



VIRTUAL REALITY TRAINING FOR WORK AT HEIGHT
DATA SHEET



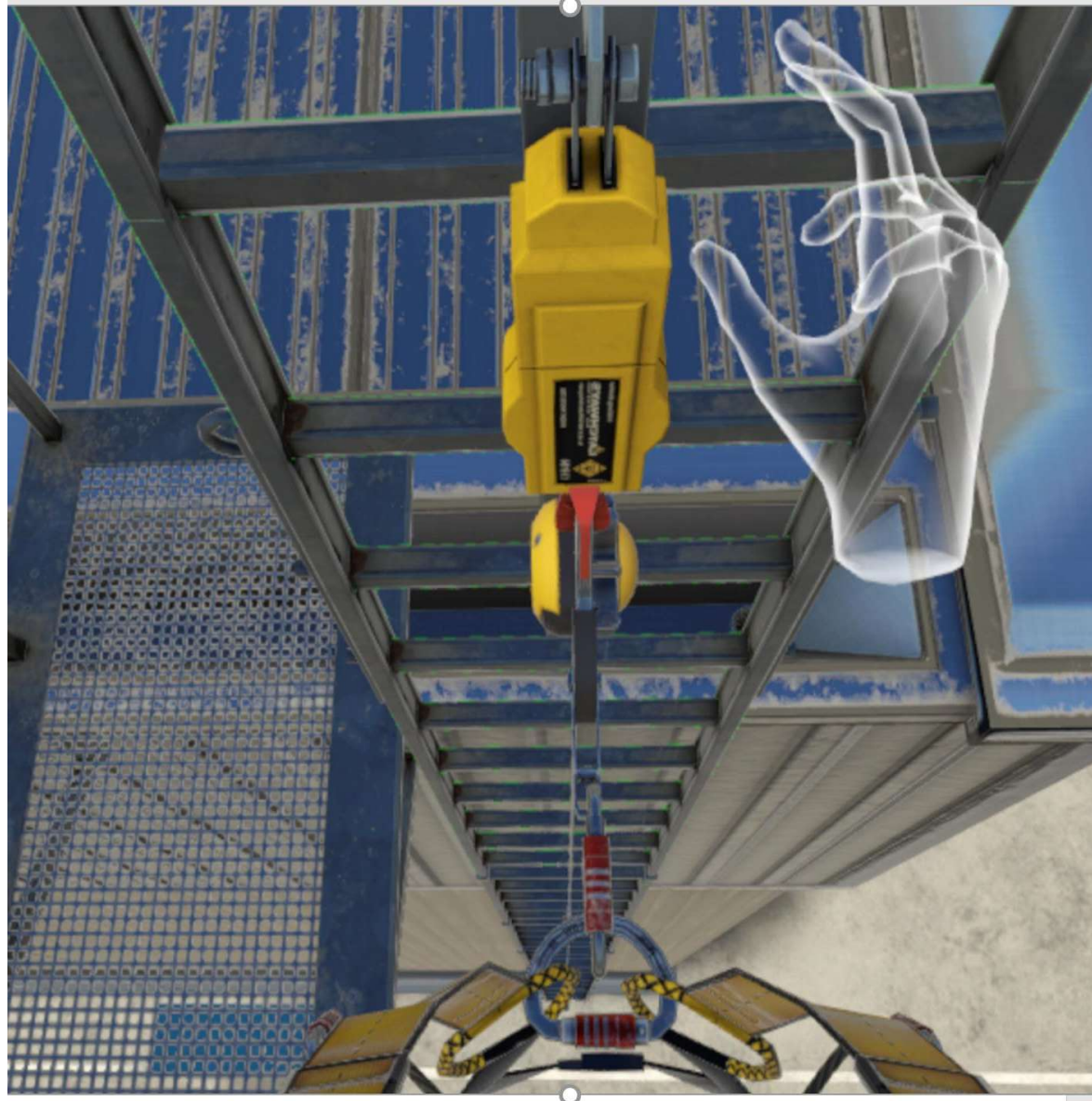
Ludus

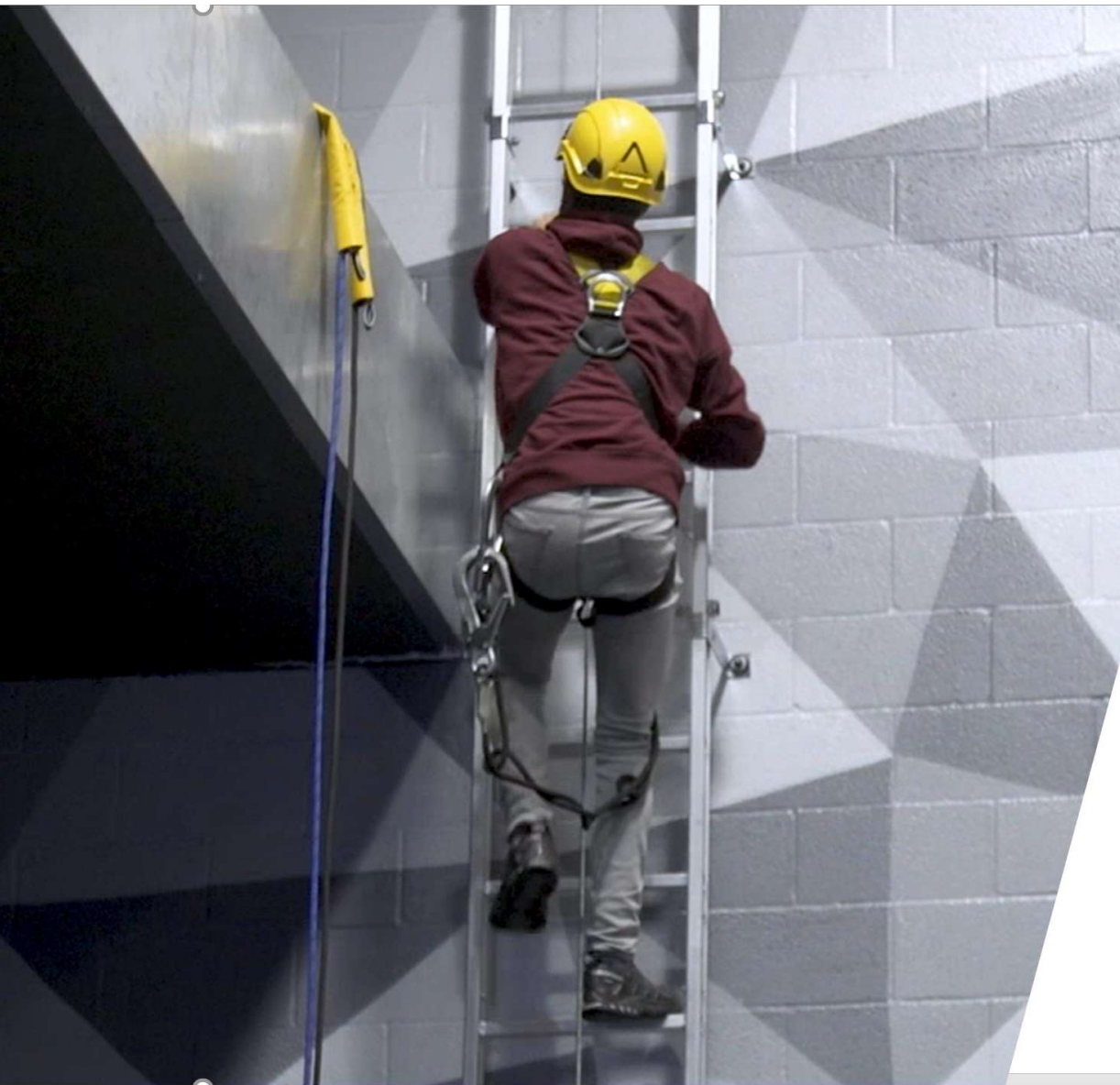


L U D U S G L O B A L

LUDUS PRESENTS AN INNOVATIVE, 100% REALISTIC AND RISK-FREE TECHNOLOGY

- ▶ **Improves effectiveness** in the learning process of operators.
- ▶ **Reduces the costs associated** with training and travel.
- ▶ Reduces the number of **accidents and casualties**.





FALL PROTECTION

VIRTUAL REALITY SIMULATOR FOR HIGH- ALTITUDE JOBS

- ▶ **Fall Protection** is a LUDUS product oriented for **height safety training**. The simulation has several exercises covering **different types of lifeline systems and dangerous situations**.
- ▶ The users goal is to carry out the work that is asked **in a safe manner and avoiding risks**.
- ▶ The simulation serves both to **explain the use and security measures**, and to **test the user** in relation to the knowledge learned.

TYPES OF TRAINING

GUIDED EXERCISES

- ▶ **Guided by Simulation:** The student learns autonomously, through tracks deployed by the simulation itself.
- ▶ **Guided by Supervisor:** A trainer will be able to explain through voice and by visual signals how to continue the protocol.

PRACTICAL EXERCISES

- ▶ Oriented for test the student's knowledge, through unguided exercises that might have unforeseen conditions.
- ▶ Simulation evaluates decision-making and mistakes made.
- ▶ A supervisor can observe, guide and/or evaluate the student at the same time.



▶ 1. IDENTIFY AND EQUIP PPE

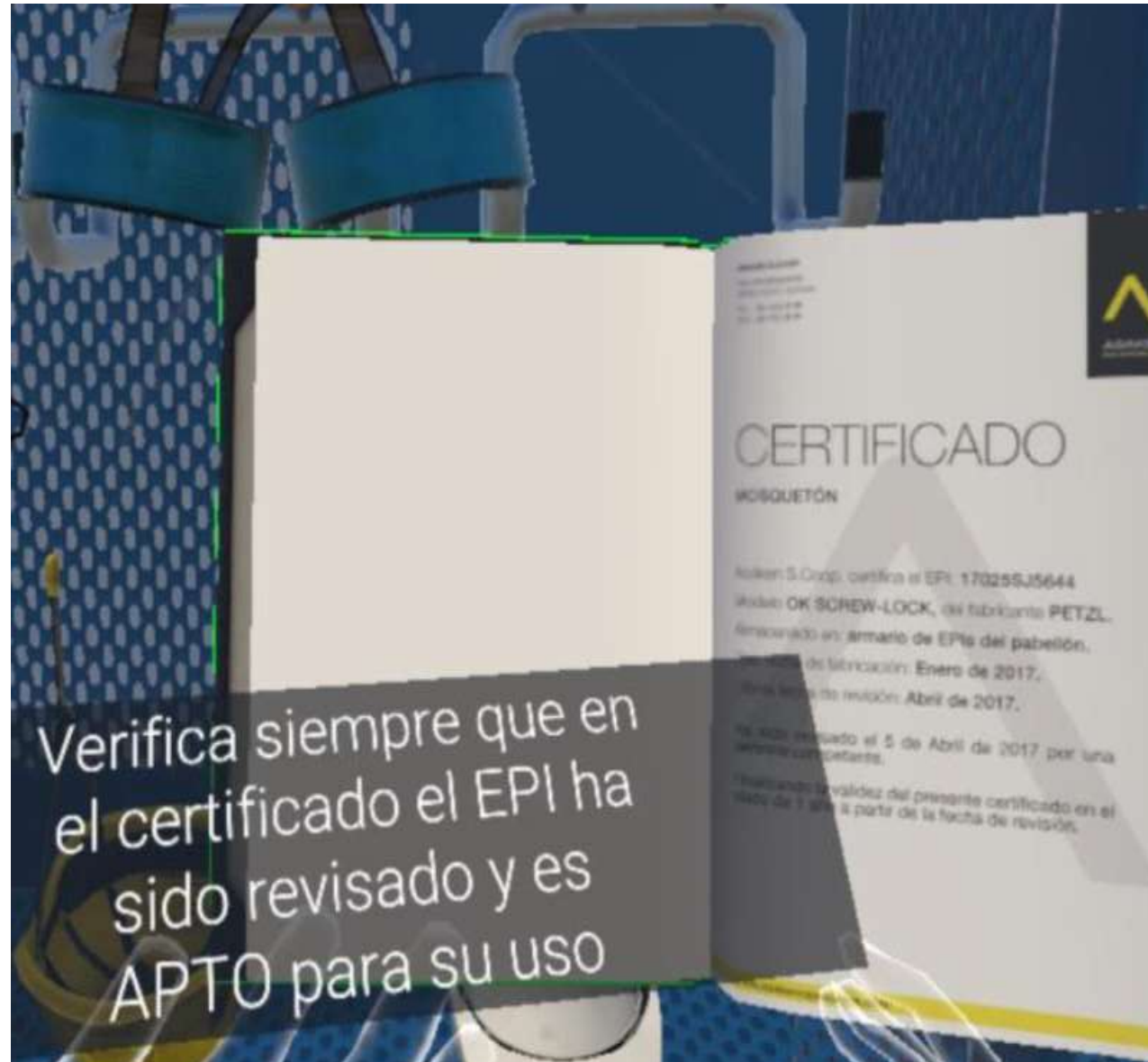
In this **guided exercise** the user will immerse in a realistic environment, where he/she have to **check** the condition of the personal protective equipment, through ways to **distinguish** if the correct one is selected.

▶ **LEARNING GOAL:**

- ▶ Teach the correct verification of the condition of all PPES: helmet, harness, carabiner, anchoring points... realistically.
- ▶ As it is a guided exercise, it allows the trainer to have availability to give feedback to the user and the other attendees, generating greater impact.

▶ **EXERCISE GOALS:**

- ▶ **Awareness:** The exercise is designed to delve into the relevance of checking the PPE needed for working at height.
- ▶ **Review of the procedure:** It is an opportunity to learn the procedure seen theoretically, while capturing the attention of the user and the attendees by the realistic and immersive environment.



▶ 2 SELECTION AND VERIFICATION OF PPE

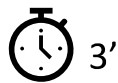
- ▶ It is an **unguided exercise**, in which the trainer can speak of the different PPE that appear, or for the student to demonstrate his knowledge acquired in the theoretical part of the training. The **verification** of certificates and details indicating that the PPE is correct offers a new **opportunity to reinforce** the importance of this procedure.

▶ LEARNING GOAL:

- ▶ Allow the user to demonstrate that he/she have acquired the knowledge taught in the previous exercise, by carrying out the process of reviewing and placing the personal protective equipment.

▶ EXERCISE GOALS:

- ▶ **Evaluate** the knowledge acquired in the theoretical phase of training, as well as the previous guided process.
- ▶ **Generate** the opportunity to detect concepts not acquired by the user and correct them, as well as the other attendees.



▶ 3 LADDER WITH LIFELINE

- ▶ This **guided** exercise gives the trainer the freedom to observe and **reinforce concepts** to both the user and the rest of the attendees about what is happening in real-time simulation.

- ▶ **LEARNING GOAL:**

- ▶ The user learns the correct use of a lifeline, verification of its components and ascent. In addition, the verification and placement of appropriate PPE is again touched

- ▶ **EXERCISE GOALS:**

- ▶ **Awareness:** Reinforce the importance of using the lifeline to climb the stairs. The user will be able to check the consequences of climbing the stairs without performing this action.
- ▶ **Review of the procedure:** The exercise involves taking the opportunity to reinforce the procedure for the user, increasing and strengthening his/her learning.



▶ 4 PERIMETRAL LIFELINE

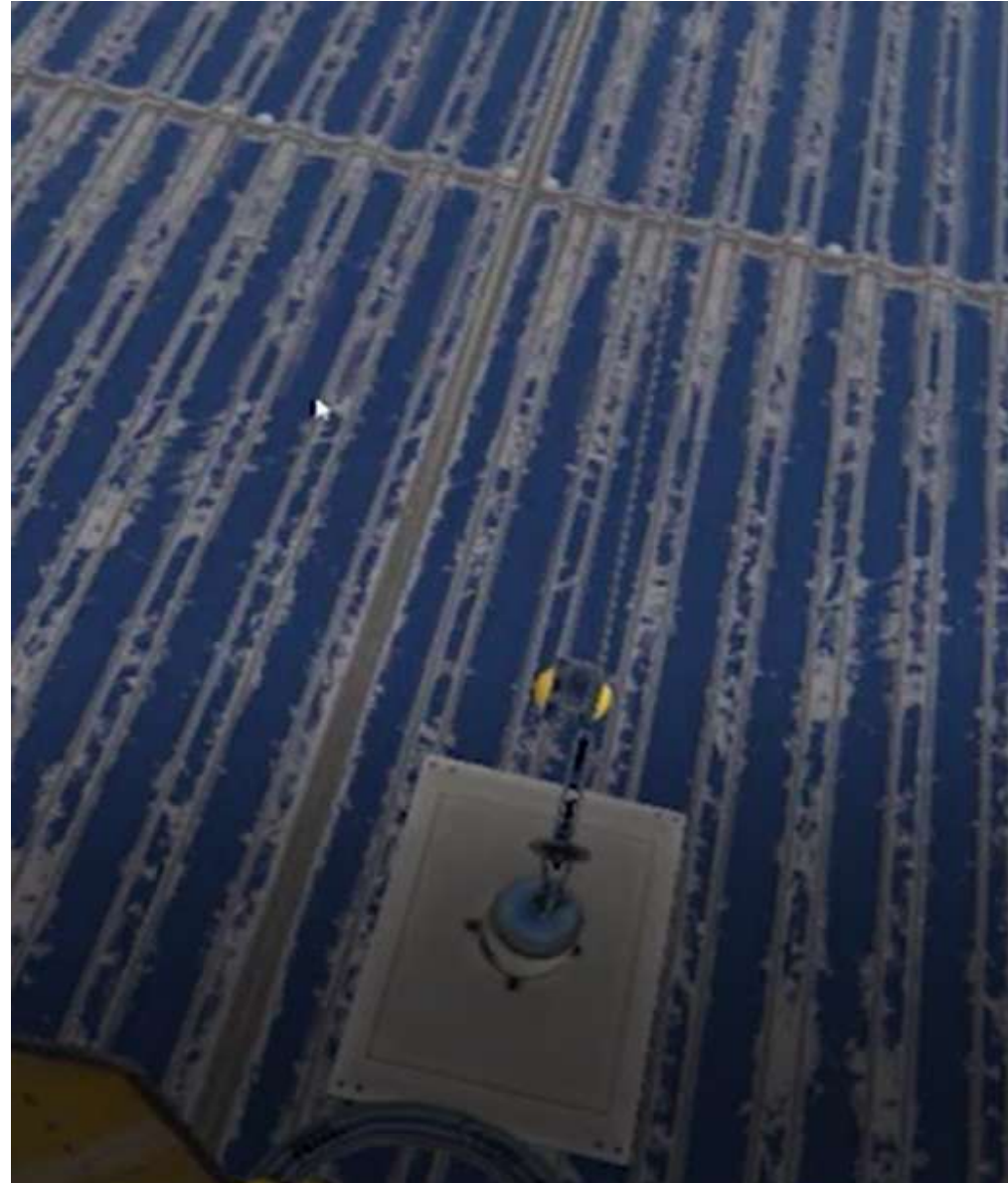
▶ In this **guided** exercise, is about the verification of the PPE used to use a horizontal perimeter lifeline safely.

▶ **LEARNING GOAL:**

- ▶ Through a tour of the deck, learn the procedure, PPE and verification necessary for a proper use of a perimeter lifeline.

▶ **EXERCISE GOALS:**

- ▶ **Awareness:** The exercise has an awareness-raising approach to the security measures needed for these actions.
- ▶ **Review of the procedure:** The user has a new formative impact that will allow him/her to assimilate the theoretical knowledge related to the perimetral lifeline.



▶ 5 FLEXIBLE LIFELINE

- ▶ The simulation explains in a **guided** way the PPE to choose and the steps that need to be taken to use a horizontal lifeline installed on a ridge without anti-balancing.
- ▶ **LEARNING GOAL:**
 - ▶ Taking a tour of the deck, identifying and performing the relevant actions for the correct use of a flexible lifeline.
- ▶ **EXERCISE GOALS:**
 - ▶ **Awareness:** Thanks to virtual reality, we will be able to put the user at risk with total security for his/her person. But the user can see in the third person an animation where the trainer can teach the risk of the pendulum effect.
 - ▶ **Review of the procedure:** The user will carry out a process in which all actions, except the last one, are focused on maximum risk prevention.



▶ 6 FLEXIBLE LIFELINE II

- ▶ The simulation explains in a **guided** way the PPE to choose and the steps that need to be taken to use a horizontal lifeline installed on a ridge with anti-balancing.
- ▶ **LEARNING GOAL:**
 - ▶ Recreates the process in which the user learns the correct use of hook and the installation of anti-rolling poles.
- ▶ **EXERCISE GOALS:**
 - ▶ **Awareness:** This exercise shows the importance of using anti-balancing poles.
 - ▶ **Review of the procedure:** The user is taught the correct use of the security measures at his/her fingertips.



▶ 7 RISK SITUATIONS

- ▶ With this guided exercise the user can identify different risk situations on a deck. It allows the trainer to reinforce the user and other students in real time the necessary measures to prevent accidents

- ▶ **LEARNING GOAL:**

- ▶ Review of the risky situations the student may experience in real life if he or she doesn't make proper use of lifelines. Learning the consequences of stepping on skylights, as well as the importance of using the right transit locations.

- ▶ **EXERCISE GOAL:**

- ▶ **Awareness:** This exercise is in such a way that it has an impact, showing the consequences of moving inappropriately. In addition, the user may experience an accident in which the user can understand the benefits of proper use of personal protective equipment.





▶ 8 LIFELINE PRACTICES

▶ In this last exercise, the user will be able to **implement** everything **learned** in the guided exercises without any help.

▶ **LEARNING GOAL:**

▶ Review the material learned in previous exercises by putting the knowledge gained into practice

▶ **EXERCISE GOAL:**

▶ **Evaluation:** It is an optimal exercise to determine whether the student has internalized all the concepts seen in the theoretical training and in the previous exercises of this simulation.





SUPERVISION SYSTEM

- ▶ **Tracking** of the course in real-time simulation.
- ▶ **Interactive modification** of the simulation conditions.
- ▶ **Direct communication** with users.
- ▶ Disposition of **clues and visual aids**.

STATISTICS SYSTEM

BASIC STATISTICS

- ▶ **Deployed to the user** at the end of the simulation.
- ▶ Save **individual reports** for subsequent consultations.

ADVANCED STATISTICS

- ▶ **Advanced reports** of user evolution.
- ▶ Registration of procedure **steps** and **mistakes**.

