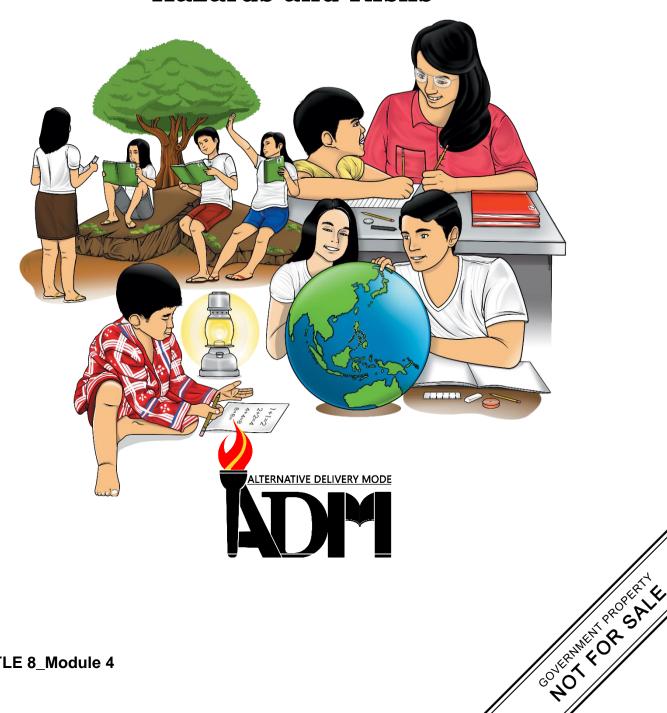




Technology and Livelihood Education

Home Economics - Dressmaking Quarter 0 - Module 4 Hazards and Risks



TLE – Grade 8 Dressmaking Alternative Delivery Mode Quarter 0 - Module 4 Hazards and Risks First Edition, 2020

Republic Act 8293, section 176 states that: No copyright shall subsist in any work of the Government of the Philippines. However, prior approval of the government agency or office wherein the work is created shall be necessary for the exploitation of such work for a profit. Such agency or office may, among other things, impose as a condition the payment of royalties.

Borrowed materials (i.e., songs, stories, poems, pictures, photos, brand names, trademarks, etc.) included in this module are owned by their respective copyright holders. Every effort has been exerted to locate and seek permission to use these materials from their respective copyright owners. The publisher and authors do not represent nor claim ownership over them.

Published by the Department of Education Secretary: Leonor Magtolis Briones Undersecretary: Diosdado M. San Antonio

Development Team of the Module

Writer: Judalyn D. Guerta
Editor: Geraldine F. Vergas

Reviewers: Elizabeth Bautista, Ruby C. Lumen, Ma. Ligaya C. Azarcon, Lorna L. Estal,

Virginia Mahinay

Layout Artist: Eljun A. Calimpusan, Peter A. Alavanza

Management Team: Francis Cesar B. Bringas, Isidro M. Biol, Maripaz F. Magno,

Josephine Chonnie M. Obseňaries, Minerva T. Albis, Imee R. Vicariato,

Genevieve S. Verceles, Corazon F. Adrales

Printed in the Philippines by _	
---------------------------------	--

Department of Education – Caraga Region

Office Address: Teacher Development Center

J.P. Rosales Avenue, Butuan City, Philippines 8600

Tel. No./Telefax: (085) 342-8207/ (085) 342-5969

E-mail Address: caraga@deped.gov.ph

Technology and Livelihood Education Home Economics - Dressmaking

Home Economics - Dressmaking
Quarter 0 - Module 4
Hazards and Risks



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 SLM is composed of different parts. Each part shall guide you step-bystep 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 tests. And read the instructions carefully before performing each task.

If you have any 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.

Lesson

Workplace Hazards and Risks

Health and safety should always remain a priority in delivering care to our patients. Hazards and risks must be identified to enforce safety procedures and protocols. This will ensure effective delivery of care and promote well- being of its workers.



What I Know

Directions: Choose the letter that corresponds to the question. Write your answer in your activity notebook.

- 1. It is the source of potential damage or adverse health effects on something or someone under certain conditions.
 - A. hazards
 - B. psychological
 - C. risks
 - D. chemical
- 2. It is a probability that a person will be harmed if exposed to a hazard.
 - A. risk
 - B. psychological
 - C. ergonomics
 - D. none of these
- 3. What substance can cause harm primarily to people?
 - A. substance
 - B. hazard
 - C. chemical
 - D. psychological
- 4. It has recently been acknowledged in legislation as a workplace hazard.
 - A. risk
 - B. ergonomics
 - C. psychological
 - D. chemical

- 5. Which is an example of a hazard?
 - A. wet floor
 - B. flower
 - C. cake
 - D. baby
- 6. Which is an example of a risk?
 - A. trips
 - B. electricals
 - C. scissors
 - D. knife
- 7. What is a risk assessment?
 - A. The process of identifying hazards
 - B. The process of analyzing or evaluating the risk associated with hazard
 - C. Method of determining appropriate ways to eliminate or control the hazard
 - D. all of these
- 8. Adverse health effects include:
 - A. bodily injury
 - B. disease
 - C. effects on developing fetus
 - D. all of these
- 9. It is the structures of cells that can lead to illness or health problems.
 - A. adverse health effects
 - B. hazard
 - C. risk
 - D. ergonomics
- 10. This type of hazard is caused by poor workplace design, awkward body postures, and repetitive movements.
 - A. psychological
 - B. ergonomics
 - C. chemical
 - D. biological
- 11. It refers to substances that threaten your physical safety.
 - A. chemical
 - B. ergonomics
 - C. biological
 - D. physical

- 12.It is a plan devised for an exceptional risk that would have catastrophic consequences.
 - A. project plan
 - B. house plan
 - C. contingency plan
 - D. evacuation plan
- 13. Which is an example of Personal Protective Equipment (PPE)?
 - A. gloves
 - B. respirators
 - C. earmuffs
 - D. all of these
- 14. The protective equipment used to protect the dress is referred to as
 - A. respirators
 - B. safety clothing
 - C. earmuffs
 - D. headbands
- 15. How to avoid injury in a sewing machine?
 - A. examine the sewing machine
 - B. evaluate the ergonomics
 - C. clear your surroundings
 - D. all of these

Lesson

4

Hazards and Risks

This Lesson in Technology and Livelihood Education (TLE) is an exploratory and introductory course which focuses on the risks and hazards in the workplace. After using this module, you will be able to follow proper health and safety protocols to avoid the adverse effect of hazards and risks.



What's In

In our previous discussion, we've learned the significance of maintaining a functional sewing machine as a potent tool in any sewing activity. To assess your learning, you have to answer the activity below. Give your honest response as much as possible so we can determine your skills about the proper care of the sewing machine.

Activity 1

Directions: Answer each question honestly based on what you've learned. Use your activity notebook to write the answers.

1.	What do you think is the reason why we need to clean and keep the sewing machine lubricated at all times?
2.	What are the parts of the machine that needs to be cleaned and lubricated?
3.	Why is it important to know the remedies for every machine trouble you've encountered?



What's New

Hazard is any source of potential harm, damage, or adverse health effects on something or someone under certain conditions at work. It may consist of the steps on how to protect workers from exposure to a substance or any health hazard. To test your skills about the lesson, let us answer the activities below:

Activity 1

A.	hazards and risks that may cause injury to a	
В.	Directions: Tell whether the following is a <i>Ha</i> in your activity notebook.	zard or Risk. Write your answer
	1. Electricals	6. Pricks
	2. Trips	7. Seam Ripper
	3. Spillage of wet substance	8. Cutting cloth
	4. Falls	9. Cloth dust
	5. Scissors	10. Fire



What is It

LO1. Identify and Evaluate Hazards and Risks

LO1.2 Explain Workplace Hazards and Risks

Occupational Health and Safety

Occupational Health and Safety is the campaign and maintenance of the health of workers in every occupation. It deals about keeping the workplace/ area clean and keeping the workers safe from any hazardous circumstances. As an effect, it may also protect co-workers, family members of the community who are affected by the workplace environment.

Hazards and Risks

What is a Hazard?

Hazard is defined as source of potential damage, cause accident or danger to something or someone. A hazard can cause harm or adverse effects (to individuals as health effects or organizations as property or equipment losses).

What are the examples of Hazard?

Examples of Hazard that can cause harm or adverse health effect to a person under certain conditions. See Table 1.

Table 1							
Exam	ples of Hazards and Their	Effects					
Workplace Hazard	Example of Hazard	Example of Harm Caused					
Thing	Knife	Cut					
Substance	Benzene	Leukemia					
Material	Asbestos	Mesothelioma					
Source of Energy	Electricity	Shock, electrocution					
Condition	Wet floor	Slips fall					
Process	Welding	Metal fume fever					
Practice	Hard rock mining	Silicosis					

As shown in Table 1, workplace hazards also include practices or conditions that release uncontrolled energy like:

- an object that could fall from a height (potential or gravitational energy)
- a runaway chemical reaction (chemical energy)
- the release of compressed gas or steam (pressure: high temperature)
- entanglement of hair or clothing in rotating equipment (kinetic energy), or
- contact with electrodes of a battery or capacitor (electrical energy)

What is Risk?

Risk is the chance or probability that a person will be harmed or experience an adverse health effect if exposed to a hazard. It may also apply to situations with property or equipment loss.

What is Risk Assessment?

Risk Assessment is the process where you:

- o identify hazards;
- o analyze or evaluate the risk associated with the hazard; and
- o determine appropriate ways to eliminate or control the hazard.

Factors that influence the degree of risk:

- how much a person exposed to a hazardous thing or condition
- how the person is exposed (e.g., breathing in a vapor, skin contact)
- how severe are the effects under the conditions of exposu

Types of Hazards

- 1. Chemical Hazards is any substance that can cause harm, primarily to people. Any chemical substance can result in severe injuries if not properly handled. Examples are bleach, fumes, gasoline, chlorine, etc.
- 2. Electrical Hazard is a dangerous condition where a worker could make electrical with energized equipment or a conductor, and from which the person may sustain an injury from shock. It is a potential for a worker to receive an arc flash burn, thermal burn, or blast injury. With adequate safety measures in place, every electrical injury and fatality can be prevented.
- 3. Ergonomic Hazard is the repetitive and forceful movements of workers, employers, and their families. Examples are poor workplace design, awkward body mechanics or postures, and repetitive movements.
- 4. Psychological Hazards relates to mental and behavioral disorders.
- 5. Radiation Hazards (RADHAZ) describes the hazards of electromagnetic radiation to fuels, electronic hardware, ordinance, and personnel. In the military, these hazards are segregated as follows:
- 1.) Hazards of Electromagnetic Radiation to Personnel (HERP)
- 2.) Hazards of Electromagnetic Radiation to Ordnance (HERO)
- 3.) Hazards of Electromagnetic Radiation to Fuel (HERF)
- 6. Biological Hazards or biohazard is anything coming from living organisms (i.e., pollen, fungi, animals, insects, bacteria, and viruses).
- 7. Physical Hazards are those substances that threaten your physical safety. The most common types of physical hazards are fire, explosion, and chemical reactivity.

Hazard Management

One of the most important duties required by OHS law of all workers, including volunteers, is to keep the workplace as safe as possible. An excellent way to do this is to use the 4 'SAFE' steps:

Spot the hazard.

Assess the hazard.

Fix the hazard.

Evaluate the result

Safe operating procedure in using the sewing machine

- 1. Do not use machines unless you had instruction and training in their safe use and operation.
- 2. Teacher permission must be given when operating the sewing machine.
- 3. Read and understood the instruction sheet, completed the safety test with a 100% score, and demonstrated competence and safe use.

Pre - Operational Safety

- 1. Always check that the sewing machine and its cord are in good working condition.
- 2. Check all adjustments and settings carefully before commencing any sewing operation.
- 3. The workplace should be clean and free of equipment, rubbish, and other obstacles.

Operating Safety Precautions

- Make sure all other students keep away from the workplace at all times.
- One person only is to operate a sewing machine while another person is sewing.
- Do not wear loose clothing, especially long sleeves and neckties.
- Turn the power off when making adjustments to the sewing machine, such as changing the presser foot and needle.
- Never race the sewing machine at high speed.
- Take care not to machine over pins.
- Make sure the thread take-up lever is in the upper position before pulling out the fabric and in cutting threads.
- It is important to keep the machine as free of lint as possible.
- Do not push or pull the fabric sewing. Let the machine do the work your hands should guide the fabric without forcing it.

LO1.3 Causes of Hazards and Risks

- A. Hazards encountered when using the sewing machine includes the following:
 - Cuts and injuries from sharp edges, knife blades, scissors, and pins.
 - Finger injuries while sewing.
 - Back injury due to poor posture and improper lifting procedures.
 - Eye strain from poor lighting.

B. Exposure to physical agents

Exposure to loud noise can result in permanent hearing damage, such as noise-induced hearing loss and tinnitus. Electromagnetic fields may also be found in some workplaces in the textile sector.

Accidents in the textiles sector. The textile sector has many hazards that can cause injury to workers, from transport in the workplace (lift truck), dangerous large work equipment and plant, to the risk of slips from a wet working environment. also The risks of fire and explosions, for example, from heating plants used for vapor generation.

Psychosocial issues in the textiles sector. Work-related stress has been defined as being experienced when the demands of the work environment exceed the workers' ability to cope with or control them.

How do you avoid hazards and risks?

It can be done through:

- 1. Elimination remove the hazard from the workplace. Hazard can be substances, materials, or processes.
- 2. Substitution Replace the toxic material with a less toxic or alternative substitute.
- 3. Engineering control
 - a) Isolation, barrier.
 - o Interrupt the pathway between hazard and worker
 - o Either enclosure to isolate source or isolate the worker from a contaminated environment.
 - b) Ventilation
 - o Dilution ventilation
 - Local exhaust ventilation
- 4. Administrative Record

These are all about identifying and implementing the procedures you need to work safely, e.g.,

- a. Reducing the time of workers are exposed to hazards (job rotation)
- b. Increasing safety signage
- c. Prohibiting the use of mobile phones in hazardous areas
- d. Supervision/ support
- e. Education and training
- 5. Personal Protective Equipment
 - a. Body protection (e.g., for your eyes, hand, and head)
 - b. Respirators



What's More

Activity 1

Directions: Determine the type of hazards based on the description given in each

iteı	Arrange the scrambled letters to come up with the correct answer. Use ye	our
act	ity notebook.	
1.	ype of hazard which is caused by a repetitive and forceful movement.	

R	OGIN	A C E N	1 O			

2. It refers to any substance that can result in severe injuries if not properly handled, such as bleach and fumes.

Η.	ALEO	CMCI	[

3. Living organisms such as insects, bacteria, and viruses are a type of hazard which can be classified as

L (OB G	IIOC	LA				

4. What type of hazard do fires, explosion, and chemical reactivity belong?

Η	IYSC	APL			

5. Mental and behavioral disorder belongs to what type of hazard?

P	cos	YH	OLA	GIC	L				

Activity 2

Direction: Select the correct answer from the word the pool below that matches the statement of the given examples of hazard in each item. Use your activity notebook.

Biologica	Chemical	Ergonomic	
Physical	Psychological	Safety	
	 Noise, vibration, energy, wear pressure. Improperly designed worksta Some examples of this type 	, ,,	or
or	1 01		
	gaseous substances, dust, fu	ıme, or mist.	
2	 This hazard is caused by organized fungi and parasites. 	anisms such as viruses, bacteria	,
unsafe	5. It refers to inadequate a	nd insufficient machine guards	s,
	workplace conditions, unsaf	e work practices.	

Activity 3

Directions: In the table below, write down the different types of hazards and identify its causes then suggest ways on how to avoid it. You may use your activity notebook to record your responses.

Name of Hazard	Causes	How to avoid
1.		
2.		
3.		
4.		
5.		
6.		
7.		



What I Have Learned

Directions: Read each statement carefully. In your activity notebook, write the correct missing word each number.

1.	is any source of potential damage, harm, or adverse health				
	effects on something or someone under certain conditions at work.				
2.	is the chance or probability that a person will be harmed or				
	experience an adverse health effect if exposed to a hazard.				
3.	is any substance that can cause harm, primarily to people,				
	and can result in severe injuries if not properly handled or if carelessly used.				
4.	may cause worker an arc flash burn, thermal burn, or blast				
	when a worker makes electrical contact.				
5.	are physical conditions that may pose a risk of injuries such				
	as the muscles or ligaments of the lower back, tendons or nerves of the				
	hands/wrists, or bones surrounding the knees, resulting in a				
	musculoskeletal disorder.				
6.	are aspects of the work environment that are associated with				
	mental disorders and physical injury or illness.				
7.	describes the hazards of electromagnetic radiation to fuels,				
	electronic hardware, the ordinance, and personnel.				
8.	are those substances that threaten your physical safety.				
9.	are organic substances that present a threat to the health of				
	people.				
10.	is the adverse reaction people have to excessive pressures or				
	other types of demand placed on them at work.				



What I Can Do

Activity 1

Directions: Observe your environment and identify the hazards that might cause injury, then classify as to what type of hazard they belong. Write your answer in your activity notebook.

Hazards	Examples
1. Biological	

2. Chemical hazards	
3. Ergonomic hazards	
4. Physical hazards	
5. Psychological hazards	
6. Electrical	



Assessment

Multiple Choice. Choose the letter of the best answer. Write the chosen letter on a separate sheet of paper.

- 1. How are we going to avoid injury in a sewing machine?
 - A. examine the sewing machine
 - B. evaluate the ergonomics
 - C. clear surroundings
 - D. all of these
- 2. The protective equipment used to protect the dress is called
 - A. respirators
 - B. safety clothing
 - C. earmuffs
 - D. headband
- 3. Which of the following is an example of Personal Protective Equipment (PPE)?
 - A. gloves
 - B. respirators
 - C. earmuffs
 - D. all of these
- 4. It is a plan devised for an exceptional risk that would have catastrophic consequences.
 - A. project plan
 - B. house plan
 - C. contingency plan
 - D. evacuation plan

- 5. It refers to substances that threaten your physical safety.
 - A. chemical
 - B. ergonomics
 - C. biological
 - D. physical
- 6. This type of hazard is caused by poor workplace design, awkward body postures, and repetitive movements.
 - A. psychological
 - B. ergonomics
 - C. chemical
 - D. biological
- 7. The structures of cells that can lead to disease or health problems.
 - A. adverse health effects
 - B. hazard
 - C. risk
 - D. ergonomics
- 8. The chance or probability that a person will be harmed if exposed to a hazard is referred to as
 - A. psychological
 - B. risk
 - C. ergonomics
 - D. none of these
- 9. Risk assessment is the process where you?
 - A. The process of identifying hazards
 - B. The process of analyzing or evaluating the risk associated with hazard
 - C. Method of determining appropriate ways to eliminate or control hazard
 - D. All of these
- 10. Which of the following is the example of risk?
 - A. trips
 - B. electricals
 - C. scissors
 - D. knife
- 11. Which of the following is the example of a hazard?
 - A. wet floor
 - B. flower
 - C. cake
 - D. baby

- 12.It has recently been acknowledged in legislation as a workplace hazard.

 A. risk

 B. ergonomics
 - D. chemical

C. psychological

- 13. What substance can cause harm primarily to people?
 - A. substance
 - B. hazard
 - C. chemical
 - D. psychological
- 14. The chance or probability that a person will be harmed if exposed to a hazard is referred to as
 - A. psychological
 - B. risk
 - C. ergonomics
 - D. none of these
- 15. The source of potential damage or adverse health effects on something or someone under certain conditions at work is called
 - A. hazards
 - B. psychological
 - C. risks
 - D. chemical



Additional Activities

Activity 1

Directions: Look and cut pictures showing different types of hazards and risks then give a short description of every photo. Paste the images in a long bond paper.



7. D 7. D 8. D 10. B 11. D 12. C 13. D 14. B 14. B 15. D What's More Activity 1 6. Psychological Hazards 7. Ergonomic Hazards 6. Psychological Hazards 7. Ergonomic Hazards 7. Ergonomic Hazards 8. Biological Hazards 9. Chemical Hazards 1. Physical Hazards 2. Chemical Hazards 3. Chemical Hazards 4. Physical Hazards 5. Psychological Hazards 7. Ergonomic Hazards 8. Ergonomic Hazards 9. Chemical Hazards 7. Ergonomic Hazards 7. Physical Hazards	5. Hazard 6. Risk 8. Risk 9. Risk 10. R	6. psychological hazards 8. physical hazards 9. stress 10. work related stress 11. D 2. B 3. D 4. C 5. D 10. A 11. A 12. C 13. C 14. B 14. B 15. A
4. C 5. A 6. A 7	3. Hazard 4. Risk	4. electrical hazards 5. ergonomical hazards 6. psychological hazards
A .1 2. A 3. C	Hazard(Physical,ergonomics, chemical,biological,psychological) B.1.Hazard 2. Risk	1. Hazard 2. Risk 3. chemical hazards
What I Know	well s'stant What's New of Well s'stant What's New of Well Stanton Wel	What I Have Learned

References

Books

K to 12 BEC Technology and Livelihood Education: Learning Dressmaking/ Tailoring, Department of Education

Learning Material Home Economics: Dressmaking / Tailoring, Department of Education

Internet

"K to 12 Dressmaking and Tailoring Learning Modules" 2019 Retrieved from

https://idoc.pub/documents/k-to-12-dressmaking-and-tailoring-learning modules-qn8580o7qkn1 on May 29, 2020

"Hazard Assessment and Job Safety Analysis" 2018 https://www.osha.gov/sites/default/files/2018-12/fy16_sh-29629sh6_HAandJSA trainingmanual.pdf on May 29, 2020

"Hazard Recognition and Identification" 2012 Retrieved from

https://www.pecsafety.com/safetymeetings/2012-08-Hazard-Recognition-Presentation.pdf on May 31, 2020

"Hazard and Risk" 2020

Retrieved from

https://www.ccohs.ca/oshanswers/hsprograms/hazard_risk.html on May 31, 2020

"Types of Hazards - Alison" 2020

Retrieved from

https://alison.com/topic/learn/31998/types-of-hazards on June 1, 2020

"Hazard and Risk"1997

Retrieved from

http://www.ccohs.ca/oshanswers/hsprograms/hazard_risk.html www.dehp-facts.com/Clab/Cl_hazard.htm Dreamstime.com/Karwan Manhood Khudhir on June1, 2020

For inquiries or feedback, please write or call:

Department of Education Bureau of Learning Resources (DepEd-BLR)

Ground Floor, Bonifacio Bldg., DepEd Complex Meralco Avenue, Pasig City, Philippines 1600

Telefax: (632) 634-1054; 634-1072; 631-4985

Email Address: blr.lrpd@deped.gov.ph