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DepED
DEPARTMENT OF EDUCATION

Lesson Exemplar for Science

Quarter 2
Lesson
4

Lesson Exemplar for Science Grade 8
Quarter 2: Lesson 4 of 6 (Week 5)
SY 2025-2026

Development Team

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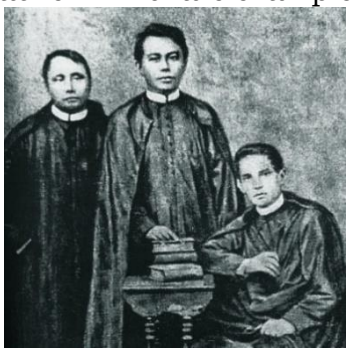
SCIENCE / QUARTER 2 / GRADE 8

I. CURRICULUM CONTENT, STANDARDS, AND LESSON COMPETENCIES	
A. Content Standards	The learners learn that: 1. **The use of timeline and charts can illustrate scientific knowledge of the structure of the atom has evolved over time.** 2. The current structure of the atom includes subatomic particles, their symbol, mass, charge, and location. 3. Elements and compounds are identified as pure substances. 4. The periodic table is a useful tool to determine the chemical properties of elements.
B. Performance Standards	By the end of the Quarter, learners demonstrate an understanding of the structure of the atom and how our understandings have changed over time. They draw models of the atom and use tables to represent the properties of subatomic particles. They demonstrate their knowledge and understanding of the periodic table by identifying the elements, their symbols, their valence electrons, and their positions within the groups and periods. **They design and/or create timelines or documentaries as interesting learning tools.**
C. Learning Competencies and Objectives	***Learning Competency*** 1. **discuss the significant contributions of early scientists in the development of the periodic table using a timeline.** 2. identify the names and symbols of the first 20 or several common elements of the periodic table. 3. explain that the arrangement of elements in the periodic table as 7 periods and 18 groups is based on their atomic structure and chemical properties, such as reactivity. 4. explain that the electron structure of an atom determines its position on the periodic table. 5. calculate the number of protons, neutrons, and electrons in the atom of several elements, such as aluminum; and explain that the elements within a group in the periodic table have the same number of valence electrons. ***Learning Objectives:*** 1. Identify key scientists who contribute to the development of the periodic table 2. Describe the arrangements of elements in the periodic table of elements
D. Content	Topic: The Development of the Periodic Table Sub-topics: Law of Triads, Law of Octaves, Periodic Law and Revised/Modern Periodic Law
E. Integration	SDG 6: Clean water and sanitation SDG 12: Responsible Consumption and Production SDG 14: Life below water SDG 15: Life on land

II. LEARNING RESOURCES
Chang, R., & Goldsby, K. (2014). *General chemistry: the essential concepts*. Mcgraw-Hill. Dhruvitha. (n.d.). Periodic Classification of Elements - History, Periodic Table & Periodic Trends. BYJUS. https://byjus.com/chemistry/classification-of-elements-in-modern-periodic-table/ Helmenstine, A. (2018, October 11). When Were the Elements Discovered? Timeline and Periodic Table. Science Notes and Projects. https://sciencenotes.org/when-were-the-elements-discovered-timeline-and-periodic-table/#:~:text=1%20Hydrogen%20%28Henry%20Cavendish%201766%29%202%20Nitrogen%20%28Rutherford NagwaEd. (n.d.). History of the periodic table. Nagwa. https://www.nagwa.com/en/videos/248156969426/

III. TEACHING AND LEARNING PROCEDURE		**NOTES TO TEACHERS**
A. Activating Prior Knowledge	**DAY 1** **1. Short Review** *Possible Activity 1:* Pure Substances Showdown! (Day 1, 5 – 8 minutes) Instructions: 1. The teacher will divide the class into two teams: "Elements" and "Compounds." 2. Set a timer for 2 minutes (or adjust based on class size). 3. Challenge each team to write down as many examples of pure substances as they can, following the two categories. 4. After the time is up, each team takes turns sharing their list. 5. If a team has the same answer, they will cancel that example. 6. If a team lists an incorrect substance (e.g., air - a mixture), the other team can challenge it. 7. Award points for each correct and unique example under the right category. *Possible Activity 2:* Timeline Making Create an activity to review concepts related to timeline making. Ensure that the basic structural elements such as linear flow, scale and time spans, and dating are considered. **2. Feedback (Optional)** Provide a feedback mechanism on how to check any homework indicated in LE Q2 W4.	Discuss any misconceptions and review the key points: • All elements have a unique number of protons (their atomic number). • Compounds have a fixed ratio of elements, but the number of protons can vary between elements in the compound. The teacher may think of other activities if the review activity focuses on the previous lesson.

B. Establishing Lesson Purpose	**1. Lesson Purpose** Sub-topic 1: • Introduce the concept of triads in chemistry and understand how elements with similar properties are grouped. • Explore the relationship between atomic masses and properties within triads. • The importance of this lesson is, although the Law of Triads has limitations, it paved the way for more comprehensive periodic laws. Sub-topic 2: • The reason for this is to delve into Newland's Law of Octaves and its implications. • The objective of this is to understand why every eighth element exhibits similar properties and recognize the limitations of this early periodic law. • The importance of the Law of Octaves inspired further investigations into periodicity and led to the development of the periodic table. Sub-topic 3: Periodic Law • The reason for this is to explore the foundational concept of periodicity. • The objective of this is to discuss how Mendeleev's arrangement of elements based on atomic mass led to the periodic table and recurring patterns. • The importance of the Periodic Law is that it provided a framework for organizing elements and predicting their behavior. Sub-topic 4: Modern Periodic Law • The reason is to introduce the modern understanding of periodic trends. • The objective is to contrast Mendeleev's periodic table with the current version, emphasizing the role of atomic numbers. • Understanding the modern periodic law is essential for comprehending element properties and their applications. **2. Unlocking Content Area Vocabulary (Day 1, 5 minutes)** Possible Activity: Mix and Match Instructions: 1. Present the three words: triad, octave, and periodic. 2. Ask a student to share what they know about the term, and if they can provide an example.	The teacher should inform the learners of the lesson focus and link to previous learning. The teacher may change what is written in the lesson purpose provided that the reason, objective and relevance of the session for that day is shared. The teacher may add more terms to be unlocked in this section based on the level of understanding of their students.

	3. Ask the student to select from the table the definition that they think best describes what the term is in chemistry context. *triad*: Group of three elements with similar properties *octave*: Recurring pattern where every eighth element has similar properties *period:* Regularly repeating pattern of properties of elements 4. Let students share the definition of the class. 5. The teacher should flash the definition as well.	
C. Developing and Deepening Understanding	**DAY 1** **SUB-TOPIC 1: Law of Triads** **1. Explicitation** The teacher will share examples of their favorite trios or famous trios.  Gomburza. Image Source: wikimedia.org  TVJ Image Source: static.wikia.nocookie.net Then, the teacher will elicit the learners' examples. **Ask students:** 1. *What is the trio called?* 2. *Why do you think the trio was formed?* 3. *Which of these groups comes first in history?* • Introduce Johann Wolfgang Dobereiner, a German chemist. He noticed some elements liked to hang out in groups of three. He called these groups "triads." • Elements in a triad shared similar physical and chemical properties, kind of like three different colored bricks that are all the same size and shape. • Interestingly, the middle element's atomic mass (think of it as the weight of the building block) was roughly the average of the other two!	Ensure that the examples are relatable. Provide some general feedback on the students' possible answers on the trios, and on the follow-up questions.  Dobereiner Image Source: wikimedia.org

2. Worked Example

The teacher will focus on the first of Dobereiner's triads that were identified in 1817: Calcium (Ca), Strontium (Sr), and Barium (Ba). These are all soft, shiny metals that react easily to water.

First, the teacher will arrange these elements by their atomic mass.

Calcium (Ca) - Atomic Mass: 40.1
Strontium (Sr) - Atomic Mass: 87.6
Barium (Ba) - Atomic Mass: 137.3

According to the Law of Triads, the middle element (Sr in this case) should have an atomic mass that's roughly the average of the first and third elements (Ca and Ba). Then, calculate the average atomic mass of Ca and Ba:

Average = (Calcium's Mass + Barium's Mass) / 2
Average = (40.1 + 137.3) / 2
Average = 88.7

The average of the masses of Ca and Ba corresponds to 88.7, which is almost equal to the atomic mass of Sr. This is what the Law of Triads predicts!

Present examples of three elements with similar properties.

DAY 2

3. Lesson Activity

Activity 1.

Instructions: The teacher will ask the class to form groups of 3. Then, as a group, they need to identify which among the set of elements given follows the Law of Triads.

See Learning Activity Sheet: *Activity # 1: Try a Triad*

They may do the activity with or without a calculator, but each student should have a periodic table that has the information about the elements' atomic masses.

Elements	What are the atomic masses of each element?	What is the average atomic mass of the two elements?	Is the set of elements a Dobereiner's Triad?
1. Lithium, sodium, potassium			
2. Cu, Ag, Au			
3. Krypton, Xenon, Radon			

Discuss the limitations of the Law of Triads after the activity.
1. Several known elements did not fit into any of the triads. (Set number 2)

4. S, Se, Te			
5. Zr, Hf, Rf			

Questions for enrichment:

1. What are the elements' actual names?
2. What are the symbols for the given element names?
3. Do all the sets of elements above follow the Law of Triad?
4. Why do you think some elements do not follow the Law of Triad?
5. Can laws be outdated?

DAY 2

SUB-TOPIC 2: Law of Octaves

1. Explicitation

The teacher will ask the learners to imagine a simple melody that starts on the syllable Do:

Do Re Mi Fa Sol

According to the Law of Octaves, if we move up eight notes (like going up eight white keys), we should find a syllable with similar musical properties. Count eight syllables (including the starting Do) on the piano:

Do Re Mi Fa Sol La Ti Do

Notice how the second "Do" is an octave higher than the first Do. It has a higher pitch but shares the same name and basic musical function within a scale. This is the essence of the Law of Octaves.

2. Worked Example

John Newland, a British chemist, saw a pattern when he arranged elements known at that time (1864) by increasing atomic mass. Every eight elements (like going up and down eight piano keys), elements with similar properties showed up again.

2. Newly discovered elements did not fit into any of the triads (Set number 3)
3. The identification of new elements made the model obsolete. (Set number 5)

Only a total of 5 Dobereiner's Triads were identified.
The Law of Triads doesn't work perfectly for all elements, but it was a great early observation that helped scientists organize elements with similar properties. Owing to these shortcomings, other methods of classifying elements were developed.

Expected Responses LAS 1 Table for the question.

Is the set of elements a Dobereiner's Triad?

1. Yes
2. No
3. No
4. Yes
5. No

The teacher may use a piano app, a simple xylophone, or simple vocalization to demonstrate this.

The table is read with 'similar' elements grouped in each row.

Newlands called this the "Law of Octaves". It proposes that elements with similar properties repeat after eight places when arranged by increasing atomic mass.

Increasing order of atomic mass →

Note of musical scale	1/8	2	3	4	5	6	7	8/1
Indian	sa	re	ga	ma	pa	dha	ni	sa
Western	do	re	mi	fa	so	la	ti	do
	H(1st)	Li	Be	B	C	N	O	Repetition of 1st note
	F(8th)	Na	Mg	Al	Si	P	S	
	Cl	K	Ca	Cr	Ti	Mn	Fe	
	Co & Ni	Cu	Zn	Y	In	As	Se	
	Br	Rb	Sr	Ce & La	Zr	-	-	

Law of Octaves Table
Retrieved from: google.com

An example of a comparison is provided that can be used for the discussion:

Properties	Lithium (Li)	Sodium (Na)
State at room temperature	solid	solid
Texture	soft	soft
Color	silvery-white	silvery-white
Metal or nonmetal	metal	metal
Density	low	low

You may also discuss the properties if they are not included in the review.

The answers in italics are the correct answers. The teacher need not discuss these answers in detail as these properties will be fully explained later.
For part C, if the students have identified physical properties that have slight differences, this would be a great steppingstone to discuss the inconsistencies of the Law of Octaves.

3. Lesson Activity
Activity 2.
Ask the students to complete the tables below by referring to their periodic table of elements for properties. Allow them to access other resources to complete the activity.

See Learning Activity Sheet: *Activity #2: Compare and Contrast*

A.

Properties	**Carbon (C)**	**Silicon (Si)**
State at room temperature	solid	*solid*
Metal or non-metal	*non-metal*	non-metal

Discuss the limitations of the Law of Octaves.

1. Several elements fit into the same slots in Newland's periodic classification. (See Figure)

Strength in conducting electricity	poor	*poor*

B.

Properties	**Chlorine (Cl)**	**Cobalt (Co)**
State at room temperature	*gas*	solid
Color	*Greenish yellow*	*Bluish gray*
Metal or nonmetal	Non-metal	*metal*
Reactivity	*Extremely reactive*	*Somewhat reactive*

C.

Properties	**Neon (Ne)**	**Argon (Ar)**

Questions for enrichment:

1. Do all the pairs above follow the Law of Octaves?
2. Why do you think some elements do not follow the Law of Octaves?

Not all elements fit neatly into groups of eight. Some elements have properties that fall between others, kind of like having a note in between some piano keys.

The Law of Octaves focuses on atomic mass, but it's not the most accurate way to organize elements based on their overall properties. This method of classifying elements did not leave any room for the discovery of new elements.

2. Elements with dissimilar properties were grouped together. (Table B)

3. Newland's law of octaves held true only for elements up to calcium. Elements with greater atomic masses could not be accommodated into octaves. The elements that were discovered later could not fit into the octave pattern. (Table C). Argon was discovered in 1894, and neon was discovered in 1898.

The Law of Octaves, though not perfect, was a steppingstone. It helped scientists notice repeating patterns among elements, which later led to the development of the Periodic Table based on atomic number, which is a more accurate way to group elements with similar properties.

DAY 3
SUB-TOPIC 3: Periodic Law

1. Explicitation

The teacher may start the class by asking them to describe the periodicity of days. The following questions may be used:

1. What comes after that day? What comes after night?
2. Is this arrangement regular and repeated?
3. Is the transition of days consistent?
4. What causes this pattern?

The teacher may also ask the students about other periodicities that they know.

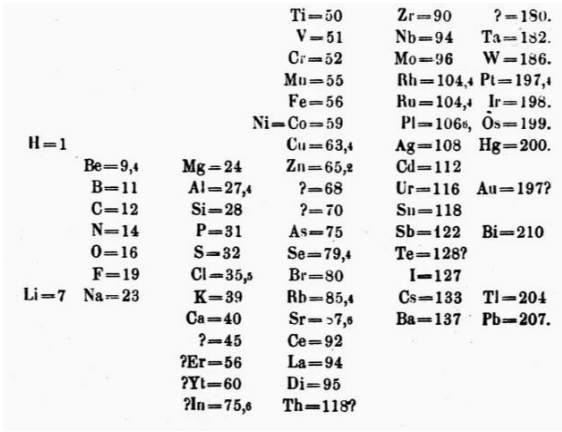
The teacher may perform a short review of the atoms and elements, as well as the atomic properties, atomic number and atomic mass.

The teacher will introduce Dmitri Mendeleev. Mendeleev noticed a different pattern, where instead of focusing just on groups of three or eight, he saw a repeating trend of properties when elements were arranged by increasing atomic mass. This was the birth of the Periodic Law.

Mendeleev was so confident in his idea that he even left blank spaces for elements that hadn't been discovered yet, predicting their properties based on their place on the table. Talk about a brave guess!

2. Worked Example

- Dmitri Mendeleev and Lothar Meyer individually came up with their own periodic law.
- Mendeleev found that the properties of elements were related to atomic mass in a periodic way.
- He observed that elements were arranged in the increasing order of atomic mass and there was the periodic occurrence of elements with similar properties.



				Ti=50	Zr=90	?=180.	
				V=51	Nb=94	Ta=182.	
				Cr=52	Mo=96	W=186.	
				Mn=55	Rh=104,4	Pt=197,4	
				Fe=56	Ru=104,4	Ir=198.	
				Ni=Co=59	Pl=106,6	Os=199.	
H=1				Cu=63,4	Ag=108	Hg=200.	
	Be=9,4		Mg=24	Zn=65,2	Cd=112		
	B=11		Al=27,4	?=68	Ur=116	Au=197?	
	C=12		Si=28	?=70	Sn=118		
	N=14		P=31	As=75	Sb=122	Bi=210	
	O=16		S=32	Se=79,4	Te=128?		
	F=19		Cl=35,5	Br=80	I=127		
Li=7	Na=23		K=39	Rb=85,4	Cs=133	Tl=204	
			Ca=40	Sr=87,6	Ba=137	Pb=207.	
			?=45	Ce=92			
			?Er=56	La=94			
			?Yt=60	Di=95			
			?In=75,6	Th=118?			

Mendeleev's Periodic Table
Retrieved from: britannica.com

- According to this observation, he formulated a periodic law which states: "*The properties of elements are the periodic function of their atomic masses*."
- In the Mendeleev periodic table, vertical columns in the periodic table and horizontal row in the periodic table were named as groups and periods, respectively.

- For Mendeleev's Group 1, the melting points were studied.
  Atomic mass: Li (6.94), Na (22.99), K (39.10), Rb (85.47), Cs (132.91)
  Melting points: Li (174 ^{o}C), Na (97.8 ^{o}C), K (63.7 ^{o}C), Rb (38.9 ^{o}C), Cs (28.5 ^{o}C)

- If this is arranged based on increasing atomic mass, it would be:
  Li (6.94) < Na (22.99) < K (39.10) < Rb (85.47) < Cs (132.91)
  Li (174 ^{o}C) > Na (97.8 ^{o}C) > K (63.7 ^{o}C) > Rb (38.9 ^{o}C) > Cs (28.5 ^{o}C)

- Therefore, there is a trend existing between elements in a group. In this example, it can be said that: *The melting points decrease as the atomic mass increases.*

3. Lesson Activity

Activity 3.

Instructions. Ask the students to arrange the following sets of elements based on their atomic masses. Then, ask them to create a statement explaining the trend observed.

See Learning Activity Sheet: *Activity #3: Periodic Trends based on Periodic Law*

Set A	Oxygen as O_2: Boiling point is -182.955 K Selenium (Se): Boiling point is 988 K Sulfur as S_8: Boiling point is 717.8 K Tellurium (Te): Boiling point is 1261 K
Arranged Set A (atomic mass and boiling point)	
Statement of trend	The boiling point _____ as the atomic mass increases.

Set B	Antimony (Sb): Density is 6.697 g/cm³ at 25°C Arsenic (As): Density is 5.727 g/cm³ at 25°C Bismuth (Bi): Density is 9.78 g/cm³ at 25°C Nitrogen (N_2): Density is 0.001251 g/ cm³ at 25°C Phosphorus (P): Density is 1.823 g/cm³ at 25°C
Arranged Set B (atomic mass and density at 25°C)	
Statement of trend	

Set C	Choose between melting point or boiling point for the following elements and find the values. Bromine (___): _____ Chlorine (___): _____ Fluorine (___): _____ Iodine (___): _____
Arranged Set C	
Statement of trend	

After the activity, discuss the merits and demerits of the Mendeleev Periodic Table.

- ➢ Merit: Some gaps were left for the elements yet to be discovered. Thus, if a certain new element is discovered, it can be placed in a new group without disturbing any existing group.
- ➢ Demerits:
  1. He was unable to locate hydrogen in the periodic table.
  2. Increase in atomic mass was not regular while moving from one element to another. Hence, the number of elements yet to be discovered was not predictable.
  3. Later, isotopes of elements were found which violated Mendeleev's periodic law.

For Set B, Nitrogen (N_2) has a density of 1.251 g/L (g/L refers to grams per liter, which is the density for gases at standard temperature and pressure). However, for comparison, conversion of unit is done in the activity.

g/cm³ refers to grams per cubic centimeter, which is the density for solids at standard temperature and pressure) - Note that phosphorus has different allotropes (forms), and this density refers to the most common red phosphorus form.

For Set C, the teacher may allow the students to use the periodic table to find the boiling points or melting points of the given elements. The teacher may provide the data themselves by showing it on the screen or writing it on the board.

DAY 3
SUB-TOPIC 4: Revised Periodic Law

1. Explicitation

As more elements were found, scientists realized atomic mass wasn't the perfect way to order them. It turns out, the number of protons in an element (called its atomic number) is the key.

The modern Periodic Table organizes elements based on their atomic number, putting elements with similar properties in columns and showing repeating trends across the rows.

2. Worked Example

- Mendeleev placed certain elements into groups that expressed similar chemical behavior even though they were not in order of increasing atomic mass.

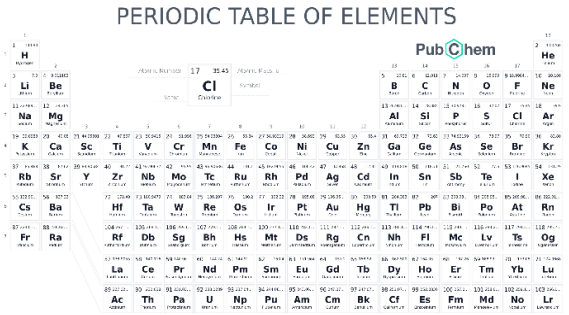


Image Source: https://pubchem.ncbi.nlm.nih.gov/periodic-table/

- In 1913, Henry G.J. Moseley performed experiments that led to the discovery of the atomic number.

- With Moseley's contribution the Revised Periodic Law can be stated as: *Similar properties recur periodically when elements are arranged according to increasing atomic number.*

- Atomic numbers, not weights, determine the factor of chemical properties.

- The periodic law is found to help determine many patterns of many different properties of elements: melting and boiling points, densities, electrical conductivity, reactivity, acidic, basic, valence, polarity, and solubility.

- For Group 1 alkali metals, these are the melting point data.
  Atomic number: Li (3), Na (11), K (19), Rb (37), Cs (55), Fr (87)
  Melting points: Li (174 °C), Na (97.8 °C), K (63.7 °C), Rb (38.9 °C), Cs (28.5 °C), Fr (26.85 °C)

An example of this was with argon (atomic mass 39.9), which was put in front of potassium (atomic mass 39.1).

- If this is arranged based on increasing atomic number, it would be:
  Li (3) < Na (11) < K (19) < Rb (37) < Cs (55) < Fr (87)
  Li (174 ^{o}C) > Na (97.8 ^{o}C) > K (63.7 ^{o}C) > Rb (38.9 ^{o}C) > Cs (28.5 ^{o}C) > Fr (26.85 ^{o}C)

- Therefore, there is a trend existing between elements in a group. In this example, it can be said that: *The melting points generally decrease as the atomic number increases. The melting points generally decrease from top to bottom in a group.*

- For Period 1 elements, these are the melting point data.
  Atomic number: Li (3), Be (4), B (5), C (6)
  Melting points: Li (180.54 °C), Be (1287 °C), B (2076 °C), C (as diamond, 3550 °C)

- If this is arranged based on increasing atomic number, it would be:
  Li (3) < Be (4) < B (5) < C (6)
  Li (180.54 °C) < Be (1287 °C) < B (2076 °C) < C (as diamond, 3550 °C)

- Therefore, there is a trend existing between elements in a period. In this example, it can be said that: *The melting point generally increases as the atomic number increases within a period, from left to right.*

3. Lesson Activity

Activity 4.

Ask the students to arrange the following sets of elements based on their atomic number. Then, create a statement explaining the trend observed.

Set A	First ionization energy: Barium (Ba): 509 kJ/mol Beryllium (Be): 899 kJ/mol Calcium (Ca): 589 kJ/mol Magnesium (Mg): 737 kJ/mol Strontium (Sr): 549 kJ/mol

See Learning Activity Sheet: *Activity #4: Periodic Trends based on Revised Periodic Law*

Explain the importance of the term 'generally' to the students. 'Generally,' means that there may be discrepancies in the rule, but the trend is still true for the rest of either group or period.

Arranged Set A (atomic number and ionization energy)	
Statement of trend	The ionization of energy generally _____ as the atomic number _____. The ionization energy generally _____ from top to bottom within a group.

Set B	First ionization energy: Boron (B): 800 kJ/mol Carbon (C): 1086 kJ/mol Nitrogen (N): 1402 kJ/mol Oxygen (O): 1314 kJ/mol Fluorine (F): 1681 kJ/mol Neon (Ne): 2080 kJ/mol
Arranged Set B (atomic number and first ionization energy)	
Statement of trend	

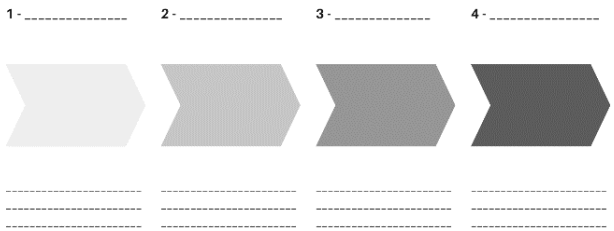
Set C	Choose between electron affinity or electronegativity for a set of four (4) elements across a period or within a group and find the values. _____ (___): _____ _____ (___): _____ _____ (___): _____ _____ (___): _____
Arranged Set C	
Statement of trend	

Note that some elements in this period do not have melting point data since they are already in gaseous state under standard conditions (N, O, F, and Ne). Also, graphite, another form of carbon, sublimates instead of melting.

The teacher may end the lesson by providing the significance of the periodic classification of elements.

1. Makes the study of elements easy.
2. Helps in discovering new elements.

Source: https://byjus.com/chemistry/classification-of-elements-in-modern-periodic-table/

D. Making Generalizations	**1. Learners' Takeaways** **Periodic Timeline.** Using the arrow chart below, fill in the name of the scientist, the law that they developed, and the statement of the law.  **2. Reflection on Learning** In their notebook, the students will write a journal entry consisting of 3-4 sentences, answering ANY of the following questions. a. What did I learn about this lesson that I did not know before? b. Which topic was easy for me? c. Which topic was challenging to learn? d. Do I understand it now?	The teacher may propose other activities for the learners to describe their understanding of a concept, idea, and skill covered in the previous topic. The teacher should allow the learners to document their ways on how they think about their learning (metacognition).

IV. EVALUATING LEARNING: FORMATIVE ASSESSMENT AND TEACHER'S REFLECTION	**NOTES TO TEACHERS**
A. Evaluating Learning	The teacher may form other assessment items or strategies for this section.

1. Formative Assessment

A. Dobereiner's Triads. Complete the table. Show your computation.

Elements	**What are the atomic masses of each element?**	**What is the average atomic mass of the two elements?**	**Is the set of elements a Dobereiner's Triad?**
chlorine, Br, iodine			

B. Law of Octaves. Complete the table.

Properties	Magnesium (____)	_____(Ca)
State at room temperature		
Metal or non-metal		
Strength in conducting electricity		

<table>
<tr><td></td><td colspan="3">2. Homework (Optional)</td><td></td></tr>
<tr><td rowspan="5">B. Teacher's Remarks</td><td>Note observations on any of the following areas:</td><td>Effective Practices</td><td>Problems Encountered</td><td rowspan="5">The teacher may take note of some observations related to the effective practices and problems encountered after utilizing the different strategies, materials used, learner engagement and other related stuff.

Teachers may also suggest ways to improve the different activities explored in the lesson exemplar.</td></tr>
<tr><td>strategies explored</td><td></td><td></td></tr>
<tr><td>materials used</td><td></td><td></td></tr>
<tr><td>learner engagement/ interaction</td><td></td><td></td></tr>
<tr><td>others</td><td></td><td></td></tr>
<tr><td>C. Teacher's Reflection</td><td colspan="3">Reflection guide or prompt can be on:
• <u>principles behind the teaching</u>
What principles and beliefs informed my lesson?
Why did I teach the lesson the way I did?

• <u>students</u>
What roles did my students play in my lesson?
What did my students learn? How did they learn?

• <u>ways forward</u>
What could I have done differently?
What can I explore in the next lesson?</td><td>Teacher's reflection in every lesson conducted/facilitated is essential and necessary to improve practice. You may also consider this as an input for the LAC/Collab sessions.</td></tr>
</table>