Lesson Title	Periodic Table
Length of Lesson	50 minutes
Created By	Claire Babineaux
Subject	General Science
Grade Level	8th
State Standards	2.a
DOK Level	1
DOK Application	Define, list, label, illustrate, recognize
National Standards	Physical Science
Graduate Research Element	Chemical compositions of rocks & minerals; Precipitates in sand, sand itself are also minerals and are composed of elements

Student Learning Goal:
State Standards:
2.a: Identify patterns found in chemical symbols, formulas, reactions, and equations that apply to the law of conservation of mass.

National Standards:
Physical Science: Properties and changes of properties in matter: Substances react chemically in characteristic ways with other substances to form new substances with different characteristic properties. In chemical reactions, the total mass is conserved. Substances often are placed in categories or groups if they react in similar ways, metals are an example of such a group.

Materials Needed (supplies, hand-outs, resources):
Powerpoint (See Teacher's Notes); Index cards, Markers, Periodic Table handouts

Lesson Performance Task/Assessment:
The students will demonstrate their understanding for this lesson by taking a quiz at the end of the lesson and be able to identify: various organizational patterns within the periodic table (period, group, block, etc.); the atomic properties such as mass, name, symbol, and number; and the history of the periodic table.

Lesson Relevance to Performance Task and Students:
Students will explore the periodic table and elements for future chemistry classes.

Anticipatory Set/Capture Interest:
- Information presented about patterns and how they are everywhere, including in their science textbook.
- A random assortment of everyday household items and rocks & minerals (geology) and an explanation of how everything is composed of the elements on the periodic table…including the human body.

Guided Practice:
A teacher led discussion of the elements and the periodic table. The teacher will pass out the index cards, markers, and periodic table handouts. As the teacher goes through the lesson, as each element in the element block is covered, the student will create their own element. For example:

- The teacher discusses the atomic number and will assign each student an atomic number from the periodic table and the student will write it in their element block (index card).
- The teacher discusses the chemical symbol, and has the students use their initials as their chemical symbol and has them write it on their element block.
- The teacher discusses the element name, and has the students write their names on the element block.
- The teacher discusses atomic mass, and then has the students look up the atomic mass for the atomic number they were assigned. They then write it on their element blocks.

Independent Practice:
The students will complete a worksheet that focuses on guiding them through the lesson information and the periodic table. (See Teacher's Notes)

Remediation and/or Enrichment:
Remediation: Individual IEP: Resource teacher assigns extra practice

Enrichment: Lesson extension: discussion of synthetic elements

Check(s) for Understanding:
The students will demonstrate their understanding by being able to:

- Describe the patterns within the periodic table
- Describe the organization of the periodic table (period, groups, families, blocks etc.)
- Describe the atomic properties displayed in the periodic table (atomic number, atomic mass, name, symbol)
- Define Isotopes and give examples

Closure:
Teacher led discussion of elements, patterns in the periodic table, organization and atomic properties.

Possible Alternate Subject Integrations:
Geology: chemical compositions of rocks and minerals
Chemistry: balancing chemical equations
Economics: Importance of resources and reserves of minerals and elements

Teacher Notes:
Resources for this lesson plan are as follows: powerpoint and worksheet