

Title

What can chlorine bleach do ?

Curriculum Area

Chemistry, everyday life

Students' age

14 -16

Duration

120 minutes

Learning Objectives

As it is important to take care of hygiene and disinfection during the covid 19 pandemic the student will:

- Understand the difference between cleaning and disinfection,
- Be able to discuss the purpose and types of disinfection,
- Learn the mechanism of action of chlorine bleach,
- Apply chlorine bleach to household applications other than disinfection,
- Understand the importance of proper handling and storage of chlorine bleach in the household,
- Learn the possible dangers to human health due to poor handling of chlorine binder.

Materials

CHLORINE BLEACH GLOVES, APRONS, GOGGLES

ALL DEVICES, ACCESSORIES AND MATERIAL WILL BE ON THE CENTRAL TABLE OF THE LABORATORY, SO THAT THE STUDENTS AFTER PLANING CAN SELECT THE NECESSARY FOR THEIR WORK.

- **Student Resource [Link](#)(about chlorine bleach)**
- **Student worksheet**
- **Reflection worksheet**



Activity Set-up

1. Students watch the videos on the [link](https://www.youtube.com/watch?v=mG-jezPKrQ0&ab_channel=IndoorChem) https://www.youtube.com/watch?v=mG-jezPKrQ0&ab_channel=IndoorChem and https://www.youtube.com/watch?v=VBZPO1ecxhg&ab_channel=Clorox
Discuss with them about the importance of hygiene and disinfection in everyday life.
Explain to them the difference between cleaning and disinfection .
Explain to them the mechanism of action of chlorine bleach.
Point to them the possibility that chlorine bleach, in addition to destroying microorganisms, mold etc., can also destroy plants and bleach organic materials, such as cotton, linen, plastic, etc.
It can also be used to restore shine to glass and porcelain.
2. Divide the class into groups of 4 students (6 teams).
3. Explain to students that they need to work as a team to **design a plan** on how to demonstrate the **use of chlorine bleach for a purpose other than household disinfection** on a **practical example**.
To create a plan, they can use ideas from their own lives or search for an idea on the Internet.
4. Teams prepares the required materials they have planned. They may ask for additional materials if they consider it is necessary.
5. During the work students record all important data.
6. At the end of the work, the students return the washed and cleaned utensils to the central table in the laboratory
7. Each team will present their system step by step as described in their plan to their classmates. The other teams need to carefully observe the presented and decides wich demonstration is the best.
8. After the presentation the students will evaluate the results of their teams by answering the questions in the reflection worksheet. After that they will present that in front of their classmates.

Annex

STUDENT WORKSHEET

DESCRIBE AND DRAW THE PROCEDURE:

WRITE WHAT ACCESSORIES AND MATERIALS NEED FOR WORK:

DESCRIBE THE RESULTS OF WORK:

CONCLUSION:



Reflection worksheet

	<i>questions</i>	<i>answers</i>
1.	<i>Where you found the idea for your work ?</i>	
2.	<i>Have you chosen good example to demonstrate</i> <i>What can chlorine bleach do ?</i> If your system failed, what went wrong? If your system succeed, what went well?	
4.	<i>Give some more examples from everyday life where chlorine bleach can be use.</i>	

Resources:

- https://www.youtube.com/watch?v=mG-jezPKrQ0&ab_channel=IndoorChem
- https://www.youtube.com/watch?v=VBZPO1ecxhg&ab_channel=Clorox
- <https://www.homestoriesatoz.com/cleaning-tips/9-household-uses-for-clorox-bleach.html>
- <https://www.24sata.hr/lifestyle/super-koristi-od-izbjeljivaca-cisti-igracke-plijesan-kante-663828>