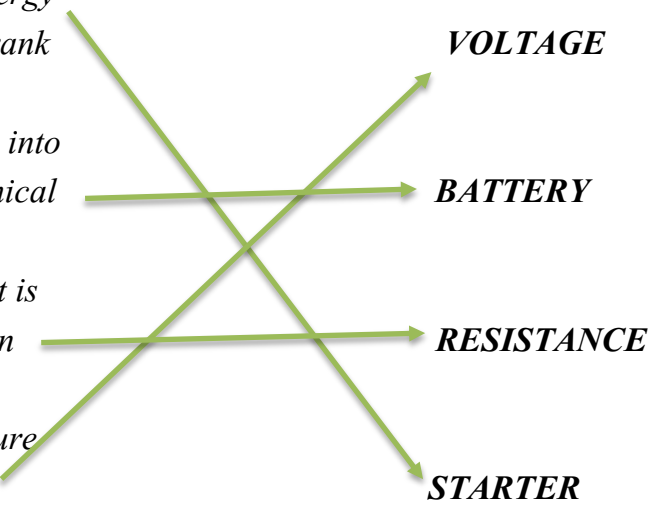
6.- Complete

Mirrors are found on the **exterior of motor vehicle** for the purposes of helping **the driver** see areas behind and to **the sides** of the vehicle.

- a) The sides
- b) Exterior of the motor vehicle
- c) The driver

7.- Match with lines.

- a) It converts electrical energy to mechanical energy to crank the engine
- b) The purpose of this part into the vehicle is to store chemical energy.
- c) This part inside a circuit is usually a load a such as an electrical motor.
- d) It is the electrical pressure that causes current to flow



SOUP OF WORDS

8. - Find the next words

1. - battery 2. - key switch 3.- starter 4.- alternator 5.- regulator

H	C	T	I	W	S	Y	E	K	X	R
S	X	R	Z	X	V	G	I	P	L	O
Q	W	O	E	P	T	H	P	I	J	T
S	D	F	G	T	H	Y	C	T	Y	A
D	F	T	Z	Y	R	Q	W	E	R	L
X	C	V	B	E	N	A	M	K	L	U
Y	K	N	T	P	F	D	T	S	R	G
P	O	T	I	U	K	F	D	S	T	E
Z	A	L	T	E	R	N	A	T	O	R
B	Z	X	C	V	B	N	M	O	E	Z

9. - Match with lines and fill the crossword.

DISC BRAKES → a) They are comprised of a drum and backing plate.

BRAKE FLUID → b) It is a mechanical device which inhibit motion.

DRUM BRAKES → c) They are comprised of a disc or rotor.

BRAKE → d) It is a type of hydraulic fluid used in brake applications.

CROSS WORD

(b)

D	I	S	C	B	R	A	K	E	S
				R					
			S	A					
			E	K					
B	R	A	K	E	F	L	U	I	D
			A						
			R						
			B						
			M						
			U						
			R						
			D						

(c)

(d)

(a)

CURRICULAR PLAN OF THE EDUCATIVE UNIT “JUAN ABEL ECHEVERRÍA”

ASIGNATURAS	HORAS SEMANALES DE CLASE POR ASIGNATURA / AÑOS DE EDUCACIÓN GENERAL BÁSICA									
	1.º	2.º	3.º	4.º	5.º	6.º	7.º	8.º	9.º	10.º
LENGUA Y LITERATURA		12	12	9	9	9	9	6	6	6
MATEMÁTICA		8	8	7	7	7	7	6	6	6
ENTORNO NATURAL Y SOCIAL	25	5	5	-	-	-	-	-	-	-
CIENCIAS NATURALES		-	-	5	5	5	5	4	4	4
ESTUDIOS SOCIALES		-	-	4	4	4	4	4	4	4
EDUCACIÓN ESTÉTICA	2	2	2	2	2	2	2	2	2	2
EDUCACIÓN FÍSICA	5	5	5	5	5	5	5	5	5	5
LENGUA EXTRANJERA		-	-	-	-	-	-	5	5	5
CLUBES		3	3	3	3	3	3	3	3	3

ASIGNATURAS DE PRIMER AÑO DE BACHILLERATO GENERAL UNIFICADO

1.º año.

ASIGNATURAS TRONCO COMÚN	HORAS DE CLASE PARA PRIMER AÑO DE BGU
FÍSICA	4
QUÍMICA	4
HISTORIA Y CIENCIAS SOCIALES	4
LENGUA Y LITERATURA	4
MATEMÁTICA	4
IDIOMA EXTRANJERO	5
DESARROLLO DEL PENSAMIENTO FILOSÓFICO	4
EDUCACIÓN FÍSICA	2
EDUCACIÓN ARTÍSTICA	2
INFORMÁTICA APLICADA A LA EDUCACIÓN	2
TOTAL HORAS COMUNES OBLIGATORIAS	35

Los estudiantes que opten por el Bachillerato en Ciencias, además del tronco común, deben cumplir con 5 periodos académicos semanales de asignaturas definidas por la institución de acuerdo a su proyecto e identidad institucional.

2do AÑO

ASIGNATURAS TRONCO COMÚN	HORAS DE CLASE PARA SEGUNDO AÑO DE BGU
FÍSICO-QUÍMICA ✓	4
BIOLOGÍA ✓	4
HISTORIA Y CIENCIAS SOCIALES ✓	4
LENGUA Y LITERATURA ✓	4
MATEMÁTICA ✓	4
IDIOMA EXTRANJERO ✓	5
EMPRESARIATO Y GESTIÓN	2
EDUCACIÓN PARA LA CIUDADANÍA ✓	4
EDUCACIÓN FÍSICA ✓	2
EDUCACIÓN ARTÍSTICA ✗ ✓	2
TOTAL HORAS COMUNES OBLIGATORIAS	35

3er AÑO

ASIGNATURAS TRONCO COMÚN	HORAS DE CLASE PARA TERCER AÑO DE BGU
LENGUA Y LITERATURA	4
MATEMÁTICA	4
IDIOMA EXTRANJERO	5
EMPRESARIATO Y GESTIÓN	2
EDUCACIÓN PARA LA CIUDADANÍA	3
EDUCACIÓN FÍSICA	2
TOTAL HORAS COMUNES OBLIGATORIAS	20

BACHILLERATOS TÉCNICOS INDUSTRIALES

FIP: ELECTROMECAÁNICA AUTOMOTRIZ

MÓDULOS FORMATIVOS	1º Año	2º Año	3º Año
Dibujo Técnico Aplicado	3 /	2	
Motores y sus Sistemas Auxiliares			12
Tren de Rodaje: Frenos, Transmisión, Dirección y Suspensión			8
Sistemas Eléctricos del Vehículo		8 /	2
Sistemas de Seguridad y Confortabilidad			3
Técnicas de Mecanizado para el Mantenimiento de Vehículos	3 /		
Seguridad y Salud Laboral en el Mantenimiento de Vehículos	2 /		
Formación y Orientación Laboral - FOL	2		
Formación en Centros de Trabajo - FCT	(150 horas reloj en horario extra)		
TOTAL	10	10	25

