

**Ministry of Education
Curriculum Planning and Development Division**

Level: Forms 4 & 5

CVQ Level 1 – Ornamental Aquaculture Operations

Unit Code	Unit Title	Mandatory/ Elective
AG01000	Maintain Safe And Effective Working Practices	Mandatory

Unit Descriptor:

This unit deals with the skills and knowledge required for maintaining health and safety and maintaining effective working relationships in all work contexts. It is also a requirement of all individuals that they are able to work effectively and efficiently with colleagues and supervisors.

ELEMENTS <i>Candidates must be able to:</i>	PERFORMANCE CRITERIA
1 Maintain the safety of self and others when working	1.1 Use recommended personal protective equipment when working

Personal protective gears and clothing

Personal Protective Equipment (PPE)

- ▶ Coveralls
- ▶ Steel-tip boots
- ▶ Gloves
- ▶ Helmet
- ▶ Goggles
- ▶ Hat



Source: <https://www.omrindustryjournal.com/personal-protective-equipment-ppe>

What is personal protective equipment?

- ▶ Personal protective equipment, commonly referred to as "PPE", is equipment worn to minimize exposure to hazards that cause serious workplace injuries and illnesses.
- ▶ Injuries and illnesses may result from contact with chemical, physical, electrical, mechanical, or other workplace hazards.

PPE Stands for

Personal

Protective

Equipment



Source: <https://www.omrindustryjournal.com/personal-protective-equipment-ppe>

What is personal protective equipment?

- ▶ Personal protective equipment may include items such as gloves, safety glasses and shoes, earplugs or muffs, hard hats, respirators, or coveralls, vests and full body suits.



Source: <https://www.omrindustryjournal.com/personal-protective-equipment-ppe>

Types of personal protective equipment.

PPE can be considered in the following categories, based on the type of protection afforded by the equipment:

1. Head protection
2. Eye and face protection
3. Body protection
4. Respiratory protection
5. Hand protection
6. Foot protection

Head Protection

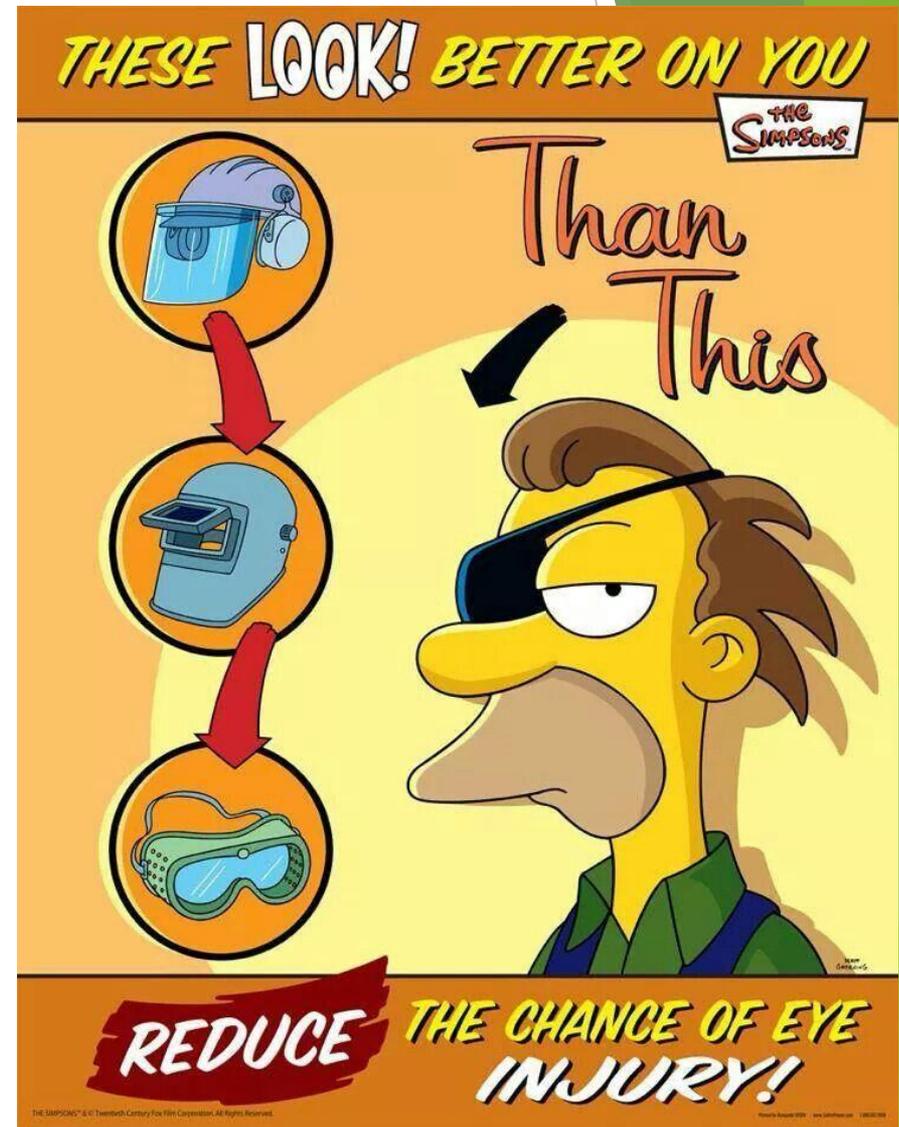
- ▶ Safety helmets protect against falling objects, bumps, electrical hazards and prevention of hair getting tangled in machinery.
- ▶ Hats are provided for sun and rain protection.



Source: <https://www.omrindustryjournal.com/personal-protective-equipment-ppe>

Eye and face protection

- ▶ Eyes are the most sensitive part of the body as it absorbs chemicals quickly.
- ▶ Some common hazards might include flying particles, dust, splashing substances, harmful gases, vapours, aerosols, lasers and strong heat sources.



Eye and face protection

- Some examples of protective equipment for the eyes include: face shields, goggles and safety spectacles.



Impact Protection



Laser Protection
Goggles



Splash Protection



Welding Goggles



Impact & UV
Protection



Laser Protection
Glasses



Biological Face Mask
with Eye Shield



Welding Helmet



Biological
Splash Shield



Face Mask

These can provide UV, Chemical, or Impact resistance depending on the material they are made of.



Face Shield

Body protection

- ▶ Equipment is needed to protect against heat, chemical or metal splash, spray from pressure leaks or spray guns, contaminated dust, impact or penetration, excessive wear or entanglement of own clothing.

Body protection

- ▶ Disposable or washable coveralls or full bodied aprons, long sleeved shirts and trousers can be used for body protection
- ▶ The choice of materials includes flame-retardant, anti-static, water proof, chemically impermeable, and high-visibility



Source: <https://www.omrindustryjournal.com/personal-protective-equipment-ppe>

Respiratory Protection

- ▶ A respirator is a unit that covers the mouth and nose to prevent spray droplets of pesticides, small particles and vapours from getting into the lungs.



Hand Protection

- ▶ Hands always become contaminated when handling equipment and chemicals.
- ▶ They can also become affected by abrasions, temperature extremes, cuts, electric shock and prolonged immersion in water.
- ▶ It is recommended to use suitable gloves, gloves with a cuff and sleeving that covers part or all of the arm when carrying on duties.



Foot Protection

- ▶ Safety footwear should provide adequate protection from injury and comfortable support for the feet.
- ▶ These include safety boots and shoes with protective toecaps and are penetration-resistant.



Chemical Resistant Boots



Aluminum Toe Boots
with Metatarsal Guard



Rain Boots



Snow Boots

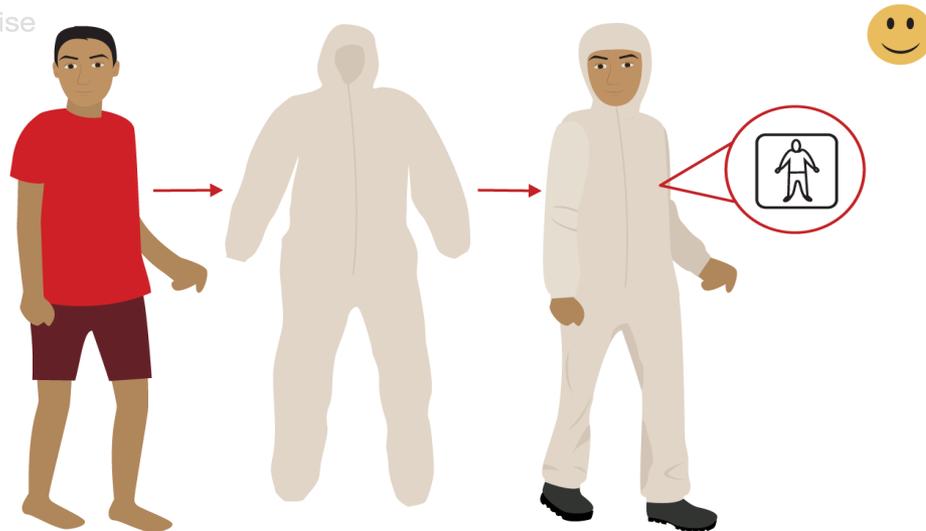


Steel Toe Boots

What can be done to ensure the proper use of personal protective equipment?

- ▶ All personal protective equipment should be safely designed and constructed, and should be maintained in a clean and reliable fashion.
- ▶ It should fit comfortably as this can make the difference between being safely covered or dangerously exposed.

Pesticidewise



Source: <https://www.omrindustryjournal.com/personal-protective-equipment-ppe>

What can be done to ensure the proper use of personal protective equipment?

- ▶ **Employers are also required to train each worker required to use personal protective equipment to know:**
 - ▶ **When it is necessary**
 - ▶ **What kind is necessary**
 - ▶ **How to properly put it on, adjust, wear and take it off**
 - ▶ **The limitations of the equipment**
 - ▶ **Proper care, maintenance, useful life, and disposal of the equipment**

EVALUATION

1. What does the acronym PPE stand for?
2. How do injuries and illnesses commonly occur at the workplace?
3. What are the 6 categories of PPE?
4. What do Safety helmets protect against?
5. Identify 4 common hazards that may affect your eyes in the workplace
6. Why is body protection important?
7. What can be done to ensure the proper use of personal protective equipment by employers?

ANSWERS

What is PPE and what does the acronym PPE stand for?

Personal protective equipment, commonly referred to as "PPE", is equipment worn to minimize exposure to hazards that cause serious workplace injuries and illnesses.

ANSWERS

How do injuries and illnesses commonly occur at the workplace?

Injuries and illnesses may result from contact with chemical, physical, electrical, mechanical, or other workplace hazards.

ANSWERS

What are the 6 categories of PPE?

PPE can be considered in the following categories, based on the type of protection afforded by the equipment:

1. Head protection
2. Eye and face protection
3. Body protection
4. Respiratory protection
5. Hand protection
6. Foot protection

ANSWERS

What do Safety helmets protect against?

Safety helmets protect against falling objects, bumps, electrical hazards and prevention of hair getting tangled in machinery.

ANSWERS

Identify 4 common hazards that may affect your eyes in the workplace

Some common hazards might include flying particles, dust, splashing substances, harmful gases, vapours, aerosols, lasers and strong heat sources.

ANSWERS

Why is body protection important?

We need equipment to protect against heat, chemical or metal splash, spray from pressure leaks or spray guns, contaminated dust, impact or penetration, excessive wear or entanglement of own clothing.

ANSWERS

What can be done to ensure the proper use of personal protective equipment by employers?

Employers are also required to train each worker required to use personal protective equipment to know:

- **When it is necessary**
- **What kind is necessary**
- **How to properly put it on, adjust, wear and take it off**
- **The limitations of the equipment**
- **Proper care, maintenance, useful life, and disposal of the equipment**

References

- ▶ Critical review of the role of PPE in the prevention of risks related to agricultural pesticide use
 - ▶ Retrieved from: <https://doi.org/10.1016/j.ssci.2019.104527>