# SCIENCE LAB SAFETY & WHMIS

## QUESTION OF THE DAY

- Which of the following contains the same chemical energy as 7 grams of TNT?
  - 1. 7g of gun powder
  - 2.) 7g of a marshmallow
  - 3. 7g of a potato
  - 4. 7g of hairspray



# **DANGEROUS MARSHMALLOWS?**

https://www.youtube.com/watch?v=4mWxL8upOPo

# LAB SAFETY RULES – HOW MUCH DO YOU REMEMBER?

- You and your table partner will be assigned one lab safety rule topic
- Come up with as many rules as you can related to that topic
- Role 1: writerRole 2: speaker
- After ~5 minutes, we will discuss as a class

- I. General precautions
- 2. Protective clothing
- 3. First aid
- 4. Using equipment
- 5. Heating and fire safety
- 6. Sharp materials
- 7. Working with chemicals
- 8. Cleaning up

## DUA LIPA PARODY

https://www.youtube.com/watch?v=BRDApYgvDqQ&ab\_channel=AsapSCIENCE

#### WHMIS MATCHING

- Work with your table partner to match the WHMIS symbols to their name and description
- Call the teacher over when finished to have your answers checked

#### WHMIS SYMBOLS



• WHMIS stands for "Workplace Hazardous Materials Information System" and they use symbols in order to identify dangerous materials. These symbols can be found on labels of common household items and chemicals.

Symbol	Name	Definition	Example of products that have this symbol
	Compressed Gas	<ul> <li>Gas under pressure</li> <li>Heat may cause the container to explode.</li> <li>A drop/impact may cause the container to explode.</li> </ul>	<ul><li>Propane</li><li>Fire extinguishers</li><li>Helium gas</li></ul>

Symbol	Name	Definition	Example of products that have this symbol
	Flammable	<ul> <li>May burn at low temperatures.</li> <li>Sparks, flames, friction may ignite it.</li> </ul>	<ul><li>Gasoline</li><li>Diesel</li><li>OFF bug repellent</li></ul>

Symbol	Name	Definition	Example of products that have this symbol
	Oxidizing Hazard	<ul> <li>Speed up development of a fire and make it more intense</li> <li>Cause substances that don't usually burn to readily burn in air</li> </ul>	- Chlorine - Bleach

Symbol	Name	Definition	Example of products that have this symbol
	Poisonous	- May cause death/toxicity with short exposure to small amounts.	- Bleach - WD-40

Symbol	Name	Definition	Example of products that have this symbol
	Health Hazard	- Suspected to cause serious health effects (cancer, organ damage, genetic defects) after repeated exposure	- Formaldehyde

Symbol	Name	Definition	Example of products that have this symbol
	Exclamation Mark	- May cause irritation to skin and eyes.	<ul><li>Draino</li><li>Toilet bowl cleaners</li><li>Drain openers</li></ul>

Symbol	Name	Definition	Example of products that have this symbol
	Corrosive	- Corrosive damage to metals, eyes, skin.	<ul><li>Chlorine</li><li>Bleach</li><li>NaOH</li></ul>

Symbol	Name	Definition	Example of products that have this symbol
	Explosive	<ul> <li>May be a self-reactive substance</li> <li>Explosion may cause damage to surroundings</li> </ul>	<ul><li>OFF bug spray</li><li>Hairspray</li></ul>

Symbol	Name	Definition	Example of products that have this symbol
	Biohazardous Infectious Materials	- Organisms/toxins that can cause diseases in people or animals	<ul><li>Viruses</li><li>Bacteria</li><li>Mold</li></ul>

Symbol	Name	Definition	Example of products that have this symbol
*	Environmental Hazard	- May cause damage to the aquatic environment (fish, crustacean, or aquatic plants)	<ul><li>Heavy metals (mercury)</li><li>Pesticides</li></ul>







Product Name	WHMIS Symbols on Container	Briefly describe the precautions you should take when using this product
	Flammable	- Avoid open flames around this product
Dry Shampoo	Explosive	<ul><li>Don't drop the product</li><li>Do not severely damage the can</li></ul>
Clorox	Corrosive	<ul> <li>- Wear gloves when using the product</li> <li>- Keep away from little kids</li> <li>- Wash hands immediately after use</li> </ul>
WD-40	Flammable  Poisonous  Explosive	<ul> <li>Don't consume</li> <li>Use gloves, masks, and eye protection when using product</li> <li>Don't smell directly (waft to smell)</li> </ul>

#### WHMIS SAFETY SCENARIOS

- Working with a partner
- Read through the scenario
- Draw/name the WHMIS symbols that should be found on that container
- Describe any safety precautions that should be taken when using the product
- Hand in when finished!