Ministerio de Educación

Gobierno de Chile

100 TOP
Construction
WORDS TP BOOKLET
3° MEDIO

DEG
División Educación General

English Opens Doors Program

División de Educación General - Mineduc

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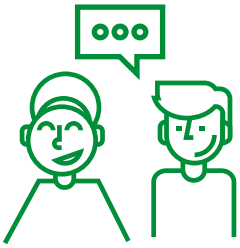
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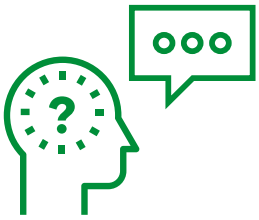
Think & discuss

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¡Bienvenido!

Welcome!

ES

A continuación, te presentamos un recurso elaborado para avanzar en uno de nuestros principales objetivos: mejorar la calidad y fortalecer la enseñanza Técnico-Profesional en el país.

La creación de este Booklet responde a la importancia de aprender el idioma inglés en el contexto de cada especialidad técnica, de manera que en el futuro puedas acceder a mayores oportunidades de especialización y en el mundo laboral.

Es por esta razón que creamos este recurso didáctico, donde proponemos tanto a docentes como estudiantes, las 100 palabras más utilizadas en cada especialidad aplicadas en contextos específicos, fundamentales para el dominio del idioma.

Dado que en el mundo de hoy es importante entregar todas las opciones para favorecer el aprendizaje del inglés, el trabajo continuo de las actividades que ofrece cada unidad te permitirá desarrollar habilidades lingüísticas como la lectura, audición, expresión escrita y oral, además de trabajar colaborativamente en los proyectos al término de cada unidad.

Esperamos que este 100 Top Words Booklet sea una contribución para el aprendizaje del idioma en la especialidad que has elegido.

EN

We are pleased to present you with this resource, which was created to advance one of our primary objectives- improving and strengthening the quality of technical professional education in Chile.

The creation of this booklet responds to the importance of learning the English language in the specific context of each technical specialty and aims to provide you with access to greater opportunities in your area of concentration, and in the labor market in general.

With that in mind we have created this educational resource, through which we propose to teachers and students alike – the 100 most commonly used words for specific contexts, fundamental to language mastery in each area of technical specialization.

Given the current importance of providing all possible opportunities to foment English language acquisition, the successive completion of the activities offered in each unit will facilitate the development of your linguistic abilities, including reading comprehension, written and oral expression, as well in collaborative learning projects provided at the end of each unit.

We hope that the "100 Top Words" Booklet will contribute to your English language learning, in the technical professional concentration that you have chosen.

Tus comentarios nos importan: escríbenos a TPenglish@mineduc.cl

Construction Booklet Glossary

(A)

1. Add (v.) To put two or more numbers or amounts together to get a total.

2. Advise (v.) To give someone advice.

3. Aggregate (n.) Small stones used in building.

4. Amount (n.) A collection or mass, especially of something that cannot be counted.

5. Anchor (n.) To make something or someone stay in one position by fastening him, her, or it, firmly.

6. Arch (n.) A structure, consisting of a curved top on two supports, which holds the weight of something above it.

(B)

7. Batch (n., v.) (n) A group of things that are dealt with or produced at the same time, or a group of people who are similar in some way. (v) To bring together or process as a group.

8. Bind (v.) To tie something or someone tightly or to fasten something.

9. Brick (n.) A rectangular block of hard material used for building walls and houses.

10. Bucket (n.) A container with an open top and a handle, often used for carrying liquids.

(C)

11. Cabinet (n.) A piece of furniture with shelves, cupboards, or drawers, used for storing or showing things.

12. Centimeter (n.) A unit of length equal to 0.01 of a meter.

13. Circular saw (n.) An electric saw (= a tool for cutting hard materials) that has a circular blade, sometimes with sharp points along the edge.

14. Clay (n.) Thick, heavy soil that is soft when wet, and hard when dry or baked, used for making bricks and containers.

15. Column (n.) A tall, vertical post used as a support for the roof of a building or for decoration.

16. Compression (n.) The act of pressing something into a smaller space or putting pressure on it from different sides until it gets smaller.

17. Concrete (n.) A very hard building material made by mixing together cement, sand, small stones, and water.

18. Corrosion (n.) The process of corroding, or metal that has been corroded.

19. Cover (n., v.) (n) Something that is put on or over something else, usually to protect it. (v) To put or spread something over something, or to lie on the surface of something.

20. Crack (n.) A very narrow space between parts of something.

21. Crane (n.) A tall metal structure with a long horizontal part, used for lifting and moving heavy objects.

22. Cubic (adj.) Used in units of volume to show when the length of something has been multiplied by its width and height.

(D)

23. Drainage (n.) The system of water or waste liquids flowing away from somewhere into the ground or downpipes.

24. Drill rig (n.) A machine that makes holes in the earth's surface.

25. Drywall (n.) Material consisting of two sheets of heavy paper with a layer of plaster between them used to make walls and ceilings before putting on a top layer of plaster.

E **26. Earplug** (n.) A small piece of soft material, such as wax or foam, placed in the ear to keep out noise or water.

27. Efficiency (n.) The good use of time and energy in a way that does not waste any.

28. Equal (v., adj.) (v) To be the same in value or amount as something else. (adj.) The same in amount, number, or size.

29. Expensive (adj.) Costing a lot of money.

F **30. Face shield** (n.) A clear plastic cover worn over the face to protect the person wearing it from viruses, chemicals, thrown objects, etc.

31. Facility (n.) A place, especially including buildings, where a particular activity happens.

32. Failure (n.) The fact of something not working or stopping working as well as it should.

33. Fastener (n.) A button or other device for joining together the separate parts of something, especially clothes.

G **34. Glass** (n.) A hard, transparent material, used to make windows, bottles, and other objects.

35. Gravel (n.) A mixture of rock fragments that is coarser than sand.

H **36. Hazard** (n., v.) (n) Something that is dangerous and likely to cause damage. (v) To risk doing something that might cause harm to someone or something else.

37. Hold (v.) To support something.

38. Hydraulics (n.) A system of using water to produce power.

I **39. Intermittent** (adj.) Not happening regularly or continuously; stopping and starting repeatedly or with periods in between.

J **40. Jackhammer** (n.) A powerful tool, held in the hands and operated by air pressure, that is used for breaking hard surfaces such as rock and roads.

K **41. Kilogram** (n.) A unit of mass equal to 1,000 grams.

42. Knot (n.) A small hard area on a tree or piece of wood where a branch was joined to the tree.

L **43. Layout** (n.) The way that something is arranged.

44. Level (n., v.) (n) A tool that contains a tube of liquid with an air bubble in it, used to show if a surface is level. (v) To make a surface flat.

45. Liter (n.) A unit for measuring the volume of a liquid or a gas, equal to 1,000 cubic centimeters.

46. Loose (adj.) Not firmly held or fastened in place.

47. Lumber (n.) Wood that has been cut into various lengths for building.

M **48. Machinery** (n.) A group of large machines or the parts of a machine that make it work.

49. Magnitude (n.) The large size or importance of something.

50. Maintenance (n.) The work needed to keep a road, building, machine, etc. in good condition.

51. Management (n.) The control and organization of something.

52. Meter (n.) A unit of measurement of length equal to 100 centimeters.

53. Mixer truck (n.) A vehicle that transports concrete to the construction site, while mixing the concrete.

N **54. Nail** (v.) A small, thin piece of metal with one pointed end and one flat end that you hit into something with a hammer, especially in order to fasten or join it to something else.

P **55. Pedestrian** (n.) A person who is walking, especially in an area where vehicles go.

56. Plus (prep.) Added to.

57. Plywood (n.) Wood that consists of several thin layers of wood stuck together.

58. Pollution (n.) Damage caused to water, air, etc. by harmful substances or waste.

59. Power tool (n.) A tool that operates with an electric motor.

60. Prevention (n.) The act of stopping something from happening or of stopping someone from doing something.

61. Print (n.) A photographic copy of a painting, or a picture made by pressing paper onto a special surface covered in ink, or a single photograph from a film.

62. Project (n.) A piece of planned work or an activity that is finished over a period of time and intended to achieve a particular purpose.

63. Pump (n.) A piece of equipment that is used to cause liquid, air, or gas to move from one place to another.

R **64. Raw material** (n.) Any material, such as oil, cotton, or sugar in its natural condition, before it has been processed for use.

65. Repair (v.) The act, task, or process of repairing.

66. Roof (n.) The covering that forms the top of a building.

67. Rope (n.) (A piece of) strong, thick string made of long twisted threads.

68. Round up (n.) A bringing together of people, animals, things, etc.

S **69. Sample** (n.) A small amount of a substance or product that is tested to find out whether it is good, whether it contains a particular substance, etc.

70. Sand (n.) A substance that consists of very small grains of rock, found on beaches and in deserts.

71. Scale (n.) The relation between the real size of something and its size on a map, model, or diagram.

72. Screwdriver (n.) A tool for turning screws, consisting of a handle joined to a metal rod shaped at one end to fit in the cut in the top of the screw.

73. Screw (n.) A thin, pointed piece of metal with a raised edge twisting round along its length and a flat top with a cut in it, used to join things together, especially pieces of wood.

74. Service (n., v.) (n) A check and repair of a vehicle or machine that is done after regular periods. (v) To examine a machine and repair any damaged parts.

75. Shrink (v.) To become smaller, or to make something smaller.

76. Site plan (n.) A large-scale drawing that shows the full extent of the site for an existing or proposed development.

77. Sizing (n.) How large or small something or someone is.

78. Sketch (n.) A simple, quickly made drawing that does not have many details.

79. Slump cone (n.) A cone used to test the workability of concrete.

80. Soil (n.) The material on the surface of the ground in which plants grow.

81. Square (n.) Used with units of measurement of length to express the total size of an area.

82. Steel (n.) A strong metal that is a mixture of iron and carbon, used for making things that need a strong structure, especially vehicles and buildings.

83. Stiff (adj.) Firm or hard.

84. Storage (n.) The act of keeping things somewhere so that they can be used later, especially goods or energy supplies.

85. Stress (n.) A force that acts in a way that often changes the shape of an object.

86. Subsurface (n.) Earth material (such as rock) near but not exposed at the surface of the ground.

T **87. Tension** (n.) The state of being tight and stiff.

88. Test pit (n.) A large hole in the ground used for collecting information about the soil in a construction project.

89. Thickness (n.) The distance between the opposite sides of something.

90. Tight (adj.) (Held or kept together) firmly or closely.

91. Topographic (n.) The natural features of land, especially the shape of its surface, or the science of mapping those features.

92. Transmission (n.) The process of sending something, for example gas or electricity, from one place to another.

U **93. Unstable** (adj.) Not solid and firm and therefore not strong, safe, or likely to last.

94. Utilities (n.) A service that is used by the public, such as an electricity or gas supply or a train service.

Ⓥ

95. Valve (n.) A device that controls the flow of air or liquid from one place to another.

Ⓦ

96. Voltage (n.) The force of an electric current, measured in volts.

97. Waterproof (adj.) Not allowing water to go through.

98. Welfare (n.) Help given, especially by the state or an organization, to people who need it, especially because they do not have enough money.

99. Wheel (n.) A circular object connected at the center to a bar, used for making vehicles or parts of machines move.

100. Wood (n.) A hard substance that forms the branches and trunks of trees and can be used as a building material, for making things, or as a fuel.

Unit I: Analyzing Samples of Concrete, Soils, and Materials.

Goal: Understand and produce oral and written texts related to construction, with the purpose of knowing about the subject.

Skills: Listening, Reading, Speaking, Writing

Project: Campaign for change!

☆ 22 KEY WORDS

- Batch (n.)
- Brick (n.)
- Bucket (n.)
- Clay (n.)
- Corrosion (n.)
- Crack (n.)
- Drill rig (n.)
- Drywall (n.)
- Glass (n.)
- Gravel (n.)
- Knot (n.)
- Lumber (n.)
- Mixer truck (n.)
- Roof (n.)
- Sample (n.)
- Sand (n.)
- Slump cone (n.)
- Soil (n.)
- Steel (n.)
- Subsurface (n.)
- Test pit (n.)
- Topographic (n.)

Lesson I: Listening Comprehension

BEFORE YOU LISTEN

A. Tick the instruments you need when working with concrete.

1. Slump cone √

2. Hand saw

3. Mixer truck

4. Bucket

5. Welding machine

B. Match the words to their definition. Discuss their meaning with a classmate.

1. (example) roof (n.) **e**
2. slump cone (n.) _____
3. sample (n.) _____
4. mixer truck (n.) _____
5. batch (n.) _____
6. gravel (n.) _____
7. bucket (n.) _____

a. Instrument used to check the condition of fresh concrete.

b. Small stone particles used for construction and building roads.

c. A vehicle that combines cement with other materials to make concrete.

d. A group of materials or things similar in type

e. The ceiling or top of a building.

f. A small portion of something collected to be analyzed.

g. A container used to transport liquids or other materials.

WHILE YOU LISTEN

Click here to listen:

C. Write True or False about the conversation.

1. [Example] The two workers must use concrete for the walls of the hospital. **False**
2. Liam takes the slump cone for fresh concrete. _____
3. Pedro goes to take samples from the mixer truck. _____
4. Liam suggests that the concrete must be flexible. _____
5. The first bucket of concrete is perfect. _____
6. Pedro thinks the second batch of concrete is good. _____

AFTER YOU LISTEN

D. Imagine you are part of the construction of a hospital. Complete the sentences using the most accurate word from the box.

gravel – bucket – mixer truck – samples – ~~shovel~~

[Example] Bring me the shovel to move this sand.

1. The concrete is ready, bring a _____ to take it to the workers.
2. I'll take _____ from the material to test its quality.
3. This concrete needs more _____ since it's too watery.
4. We are waiting for the _____ to arrive to fill the roof with concrete.

E. Answer: Why did Pedro and Liam test the quality of the concrete? (try using a reason connector, such as: as, because, since).

[Example] They tested the concrete since roofs need to be secure.

Your answer:

_____

_____

_____

_____

Lesson II: Reading Comprehension

BEFORE YOU READ

A. Label the pictures using the words from the box.

1. gravel (n.)	**2.** drill rig (n.)	**3.** clay (n.)	**4.** sand (n.)	**5.** test pits (n.)

a. _____

b. _____

c. _____

d. _____

e. _____

B. Tick the activities related to soil analysis in a construction site. Check your prediction after reading.

[Example] Use tools to collect samples of sand. ___√___

1. Find precise dimensions of the land. _____

2. Dig test pits on the soil. _____

3. Use a circular saw to cut down trees. _____

4. Analyze spoil samples. _____

5. Use concrete to reinforce the floors. _____

WHILE YOU READ

C. Read the email and order the steps of soil analysis from 1 to 4.

a. _____ Prints are modified to match the precise dimensions of the land.

b. _____ A number of test pits are made to see what kinds of soil are in the terrain.

c. _____ A topographic team measures the land.

d. _____ A soil profile is written to inform the team about the characteristics of the land.

To: Laura Reynolds
From: Jenny Wilson & B contractors.
Date: April 16, 2021

Dear Laura,

Thanks for trusting our company. Before we start building and moving the materials to the construction site, we will definitely make an analysis of your property. In this email you will find detailed information about the process.

First, I will send a team to perform a **topographic** analysis so we will know the real dimensions of the site and adjust our prints if necessary. Then, we may level the terrain to make sure we are working in the best conditions.

After that, we must see how the **subsurface** looks like by taking several different samples of the **soil**. First, we will begin by making **test pits** to identify concentrations of **sand** and **gravel**, or to determine if there is a weaker soil made of **clay**. These pits will be only a few meters deep, but we can use a drill rig to reach twenty meters down if necessary.

Considering the information above, these tests will give us a **soil profile** of your property to make sure we are building on solid ground.

Please, contact the team if you have questions.

Regards,
Jenny Wilson.
B4F Contractor.

Adapted from:
Evans, V., Dooly, J., & Revels, J. (2016). *Career Paths – Construction I: Buildings (Students' Book).* Express Publishing.

D. Read the email again and write True or False about the contractor's work.

1. The contractor will study the terrain after the material gets to the construction site. _____
2. The contractor team may adapt the prints after analyzing the dimensions of the land. _____
3. The workers are surely going to level the terrain because they know it is not plane. _____
4. The contractor said it wasn't necessary to make test pits to see what kind of soil they will work on. _____
5. The workers will surely use only hand tools to create the soil profile of the land. _____

AFTER YOU READ

E. Write P (possibility) or C (certainty) about the use of the words in bold taken from the email.

1. [Example]: We **can** use a drill rig **if necessary**. P
2. We will **definitely** make an analysis of your property. _____
3. [...] and adjust our prints **if necessary**. _____
4. We **may** level the terrain to make sure we are working in the best conditions. _____
5. We **must** see how the subsurface looks [...]. _____

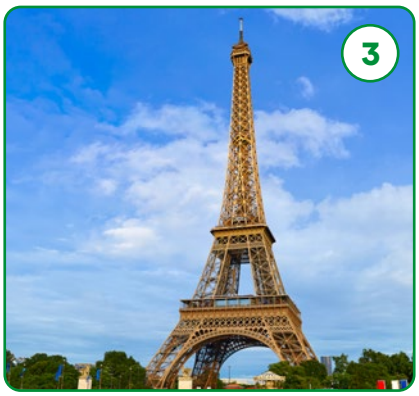
F. Look at the picture and discuss: What problem can you identify in the construction? What is the importance of analyzing the soil of a construction site?

[Example] I can imagine the soil was not stable.

Lesson III: Speaking

WARM UP

A. Look at the pictures and discuss the materials you would need to build each element.



B. Why is it important to test the quality of the materials before construction begins? Discuss with your classmates and provide examples.

1. Because some materials expire faster than others.
2. Because some materials may present damage from shipping.
3. Because weather conditions may affect the quality of materials.
4. Because not all projects require the same quality of materials.

INPUT AND ELICITING

C. Look at the pictures, listen to your teacher, and repeat the vocabulary words.

1. Bricks

2. Steel bars

3. Glass

4. Drywall

5. Lumber

6. Knots

7. Corrosion

8. Crack

CONTROLLED PRACTICE

Click here to listen:

D. Complete the dialogue with the words from the box. Listen to the dialogue and check the correct answers. Practice it with a classmate.

cracks	lumber	corrosion

[A cargo shipment arrives with materials for the construction of houses].

Quality inspector: Please leave the cargo in this area so we can inspect its quality.

Worker: Sure, no problem. How do we start?

Quality inspector: First, make sure the (1) _____ has few or no **knots**.

Worker: This **batch** is fine, what now?

Quality inspector: Let's check the **steel bars**.

Worker: They seem **straight** and without (2) _____.

Quality inspector: Good, then see if the **drywall** and **bricks** have any (3) _____.

Worker: Mmm, I found some in this batch of bricks. What do I do with them?

Quality inspector: Return them. We cannot use them if they are not in their best quality.

FREER PRACTICE

E. Create a similar dialogue about checking **the quality of glass**, **concrete**, and **lumber**. Practice with your classmate.

Student A: Good morning. Here I have the glass and bricks cargo.

Student B: Perfect! First ...

Student A: _____

Student B: _____

Student A: _____

Student B: _____

Student A: _____

F. Check your work and present your dialogue to the class.

Criteria	😀	☹
A. I practiced my dialogue with my classmate.		
B. I used the words: glass – concrete – lumber.		
C. My classmate and I spoke equal amounts of time		

EXIT TICKET

G. Match a material to a quality problem.

1.	Bricks _____	**a.**	Corrosion
2.	Steel _____	**b.**	Knots
3.	Lumber _____	**c.**	Cracks

Lesson IV: Writing

PRE-WRITING

A. Webquest: Find 3 ways to start a formal email and 3 ways to finish it (go to https://learnenglish.britishcouncil.org/business-english/english-for-emails/unit-4-starting-and-finishing-emails). Share with the class.

1. Ways to start a formal email.			
2. Ways to finish a formal email.			

B. Complete the email with the correct connector from the box.

Finally – Then – ~~First~~ – After that

From: J.J.S. Construction
To: Mr. Hawk
Subject: Update on Project #12

Mr. Hawk,

I hope this email finds you well. I am writing to inform you that we are ready to start the construction of the hospital. **(1)** **First**, the team completed the analysis of the soil and materials from the construction site. **(2)** _____, we took samples from the concrete mixer and we selected the best mixture for the job. **(3)** _____, the topographic team created a soil profile. **(4)** _____, we analyzed the results and think the construction site is in good conditions to start building.

Regards,
Marcos
J.J.S Construction

C. Read the construction report and complete the missing information with the words in the box.

tested – topographic – $20,000 – bought

B4F construction Report

Project: #2931

Budget: **1.** _____

Contractor: James Adams

Active workers: 120

Main activity:

2. The company _____ 10 tons of concrete.

3. The contractor called a _____ team.

4. The quality inspector _____ the concrete and bricks.

DRAFTING

D. Write an email summarizing the construction report in activity C. Use connectors (first, then, after that, finally) and include:

a. Sender - recipient (from and to) and subject.

b. Include a starting and ending phrase

c. Summarize in simple words the main activities of the report.

REVISING

E. Work with a classmate and check each other's e-mails.

[Example]: The email has date.	√
The email includes the items required in activity D.	
The email uses connectors to order the information.	
The email summarizes the report correctly.	

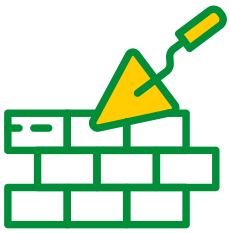
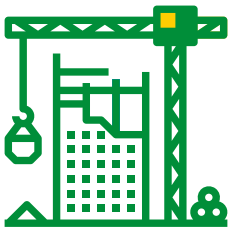
EDITING

F. Now, check your email again and improve or rewrite your draft.

PUBLISHING

G. Show your email to your teacher and publish it.

Project: Campaign for change!


Name of the Project:	Campaign for change!
Level:	11th year
Time:	90-120 minutes
General aim:	To raise awareness on the importance of testing and sampling in constructions to avoid catastrophic effects on people.
Language aim:	Use imperatives and connectors to express strong suggestions.
Resources / Materials:	canva.com Booklet Dictionary Markers and paper
Teacher's role:	Monitor the process of drafting and editing the posters.
Students' roles:	Active role in the process of creating the poster, making questions and checking information with the teacher. Monitoring the role of their peers.
Procedure:	**1.** Get into groups of 4 to find catastrophic events in construction. Choose one. **2.** Decide on a poster design and make sure text and images have equal presence. **3.** Think with your group about how testing or sampling could have prevented the accident. **4.** Create messages that help constructors to raise awareness of the importance of checking the quality of the materials and soil to avoid accidents and post-construction problems. **5.** Share your poster and messages with your teacher and class.
Variation	If a poster presentation is not possible, try making a PPT presentation or use the virtual platform Canva.com to create posters.
Rubric	See in appendix.

Unit II: Carpentry Installation Work

Goals: To understand and produce oral and written texts in English related to carpentry installation work, with the purpose of developing a personal, critical opinion related to their interests and doubts.

Skills: Listening, Reading, Speaking, Writing

Project: Designing my dream school

☆ 23 KEY WORDS

Anchors (n.)	Nails (n.)	Sizing (n.)
Circular saw (n.)	Pedestrian (n.)	Sketch (n.)
Concrete (n.)	Plywood (n.)	Square (n.)
Drainage (n.)	Prints (n.)	Storage (n.)
Facilities (n.)	Scale (n.)	Utilities (n.)
Jackhammer (n.).	Screwdriver (.n)	Welfare (n.)
Layout (n.)	Screws (n.)	Wood (n.)
Management (n.)	Site plan (n.)	

Lesson I: Listening Comprehension

BEFORE YOU LISTEN

A. Predict the duties of a contractor in charge of the design of the "site layout plan". Tick his responsibilities:

[Example] - Mix the gravel with water
- Organize the work sites ✓

1. Receive materials at the construction site.
2. Read blueprints to install workers' facilities and utility rooms.
3. Test the quality of the concrete from the construction site.
4. Understand the scales and dimensions from site plans.
5. Supervise the design of entrances and exits of the construction site.

B. Match the words to their definitions in English. Look up their meaning in a monolingual dictionary. [you can find one here: https://dictionary.cambridge.org/dictionary/].

1. [example] Scale **b**
2. Layaut _____
3. Sketch _____
4. Site plan _____
5. Utility room _____
6. Blueprints _____

a. A room equipped with appliances for washing clothes and other domestic work.

b. A graduated range of values forming a standard system for measuring blueprints.

c. The way in which the parts of something are arranged.

d. A technical drawing of a building and its rooms.

e. A rough drawing of a building used to assist in construction.

f. A map used by contractors to locate workers' facilities, entrances, and temporary services in a construction site.

WHILE YOU LISTEN:

Click here to listen:

C. Listen to a conversation between a contractor and the architect of a construction site. Tick what seems to be the problem.

[Example] - There are some documents missing ✓
- The workers do not have the necessary equipment

1. The prints and sketches did not arrive to the construction site.

2. The architect forgot to include workers' facilities to the construction site plan.

3. The contractor does not know how to read scaled prints.

4. The layout of the facilities is not well designed in the site plan.

D. Listen again. Complete the sentences with the words you hear.

[Example] • A: Hi, how are you today?

1. Hello? Mrs. Ford? This is Sebastian _____ T&R Construction.

2. I may have _____ of the site plan.

3. I sent my _____ yesterday.

4. It seems you forgot to include a _____ room and _____ room.

5. Did you check the _____ ? Maybe _____ the sketches correctly.

AFTER YOU LISTEN:

E. Answer the listening comprehension questions. Choose one alternative

1. What was the main problem in the audio?

- **i** The sketches weren't clear
- **ii** The architect forgot to include some facilities
- **iii** The contractor didn't know how to read a site plan

2. What did Mrs. Ford send to the construction site?

- **i** The blueprints and sketches of the building
- **ii** The blueprints and sketches of the room
- **iii** The blueprints and sketches of the construction site

3. What did the contractor ask Mrs. Ford?

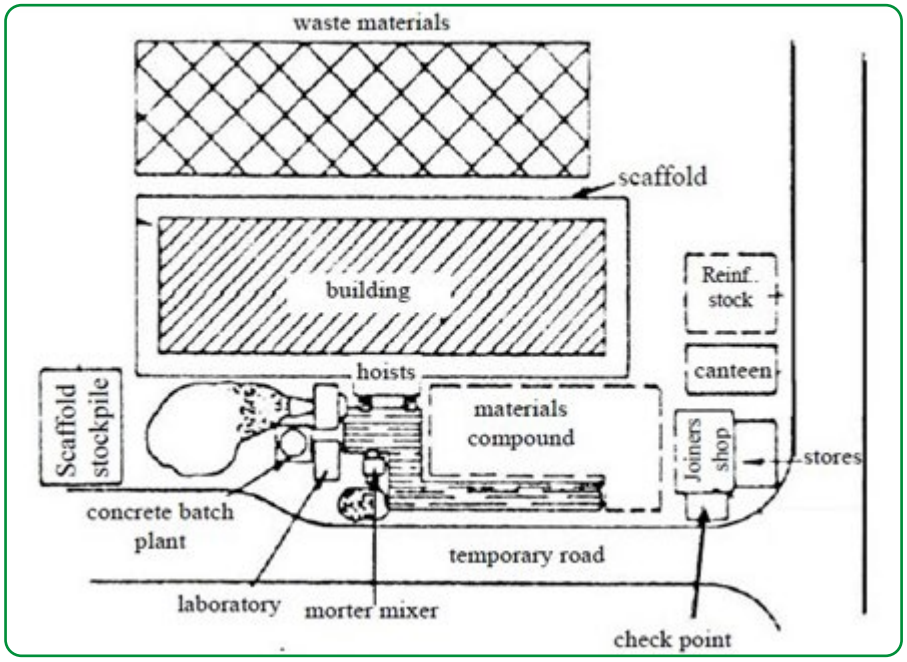
- **i** To recheck the blueprints and sketches
- **ii** To visit the construction plan
- **iii** To check the dimension of the land

Lesson II: Reading Comprehension

BEFORE YOU READ

A. Look at the picture. What purpose does this map have?

1. It tells the workers how much material they need for the construction.
2. It helps the contractor to understand the layout of the construction site.
3. It indicates how to evacuate in case of emergency.



B. Match these words to their corresponding definition, look up the words in a monolingual dictionary. [You can find one here: https://dictionary.cambridge.org/dictionary/].

1. Management (n.) _____
2. Sizing (v.) _____
3. Facilities (n.) _____
4. Constraint (n.) _____
5. Welfare (n.) _____
6. Storage (n.) _____
7. Pedestrian (n.) _____
8. Drainage (n.) _____

a. Estimate or measure the dimension of something.

b. Related to physical and mental health; people's happiness.

c. The pipes where disposal water circulates underground.

d. The people who walk instead of drive vehicles.

e. Control of people or things.

f. Space available for storing materials for later use.

g. A place or room used for a specific purpose.

h. A limitation or restriction.

WHILE YOU READ:

C. Read the text and choose the best title for each paragraph:

1. What facilities must be a part of a good site plan?
2. Problems of uncareful site plan design
~~**3.** Understanding a site Layout plan. What is it?~~
4. The benefits of an appropriate site layout plan
5. The 4 steps of a site layout plan

Construction Site Layout Planning

I Example: Understanding a Site Layout plan. What is it?

A construction site is a plan of the different services and facilities necessary for the construction. Most construction sites that run into trouble do so for reasons related to management factors rather than because of technical problems. The site-based **management** can make significant improvements in the cost and time savings during the construction process without involving a mass of additional work.

II _____

There are many advantages to having good site managers, and their role leads to increased productivity, improves workers' **welfare**, reinforces safety, reduces areas needed for temporary construction, and maximizes all the resources available at a construction site. The role of site manager is to control and maintain work performance and then take actions to rectify the situation where performance is unsatisfactory.

III _____

When organizing the space for a construction site, it is important to pay attention to the needs of the project to understand what **facilities** are needed at the site. An acceptable site manager will focus on safety-related facilities, such as fire prevention systems, medical services, and safety supplies. Other facilities are related to the flow of workers within the construction site, good roads for vehicles, and safety areas for **pedestrians** will keep workers comfortable and safe. Good managers may also pay attention to logistics about **storage** of materials and water and electricity supply.

IV _____

Lack of attention to site planning leads to serious problems in time efficiency and resource consumption. Usually, **constraints** in money for the planning of a work site involves serious problems in material handling, considering that one-third of all construction operations can be classified in this activity. Similarly, poor site management leads to problems in site cleaning, such as **drainage** and waste disposal contaminating areas occupied by workers.

V _____

To conclude, you can follow a rigorous site plan and invest time and money to maximize your overall resources consumption. It takes just four simple steps. First, you must decide which needs are going to be fundamental to cover for every project. Then, make sure your site manager considers safety a must at any site planning. Third, decide on what facilities may have positive effects on your workers and overall construction site. Finally, keep looking for areas that need improvement or facilities that may need new **sizing**. Only through careful planning, a construction site can get efficient and safe for everyone.

Taken and adapted from: https://civilengineeringbible.com/subtopics.php?i=59

AFTER YOU READ

D. Complete these ideas with information taken from the text, compare your answers with your classmate to check.

[Example] A site layout plan is prepared by the site manager

1. The site-based **management** _____

_____

2. The role of the site manager _____

_____

3. Good roads for vehicles and safety areas for **pedestrians** _____

_____

4. Usually, **constraints** in money for planning of a work site _____

_____

5. Only through careful planning _____

_____

E. Site layout planning can make workers feel safer, happier, and work more efficiently. What facilities do you think are necessary for workers to improve their working conditions in Chile? Share with your classmates.

Lesson III: Speaking

WARM UP:

A. Do you think these facilities are necessary? Discuss with your classmate.

1. [Example] A video game facility for workers' breaks: - I like this idea / I think this is not necessary.
2. A wardrobe.
3. Showers.
4. Offices.
5. A dining room.

INPUT AND ELICITING:

B. Listen to your teacher and repeat the vocabulary word. Check the meaning of these words in https://dictionary.cambridge.org/dictionary/.

1. Plywood _____
2. Concrete _____
3. Brick _____
4. Drywall _____
5. Meeting room _____
6. Utility room _____
7. Resting room _____
8. Facilities _____
9. Meters _____
10. Centimeters _____
11. Height _____
12. Length _____
13. Square _____

C. Do you remember how to use suggestions? Read the chart.

Making suggestions:

Let's revise our **noun** ...?
What about **verb** (ing) ...?
How about **verb** (ing) ...?
Why don't we **verb** (base form) ...?
Couldn't we **verb** (base form) ...?
Shall we **verb** (base form) ...?
Don't you think it is a good idea to ...?

Accepting suggestions:

That sounds like a good idea
Why not?
I'd love to do that!

Rejecting suggestions:

I don't feel like it
I don't think it's a good idea
Maybe we could try something else

Taken and adapted from:
https://www.myenglishpages.com/site_php_files/communication-lesson-suggesting.php

CONTROLLED PRACTICE

Click here to listen:

D. Two workers are planning the layout of the construction site. Listen and practice this dialogue with a classmate. Pay attention to the pronunciation of the words in bold.

A: Hey Mark, how are you doing?
B: Hi Kiara, fine thanks. What are you up to?
A: I'm looking at the layout of the work site. **How about** having a 6-meter **square** break room?
B: I don't think that's a good idea. We are too many workers to have everyone in a tiny room. Why don't we split the break room? We can have two rooms.
A: Why not? We could have one room near the **storage** rooms and the other near the **concrete mixers**.
B: That makes sense. I also think that we should use **brick** for the workers facilities. It lasts longer.

A: Maybe we could try something else. Remember the site layout plan is for temporary use in most cases.
B: Then, what do you suggest?
A: We should try using **plywood**, it's cheaper and easier to install.
B: Considering the worksite is a 1,000 m2, we would need **300 hundred** sheets of plywood.
A: Great!

FREER PRACTICE:

E. Modify the dialogue to talk about a facility you would like to include in the construction site plan.

1. Every interlocutor should make at least one suggestion and say the dimensions of the room in meters square (m2).
2. Use words from activity B to modify your dialogue.

Example:
A: Hello, I think we need a 10 m2 room that works as an office.
B: That's a wonderful idea. I believe we might need a strong Internet connection though.
A: Yes, and _____
B: _____
A: _____
B: _____
A: _____
B: _____

F. Perform the dialogue to the class or the teacher.

EXIT TICKET:

G. Complete the sentence with your own idea and say it to your class:

[Example] It may be a good idea to have a laundry facility to clean our work clothes before going home.
It may be a good idea to build a _____ facility to _____ .

Lesson IV: Writing

PRE-WRITING

A. The Hangman game. Play with a classmate or whole class. Take turns to say letters and vowels until you guess the whole word. You have three chances for each word. Find all the hidden words related to construction to win the game.

1. P _ _ _ _ _ _
2. H _ _ _ _ _
3. B _ _ _ _ _
4. D _ _ _ _ _ _
5. C _ _ _ _ _ _ _

B. Match the word to the pictures.

[Example]
Hand saw **8**

Cement mixer _____

Circular saw _____

Jackhammer _____

Screwdriver _____

Nails _____

Screws _____

Anchors _____

C. Complete the purchase order with key information from the box.

date – budget – screws – steel hammer – ~~plywood~~ – 200

Purchase order N°1			
		February 15th	
		$2,000	
Materials			
Product	Quantity	Description	Price $
	1	1 unit	20
[example] plywood	12	12mm sheets	100
	200	1'' bag	50
Anchors		1'' bag	60

DRAFTING:

D. Make a list with the materials you need to build showers for workers in a construction site.

E. Write a purchase order indicating the amounts of materials and prices.

Purchase order N° _____			
Materials			
Product	Quantity	Description	Price $

REVISING:

F. Exchange your work with your classmate's. Use the checklist to revise their work. Write comments on their work.

Criteria	😀	☹
Materials selected		
Amounts		
Spelling		
Organization		

EDITING:

G. Check your classmates' comments and modify your purchase order.

Purchase order N° _____			
Materials			
Product	Quantity	Description	Price $

PUBLISHING:

H. Submit the order note to your teacher.

Project: Designing my dream school



Name of the Project:	Designing my dream school
Level:	Grade 11
Time:	120 minutes
General aim:	To reflect on how the school organized the space for workers and students. Create a site layout plan for the school to change the organization of the spaces.
Resources / Materials:	Tape measure – markers – paper
Teacher's role	To monitor students' progress and attend their questions.
Students' role	To organize themselves in groups, measure the school, and reorganize the layout of the school plan. Present their layout to the class.
Procedure	**1.** Measure the school and scale it to fit on a paper. **2.** Identify the facilities your school has. **3.** Get into groups and modify the layout of the facilities, include new ones or modify them as you wish. **4.** Include your desired facilities into your school layout plan. **5.** Present your plan to the class.
Follow-up	Students practice their presentation before showing their proposal to the class.
Variation	Instead of paper and markers, you can use software to create a virtual scaled map of your school.
Rubric	See in appendix.

Unit III: Control and Maintenance of a Warehouse.

Goal: To understand oral and written texts related to the unit with the purpose of reporting information.

Skills: Listening, Reading, Speaking, Writing.

Project: Promoting awareness about maintenance!

☆ 21 KEY WORDS

- Advise (v.)
- Cabinet (n.)
- Circular saw (n.)
- Crane (n.)
- Earplugs (n.)
- Face shields (n.)
- Failure (n.)
- Fasteners (n.)
- Hazard (n., v.)
- Intermittent (adj.)
- Loose (adj.)
- Machinery (n.)
- Maintenance (n.)
- Power tool (n.)
- Prevention (n.)
- Repair (n., v.)
- Rope (n.)
- Service (n., v.)
- Tight (adj.)
- Transmission (n.)
- Wheel (n.)

Lesson I: Listening Comprehension

BEFORE YOU LISTEN

A. Think of materials you can find in a construction warehouse and write a list. Compare your answers with your classmate(s).

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

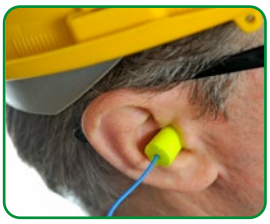
B. Label each picture with the correct word from the box.

face shield – maintenance – circular saw

earplug - fasteners – ~~power tools~~

1. power tools

2. _____



3. _____

5. _____

6. _____

7. _____

WHILE YOU LISTEN

Click here to listen:

C. Listen to a conversation between a contractor and the owner of the company. What is the main problem discussed? Choose one alternative.

1. The workers started the construction before the expected time.
2. Some construction materials are not necessary for the project.
3. Lack of maintenance of tools and not enough security equipment.
4. The owner of the company does not want to begin the construction.

D. Listen to the audio again; write True or False about the conversation.

1	T	According to the owner of the company, the construction is delayed.
2		The contractor believes they have enough security equipment to begin.
3		The owner of the company sent the power tools to preventive maintenance.
4		The warehouse of the company has all the necessary materials and equipment.
5		The contractor does not want to begin the construction until they have the security equipment.

AFTER YOU LISTEN

E. Complete the sentences using the correct vocabulary from activity B.

face shield – maintenance – circular saw – earplugs – ~~fasteners~~ - power tools

1. The table is not rigid enough. I'll change the **fasteners**.
2. This drilling machine needs _____ because it is not working properly.
3. I'll rent a _____ to cut the wood panels for the wall.
4. This machine is too noisy. I'll need some _____ to protect myself.
5. A colleague damaged her eyes because she was not wearing a _____ when cutting through wood.
6. We cannot use _____ because there is no electricity here.

F. Think about and discuss safety on a construction site. Guide your discussion with these questions.

1. Who is responsible for the safety of all workers in a construction site? Why?
2. What is the importance of safety equipment in all kinds of construction?
3. Remember the last person you saw working in construction-related activities. What safety equipment were they using? Why?

Lesson II: Reading Comprehension

BEFORE YOU READ

A. Play a word search puzzle. Use the hints (in brackets) to help you complete the activity.

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

1. (noun) to take care of something to avoid future problems: P _ _ _ _ N _ _ _ N
2. (noun) electrical equipment used in construction: M _ _ _ _ N _ _ Y
3. (noun) guidance or recommendation offered to another person: A _ _ I _ E
4. (noun) not functioning properly, a problem in the performance of an artifact or machine: F _ _ L _ _ E

B. Answer: Can you predict three good tips to take care of construction equipment?

[Example] Check if power tools are working properly.

1. _____
2. _____
3. _____

WHILE YOU READ

C. Read the text below about equipment maintenance and check your predictions from activity B. What are good tips to take care of construction equipment?

Construction Equipment Maintenance Tips

Why is it important to do preventive maintenance? Here are **the main reasons why it's so important to conduct preventive maintenance** on construction equipment:

Longevity: Performing routine and preventive maintenance on construction equipment and machinery makes them last longer. Regularly servicing machines extends their life, and that extends their availability.

Availability: Any construction equipment that suddenly breaks down is unavailable for service. That makes them expensive to pull from service and make unexpected repairs.

Safety: Proper safety procedures are especially necessary when working with heavy machinery and on construction sites. Sudden equipment failure can easily cause serious injury to its operator or anyone in the line of fire.

Prepare a Routine and Preventive Maintenance Program

A company's commitment always starts with ownership and management. The goal is that every organization member watches out for problems and pitches in to prevent them. It's a win-win situation that no construction company should ignore.

Although routine and preventive maintenance tasks are somewhat separate entities, they're tied together by a common denominator. That's the act of inspections where careful eyes catch issues during routine maintenance tasks.

Know the Major Types and Causes of Construction Equipment Failure

1. Sudden Failure: This is the most serious and damaging type of equipment failure. Usually, sudden failures are preventable by recognizing flaws during routine inspections.
2. Gradual Failure: Operators and the support team recognize gradual failure as part of the **wear-and-tear** process that affects every piece of construction equipment. Fortunately, gradual machine failure is easy to recognize and repair.

Training Employees to Properly Operate Construction Equipment

As a final tip, remember that trained operators are more careful workers. They know their machine's capacity and capability. They also know how to safely use the machine and avoid costly damage to property and injuries to people. Trained operators also recognize when a machine requires routine and preventive maintenance. They'll report every issue and start prevention steps before there's a big problem.

Adapted from *Construction Equipment Maintenance Tips.* (n.d.). Holt of California, CAT. https://www.holtca.com/company/news/construction-equipment-maintenance-tips

AFTER YOU READ

D. Read the text again and write True or False about the information on the text.

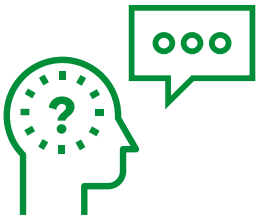
1	**T**	Routine maintenance is performed regularly on all construction equipment.
2		Performing maintenance can reduce longevity of machinery and equipment.
3		Maintenance is necessary for safety and to avoid injuries caused by failures in machines when operated.
4		Sudden failure is less serious and does not need much attention when performing routine maintenance.
5		Gradual failure is easy to recognize and repair.

E. Organize the information from the text. Then compare your answers with your classmates.

Main idea:
Supporting idea:
Three important facts:
1.
2.
3.
Purpose of the text:

F. Get into groups and discuss the idea below. Make sure everyone participates in the conversation. Use the notes space to organize your ideas.

Construction workers in Chile value "prevention maintenance" as a safety measure at work. What do you think? Do you agree? Give examples to support your opinion.



Take notes here ...

Lesson III: Speaking

WARM UP

A. Play word association.

1. Choose a concept from the box and take turns to say a word related to the topic.
2. Take notes of what words the group mentions.
3. Move to the next concept when every member of the group has said two words.
4. The group that finishes first is the winner of the game!

construction materials – power tools – hand tools

Group's name:

Construction materials: [Example] Wood and metal.

Power tools:

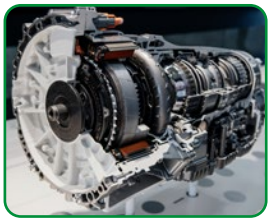
Hand tools:

INPUT & ELICITING

B. Look at the pictures, listen to your teacher, and repeat. Check the keywords with your teacher in case you do not understand them.

1. Crane

2. Wheels



3. Transmission

5. Rope

6. Cabinet

7. Hazard

CONTROLLED PRACTICE

Click here to listen:

C. Complete the conversation with the words in the box. Listen to the audio and practice the dialogue with a classmate.

wheels – ropes – hazard sign

Speaker 1: Hi Laura, would you help me with the maintenance of the worksite crane?
Speaker 2: Sure! No problem. So, these are the steps to correctly perform maintenance of cranes.
Speaker 1: The manual says I should start by replacing the (1) _____ of the crane.
Speaker 2: You definitely want to start with that. Corroded wheels can break and provoke a huge accident.
Speaker 1: That's it, now it's done. What comes next? Should we see the condition of the controls on the cabinet?
Speaker 2: Not yet. First, we should look at the (2) _____ that hold the material in the crane.
Speaker 1: Oh, sure. We do not want them to break while lifting weight.
Speaker 2: Remember to put out the (3) _____ to warn workers this crane is under maintenance.
Speaker 1: Thanks Laura!

D. Record your voices and act out the conversation. Listen to your own dialogue and make notes on what you need to improve:

Example: I must practice this vocabulary...

FREER PRACTICE

E. Create a similar dialogue. Use all the keywords in activity B.

Speaker A: Thanks for helping me. We must check the condition of the crane.
Speaker B: Oh, it's nothing. We should start with ...
Speaker A:
Speaker B:

F. Present the dialogue to your teacher and classmates.

EXIT TICKET

G. State an example of maintenance work related to one of these materials.
[Example]: wheels of a crane [wheels must be checked to see damage and replaced if necessary]

1. Plywood
2. Engine
3. Metal ropes

Lesson IV: Writing

PRE-WRITING

A. Find the definition of the keywords of the lesson in English. Use a monolingual online dictionary [you can find one here: https://dictionary.cambridge.org/dictionary/].

a) Loose (adj.): _____

b) Tight (adj.): _____

c) Intermittent (adj.): _____

d) Repair (v.): _____

e) Service (v.): _____

B. Read the inspector's maintenance report of a crane. Complete the report with the key information from the box.

~~April 22nd~~ - internal equipment was replaced – electric wires – 30 days to next preventive maintenance recommended - #2658411761659

MAINTENANCE REPORT					
Date and time:	• *[Example] (1)April 22nd*	Equipment:	power drill	Serial number:	(2)_____
Inspector's name:	Alejandra Muñoz				
Maintenance type:	routine / ~~preventive~~ / complaint		Equipment time in service:	40 days	
1. INITIAL TESTING					
Equipment visual condition:	The machine presents signs of external use and some loose parts.				
Electrical operation condition:	• Non operative ~~• Intermittent functioning~~ • Operative		Fasteners condition:	• ~~Loose~~ • Tight	
Other condition of equipment	Electric cord presents malfunctioning and electrical hazard.				
2. REPAIRS AND REPLACEMENTS					
Maintenance or repairs performed	1.- _____ 2.- fasteners were replaced and tightened. 3.- electric cord was replaced and tested. 4.- external mask cleaned and engine lubricated.		Material used	• Machine lubrication (4) _____ • fasteners	
3. AFTER REPAIR TEST					
Equipment condition after repairs	The power drill works smoothly, no signs of malfunctioning.		Recommendation	(5) _____ _____ _____	
Inspector's signature: _____ Maintenance supervisor: _____					

DRAFTING

C. Write a similar report about the maintenance of power tools in a warehouse.

MAINTENANCE REPORT					
Date and time:		Equipment:		Serial number:	
Inspector's name:					
Maintenance type:	routine / preventive / complaint		Equipment time in service:		
4. INITIAL TESTING					
Equipment visual condition:					
Electrical operation condition:	• Non operative • Intermittent functioning • Operative		Fasteners condition:	• Loose • Tight	
Other condition of equipment					
5. REPAIRS AND REPLACEMENTS					
Maintenance or repairs performed	1.- _____ 2.- _____		Material used	•	
6. AFTER REPAIR TEST					
Equipment condition after repairs			Recommendation		
Inspector's signature: _____ Maintenance supervisor: _____					

REVISING

D. Use the checklist to check your classmate's work.

Criteria	😀	☹
The report contains basic information (serial numbers, name, date).		
The comments are clear and brief.		
The report offers recommendations.		
Organization		

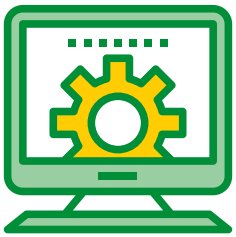
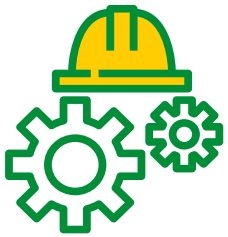
EDITING

E. Correct your mistakes and improve your writing. .

PUBLISHING

F. Show the writing to your teacher.

Project: Promoting awareness about maintenance

Name of the Project:	Promoting awareness about maintenance
Level:	Grade 11th
Time:	90-120 minutes
General aims:	To create a spoken campaign to promote awareness of the importance of maintenance of tools and general equipment.
Language aims:	To use English to convince a general audience about the importance of maintenance protocols.
Resources / Materials:	A mobile phone – to record the campaign and edit the information later. A laptop or PC-to design and edit visual information.
Teacher's role:	To monitor students' use of English and support the organization of the project.
Students' roles:	Active engagement in the design of the campaign, ask the teacher questions, and promote cooperation within their group.

Procedure	**1.** Get into groups of 4 and brainstorm as many words as you can say in English that help promote awareness of the importance of maintenance of tools and general equipment. **2.** Then, design a video where you can show these phrases. Make sure the video can convince workers and employers to take necessary actions to keep materials in optimal conditions. **3.** Record the video, edit sections, and make it look like a public campaign. **4.** Every class, make sure you ask your teacher questions to check your English and see if the video can promote the idea. **5.** Share the video with your teacher and class.
Assessment	Every class, each group can be assessed on how much they worked, and how their work improves (formative assessment). [draft of a checklist] **1.** The task shows improvement in comparison to the previous lesson or previous assessment. **2.** Doubts or problems have been appropriately solved by asking the teacher or within the group. **3.** All members have roles or duties assigned by the same members of the group.
Variation	Instead of a video, you can also create a poster campaign to promote awareness of the importance of doing maintenance work.
Rubric	See in appendix.

Unit IV: Measurement and Cubage of Materials and Supplies.

Goals: To produce written and oral texts related to construction, with the purpose of expressing a personal informed opinion about construction.

Skills: Listening, Reading, Speaking, Writing.

Project: My dream house

☆ 20 KEY WORDS

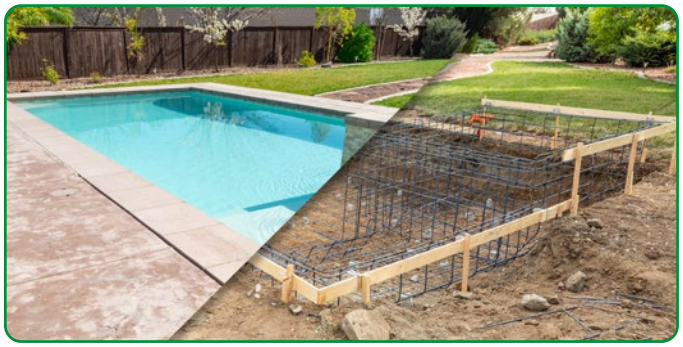
- Add (v.)
- Aggregate (n.)
- Amount (n.)
- Bind (v.)
- Centimeter (n.)
- Cover (n.,v.)
- Cubic (adj.)
- Equal (v., adj.)
- Expensive (adj.)
- Hold (v.)
- Kilogram (n.)
- Liter (n.)
- Meter (n.)
- Plus (prep.)
- Project (n., v.)
- Round up (v.)
- Shrink (v.)
- Square (adj.)
- Thickness (n.)
- Waterproof (adj.)

Lesson I: Listening Comprehension

BEFORE YOU LISTEN

A. Look at the picture and make a list of things you should know before building a pool.

[Example]: Calculate the amount of concrete.



1. _____
2. _____
3. _____

B. Match the words to their definition in English. You can look up their meaning using a dictionary [you can find one here: https://dictionary.cambridge.org/dictionary/].

1		Aggregate
2		Bind (verb)
3		Shrink (verb)
4	b	Waterproof (adj)
5		Thickness (noun)

a	Small stones used in concrete and building in general.
b	Any material resistant to water.
c	Combine smaller pieces into one single unit.
d	The distance between one side of something to the opposite side.
e	To become smaller or reduce the initial size.

WHILE YOU LISTEN

Click here to listen:

C. Listen to the instructions for using concrete for building a pool. Tick (**√**) the instruction that was **not** mentioned.

[Example]:
- Cover the area with a plastic wrap. **√**
- Measure the thickness of concrete.

1	Identify the thickness needed for the concrete.	
2	Use the precise amount of aggregate.	
3	Buy your concrete from an authorized supplier.	
4	Waterproof your pool before and after adding concrete.	

D. Listen again. Complete the sentences with the words you hear.

[Example]: When constructing a pool, **measure** the thickness of your concrete.

1. Are you starting a home _____ this summer?
2. In order to avoid future cracks or _____.
3. Builders leave the _____ of pools with a thickness of 12 cm to 18 cm.
4. Consider using the precise amount of _____.
5. Carefully read the instructions of your _____ solution.

AFTER YOU LISTEN

E. Answer the listening comprehension questions based on the listening from activity C. Choose one alternative.

1. What is the first step mentioned?

a. Compare prices of concrete and find the cheapest one.
b. Measure the thickness of the concrete in your pool.
c. Buy the best waterproof solution for your pool.

2. What is a good example of "aggregate" from the second step?

a. The waterproof solution is an aggregate used with concrete.
b. Aggregate refers to the amount of concrete you can add.
c. Tiny stones can be added to the mixture to improve its quality.

3. The third step mentioned is to use a waterproof solution. Why?

a. To prevent water from damaging the concrete.
b. To improve the hardness of the concrete.
c. To make the pool cheaper to build.

Lesson II: Reading Comprehension

BEFORE YOU READ

A. Look up these vocabulary words. Use a monolingual dictionary to write their definitions [you can find one here: https://dictionary.cambridge.org/dictionary/]. Check with your classmates.

1. Expensive (adjective): _____
2. Round something up (phrasal verb): _____
3. Equal (verb): _____
4. Plus (preposition): _____
5. Add (verb): _____

B. Read the subject in the email in activity C and choose what the email is about.

1. An email with instructions for building something.
2. An email about a problem in the process of building something.
3. An email about costs and amounts of materials from a construction.

WHILE YOU READ

To: Camila Goldman-Ramírez
From: Ray Grau
Subject: RE: Costs related to materials

Dear Camila,
Thank you for your interest in understanding why the materials are **expensive.** I will try to explain the calculations behind the costs we informed you.
To build your pool, we must consider that the concrete needed to level the terrain is approximately one and a half bags per meter. Also, most pools need four and a half bags of concrete per meter to build the walls. We **rounded** this **up** to six bags of concrete per meter. Your pool will be 30 cubic meters. If you **multiply** six bags per 30 cubic meters this equals 180 bags.
Our suppliers offer a price of $5 per bag of concrete. This equals $900 just in concrete; plus taxes, the price can get up to $1,080. Our pricing policy is that we charge a percentage based on the cost of materials, plus a daily fee for changes you may want to make to the construction. This is 25% of the material which came to $270. **Add** this to the material cost, the total is $1,350.
I hope this explanation answers your doubts in relation to the costs. Remember that we offer the possibility of paying the bill ($270) in several payments.
Best,
Ray.

Adapted from Evans, V., Dooly, J., & Revels, J. (2016). Career Paths *Construction I: Buildings (Student's Book).* Express Publishing.

C. Read the email. Check your predictions from activity B.

D. Read the statements and scan the text to see whether they are **True** or **False**. Correct the false ones.

[Example]: The email was sent to Ray Grau. False. The email was sent to Camila.

1		Camila was worried about the quality of the materials selected for her pool.
2		Ray needs six bags of concrete to build the pool.
3		The concrete supplier offers a price of $5 per bag of concrete.
4		Ray charges $270 for any construction work.
5		Camila can pay the bill in several payments

AFTER YOU READ

E. Label these Math problems with the correct name.

[rounding up – addition – multiplication – ~~subtraction~~]

[Example]: If I take 5 kilos of concrete to the mixture, I have only 5 left. **subtraction**.

1. We need 249 gallons of paint per building, and we have 10 buildings to paint. I'll say we need around 2,500 gallons. _____

2. Ten times 249 gallons equals 2,490 gallons of paint in total. _____

3. One building needs 249 gallons of paint. Then, for two, we need 249 and 249 which is 498: _____

Lesson III: Speaking

WARM UP

A. Look at the pictures and think of materials you need to build the structures. Brainstorm the materials to write them on the whiteboard or your notebook.

INPUT AND ELICITING:

Click here to listen:

B. Listen to these phrases and check the pronunciation of the underlined words with your teacher.

1. For 20 m2 you need around 10 kilograms of concrete.
2. In 10 m3, you have 10,000 liters of volume.
3. Leave 5 centimeters between each filter entry.
4. This wall is 5 meters long and 1 meter high.
5. Make sure you measure the cubic meters of the pool.
6. The area we need to paint is 10 square meters.

CONTROLLED PRACTICE

C. Complete the dialogue with the key information from the box. Then, practice saying the dialogue aloud with a classmate.

50 square meters – ~~10,000 liters~~ – 10 cubic meters
20 centimeters – 16 kilograms

Speaker A: Hi, this is Nick, from William suppliers. Who am I speaking with?
Speaker B: Hi, I'm Jenny, I'm working on a pool project. I need some materials.
Speaker A: Oh, Jenny, hi. How is the pool going? Let me know what you need.
Speaker B: Everything is going as planned Nick, thanks for asking. I need the pool to hold up to [example] (1) 10,000 liters. I'll need enough concrete for that. Could you help me calculate that amount?
Speaker A: Alright, that's easy. Look, our specialized concrete for pools covers an area of 1 square meter per bag. The weight of each bag is (2)_____.
Speaker B: Doing the math, the pool comes to (3) _____. This means I'll need 10 bags, right?
Speaker A: That's right. Anything else?
Speaker B: Yes, I need a stone floor for the backyard. The area is (4)_____. Do you have anything like that?
Speaker A: We have a beautiful rustic stone floor. Each tile is $7 and the size is (5)_____ long and 5 centimeters wide.
Speaker B: Perfect, I want them. Send everything to my address, please.

FREER PRACTICE

D. Use the vocabulary in activity B to create your own dialogue. Talk about the materials you need to build a structure of your choosing.

Speaker A: _____
_____
Speaker B: _____
_____
Speaker A: _____
_____
Speaker B: _____
_____
Speaker A: _____
_____
Speaker B: _____
_____
Speaker A: _____
_____

EXIT TICKET

E. Say these measurements aloud to one classmate and vice versa. Check if your pronunciation is clear enough.

1. This wall is 12 square meters.
2. The bag weighs 50 kilograms.
3. The pool holds 5 cubic meters of water.

Lesson IV: Writing

PRE-WRITING

A. Look up these words in a monolingual online dictionary [you can find one here: https://dictionary.cambridge.org/dictionary/]. Write the definition and compare your answers with your classmates.

Project (noun.): _____.
Amount (noun.): _____.
Cover (verb): _____.
Hold (verb): _____.

B. Read the text and complete it using the vocabulary from activity A.

How to measure the concrete needed in a pool (1)_____?
One of the most important things when building a pool is understanding the exact (2) _____of materials you need. There are many elements to take into account, and with this step-by-step guide you will have a 5-star pool.
First, measure your desired pool. How long is it going to be? This is important because it will tell you how much area you need to (3)_____with concrete (m2) and how much water it can (4)_____(m3).

Then, you can decide how thick the walls of the pool need to be. Ideally, a pool would have walls that are between 12 cm and 18 cm thick.
Once you have this basic information at hand, you can start doing the math. Read the information from your concrete supplier: they tell you how much area a bag of concrete could cover.

Next, once you know how many bags of concrete you need, you can start measuring details such as the entries for filter bumps and lighting if you want.
Finally, you can start the process of building the actual pool. Make sure you follow the instructions for each material, especially because you are combining weights, water, and concrete.

Adapted from Kennan, M. (n.d.). *How to Calculate the Cubic Yards in a Concrete Ramp*. Hunker. https://www.hunker.com/13402019/how-to-calculate-the-cubic-yards-in-a-concrete-ramp

DRAFTING

C. Write your own step-by-step instructions on how to build a project of your choosing.

Step-by-step guide on how to build a _____.
First, _____. **Then,** _____
_____. **Once you have this,** _____
_____. **Next,** _____
_____. **Finally,** _____
_____.

REVISING

D. Check your classmate's work using the checklist.

Criteria	😀	😕
The steps have a logical sequence.		
The steps are easy to follow.		
The language is clear and concise.		
General comments		

EDITING

E. Check your classmate's work using the checklist.

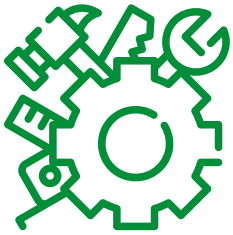
Step-by-step guide on how to build a _____.
First, _____. **Then,** _____
_____. **Once you have this,** _____
_____. **Next,** _____
_____. **Finally,** _____
_____.

PUBLISHING

F. Present the step-by-step guide to your teacher and your class.

Project: My dream house





Name of the Project	My dream house
Level	Grade 11th
Time	90-120 minutes
General aim	To make decisions about the equipment and materials needed to design a basic construction of a house based on the needs of the client and available resources.
Language aim	Students will be able to orally report the materials and equipment they need, using vocabulary from the unit.
Resources / Materials	Projector and computer-based program to draw and design a house, for example, Paint, SketchUp, or AutoCAD.
Teacher's role	Monitoring students' work and giving advice for students' presentations.
Students' role	Active engagement on the design of a house, ask the teacher questions, and contribute to the group's task.

Procedure	Design a basic house of up to 100 m2. Think of available resources in Chile and a budget of 10 million Chilean pesos. Make decisions on the necessary equipment, tools, and materials. Orally report the project to the class, emphasizing the decisions made on materials and equipment, amounts, and costs.
Assessment	In each class, each group can be assessed on how much they worked, and how their work improves. 1. The task shows improvement in comparison to the previous lesson or previous assessment. 2. Doubts or problems have been appropriately solved by asking the teacher or within the group. 3. All members have roles or duties assigned by the members of the group.
Variation	Instead of designing a house, other constructions are allowed.
Rubric	See in appendix.

Appendix

ANSWER KEY UNIT I

LESSON I:

Activity A:
1. √ [Example]
2. X
3. √
4. √
5. X

Activity B:
1.E, 2.A, 3.F, 4.C, 5.D, 6.B, 7.G

Activity C:
1.F, 2.T, 3.T, 4.F, 5.F, 7.T

Activity D:
1. bucket
2. samples
3. gravel
4. mixer truck

Activity D:
Students' own answers.

LESSON II:

Activity A:
1.A, 2.C, 3.E, 4.B, 5.D

Activity B:
1. √
2. √
3. X
4. √
5. X

Activity C:
A.2, B.3, C.1, D.4

Activity D:
1.F, 2.T, 3.F, 4.F, 5.F

Activity E:
1.P, 2.C, 3.P, 4.P, 5.C

Activity F:
Students' own answers.

LESSON III:

Activity A:
1. Metal
2. Glass
3. Metal
4. Concrete
5. Wood

Activity B:
Students' own answers.

Activity C:
Students' own answers.

Activity D:
1. lumber
2. corrosion
3. cracks

Activity E:
Students' own answers.

Activity F:
Students' own answers.

Activity G:
1. C, 2. A, 3. B

LESSON IV:

Activity A:
1. Ways to start: Dear Mr., Sir or Madam.
2. Ways to finish: Yours sincerely, Faithfully, Best wishes.

Activity B:
1. [Example] First
2. Then / After that
3. After that / Then
4. Finally

Activity C:
1. $20.000
2. bought
3. topographic
4. tested

Activity D:
Students' own answers.

Activity E:
Students' own answers.

Activity F:
Students' own answers.

Activity G:
Students' own answers.

ANSWER KEY UNIT II

LESSON I

Activity A:
1. X
2. √
3. X
4. √
5. √

Activity B:
1.B, 2.C, 3.E, 4.F, 5.A, 6.D

Activity C:
1. X
2. √
3. X
4. X

Activity D:
1. the contractor from
2. an issue with the prints
3. new sketches of the site
4. resting utility
5. scale you are not reading

Activity E:
1.B, 2.C, 3.A

LESSON II

Activity A:
2. It helps the contractor understand the layout of the construction site.

Activity B:
1.E, 2.A, 3.G, 4.H, 5.B, 6.F, 7.D, 8C

Activity C:
1.C, 2.D, 3.A, 4.B, 5.E

Activity D:
1. can make significant improvements in cost and time savings.
2. is to control and maintain work performance.
3. will keep workers comfortable and safe.
4. result in serious problems in material handling.
5. can a construction site become efficient and safe for everyone.

Activity E:
Students' own answers.

LESSON III

Activity A:
Students' own answers.

Activity B:
Students' own answers.

Activity C:
Students' own answers.

Activity D:
Students' own answers.

Activity E:
Students' own answers.

Activity F:
Students' own answers.

Activity G:
Students' own answers.

LESSON IV

Activity A:
1. PLYWOOD
2. HAMMER
3. BRICKS
4. DRYWALL
5. CONCRETE

Activity B:
A.8, B.1, C.4, D.6, E.2, F.5, G.7, H.3

Activity C:

Purchase order N°1			
Date		February 15th	
Budget		$2,000	
Materials			
Product	Quantity	Description	Price $
Steel hammer	1	1 unit	20
[Example] Plywood	12	12mm sheets	100
Screws	200	1'' bag	50
Anchors	200	1'' bag	60

Activity D:

Students' own answers.

Activity E:

Students' own answers.

Activity F:

Students' own answers.

Activity G:

Students' own answers.

Activity H:

Students' own answers.

ANSWER KEYS UNIT III:

LESSON I

Activity A:
Students' own answers.

Activity B:
1. power tools [Example]
2. face shield
3. earplug
4. fasteners
5. maintenance
6. circular saw

Activity C:
3. Lack of maintenance of tools and not enough security equipment.

Activity D:
1. T, 2.F, 3.F, 4.F, 5.T

Activity E:
1. fasteners [Example]
2. maintenance
3. circular saw
4. earplugs
5. face shield
6. power tools

Activity F:
Students' own answers.

LESSON II

Activity A:
1. PREVENTION
2. MACHINERY
3. ADVICE
4. FAILURE

Activity B:
Students' own answers.

Activity C:
Students' own answers.

Activity D:
1.T, 2.F, 3.T, 4.F, 5.T

Activity E:
Students' own answers.

Activity F:
Students' own answers.

LESSON III

Activity A:
Students' own answers.

Activity B:
Students' own answers.

Activity C:
1. wheels
2. ropes
3. hazard sign

Activity D:
Students' own answers.

Activity E:
Students' own answers.

Activity F:
Students' own answers.

Activity G:
Students' own answers.

LESSON IV

Activity A:
a. Loose: Not firmly fixed in place.
b. Tight: Held firmly or closely.
c. Intermittent: Not happening regularly or continuously
d. Repair: "To put something broken back into good condition."
e. Service: "To check and repair a machine at regular periods."

Activity B:
1. April 22nd [Example]
2. #2658411761659
3. internal equipment was replaced
4. electric wires
5. 30 days to next preventive maintenance recommended

Activity C:
Students' own answers.

Activity D:
Students' own answers.

Activity E:
Students' own answers.

Activity F:
Students' own answers.

ANSWER KEY UNIT IV

LESSON I

Activity A:
Students' own answers.

Activity B:
1.A, 2.C, 3.E, 4.B, 5.D

Activity C:
3. buy your concrete from an authorized supplier.

Activity D:
1. PROJECT
2. SHRINKING
3. WALLS
4. AGGREGATE
5. WATERPROOF

Activity E:
1.B, 2.C, 3.A

LESSON II

Activity A:
1. Expensive: Costing a lot of money.
2. Round something up: To increase a number to the nearest whole or simple number.
3. Equal: To be the same in value or amount as something else.
4. Plus: Added to.
5. Add: To put two or more numbers together to get a total.

Activity B:
Students' own answers.

Activity C:
Students' own answers.

Activity D:
1. False. Camila was worried about the costs of the materials.
2. False. Ray needs 180 bags in total.
3. True.
4. False. Ray charges 25% of the material cost.
5. True.

Activity E:
1. Round up
2. Multiply
3. Addition

LESSON III

Activity A:
Students' own answers.

Activity B:
Students' own answers.

Activity C:
1. 10,000 liters [Example]
2. 16 kilograms
3. 10 cubic meters
4. 50 square meters
5. 20 centimeters

Activity D:
Students' own answers.

Activity E:
Students' own answers.

LESSON IV

Activity A:
1. Project: Planned work finished over time.
2. Amount: A collection or mass, especially of something that cannot be counted.
3. Cover: To put or spread something over something, or to lie on the surface of something.
4. Hold: To support something.

Activity B:
1. project
2. amount
3. cover
4. hold

Activity C:
Students' own answers.

Activity D:
Students' own answers.

Activity E:
Students' own answers.

Activity F:
Students' own answers.

PROJECT RUBRIC UNIT I: CAMPAIGN FOR CHANGE!

CRITERIA	EXCELLENT (3)	SUFFICIENT (2)	NEEDS IMPROVEMENT (1)
Language: use of tenses, language structure, and word choice.	The language is appropriate most of the time. Mistakes are present, but do not interfere with the message.	The language is appropriate to some extent. Few mistakes interfere with the message.	Mistakes in the language interfere with the understanding of the message.
Poster design: use of images and texts.	The images and texts are equally present in the poster. The message is clear.	The images or texts may have unequal presence, but this does not interfere with the message.	The number of images or texts interferes with the overall message of the poster. The poster is unclear.
Project requirements: fulfillment of requirements asked by the teacher.	The task included all the requirements asked by the teacher.	The task included some of the requirements asked by the teacher.	The task did not include the requirements asked by the teacher.
Classwork: student participation in classes in relation to the task.	The members of the group devoted most of their time in classes to the task or to ask questions.	The members of the group devoted a sufficient part of their time in classes to the task or to ask questions.	The members of the group devoted little to no time in classes to the task or to ask questions.

PROJECT RUBRIC UNIT II: DESIGNING MY DREAM SCHOOL

CRITERIA	EXCELLENT (3)	SUFFICIENT (2)	NEEDS IMPROVEMENT (1)
Language: use of tenses, language structure, and word choice.	The language is appropriate most of the time. Mistakes are present, but do not interfere with the message.	The language is appropriate at some extent. Few mistakes interfere with the message.	Mistakes in the language interfere with the understanding of the message.
Presentation design: the elements used in the presentation of the school layout plan.	The images and texts are equally present in the poster. The message is clear.	The images or texts may have unequal presence, but this does not interfere with the message.	The number of images or texts interferes with the overall message of the presentation. The message is unclear.
Project requirements: fulfillment of requirements asked by the teacher.	The task included all the requirements asked by the teacher.	The task included some of the requirements asked by the teacher.	The task did not include the requirements asked by the teacher.
Classwork: student participation in classes in relation to the task.	The members of the group devoted most of their time in classes to the task or to ask questions.	The members of the group devoted a sufficient part of their time in classes to the task or to ask questions.	The members of the group devoted little to no time in classes to the task or to ask questions.

PROJECT RUBRIC UNIT III: PROMOTING AWARENESS ABOUT MAINTENANCE

CRITERIA	EXCELLENT (3)	SUFFICIENT (2)	NEEDS IMPROVEMENT (1)
Language: use of tenses, language structure, and word choice.	The language is appropriate most of the time. Mistakes are present, but do not interfere with the message.	The language is appropriate to some extent. Few mistakes interfere with the message.	Mistakes in the language interfere with the understanding of the message.
Technology use: use of images and audio/texts to convey a clear message.	The images and audio/texts are equally present in the video. The meaning of the product is clear.	The images or audio/texts may have unequal presence, but this does not interfere with the meaning of the product.	The images or audio/texts have an overwhelming presence in the video. The meaning of the product loses clarity.
Project requirements: inclusion of requirements/components set out by the teacher.	The task included all the requirements asked by the teacher.	The task included some of the requirements asked by the teacher.	The task did not include the requirements asked by the teacher.
Classwork: student participation in classes in relation to the project.	The members of the group devoted most of their time in classes to the task or to ask questions.	The members of the group devoted a sufficient part of their time in classes to the task or asking questions. Their time management could have been better.	The members of the group devoted little to no time in classes to the task or to ask questions.

PROJECT RUBRIC UNIT IV: MY DREAM HOUSE

CRITERIA	EXCELLENT (3)	SUFFICIENT (2)	NEEDS IMPROVEMENT (1)
Language: use of tenses, language structure, and word choice.	The language is appropriate most of the time. Mistakes are present, but do not interfere with the message.	The language is appropriate to some extent. Few mistakes interfere with the message.	Mistakes in the language interfere with the understanding of the message.
Presentation format: use of images and audio/texts to convey a clear message.	The images and audio/texts are equally present in the presentation. The meaning of the product is clear.	The images or audio/texts may have unequal presence, but this does not interfere with the meaning of the product.	The images or audio/text have an overwhelming presence in the video. The meaning of the product loses clarity.
Project requirements: fulfillment of requirements set out by the teacher.	The task included all the requirements asked by the teacher.	The task included some of the requirements asked by the teacher.	The task did not include the requirements asked by the teacher.
Classwork: student participation in classes in relation to the task.	The members of the group devoted most of their time in classes to the task or to ask questions.	The members of the group devoted a sufficient part of their time in classes to the task or to ask questions.	The members of the group devoted little to no time in classes to the task or to ask questions.

SCRIPTS

SCRIPT UNIT I

[Lesson I, Activity C]

At a construction site, two workers oversee the construction of a Public Hospital.

- Liam: Good morning Pedro! Did you receive the boss's message?
- Pedro: Hi Liam! Yes, he asked us to check the quality of the concrete for the **roof** of the hospital.
- Liam: So... I'll bring the **slump cone** to test fresh concrete.
- Pedro: Ok Liam, then I'll be taking the **samples** from the **mixer truck**.
- Liam: So, the mixture between cement and water must be hard enough for a rooftop.
- Pedro: This first **batch** came too watery. Let's try again. Give me the other **bucket**.
- Liam: We might need to add more **gravel**, so the mixture hardens better.
- Pedro: That's it. This second batch came out better than the first one.
- Liam: Yeah, it has the right amount of water, cement, and gravel.
- Pedro: I'll write the test report.
- Liam: Great Pedro, see you in the office.

[Lesson III, Activity D]

A cargo shipment arrives with materials for the construction of houses.

- Quality inspector: Please leave the cargo in this area for us to inspect its quality.
- Worker: Sure, no problem. How do we start?
- Quality inspector: First, make sure the **lumber** has few or no **knots**.
- Worker: This **batch** is fine, what now?
- Quality inspector: Let's check the **steel bars**.
- Worker: They seem **straight** and without **corrosion**.
- Quality inspector: Good, then see if the **drywall** and **brick**s have any **cracks**.
- Worker: Hmmm, I found some in this batch of bricks. What do I do with them?
- Quality inspector: Return them. We cannot use them if they are not in their best quality.

SCRIPT UNIT II

[Lesson I, Activity C]

- Sebastian: Hello? Mrs. Ford? This is Sebastian, the contractor from T&R Construction.
- Mrs. Ford: Hi, good morning. How are you doing Sebastian? Is everything alright?
- Sebastian: I'm fine Mrs. Ford, thanks for asking. I may have an issue with the **blueprints** of the **site plan**.
- Mrs. Ford: Did you receive them? I sent my new **sketches** of the site yesterday.
- Sebastian: We did Mrs. Ford, but we have some problems with the installation of the workers' **facilities**.
- Mrs. Ford: I see... what happened?
- Sebastian: It seems you forgot to include a resting room and **utility room**.
- Mrs. Ford: Oh, that's a problem... I'm sure I included them in the general **layout**. Did you check the **scale**? Maybe you are not reading the sketches correctly.
- Sebastian: I'm sure Mrs. Ford, we measured the land, and the sketches follow the right dimension. Maybe you can recheck the site plan?
- Mrs. Ford: Sure, I can. I'll call you back.
- Sebastian: Thanks!

[Lesson III, Activity D]

- Kiara: Hey Mark, how are you doing?
- Mark: Hi Kiara, fine thanks. What are you up to?
- Kiara: I'm looking at the layout of the work site. **How about** having a 6-meter **square** break room?
- Mark: I don't think that's a good idea. There are too many workers to have everyone in a tiny room.
- Why don't we split the break room? We can have two rooms.
- Kiara: Why not? We could have one room near the **storage** rooms and the other near the **concrete mixers**.
- Mark: That makes sense. I also think that we should use **brick** for the workers facilities. It lasts longer.
- Kiara: Maybe we could try something else. Remember that the site layout plan is for temporary use in most cases.
- Mark: Then, what do you suggest?
- Kiara: We should try using **plywood**. It's cheaper and easier to install.
- Mark: Considering the worksite is **1,000 m2**, we would need **300 hundred** sheets of plywood.
- Kiara: Great!

SCRIPT UNIT III

[Lesson I, Activity C]

- Anthony: Hi Barbara, thanks for coming and for agreeing to be the contractor of this project. It hasn't been easy to manage the construction as the owner of the company.
- Barbara: Oh, it's nothing, I'm glad you called me, Anthony. I already checked the construction site, but I believe we have some issues. We're short in basic equipment and there is no report on the maintenance of your power tools.
- Anthony: What tools and equipment do your workers need to begin the construction of the **cabin**? We are delayed. Did you check the equipment in the **warehouse**?
- Barbara: I went to the warehouse and we were running low in **fasteners** and security equipment. Our workers do not have enough **face shields** and **earplugs**. Since we're using wood for the cabin, they'll need a **circular saw**, and other electrical equipment. The workers need protection for this kind of work.
- Anthony: I understand, I'll make sure we have those elements before the end of this week. However, I need this project to be ready before the end of the month. You and your workers will have to begin tomorrow.
- Barbara: That's a problem Anthony, we cannot begin the construction without the basic security equipment. I imagine you understand why this equipment is a must on any construction site.
- Anthony: I do, I'll do my best to have these elements available for all the workers ASAP. Is there any other issue you think requires my attention?
- Barbara: Yes, there is. I did not find any report on the **maintenance** of the **power tools**. Is it possible for a technician to come and check some of them? Most of the tools have clear signs of use and are not in a very good condition.
- Anthony: I do not think we need maintenance for those tools Barbara. They worked just fine in our last project in the hospital. Do you really think it is necessary to spend part of the low budget we have for maintenance of the power tools?
- Barbara: It is absolutely necessary, Anthony. We cannot risk an accident due to the machinery not working properly, or problems in the construction for lack of maintenance of the power tools.
- Anthony: You're right. I'll send everything to our warehouse, and I'll call you back when the maintenance is ready.
- Barbara: Thanks Anthony, I'm sure the client will understand the delay on the works.

SCRIPTS

[Lesson III, Activity C]

- Speaker 1: Hi Laura, would you help me with the maintenance of the worksite crane?
- Speaker 2: Sure! No problem. So, these are the steps to correctly perform maintenance of cranes.
- Speaker 1: The manual says I should start by replacing the **wheels** of the crane.
- Speaker 2: You definitely want to start with that. Corroded wheels can break and provoke a huge accident.
- Speaker 1: That's it, now it's done. What comes next? Should we see the condition of the controls on the cabinet?
- Speaker 2: Not yet. First, we should look at the ropes that hold the material in the crane.
- Speaker 1: Oh, sure. We do not want them to break while lifting weight.
- Speaker 2: Remember to put out the hazard sign to warn workers this crane is under maintenance.
- Speaker 1: Thanks Laura!

SCRIPTS UNIT IV

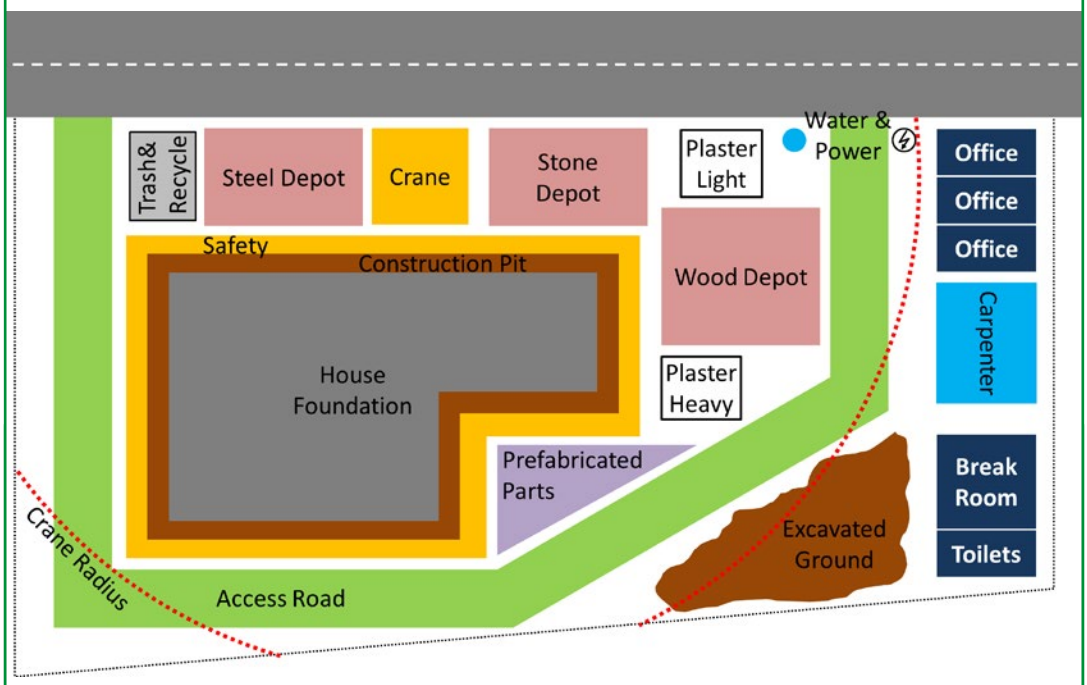
[Lesson I, Activity C]

Are you starting a home project this summer? Do you want to give use to that extra space in your backyard? Or maybe you started a construction company? Then you definitely need to know how to build a concrete pool. These are the instructions for calculating the amount of concrete you need to build your dream pool. First, you must measure how **thick** you need your concrete to be, in order to avoid future cracks or **shrinking**. Usually, builders leave the walls of pools with a thickness of 12 cm to 18 cm depending on the length and resistance needed. Second, consider using the precise amount of **aggregate** to ensure the concrete **binds** together correctly. Aggregate also helps give a luxury finish to your pool project. Finally, use any **waterproof** solution to prevent water from damaging the concrete. Remember to use the solution before and after adding the concrete. Carefully read the instructions of your waterproof solution because you must use the exact amount to make sure your pool project gets the best results!

[Lesson III, Activity B]

1. For 20 m2 you need around 10 kilograms of concrete.
2. In 10 m3, you have 10,000 liters of volume.
3. Leave 5 centimeters between each filter entry.
4. This wall is 5 meters long and 1 meter high.
5. Make sure you measure the cubic meters of the pool.
6. The area we need to paint is 10 square meters.

Flashcards



SITE PLAN

CRANE

SLUMP CONE

LEVEL

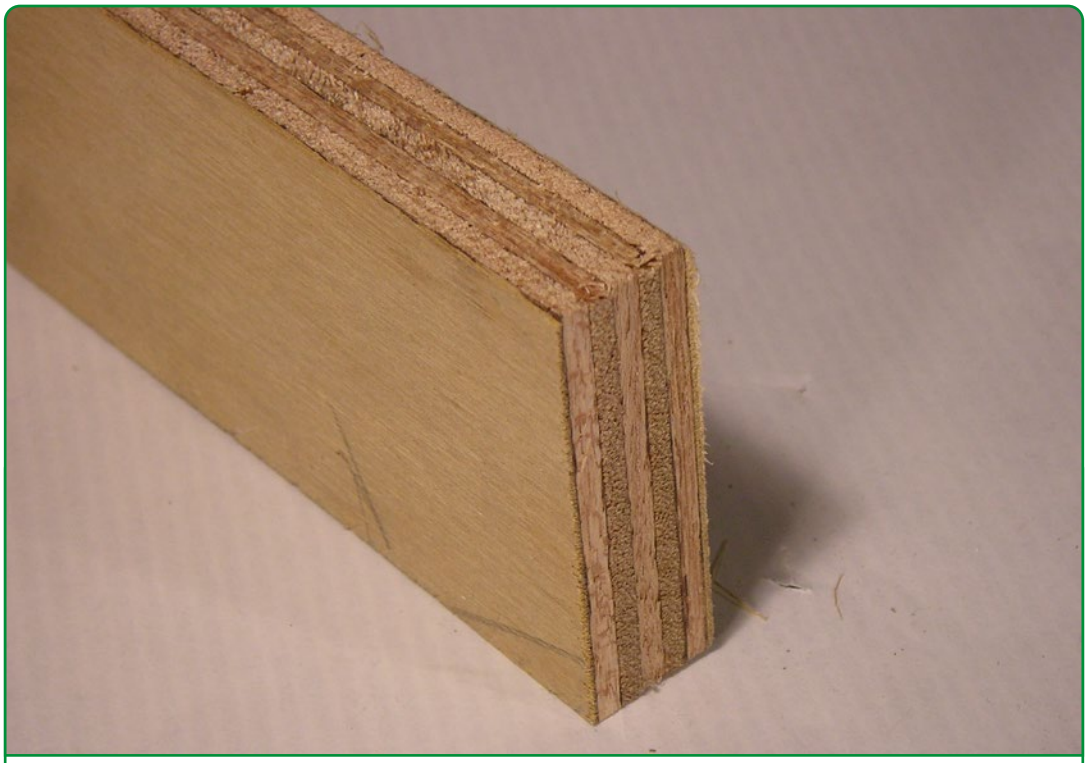
DRILL

SCREWDRIVERS

MAINTENANCE

INSULATE

FASTENERS



PLYWOOD

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