



Week 8

NATIONAL CHEMISTRY WEEK



Mole Day Celebration: Oct 24th



Sign up on Seesaw: Comment

Agenda

- **National Chemistry Week**
 - Mole Day (+1) Celebration – Thursday
- **Exam Review**
- **Exam**
- **Unit 1B: Matter**
 - EXP Physical and Chemical Changes
 - Content and Skills Focused
 - ONLY Data Tables and Analysis Required.

Exam Review Options



**ONE NOTE UNIT
REVIEWS, LABS,
ACTIVITIES AND EXTRA
PRACTICES**



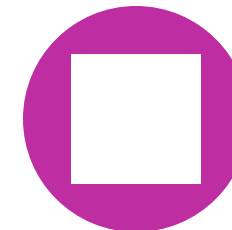
**TEAMS: UNIT REVIEW
PPT**



**CLASSLINK: MCGRAW-
HILL: INSPIRE
CHEMISTRY**



**PEARSON CHEMISTRY
(TEXTBOOK): READ AND
PROBLEM POOLS**



**EDUCREATIONS
LECTURES**

Exam Review

Go to Teams

Click on Unit 1 at the left of the screen

Click "File" at the top of the screen

Open "Unit 1 (or 1A) Review" Powerpoint

The screenshot shows the Microsoft Teams interface. At the top, there is a search bar with the text "Search or type a command". Below this, the "Teams" section is visible, listing several teams. The team "Unit 1 Matter" is selected and highlighted. In the top right corner of the "Unit 1 Matter" team view, the "Files" tab is circled in red. Below the "Files" tab, there is a list of files. The file "Unit 1 Review.pptx" is circled in red. Other files listed include "EXP Reaction in a Bag .docx" and "NOTES Measuring Matter.docx".

Microsoft Teams

Search or type a command

Teams

Unit 1 Matter Posts Files Notes +

Your teams

- Chem Team (SHS)
- CHEMISTRY - SCI300 - Y33
General
Unit 1 Matter
- CHEMISTRY - SCI300 - Y41
General
Unit 1 Matter
- CHEMISTRY - SCI300 - Y51
General
Unit 1 Matter
- CHEMISTRY - SCI300 - Y62
General

Unit 1 Matter

+ New Upload Copy link Download Add cloud

Unit 1 Matter

Name	Modified
Unit 1 Review.pptx	Yesterday at 5:20 PM
EXP Reaction in a Bag .docx	October 8
NOTES Measuring Matter.docx	September 17



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TOPIC: Reading Measurements
Questions: If a graduated cylinder gives a reading of 20 mL, what are some reasonable values?



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Topics*

- Identify the correct number of significant figures in each number.
- Round the numbers to the correct number of significant figures.
- Calculate the area of a rectangle.
- Calculate the volume of a rectangular prism.
- Calculate the density of a substance.
- Calculate the mass of a substance.
- Calculate the volume of a substance.
- Calculate the density of a substance.
- Calculate the mass of a substance.
- Calculate the volume of a substance.

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Topic: Scientific Notation, Significant Figures, Math with Sig Figs and Sci Not

Question

When calculating the density of a material with a mass of 55.0g and a volume of 37.28, how many significant figures should the calculated density have? Distinguish the correct amount of significant figures the answer needs to have.

Options

- A. 2 sig figs
- B. 3 sig figs
- C. 4 sig figs
- D. 14 sig figs
- E. 13 sig figs

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Topic: Scientific Notation, Significant Figures, Math with Sig Figs and Sci Not

Question

Express the number 54,832,000 in scientific notation.

Topic: Scientific Notation, Significant Figures, Math with Sig Figs and Sci Not

Question

When calculating the density of a material with a mass of 55.0g and a volume of 37.28, how many significant figures should the calculated density have? Distinguish the correct amount of significant figures the answer needs to have.

Options

- A. 2 sig figs
- B. 3 sig figs
- C. 4 sig figs
- D. 14 sig figs
- E. 13 sig figs

Answer:

Explanation:

Level of Bloom's Taxonomy:

Comments

New

BJ Bartminn, Lina Joy

correct answer - 3 sig figs because the least accurate measurement is 55.0, which has 3 sig figs

Reply...

See more comments

Exam Review

Go To Class Link Issaquah

Click on McGraw-Hill

Click on Course

Use any resources available
(ex. Module Assessment)

The screenshot displays the McGraw-Hill Education course interface for Period 3, managed by Jenny Godley. The left sidebar contains navigation options: My Programs, Dashboard, Course (highlighted), Gradebook, Calendar, Assignments (with a notification badge), Roster, Reports, Assessments, and My Tools. The main content area features a 'Learning Resources' section with four expandable items: 'Learning Resources', 'Module Opener', 'Module Wrap-Up', and 'Module Assessment' (which is expanded). Under the 'Module Assessment' section, there are four resource cards, each with a red background and a white checkmark icon, and a date range of 'Oct 18, 2019 - Oct 22, 2019':

- Module Test: The Central Science
- Module Test Answer Key: The Central Science
- Module Vocabulary Practice: The Central Science
- Module Vocabulary Practice Answer Key: The Central Science

Each card also includes a copyright symbol (©) in the bottom right corner. A 'Back to T' button is visible in the bottom right corner of the interface.

Mole Day Celebration

$6.02214076 \times 10^{23}$



Mole Conversions

A mole is a word that represents a specific quantity of something.

Example, 1 dozen = 12

1 mole = 6.022×10^{23} _____

(in chemistry, the unit we use atoms, formula units, or molecules)

Therefore, the equivalents will be...

$$\frac{1 \text{ mole}}{6.022 \times 10^{23}} \underline{\hspace{1cm}}$$

or $\frac{6.022 \times 10^{23}}{1 \text{ mole}} \underline{\hspace{1cm}}$



EXP

Physical and Chemical Changes

UNIT 1B: MATTER REVISITED

EXP

Physical and Chemical Changes

1) Quiz (Pre-Post): Safety and Procedure

- Pre (Oct 25)
- Post (Oct 31)

Students can use the Protocol.

2) Lab Assessment Physical and Chemical Properties and Changes and Lab Skills

- Nov 4

Students can use their data sheet and analysis answers.

There is NO formal lab report.



DATA TABLE 1: PHYSICAL PROPERTIES OF MATTER

Substance and Formula	Physical State	Color	Odor	Dissolves in water	Effect of Magnet
sulfur, S					
iron filings, Fe					
sodium hydrogen carbonate, NaHCO ₃					
sodium chloride, NaCl					
sucrose, C ₁₂ H ₂₂ O ₁₁					
sand, SiO ₂					
magnesium, Mg					

Do NOT touch the magnet directly to substances.

Why are these are SUBSTANCES?

Remember to clean and dry spatula/scoopula between uses to avoid contamination.

**Waste Containers:
S, Fe, Sand, Mg**





**Sink:
NaCl, C₁₂H₂₂O₁₁,
NaHCO₃**

EXP Physical and Chemical Changes




PART A

EXP Physical and Chemical Changes

Part B

-  Fume Hood
-  Waste Container
-  Add water to testtube and bring to the front
-  Trash

DATA TABLE 2: OBSERVATIONS OF PHYSICAL AND CHEMICAL CHANGES

System	Observations
Fe and S mixture —tested with magnet 	
NaCl and sand mixture —mixed with water  —filtered —filtrate allowed to evaporate	
Mg  —burned in air	
Mg  —reacted with 6M HCl	
product of burning  —reacted with 6M HCl	
$C_{12}H_{22}O_{11}$  —heated	
$NaHCO_3$ —reacted with 6M HCl	
Fe and S mixture —heated initial mass  final mass	

Analysis

Answer the questions using your data tables. Do this **INDEPENDENTLY** first.

Discuss with your group. Modify answers in **RED**.

Class Discussion.

Answer questions 1 – 6.

1. The following is a list of changes you observed in Parts B and C. Indicate whether each change was a physical change or a chemical change and give reasons for your answer.

a. Mixing iron and sulfur. (Part B, Step 6)

b. Mixing salt, sand, and water. (Part B, Step 8)

c. Burning magnesium. (Part B, Step 9)

d. Mixing magnesium and the product of burning magnesium with hydrochloric acid. (Part B, Step 10)

e. Heating sucrose. (Part B, Step 11)

f. Mixing sodium hydrogen carbonate and hydrochloric acid. (Part B, Step 12)

g. Heating iron and sulfur. (Part C, Step 14)