



# CHEMISTRY

## SUMMER LEARNING JOURNAL

MARION P. THOMAS



Name: \_\_\_\_\_

Teacher: \_\_\_\_\_

## **Summer Chemistry Learning Packet Overview For Rising 10th Grade Students**

Welcome back to Marion P. Thomas Charter School! This packet is designed to help you review and strengthen key foundational skills needed for success in Chemistry. Completing this work will ensure you start the school year confident and prepared for the exciting challenges and experiments ahead.

Each section of this packet focuses on a specific foundational topic. At the top of each section, you will find a link to an Edpuzzle lesson. You must watch and complete the Edpuzzle before attempting the activities and problems in that section of the packet. The Edpuzzle videos provide critical explanations, examples, and guided practice to support your understanding.

### **Important Information:**

- Both the completed Edpuzzles and the physical packet will count toward your first assessment grade in Chemistry.  
Be sure to answer all questions thoroughly and show your work where required.
- Stay organized and pace yourself throughout the summer to complete all sections before the first day of school.


By dedicating time to review and practice these essential skills, you are setting yourself up for a strong and successful start in Chemistry. We look forward to seeing the hard work and effort you put into this summer assignment. If you have any questions, feel free to reach out to the following teachers:

Waleed Khalid, [wkhalid@mptcs.org](mailto:wkhalid@mptcs.org)

Tony Tawfik, [ttawfik@mptcs.org](mailto:ttawfik@mptcs.org)

**Google Classroom Code:** 2m56h5fg

## Part 1: Atomic Structure

Section Overview	EdPuzzle Lesson
What is an atom and what is it made up of? What are the functions of its components?	

1. What are the three “ingredients” that make up everything in our known universe?

---

---

---

---

---

2. Which subatomic particle can change the identity of an element?

---

---

---

---

---

3. Identify the following elements (you will need to use a periodic table online!)
  - a. 2 proton element
  - b. 12 proton element
  - c. 5 proton element
  - d. 38 proton element
  - e. 79 proton element

4. In theory, what substance can you use to create gold if you can modify the number of protons in an element? (remember what the role of a proton is)

---

---

---

---

---

5. What is the overall charge of the nucleus of an atom? Explain your answer using RACE

---


---

---

---

---

## Part 2: Conservation of mass and energy

Section Overview	EdPuzzle Lesson
What does it mean when we say "Conservation of mass and energy" and what are real life examples of this concept?	

### Lesson 2

1. Name four different types of energy:

---

---

---

---

2. When using a bicycle, what types of energy are involved? (keep in mind that your body has to output the energy first) (feel free to draw a sketch of you prefer that)

---

---

---

---

---

3. Explain what happens to the water molecules when water freezes (the Edpuzzle covered what happens when ice melts) (a drawn model would be acceptable)

---

---

---

- 
- 
4. Write your explanation of the conservation of matter to an 8 year old (you can pretend, you don't actually have to do it....unless you want to)

---


---

---

---

---

## Part 3: Numbers & Measurement

Section Overview	EdPuzzle Lesson
How do we use numbers in science? What's considered an accurate measurement?	

### Lesson 3

1. What is considered a precise measurement? Answer using RACE

---

---

---

---

---

2. I timed 5 runners and here are their times:

- a. 15:43:00
- b. 12:55:34
- c. 11:00
- d. 09:55:98

Which of these measurements is the least precise? Explain your answer

---

---

---

---

---

3. Why would a store create a system of precise prices instead of using whole numbers only? (in other words, why would a store price something at \$1.27 instead of just saying \$1)? Answer using RACE

---

---

---

---

---

4. In science, why is it important to write numbers with a specific number of significant figures? (why would I write my scale measurement in 3 significant figures instead of 1 or 5?) Answer using RACE

---

---

---

---

---