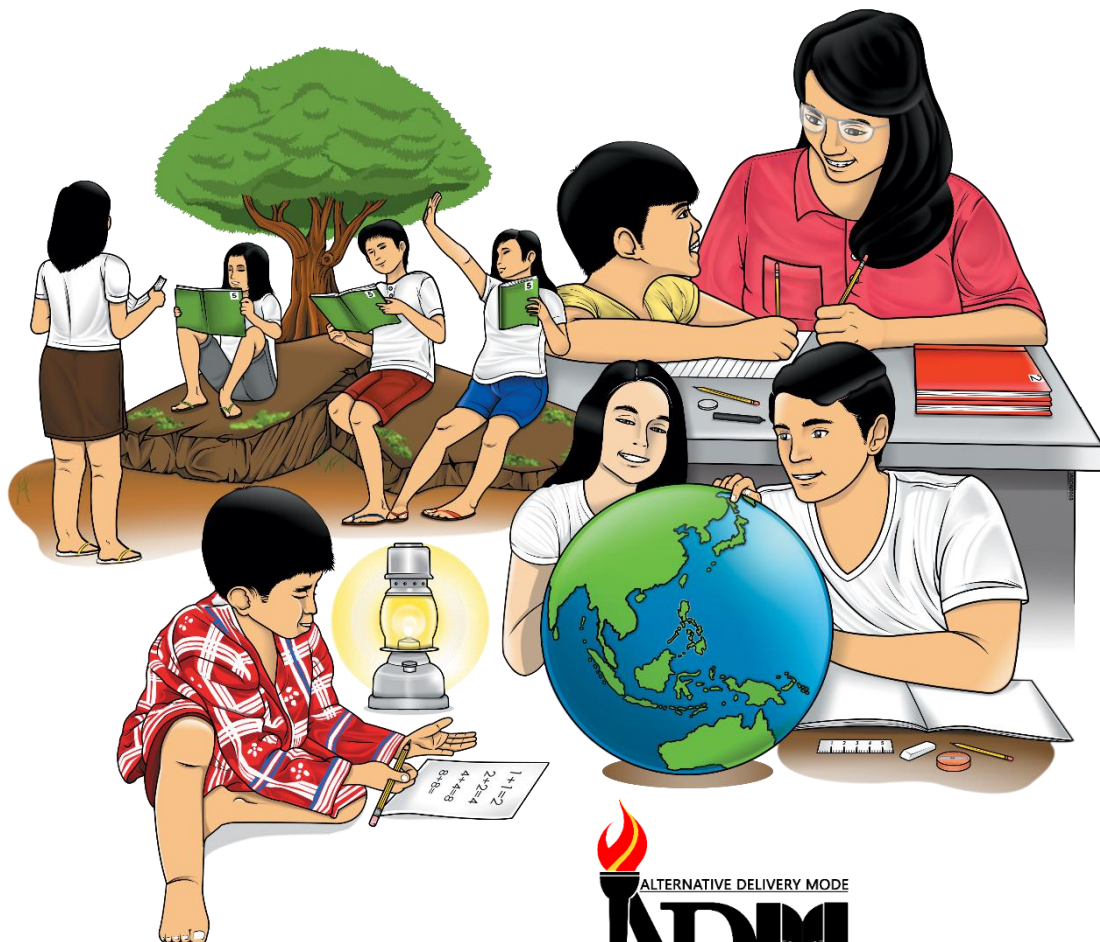


Technology and Livelihood Education

Quarter 1 - Module 1

Prepare Tools, Equipment and Materials for Staking-out Building Lines (Preparing/Staking-out building lines)

CARPENTRY NC II



10

Technology and Livelihood Education

Quarter 1 - Module 1

Prepare Tools, Equipment and Materials for Staking-out Building Lines (Preparing/Staking-out building lines)

CARPENTRY NC II

TLE Carpentry – Grade 10

Alternative Delivery Mode

Quarter 1 – Module 2: Prepare Tools, Equipment and Materials for Staking-out Building Lines (Preparing/Staking-out Building Lines)

First Edition, 2020

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Introductory Message

This Self-Learning Module (SLM) is prepared so that you, our dear learners, can continue your studies and learn while at home. Activities, questions, directions, exercises, and discussions are carefully stated for you to understand each lesson.

Each SLMS is composed of different parts. Each part shall guide you step-by-step as you discover and understand the lesson prepared for you.

Pre-tests are provided to measure your prior knowledge on lessons in each SLM. This will tell you if you need to proceed on completing this module or if you need to ask your facilitator or your teacher's assistance for better understanding of the lesson. At the end of each module, you need to answer the post-test to self-check your learning. Answer keys are provided for each activity and test. We trust that you will be honest in using these.

In addition to the material in the main text, Notes to the Teacher are also provided to our facilitators and parents for strategies and reminders on how they can best help you on your home-based learning.

Please use this module with care. Do not put unnecessary marks on any part of this SLM. Use a separate sheet of paper in answering the exercises and test. And read the instructions carefully before performing each task.

If you have questions in using this SLM or any difficulty in answering the tasks in this module, do not hesitate to consult your teacher or facilitator.

Thank you.



Notes to the Teacher

This contains helpful tips or strategies that will help you in guiding the learner.

For the facilitator:











Hi, as a facilitator you are expected to orient the learners on how to use this module. You also need to keep track of the learners' progress while allowing them to manage their own learning. Kindly, advise the learner's parents or guardians of the same procedure since they will be the primary supporters in the learners'

progress. Please, do not forget to remind the learner to use separate sheets in answering all of the activities found in the learning module.

For the learner:

Hello learner, Welcome to the Carpentry NC II Alternative Delivery Mode (ADM) Module on Preparing/Staking-out Building Lines. I hope you are ready to progress in your Grade 10 TLE in Carpentry NC II with this learning module. This is designed to provide you with interactive tasks to further develop the desired learning competencies prescribed in our curriculum. With this, you are expected to appreciate staking through the information and activity given.

This module has the following parts and corresponding icons:

ICON	LABEL	DETAIL
	What I Need to Know	This contains the learning objectives which you need to accomplish.
	What I know	This evaluates what you know about the lesson you are to learn.
	What's In	This connects the current lesson with a topic necessary in your understanding.
	What's New	This introduces the lesson through an activity.
	What Is It	This contains a brief discussion of the learning module lesson.
	What's More	These are activities to check your understanding of the lesson.
	What I Have Learned	This summarizes the important ideas presented in the lesson.
	What I Can Do	This is a real-life application of what you have learned.
	Assessment	This is a post assessment of what you have learned.
	Additional Activity	This is an activity that will strengthen your knowledge about the lesson.

At the end of this module you will also find:

References

This is a list of all sources used in

developing this module.

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Lesson

1

Preparing/Staking-out Building Lines

The following are some reminders in using this module:

1. Use the module with care. Do not put unnecessary mark/s on any part of the module. Use a separate sheet of paper in answering the exercises.
2. Don't forget to answer *What I Know* before moving on to the other activities included in the module.
3. Read the instruction carefully before doing each task.
4. Observe honesty and integrity in doing the tasks and checking your answers.
5. Finish the task at hand before proceeding to the next.
6. Return this module to your teacher/facilitator once you are through with it.

If you encounter any difficulty in answering the tasks in this module, do not hesitate to consult your teacher or facilitator. Always bear in mind that you are not alone.

We hope that through this material, you will experience meaningful learning and gain deep understanding of the relevant competencies. You can do it!



What I Need to Know

This module was designed and written to guide you to acquire the learning competencies and develop your skills in preparing tools, equipment and materials for staking-out building lines. The scope of this module permits it to be used in many different learning situations. The language used recognizes the diverse vocabulary level of students. The lessons are arranged to follow the standard sequence of the course. However, the order in which you read the module can be changed to correspond with the textbook you are now using.

Learning Objectives: Prepare tools, equipment and materials for staking out building lines (TLE_IACP9-12BLIa-h-1)

After going through this module, you are expected to:

1. identify the necessary tools in installing formworks;
2. explain the different uses of tools for the job requirement; and,
3. apply the underlying principles in using the specific tools.



What I Know

Let us determine how much you already know about tools, equipment and materials for staking out building lines.

Direction: Read the statements carefully. Choose the correct letter of your answer and write it on the answer sheet.

1. It is used to mark a straight line on a long piece of stock or lumber.
 - a. bolo
 - b. chalk line
 - c. crosscut saw
 - d. Level bar
2. It used for leveling across longer distances.
 - a. chalk line
 - b. plumb bob
 - c. nylon string
 - d. try square
3. It is a type of wood that has been processed into beams and planks, a stage in the process of wood production.
 - a. lumber
 - b. nail
 - c. nylon string
 - d. Pegs
4. It is used as a vertical reference line, or plumb-line.
 - a. chalk line
 - b. plumb bob
 - c. level bar
 - d. pull push rule
5. It is used to make pegs for stake-out.
 - a. claw hammer
 - b. sledge hammer
 - c. bolo
 - d. try square
6. It is used for measuring long, short, straight lengths.
 - a. chalk line
 - b. pull push rule
 - c. lever bar
 - d. try square
7. It is a tool primarily used for driving nails into, or pulling nails from, some other object.
 - a. claw hammer
 - b. plumb bob
 - c. level bar
 - d. sledge hammer
8. It is a tool with a large, flat, often metal head, attached to a long handle.
 - a. bolo
 - b. pull push rule
 - c. claw hammer
 - d. sledge hammer
9. It is used to cut along the grain of wood.
 - a. chalk line
 - b. level bar
 - c. cross cut saw
 - d. rip saw
10. It is a type of strong thin wooden board consisting of two or more layers glued and pressed together with the direction of the grain alternating, and usually sold in sheets of four by eight feet.
 - a. chalk line
 - b. plumb bob
 - c. level bar
 - d. plywood
11. It is designed for cutting wood perpendicular to (across) the wood grain.
 - a. chalk line
 - c. cross cut saw

- b. rip saw
 - d. try square
- 12. It is a woodworking tool used for marking and measuring a square piece of wood.
 - a. pull push rule
 - c. try square
 - b. plumb bob
 - d. level bar
- 13. This is a process by which a coating of zinc is applied to sheets of steel or iron to act as a protective layer against corrosion, most commonly in the form of rusting.
 - a. GI Wire
 - c. nails
 - b. nylon string
 - d. plumb bob
- 14. It is a device for establishing a horizontal plane.
 - a. chalk line
 - c. level bar
 - b. plumb bob
 - d. try square
- 15. Is a testing tool used to check the horizontal alignment of the forms?
 - a. spirit level
 - c. tool box
 - b. tool holster
 - d. try square



What's In

You already know and tried using carpentry tools and materials in your home or see these used by the carpenters who are constructing a building.

Write at least 10 tools and materials used in staking out building lines. Write your answers on the answer sheet.

Carpentry tools
1.
2.
3.
4.
5.
6.
7.
8.
9.



What's New

In this lesson you will learn skills related to CARPENTRY. You will have a first-hand experience in educational activities leading you to become a successful learner.

Let us first try your ability to hunt words of the tools and materials used in staking out building lines.

Direction. Find the **WORDS** inside the table associated to our topic for this module and write your answer on the answer sheet.

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



What Is It

Tools a device or implement, especially one held in the hand, used to carry out a particular function and it is used specifically for carpentry, rather than in-workshop use, joinery or machining. There are a variety of tools that can be used for woodworking. Each area of woodworking requires a different variation of tools. Power tools and hand tools are both used for woodworking.

Many modern woodworkers choose to use power tools in their trade for the added ease and to save time. However, many choose to still use only hand tools for several reasons such as the experience and the added character to the work. While some choose to use only hand tools simply for their own enjoyment.



Photo by: NESTOR O. DAWATON

NAILS / COMMON WIRE

NAIL – An object made of metal used for fastening wood together, A wire headed in one end and pointed in the other and used as a marker in the center of the stakes.



CLAW HAMMER- is a tool used to drive and pull out nails.



PENCIL- is a tool used to mark lines and end points used as guide in lining and cutting plywood and lumber.



PULL-PUSH-RULE- is a measuring tool made of metal. It is available in 3m-7.5m in length and is used in laying out and constructing of forms.



TRY SQUARE- is an accurate tool used to test the squareness of smaller squareness of forms.



Photo by: NESTOR O. DAWATON

NYLON STRING- is used in laying out the forms for its horizontality and verticality in installation.



Photo by: NESTOR O. DAWATON

FRAMING SQUARE- is a highly accurate testing tool used for squaring bigger objects such as in squaring the foundation of a building.



Photo by: NESTOR O. DAWATON

COSS CUT SAW - is a tooth-cutting tool used to cut plywood or wood for form construction.



Photo by: NESTOR O. DAWATON

TRANSPARENT HOSE/ PLASTIC HOSE – A leveling instrument used in laying out building lines in the absence of a transit or a spirit level.

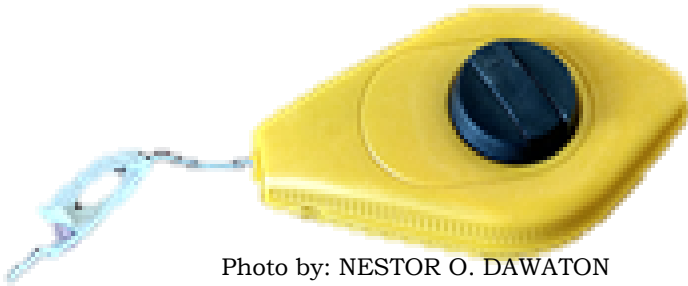


Photo by: NESTOR O. DAWATON

CHALK LINE- is a lining tool used to make straight lines surface. The chord or string is tied to a nail and pulled out on a surface and snapped to make a straight line.



Photo by: NESTOR O. DAWATON

PLUMB BOB- is a testing tool used to check the vertical alignment of the form in installation.



Photo by: NESTOR O. DAWATON

CROW BAR- is a straight iron or steel bar, with the point flattened and sometimes set at an angle, used for wrecking and pulling out large nails.



Photo by: NESTOR O. DAWATON

SPIRIT LEVEL- is a testing tool used to check the horizontal alignment of the form commonly

used in the installation of beam forms.



Photo by: NESTOR O. DAWATON

SLEDGE HAMMER – A heavy hammer used for driving stakes and pegs to the surface of the ground

Hammer and Crowbar have something in common. They can pull out nails, but large nails are in the advantage of the crowbar. The crowbar, however, cannot drive in nails. Pencil and Chalk line can both leave mark lines but the pencil is indispensable for a carpenter in marking solid lines. Steel square and Try square both determine the squareness of objects. Both alignments can be checked though Spirit level and Plumb bob.

Cross-cut saw is used to cut woods based on the desired length or width of the wood with the used of Pull-push rule. Spanner wrench is used to turn bolts and nuts, also called adjustable wrench. The Nylon string is used for lay-outting forms. Tools holster has the good holding capacity of various tools used by the carpenter in complex tasks.



What's More

DIRECTION: Match the terms in column B to its correct definition in column A. Write the letter of the best answer on the answer sheet.

A

1. Used to drive and pull out nails
2. Used to mark lines and end points used as guide in lining and cutting plywood and lumber
3. A measuring tool made of metal. It is available in 3m-7.5m in length and is used in laying out and constructing of forms.
4. Tool used to test the squareness of smaller squareness of forms.
5. Is used in laying out the forms for its horizontality and verticality in installation.
6. A tooth-cutting tool used to cut plywood or wood for

B

- A. Pull-push-rule
- B. Spirit level
- C. Chalk line
- D. Cross cut saw
- E. Plumb bob
- F. Crow bar

form construction.

7. A testing tool used to check the vertical alignment of the form in installation. G. Pencil
8. A testing tool used to check the horizontal alignment of the form commonly used in the installation of beam forms. H. Claw hammer
9. Is a lining tool used to make straight lines surface? The chord or string is tied to a nail and pulled out on a surface and snapped to make a straight line. I. Try square
10. Is a straight iron or steel bar, with the point flattened and sometimes set at an angle, used for wrecking and pulling out large nails J. Nylon string



What I Have Learned

Direction: After identifying tools and materials, you now realize the different tools and materials used in staking out building lines. Fill in the space with the correct answer to complete the sentence. Write your answer on the answer sheet.

1. _____ and Crowbar can pull out nails. The _____ cannot drive in nails.
2. Pencil and _____ can both leave mark lines but the pencil is indispensable for a carpenter in marking solid lines.
3. _____ is used in squaring bigger objects while the _____ is used in squaring smaller objects. They both determine the squareness of objects.
4. _____ determines the horizontal alignment while the _____ determines the vertical alignment. These tools will check alignments.
5. _____ is used to cut woods based on the desired length or width of the wood with the used of _____.
6. The _____ is used for lay-outing forms.



What I Can Do

Directions: List 5 materials and tools that you have in your home and give their corresponding uses. Write your answer on the answer sheet provided.

TOOLS	USES

MATERIALS	USES



Post - Assessment

Direction: Read the statements carefully. Choose the correct letter of your answer and write it on the answer sheet.

- It is a tool primarily used for driving nails into, or pulling nails from, some other object.
 - claw hammer
 - plumb bob
 - level bar
 - sledge hammer
- It used for leveling across longer distances.
 - chalk line
 - plumb bob
 - nylon string
 - try square
- It is a type of wood that has been processed into beams and planks, a stage in the process of wood production.

- a. lumber
 - b. nail
 - c. nylon string
 - d. pegs
4. It is used as a vertical reference line, or plumb-line.
- a. chalk line
 - b. plumb bob
 - c. level bar
 - d. pull push rule
5. This is a process by which a coating of zinc is applied to sheets of steel or iron to act as a protective layer against corrosion, most commonly in the form of rusting.
- a. GI Wire
 - b. nylon string
 - c. nails
 - d. plumb bob
6. It is used for measuring long, short, straight lengths.
- a. chalk line
 - b. pull push rule
 - c. lever bar
 - d. try square
7. It is a device for establishing a horizontal plane.
- a. chalk line
 - b. plumb bob
 - c. level bar
 - d. try square
8. It is a tool with a large, flat, often metal head, attached to a long handle.
- a. bolo
 - b. pull push rule
 - c. claw hammer
 - d. sledge hammer
9. It is used to cut along the grain of wood.
- a. chalk line
 - b. level bar
 - c. crosscut saw
 - d. rip saw
10. It is a type of strong thin wooden board consisting of two or more layers glued and pressed together with the direction of the grain alternating, and usually sold in sheets of four by eight feet
- a. chalk line
 - b. plumb bob
 - c. level bar
 - d. plywood
11. It is a tool primarily used for driving nails into, or pulling nails from, some other object.
- a. claw hammer
 - b. plumb bob
 - c. level bar
 - d. sledge hammer
12. It used for leveling across longer distances.
- a. chalk line
 - b. plumb bob
 - c. nylon string
 - d. try square
13. It is used to make pegs for stake-out.
- a. claw hammer
 - b. sledge hammer
 - c. bolo
 - d. try square
14. It is designed for cutting wood perpendicular to (across) the wood grain.
- a. chalk line
 - b. rip saw
 - c. cross cut saw
 - d. try square
15. It is a woodworking tool used for marking and measuring a square piece of wood.
- a. pull push rule
 - b. plumb bob
 - c. try square
 - d. level bar



Additional Activity

Direction: Write the uses of each tools on the blank provided. Write your answer on the answer sheet.

Name of Tools	Its uses
Claw hammer	
Pencil	
Pull-push-rule	
Try square	
Nylon string	
Cross cut saw	
Plumb bob	
Spirit level	
Chalk line	
Crow bar	

Answer Key

Name of Tools	Its uses
Claw hammer	is a tool used to drive and pull out nails.
Pencil	is a tool used to mark lines and end points used as guide in lining and cutting plywood and lumber.
Pull-push-rule	is a measuring tool made of metal. It is available in 3m-7.5m in length and is used in laying out and constructing of forms.
Try square	is an accurate tool used to test the squareness of smaller squareness of forms.
Nylon string	is used in laying out the forms for its horizontal and verticality in installation.
Cross cut saw	is a tooth-cutting tool used to cut plywood or wood for form construction.
Plumb bob	is a testing tool used to check the vertical alignment of the form in installation.
Spirit level	is a testing tool used to check the horizontal alignment of the form commonly used in the installation of beam forms.
Chalk line	is a lining tool used to make straight lines surface. The chord or string is tied to a nail and pulled out on a surface and snapped to make a straight line.
Crow bar	is a straight iron or steel bar, with the point flattened and sometimes set at an angle, used for wrecking and pulling out large nails.

WHAT I CAN DO

WHAT'S IN

Answers may vary

POST ASSESSMENT

- a
- a
- a
- b
- c
- b
- a
- d
- d
- d
- a
- a
- c
- c
- c

WHAT'S MORE

- H
- G
- A
- I
- J
- D
- E
- B
- C
- F

WHAT I KNOW

- b
- c
- a
- b
- c
- b
- a
- d
- c
- c
- c
- b
- d
- a
- a

4

1. Pull-push rule
2. Plumb bob
3. Nylon string
4. Crow bar

WHAT I HAVE LEARNED

1. Claw hammer, Crow bar
2. Chalk line
3. Steel square, try square
4. Spirit level, Plumb bob
5. Cross cut saw, Pull push rule
6. Nylon string

ADDITIONAL ACTIVITY

Answer may vary

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K to 12 Industrial Arts, Carpentry Curriculum Guide, May 2016

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