



Trench Attack

STEM Sims

Lesson 2: How do the different types of gas affect soldiers?

Chlorine Gas, CS (Tear Gas), Mustard Gas, Phosgene Gas, and Sarin Gas are some of the different chemical agents that have been used in chemical warfare. Which gas is most effective in chemical warfare?

Doing the Science

1. Start the Trench Attack Simulation by clicking on the “Sim” tab.
2. Click on the arrow in the “Chemical” box and select “Chlorine”.
3. Next, click on the arrow in the “Amount” box and select 11kg.
4. Click on the third blue chemical canister on the left side of the screen to release the gas.
5. To view the damage done by the gas release, click on the first soldier (the green one at the top of the screen), and record the effects on the unit in Table 1 below.
6. Click on the remaining soldiers and record in Table 1 the effects of the gas on the units.
7. To test how the different gases affect the soldiers, first click the green "Reset" button.
8. Click on the arrow in the “Chemical” box and select “CS (Tear Gas)”.
9. Repeat steps 3-7.
10. Repeat the process until all the gases have been tested. Make sure to select the "Reset" button before testing each canister and to record your data in Table 1.

Table 1.

	Effects on Unit 1	Effects on Unit 2	Effects on Unit 3	Effects on Unit 4	Effects on Unit 5
Chlorine Gas					
CS (Tear Gas)					
Mustard Gas					
Phosgene Gas					
Sarin Gas					

Do You Understand?

1. Which gas had the most effect on the soldiers?