

# Unit 4: Periodic Table

Content Area: **Template**

Course(s):

Time Period:

Length:

Status: **Published**

## State Mandated Topics Addressed in this Unit

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N/A	N/A

## Unit 4: Periodic Table

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### Essential Questions

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- How can periodic trends be explained?
- What are some ways that elements are different from one another?
- What information does the periodic table provide?

### Objectives

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- Explain how chemist began to organize known and unknown elements
- Explain how the modern periodic table is organized
- Classify elements according to their electron configuration
- Describe and explain different trends on the periodic table
- Describe how Mendeleev organized his periodic table
- Identify the three broad classes of elements

### Standards

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|---------------|--|
| 9-12.HS-PS1-1 | Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.  |
| 9-12.HS-PS2-6 | Communicate scientific and technical information about why the molecular-level structure is important in the functioning of designed materials.  |
| 9-12.HS-PS1-2 | Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties. |

## **Instructional Tasks/Activities**

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- Article on periodic trends
- Common assessment chapter test
- Common assessment quiz
- Constructed response
- Crash course periodic table
- Do now's and/or exit slips
- Graphic organizers or models
- Groups research assignment
- Guided practice
- Homework
- Individual, small, and large group work
- Laboratory investigations within small groups
- Periodic Table Bingo
- Periodic table guess who game
- Review Activity

## **Assessment Procedure**

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- Classroom Total Participation Technique
- Classwork
- DBQ
- Essay
- Exit Ticket/Entrance Ticket/Do Now
- Flashcards and/or drill and practice
- Inquiry based activities with reflective discussion
- Journal / Student Reflection
- Kahoot
- Laboratory groups
- Lecture with note taking or guided notes
- Online models and simulators
- Other named in lesson
- Peer Review
- Performance
- Power Point Presentation
- Problem Correction
- Project
- Quiz

- Rubric
- Teacher Collected Data
- Test
- Whole and small group discussions
- Worksheet

## **Recommended Technology Activities**

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- Appropriate Content Specific Online Resource
- Chromebook
- Copy/Paste Content Specific Link Here
- Copy/Paste Content Specific Link Here
- Copy/Paste Content Specific Link Here
- Gimkit
- GoGuardian
- Google Classroom
- Google Docs
- Google Forms
- Google Slides
- Kahoot
- MagicSchool AI
- Other- Specified in Lesson
- Quiziz
- Screencastify

## **Accommodations & Modifications & Differentiation**

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Accommodations and Modifications should be used to meet individual needs. Their IEP and 504 plans should be used in addition to the following suggestions.

## **Gifted and Talented**

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- Compare & Contrast
- Conferencing
- Debates
- Jigsaw
- Peer Partner Learning
- Problem Solving

- Structured Controversy
- Think, Pair, Share
- Tutorial Groups

## **Instruction/Materials**

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- alter format of materials (type/highlight, etc.)
- color code materials
- eliminate answers
- extended time
- extended time
- large print
- modified quiz
- modified test
- Modify Assignments as Needed
- Modify/Repeat/Model directions
- necessary assignments only
- Other (specify in plans)
- other- named in lesson
- provide assistance and cues for transitions
- provide daily assignment list
- read class materials orally
- reduce work load
- shorten assignments
- study guide/outline
- utilize multi-sensory modes to reinforce instruction

## **Environment**

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- alter physical room environment
- assign peer tutors/work buddies/note takers
- assign preferential seating
- individualized instruction/small group
- modify student schedule (Describe)
- other- please specify in plans
- provide desktop list/formula

## **Honors Modifications**

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## Resources

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- Resource 1
- Resource 2
- Resource 3
- Resource 4
- Resource 5