



TEACHERS' GUIDE

CHAPTER 3

FIREFIGHTING EQUIPMENT



Co-funded by
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WHAT YOU GET?

This chapter focuses on the types and purposes of handheld rescue equipment. It starts with presenting hydraulic rescue equipment, then moves to demolition equipment and extinguishing agents. In the second part, the guidelines mention personal protective equipment for firefighters.

The guidelines cover the following areas:

Part 1 Portable fire fighting equipment and fire fighting agents..... 2

Part 2 Firefighter personal protective equipment..... 10

PART 1

PORTABLE FIRE FIGHTING EQUIPMENT AND FIRE FIGHTING AGENTS



Lesson 1

Firefighting and rescue equipment.

Students will be able to distinguish the equipment according to its function, recognise the equipment, understand its usefulness and usage.



Lesson 2

Hand-held demolition equipment

Students will be able to distinguish manual demolition equipment by function, recognize equipment, and understand its usefulness and application.



Lesson 3

Hand-held firefighting equipment and extinguishing agents.

Students will be able to distinguish hand-held firefighting equipment by function and extinguishing agent, understand its usefulness and application.

INTRO

This guide will discuss the various types and uses of handheld rescue equipment. It will introduce hydraulic rescue tools, followed by demolition equipment and fire extinguishing agents.

You will find here:



3 ready-to-use lesson plans (3 x 45 min.), follow a practical step-by-step guide for a teacher and offer innovative teaching methods and techniques.



Innovative teaching methods and techniques applied:

- open-ended questions discussion,
- brainstorming,
- blended learning,
- cooperative learning
- interactive teaching/learning,
- edutainment,
- problem solving.



Ready-to use lesson resources:

- visual teaching aids: interactive presentation (Canva),
- interactive tools: QR codes, teaching/learning platform (Quizizz), links to educational videos,
- lesson tasks - teacher and student instructions.



Teaching aids supporting teaching/learning process during the lessons:

- PC / laptop,
- Internet access,
- projector & screen or interactive whiteboard,
- students' own devices (smartphones with QR code scanners and Internet access),
- real firefighting tools or flashcards with firefighting equipment vocabulary,
- an assortment of wooden planks, and heavy objects (simulating debris), you may also use tables, chairs, and boxes.



Key vocabulary

rescue tool, cutting equipment, demolishing equipment, spreaders, scissors; fire hook, crowbar, rack, pinion lift, chain winch, fire axe, chainsaw; fire extinguisher, extinguishing agent; fire blanket, fire beater (flapper), , fire pump, chimney mesh screen

LESSON 1

FIREFIGHTING RESCUE EQUIPMENT

PART 1

LESSON 1



Learning objectives

Students will develop the ability to differentiate equipment based on its function, identify the equipment, comprehend its usefulness, and understand how to use it.



Follow the steps

1

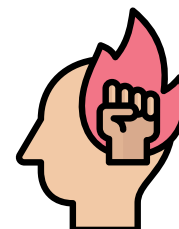
Introduction

Welcome the students. Inform them that they will gain information about portable and various types of equipment and the usage of hydraulic equipment.



3 min.

Explain to the students details of the topic and why it is important. Use motivational techniques



2

Study

1. Begin the lesson with brainstorming and discussing reasons for using portable equipment by firefighters (enhancing the capabilities of firefighters, enabling them to operate more effectively and safely in various emergencies). Ask open-ended questions.



4 min.

2. Introduce hydraulic equipment. Present its parameters and usage.

You can use the presentation in the file.



Canva presentation:
[Canva file](#)



[Download
presentation
in pdf](#)

LESSON 1

FIREFIGHTING RESCUE EQUIPMENT

PART 1 LESSON 1

3. Organise teamwork. Students recognize and name the introduced types of equipment. They can distinguish hydraulically powered equipment, they know its capabilities as well as cases and ways of its usage.



8 min.



Group work

Divide the class into teams of three or four students. Next spread tools to each team, tell students to name the tool, and give specific information.

Teaching aids:

Real objects – examples of tools representing various types of equipment (e.g. spreaders, cylindrical spreaders, scissors, scissors-spreaders).

4. Feedback and assessment. After completing the task give the students information on their results and correct answers. Please provide feedback on how well they did the task. Use short comments such as “Well done!”, “Good work!” or correct mistakes.



3 min.

3

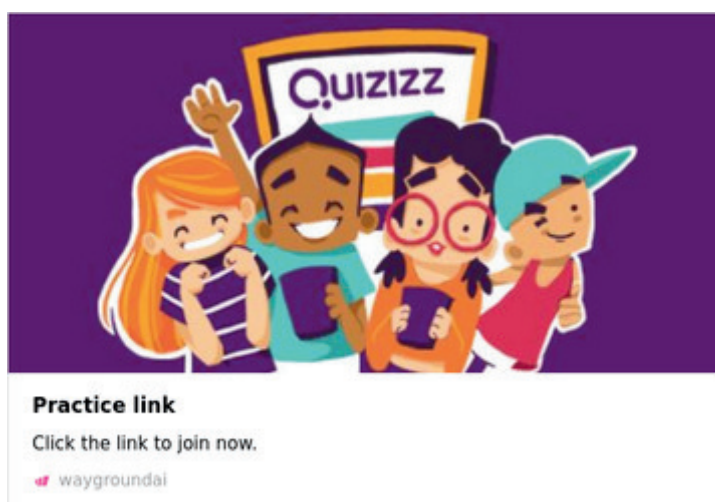
Practice

WELL
DONE!



17 min.

Quiz - Let students revise the material. Use the quiz “Firefighting rescue equipment” at Quizizz Learning Platform.



Feedback round

After students finish the quiz, discuss their performance and give feedback on how well they completed the task.



3 min.

LESSON 2

FIREFIGHTING RESCUE EQUIPMENT

PART 1

LESSON 2



Learning objectives

Students will acquire the skill to distinguish equipment according to its purpose, recognize the equipment, grasp its practicality, and comprehend how to utilize it.



Follow the steps

1

Introduction

Welcome the students. Inform them that they will learn about the handy demolition equipment available to firefighters, its types and purpose.



3 min.



Explain to the students details of the topic and why it is important. Use motivational techniques

2

Study

1. Brainstorm some ideas regarding the necessity of firefighters using hand-held demolition and cutting equipment for the following purposes:

- Providing access to injured persons.
- Operating in confined spaces.
- Securing dangerous structural elements of buildings, vehicles, and more.



3-5 min.

2. Introduce the group of hand-held demolition equipment and its respective purposes. You can use presentation attached.



8 min.

[Canva presentation](#)

[Download
presentation
in pdf](#)

LESSON 2

FIREFIGHTING RESCUE EQUIPMENT

PART 1

LESSON 2



Group work

“Firefighter Tool Challenge”



12 min.

3. Organize the class into groups, distribute the task materials to each group, and moderate the teamwork.

[Download
handout](#)



Feedback and assessment.



6 min.

4. After the students have completed the exercise, discuss their performance and provide feedback to the students on how well they did the task.

3

Practice



Pair work

1. Let students practice in pairs what they have learned about the characteristics and use of handheld demolition equipment in a given situation.



5 min.

[Download
“Fire incident
report form”](#)



Feedback and assessment.

After students finish the quiz, discuss their performance and give feedback on how well they completed the task.



5 min.

LESSON 3

HAND-HELD FIREFIGHTING EQUIPMENT AND EXTINGUISHING AGENTS

PART 1 LESSON 3



Learning objectives

Students will be able to distinguish hand-held firefighting equipment by function and extinguishing agent, and understand its usefulness and application.



Follow the steps

1

Introduction

Welcome the students. Inform them that they will learn about the hand-held extinguishing equipment operated by firefighters. You will learn about the types and purpose of the equipment.



2 min.



Explain to the students details of the topic and why it is important. Introduce learning goals for today. Use motivational techniques.

2

Study

1. Present the division of hand-held firefighting equipment and arguments supporting the necessity of equipping buildings with extinguishers and focus on the importance of using it in the initial fire stage.



10 min.

2. Then introduce basic fire extinguishing agents and their respective purposes. Use the presentation in the file.



Video: How to Use a Fire Extinguisher Using the PASS Method

<https://tiny.pl/cnmmn>

Download presentation in pdf

LESSON 3

HAND-HELD FIREFIGHTING EQUIPMENT AND EXTINGUISHING AGENTS



Group exercise



10 min.

3. students learn to recognize hand-held firefighting equipment. They know the purpose of using it and its capabilities.

Organize the class into groups, distribute the task materials to each group and moderate the teamwork.



[Download
handout](#)



Feedback and assessment.

4. After students have completed the exercise, discuss their performance and provide feedback to the students on how well they did the task.



3 min.

3 Practice



Group exercise

Let students practice what they have learned about the characteristics and use of handheld firefighting equipment and extinguishing agents equipment in a given situation.



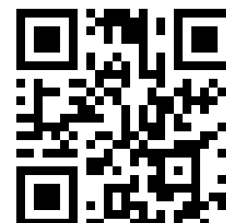
6 min.

Group activity: Checking the set area in the school building for the fire extinguishers.



[Download
handout](#)

Invite students to practise their knowledge in a quiz **'Handheld firefighting equipment'** on Quizizz Platform.



[Quiz link](#)



10 min.



Feedback and assessment.

After students have completed the exercise, discuss their performance and provide feedback to the students on how well they did the task.



4 min.

PART 2

FIREFIGHTER PERSONAL PROTECTIVE EQUIPMENT



Lesson 1

Personal protective equipment of a firefighter.

Students will be able to discuss personal protective clothing, respiratory protection equipment, and personal alert safety system.

INTRO

The section is dedicated to Personal Protective Equipment (PPE) utilized by firefighters, covering topics such as personal protective clothing, respiratory protection gear, and personal alert safety systems.

You will find here:



1 ready-to-use lesson plan (1 x 45 min.), following a practical step-by-step guide for a teacher, offers innovative teaching methods and techniques.



Innovative teaching methods and techniques applied:

- open-ended questions discussion,
- blended learning,
- cooperating learning,
- peer teaching.



Ready-to use lesson resources:

- visual teaching aids: interactive presentation (Canva),
- interactive tools: links to educational sites, videos, time counter
- lesson tasks - teacher and student instructions.



Teaching aids supporting teaching/learning process during the lessons:

- PC / laptop,
- Internet access,
- projector & screen or interactive whiteboard,
- large sheets of paper with questions to be displayed on the walls or placed on the tables,
- different colour markers /pens/ crayons for each team



Key vocabulary

PPE (Personal Protective Equipment), firefighter gear, fire helmet, fire gloves, hoods, face protection, firefighter boots, goggles, safety glasses; SCBA (Self-Contained Breathing Apparatus), PASS (Personal Alert Safety System), right angle lights, safety belts, firefighter light axes

LESSON 1

FIREFIGHTING RESCUE EQUIPMENT

PART 2

LESSON 1



Learning objectives

Students will have the opportunity to talk about personal protective clothing, respiratory protection equipment, and personal alert safety systems.



Follow the steps

1

Introduction

Welcome the students. Inform them that they will learn what is personal protective clothing (PPC), respiratory protection equipment, and personal alert safety system (PASS) they will wear during emergency responses.



2 min.

Explain to the students the details of the topic and why it is important. Use motivational techniques



2

Study

1. Begin the lesson with pair discussion practice based on general questions introducing students to the subject.



5 min.

Discussion questions:

1. Have you ever seen a firefighter in action? How did they look with all their gear on?
2. Do you think it's difficult for firefighters to put on all their gear in just 90 seconds? Why or why not?
3. How do you think wearing all that gear affects a firefighter's movement and agility?



Feedback round

After students' complete the activity, discuss the answers.

LESSON 1

FIREFIGHTING RESCUE EQUIPMENT

2. **Present** the video of firefighters discussing the components of firefighters' gear and how it protects them.



9 min.

Make students to watch it carefully and remember/note down as much information as they can so that they are able to answer some questions later.

[Firefighter Gear Overview](#)



3. **Complete the information** presented in the video with other elements of a firefighter's personal equipment displaying some photos

[Canva presentation link](#)



Download PDF file with presentation



5 min.



Pair activity

4. **Check the progress:** students answer the questions concerning personal protective equipment.

Give out a 'Check your progress' sheet to each pair. When ready with the answers, ask each pair to provide one of the answers, and comment/evaluate it.



5 min.



[Download file](#)

3

Practice

Let the students review what they've learned about personal protective equipment.



20 min.



Group activity

'Gallery walk': students share acquired information and complement the knowledge of their classmates.



[Online timer](#)



[Download file](#)

ABOUT US



READY CRISIS

Authors:



Editor-in-chief,
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PROJECT
PROJEKTY-MEDIA-EDUKACJA-FITNESS

You have read **Chapter 3 Portable fire fighting equipment and firefighting agents** of the **Inspirational Educational Guidelines for VET Teachers & educators**. This material has been developed by the Ready4Crisis project team.

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For more info check: www.ready4crisis.eu



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