



(ENG) Lab Disasters

Introduction

Step 1 - Motivational Stage

Step 2 - Investigational Stage

Step 3 - Consolidation Stage

Introduction



#Online activity #In-class activity #Inquiry-based learning
#Gamified learning #Paintings

Pupils get to know the lab safety by inventing disastrous ways of behaving at a lab

Learning Objectives



understand lab safety issues.

ACTIVITY DETAILS

Activity Details

Connection of the activity with Art

—

Rembrandt: The Anatomy Lesson of Dr. Nicolaes Tulp
Storytelling



Link to local, national School Curriculum

—

General & Safety/ Safety in laboratory



Equipment required —

- Connection to the Internet



Duration of activity —

45 minutes



Sources —



Step 1 - Motivational Stage



Ask the pupils the following question:



" How many laboratory disasters can you invent? "

Step 2 - Investigational Stage



STUDENTS' TASKS

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Task 1

Discuss with pupils the main issues of lab safety:

Because hazardous substances and compounds are handled in the laboratory, it is important to take safety precautions.

- Working alone in the laboratory is not allowed.
- You must be familiar with the safety guidelines and know where the first-aid and safety equipment can be found.
- The general laboratory safety equipment includes a bottle of eye wash, an emergency shower and fire extinguishers.
- You must always wear safety glasses, an appropriate lab coat and lab gloves in the laboratory. You must wash your hands upon entering and exiting the laboratory.
- Eating or drinking in the laboratory is forbidden.
- Maintaining good order reduces the risk of accidents.
- You must focus on your work and only use undamaged equipment.
- When diluting a strong chemical, the chemical is always poured into water or a solvent – never the other way around. Only the minimum necessary amount of the substances should be used.

Task 2

Pupils form groups of four and tell a story where everything goes increasingly wrong. They tell a sentence at a time, changing turns. They try to come up with as many unfortunate events as they can.

If the laboratory safety summary above is insufficient, you can find more information about laboratory safety guidelines online.

Laboratory Safety Manual of the University of Houston

[LINK](#)

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Task 3

Present the pupils Rembrandt's masterly painting The Anatomy Lesson of Nicolaes Tulp.

The Anatomy Lesson of Nicolaes Tulp

[LINK](#)

This painting was made in the year 1632. Ask the pupils to consider which current-day laboratory safety guidelines were not followed nearly 400 years ago.

Step 3 - Consolidation Stage



Pupils tell their best stories.

End of the activity

EXIT