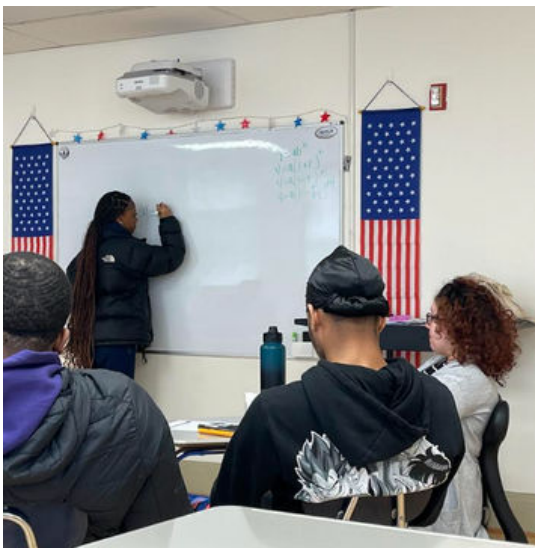




# EDUCATOR NEWSLETTER

BY NHCS CURRICULUM & INSTRUCTION



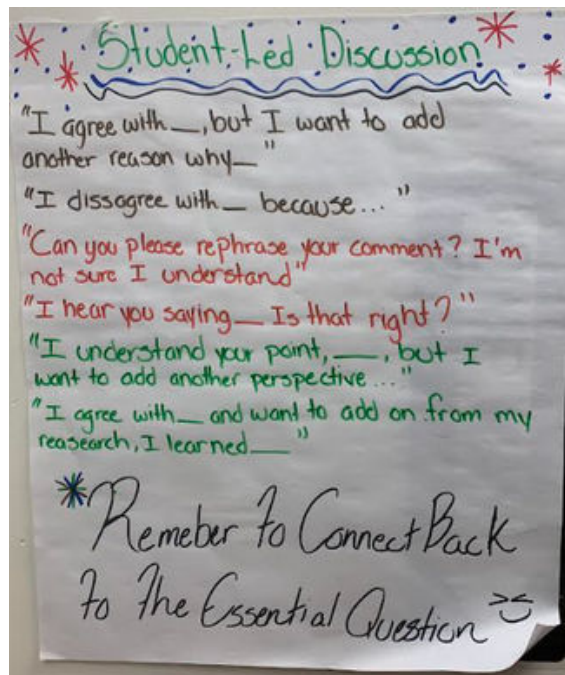
[How to run a Harkness Discussion \(general\)](#)

## Monterrey hosts a Harkness Discussion

Shout out to Valerie for planning and executing a successful Harkness discussion in Algebra 2! Scholars engaged in rigorous academic discourse to determine how logarithms can be used to solve exponential equations in various contexts. She had high engagement from scholars as they worked in groups to explore a new concept. Huge props to Ms. Monterrey for trying a new discourse tool! Oh, and did I mention she did this while 7 month pregnant?!

# Thank you Ms. Weiss and the 12th grade scholars!

I'm loving seeing the Student-Led Discussion sentence starters in classrooms across CSC! Did you know these were created by senior scholars in Ms. Weiss' class? Thank you Kyessa and Azaria! Are you looking to create an anchor chart? Scholars often love being tasked with creating these types of tools for your classroom!



**ASPIRIN**  $C_9H_8O_4$   
(acetylsalicylic acid)

Molar Mass  
 $(12.01 \times 9) + (1.008 \times 8) + (16.00 \times 4)$   
 Molar mass = 180.2 g/mol

How many grams can be LETHAL? (75 kg)  
 $200 \times 75 = 15,000 \text{ mg}$

How many typical doses can be considered lethal? (75 kg)  
 $200 \text{ mg} \times \frac{1 \text{ LHD}}{81 \text{ mg}}$   
 $x = 297 \text{ doses would be LETHAL}$

PS!!!  
 An intentional or accidental OVERDOSE can cause death. It can also cause side effects. Make sure you take the right measured amount!

Aspirin (Acetylsalicylic Acid)

**HOW TOXIC IS CANNABIS**

Molar Mass = 314.469 g/mol  
 Typical Dose = 5g or 0.000169 mol  
 Lethal Dose = 700 mg/kg or 0.000228 mol

For someone who weighs 75kg:  
 Lethal Dose =  $\frac{0.7}{75} \times 75 = 0.7 \text{ g}$   
 How many typical doses would be lethal?  
 $\frac{0.7 \text{ g}}{5 \text{ g}} \times \frac{1 \text{ LHD}}{0.000169 \text{ mol}} = 10500 \text{ typical doses}$

To insure the right dosage, start and small. Be more sure you measure. You should see your doctor and make sure your environment is safe. A peaceful, enjoyable trip.

Do you think people should have this substance? At this point, people should choose. **Risks:** Respiration, Brain issues, Lung Cancer.

THC (tetrahydrocannabinol)

**The Venom of A Snake**

Basic Facts:  
 Common Name: Snake Venom  
 Molecule Name: A-Bungarotoxin  
 Molecular Formula:  $C_{538}H_{824}N_{140}O_{255}$   
 Molar Mass: 7491.25 g/mol  
 Typical Dose: 0.9g  
 Lethal Dose: 0.0025g/kg  
 Lethal Dose for someone who weighs 75kg: 0.1875g typical dose should be lethal

Molecular Structure:  
 Bungarotoxin

Calculations:  
 $(12.01 \times 538) + (1.008 \times 824) + (14.007 \times 140) + (15.999 \times 255)$   
 $6481.38 + 828.272 + 1960.98 + 4029.225$   
 $13880.857 \text{ g/mol}$

75kg  $\times$  0.0025g/kg = 0.1875g  
 $\frac{0.1875 \text{ g}}{0.9 \text{ g}} \times \frac{1 \text{ LHD}}{0.00025 \text{ mol}} = 84 \text{ typical doses would be lethal}$

LHD = Lethal Dose

Explanation:  
 It is common sense to not go near snakes because of their venomous bite. Some snakes can kill more than 100 humans with the amount of venom they inject. The Texas snake is one of these deadly snakes which is native to Australia so don't go near snakes unless they are harmless.

Fun Facts:  
 There are around 700 venomous snakes. A venomous bite is called envenomation. -Hyalurase, Phospholipase, Hemolysins and other enzymes are known to snake venom.

## Scholars investigate toxins in Mx. Hahn's class

How many bags of takis would be a lethal dose of table salt? Check out the scholar work in the Annex hallway and you can find out! (But don't worry taki lovers, Josiah and Ethan determined that it's over 400,000). In an engaging summative assessment about molarity, scholars picked a toxic substance to discover how much would be lethal for a 65 kg human being. Many of the choices were common household items! You can see Mx. Hahn's full project assignment [here](#). Looking for support to design a creative project? Reach out!