

Dummy Landmine Detection Training

This unit is a practical lesson where the students get the opportunity to clear mine with different techniques. When clearing mines many different techniques can be used, in this Unit we are clearing mines using a metal detector and by hand using a pike and a board. Land mines are easy and cheap to put into the ground, but removing them are hard and dangerous work and really expensive and after this unit the ambition is that the student gets an understanding that.



The student has found a replica of the Swedish landmine "Truppmina 10" using a pike and board.

To be considered before start

For carrying through this Unit there is some material needed. You will need some type of dummy mine, we got help from our industrial program that made dummy mines using hockey pucks with aluminium inserts. The dummy mines were a replica of the Swedish Truppmina 10 in size.

In Sweden it is forbidden by law for civilians to use metal detectors outdoors. The solution we came up with was to rent an athletics hall and use the sand in the long jump pit to hide the mines in. As a teacher it is important to make sure what regulations regarding the use of metal detectors in your country.

It is recommended that the students have gotten some insights about the problem with land mines, a good and thrilling way to give them that is by watching the movie "The Deminer" before doing this unit.



Mines being cleared with board and pikes.

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Teachers

Teachers in History and Technology have participated in this Unit.

Duration

This Unit is a one lesson unit. The time for completing the Unit is approximately 90-120 minutes in total.

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Objectives and key competences

- To give the student practical knowledge in techniques that can be used when clearing mines.
- Knowledge of how a metal detector works.
- Knowledge about the Swedish arms industry and landmines that previously have been produced in Sweden.

Material / resources

- Dummy land mines that were produced by the teachers at the industrial program. The dummy's consisted of a hockey puck with an aluminium insert. The dummies were almost an exact copy of the Swedish "Truppmina 10".
- A board with a pattern of lines on it that is rotated forward after the area has been searched.
- Pikes to use when searching for mines, we used knitting needles for this.
- A metal detector/s.
- PP for the introduction and a projector.

Truppmina 10

Sverige har utvecklat 21 olika typer av minor sedan AVK I slutet på 90-talet började man förstöra minlagren. Totalt har 3 000 000 minor förstörts 2 500 000 var Truppmina 10



A Power Point slide from the introduction at the start of the lesson with information about the landmines that Sweden has produced during the years.

Lesson

At the start of the lesson the students are given an introduction by the teacher about the Swedish arms industry regarding land mine production and the process of detection and clearing land mines. The students also get a quick introduction about how a metal detector work. For this a Power Point was used.

The students are also given an introduction on how to search for mines using a board and pike.

A closer look at the board and technique when clearing landmines. Note the spacing between the lines on each side of the board, they are arranged this way so the mine clearer can work their way forward over the mine field in a safe way. After one side is checked the board is rotated 90° forward. The pikes should be at 45° when searching for mines. Clearing mines is a time consuming work and you be sure that the whole length of the board is checked before rotating forward.



After the introduction the students are divided into groups of 4-6 students. Half of the group will now plant the booby land mines in the sand without the other half of the group watching. When the mines are hidden in the sand the students start looking for the mines using the pike technique. After finding the mines the group switch places and the students that were clearing the mines are now hiding them.

When the students both have hidden and searched for the mines using pikes we do the same thing but this time using the metal detectors.

When all the students have tried both techniques the lesson end with a discussion about land mines and what they have experienced today. The students first discuss in their groups and after that they summarizes the group discussion for the other students in the class.

- How did it feel to clear the mines with the different techniques?
- Which one of the techniques felt most save and why?
- Is demining a profession that you can imagine yourself working with in the future?
- What how you learned today and what insights have this Unit given you?

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Results and outputs

The output of this Unit is to give the student practical knowledge about how to clear mine.

At the end there is a group discussion about what the students have learnt and experienced during the lesson.

Teachers reflections of the lesson

This was a fun activity to do with the student's. The students were engaged in the activity and did their best to find the mines in a safe way and with the right technique.

It was a good thing that the half of the students planted the mines while the other half searched and cleared the mines later and then switched roles. With the material we had, 2 metal detectors and four boards and pikes all of the students can not clear the mines at the same time, but it worked out well when dividing the group into planters and clearers.

Regarding materials, the boards and metal detectors and the mine replicas worked well. Regarding the pikes, the ones we used were a bit too weak and became more crooked for each student using them. I would recommend more robust pikes than the ones we used.

I think I was quite nice to do this activity in the long jump pit because there were only in the pit that the students could hide the mine replicas and the limits were clear to the students and the ones searching for the mines knew where to look. It was easy and quick to plant the mines and hide them in the sand. If this was done outside I think it would have been much harder for the students to do a good job hiding the mines.



A first-year student at the technology program in Västerås searching for mines using a metal detector.