

## Unit Plan: Elements

<p>1. Content Standards and Benchmarks/ Objective:  <b>Seventh Grade:</b>            P.P.M.M.2 Elements and Compounds- Elements are composed of a single kind of atom that are grouped into families with similar properties on the periodic table. Compounds are composed of two or more different elements. Each element and compound has a unique set of physical and chemical properties such as boiling point, density, color, conductivity, and reactivity.</p>																								
<p>2. Topic:  <b>Elements</b></p> <ul style="list-style-type: none"> <li>• How is our periodic table organized?</li> <li>• What are the Similarities and Differences between elements?</li> <li>• What are the general properties of an atom?</li> </ul>																								
<p>3. Culminating Outcome: The students will understand the characteristics of “Elements.”</p>																								
<p>4. Assessment and Rubric. Assessment will be based on a few factors. Group involvement, Home learning papers and observations. There will be guided reading and homework ranging in points from 5 points to 20 points. There will be class projects with points of 25 points. There will be labs ranging in points from 10 – 20 points. There will be demo lab observations up to 10 points. There is 10% taken off each day they do not turn something in.</p>																								
<p>5. Calendar of Lessons</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 20%;"><b>Monday</b></th> <th style="width: 20%;"><b>Tuesday</b></th> <th style="width: 20%;"><b>Wednesday</b></th> <th style="width: 20%;"><b>Thursday</b></th> <th style="width: 20%;"><b>Friday</b></th> </tr> </thead> <tbody> <tr> <td style="text-align: left;">Intro to Element lessons</td> <td style="text-align: left;">Element Icosahedron</td> <td style="text-align: left;">Icosahedron</td> <td style="text-align: left;">Icosahedron</td> <td style="text-align: left;">Finish Icosahedron</td> </tr> <tr> <td style="text-align: left;">Element Film/Element Bingo</td> <td style="text-align: left;">Discuss Homework/Electron Balloon lab</td> <td style="text-align: left;">Journal Entry/Flame Test Observation</td> <td style="text-align: left;">Intro To periodic table (12-7 lesson plan)</td> <td style="text-align: left;">Guided Reading (12-8 Lesson)</td> </tr> <tr> <td style="text-align: left;">Atom guided reading (12-9 lesson plan)</td> <td style="text-align: left;">Guided reading (12-10 lesson plan) Bill Nye Video</td> <td style="text-align: left;">Ruthaford Lab</td> <td style="text-align: left;">Student Teaching ended</td> <td></td> </tr> </tbody> </table>					<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	Intro to Element lessons	Element Icosahedron	Icosahedron	Icosahedron	Finish Icosahedron	Element Film/Element Bingo	Discuss Homework/Electron Balloon lab	Journal Entry/Flame Test Observation	Intro To periodic table (12-7 lesson plan)	Guided Reading (12-8 Lesson)	Atom guided reading (12-9 lesson plan)	Guided reading (12-10 lesson plan) Bill Nye Video	Ruthaford Lab	Student Teaching ended	
<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>																				
Intro to Element lessons	Element Icosahedron	Icosahedron	Icosahedron	Finish Icosahedron																				
Element Film/Element Bingo	Discuss Homework/Electron Balloon lab	Journal Entry/Flame Test Observation	Intro To periodic table (12-7 lesson plan)	Guided Reading (12-8 Lesson)																				
Atom guided reading (12-9 lesson plan)	Guided reading (12-10 lesson plan) Bill Nye Video	Ruthaford Lab	Student Teaching ended																					
<p><b>LESSON PLANS (SEE ATTACHED LESSONS)</b></p>																								

Unit Plan: Elements

Will Havill

7<sup>th</sup>

7<sup>th</sup> Grade Science (all classes)

11-20

TEACHER

GRADE

CLASS/SUBJECT/TIME

DATE

Objective: Introduction to Elements

Subject Standards (District/State) P.PM

## DAILY LESSON PLAN

	(Content/What?)	(How?)	(Student Performance/Do?)	(With?)
Time	TASK ANALYSIS (The pieces of the puzzle)	TEACHING STRATEGIES	CHECK FOR UNDERSTANDING (Include what you want the students to say)	RESOURCES/ MATERIALS (Include the actual pages needed)
5 mins	Launch	They might be giants video on YouTube for elements	Students will actively listen to the video	Youtube video <a href="http://www.youtube.com/watch?v=g_EDoF3Rb10">http://www.youtube.com/watch?v=g_EDoF3Rb10</a>
40 Mins	Icosahedron	Introduce an example of an Icosahedron.  Have the students turn to the page for making an Icosahedron. Explain the process for making one. Go over the 19 questions. Explain what is meant by the questions. Name off some elements. If students	Active listening  Students will raise their hand when they get to an element they like. Research element.	Finish model of Icosahedron Sheet of paper with traced Circles on it

Unit Plan: Elements

		want that one give them a book on it. Each student should have a different element. Have them gather the information to answer the 19 questions on the back of the hand out.	Start construction of Icosahedron.	Construction paper Stapler Tape Glue Element books. Markers, pens crayons Patterns
5 mins	Clean up	Students will return supplies and books and clean up the area around them.	Clean up	

Unit Plan: Elements

Will Havill

7<sup>th</sup>

7<sup>th</sup> Grade Science (all classes)

11-23

TEACHER

GRADE

CLASS/SUBJECT/TIME

DATE

Objective: Introduction to Elements

Subject Standards (District/State) P.PM

## DAILY LESSON PLAN

	(Content/What?)	(How?)	(Student Performance/Do?)	(With?)
Time	TASK ANALYSIS (The pieces of the puzzle)	TEACHING STRATEGIES	CHECK FOR UNDERSTANDING (Include what you want the students to say)	RESOURCES/ MATERIALS (Include the actual pages needed)
2 mins	Launch	Ask them how their weekend was with thumbs up, sideways or down.  Have them fill out their planners and take attendance	Students give thumbs up, down or sideways.  Students write in journal	
40 Mins	Icosahedron Prep	Introduce an example of an Icosahedron.  Have the students turn to the page for making an Icosahedron. Show the example of the template, how to trace them on to the paper. Then how to	Active listening  Start construction of Icosahedron.	Finish model of Icosahedron Sheet of paper with traced Circles on it

Unit Plan: Elements

		fold each circle. Go over the 19 questions. Explain what is meant by the questions. Dismiss students by numbers to pick up their sheets of paper. Have student's paperclip their circles together if they don't finish in the hour.		Construction paper Markers, pens crayons Patterns Paper clip
	Element research	Once students have 20 circles cut out, they pick out an element they like. They will then answer the 19 questions on their element. Each circle will have a fact on it. The 20 <sup>th</sup> circle will have their element name and their name and hour on it. Once all 19 circles have a fact on it they can start construction of it.	Research facts on their element. Writing facts. Constructing.	Stapler Tape Glue Element books.
5 mins	Clean up	Students will return supplies and books and clean up the area around them.	Clean up	

Unit Plan: Elements

Will Havill

7<sup>th</sup>

7<sup>th</sup> Grade Science (all classes)

11-24

TEACHER

GRADE

CLASS/SUBJECT/TIME

DATE

Objective: Introduction to Elements

Subject Standards (District/State) P.PM

## DAILY LESSON PLAN

	(Content/What?)	(How?)	(Student Performance/Do?)	(With?)
Time	TASK ANALYSIS (The pieces of the puzzle)	TEACHING STRATEGIES	CHECK FOR UNDERSTANDING (Include what you want the students to say)	RESOURCES/ MATERIALS (Include the actual pages needed)
5 mins	Launch	Daily Planner.		
20 Mins	Icosahedron	Students will continue research and construction of Icosahedron.	Active listening  Students will raise their hand when they get to an element they like. Research element.  Start construction of Icosahedron.	Stapler  Tape  Glue  Element books.  Markers, pens crayons

Unit Plan: Elements

				Patterns
5 mins	Clean up	Students will return supplies and books and clean up the area around them.	Clean up	
20	Quiz	Students will take quiz	Students take quiz	

Will Havill

7<sup>th</sup>

7<sup>th</sup> Grade Science (all classes)

11-30

TEACHER

GRADE

CLASS/SUBJECT/TIME

DATE

Objective: Introduction to Elements

Subject Standards (District/State) P.PM

## DAILY LESSON PLAN

Time	(Content/What?) TASK ANALYSIS (The pieces of the puzzle)	(How?) TEACHING STRATEGIES	(Student Performance/Do?) CHECK FOR UNDERSTANDING (Include what you want the students to say)	(With?) RESOURCES/ MATERIALS (Include the actual pages needed)
5 mins	Launch	Daily Planner.		
40	Icosahedron	Students will continue research and construction of	Active listening	Stapler

Unit Plan: Elements

Mins		Icosahedron.	Students will raise their hand when they get to an element they like. Research element.  Start construction of Icosahedron.	Tape  Glue  Element books.  Markers, pens crayons  Patterns
5 mins	Clean up	Students will return supplies and books and clean up the area around them.	Clean up	

Will Havill

7<sup>th</sup>

7<sup>th</sup> Grade Science (all classes)

12-1

TEACHER

GRADE

CLASS/SUBJECT/TIME

DATE

Objective: Introduction to Elements

Subject Standards (District/State) P.PM

# DAILY LESSON PLAN

	(Content/What?)	(How?)	(Student Performance/Do?)	(With?)
	TASK ANALYSIS	TEACHING STRATEGIES	CHECK FOR UNDERSTANDING	RESOURCES/

Unit Plan: Elements

Time	(The pieces of the puzzle)		(Include what you want the students to say)	MATERIALS  (Include the actual pages needed)
5 mins	Launch	Daily Planner.		
25 Mins	Icosahedron	Students will continue research and construction of Icosahedron.	Active listening  Students will raise their hand when they get to an element they like. Research element.  Start construction of Icosahedron.	Stapler  Tape  Glue  Element books.  Markers, pens crayons  Patterns
5 mins	Discussion	Students discuss how they could group their elements.	Discuss with table mates	
5mins	Group icosahedrons	Students will group icosahedrons where they go	Put icos. Balls into groups (teacher will hang them from the ceiling in the group location)	
10 mins	Homework	Assign Guide reading 3b-4b (stop at review don't have to do it)	Students work on guided reading Its due thursday	Work packets

Unit Plan: Elements

TEACHER

GRADE

CLASS/SUBJECT/TIME

DATE

Objective: Introduction to Elements

Subject Standards (District/State) P.PM

## DAILY LESSON PLAN

Time	(Content/What?) TASK ANALYSIS (The pieces of the puzzle)	(How?) TEACHING STRATEGIES	(Student Performance/Do?) CHECK FOR UNDERSTANDING (Include what you want the students to say)	(With?) RESOURCES/ MATERIALS (Include the actual pages needed)
2 mins	Launch	Daily Planner/Attendance	Students fill out planners	
20 mins	Film	Element Film	Observe video	Film strip Projector
5 min	Discussion	Film discussion	Students active listen and discuss in film	
3	Transition/Bingo rules	Hand out Bingo Sheets and tokens. Explain rules of element bingo	Active listen gather pieces	Bingo boards and chips
17 min	Element Bingo	Students and teacher will plan a few rounds of element bingo. Teacher is the caller.	Students play bingo, active listen.	
3 Min	Clean up	Students will gather boards and bingo chips and clean up	Pick up game pieces and organize stuff.	

Unit Plan: Elements

Will Havill

7<sup>th</sup>

7<sup>th</sup> Grade Science (all classes)

12-3

TEACHER

GRADE

CLASS/SUBJECT/TIME

DATE

Objective: Introduction to Elements

Subject Standards (District/State) P.PM

## DAILY LESSON PLAN

	(Content/What?)	(How?)	(Student Performance/Do?)	(With?)
Time	TASK ANALYSIS (The pieces of the puzzle)	TEACHING STRATEGIES	CHECK FOR UNDERSTANDING (Include what you want the students to say)	RESOURCES/ MATERIALS (Include the actual pages needed)
2 mins	Launch	Daily Planner/Attendance (HALF DAY)	Students fill out planners	
15 mins	Correct/Go over Homework	Go over homework with students. Discuss any questions they may have	Students active listening and asking questions	Homework and overheads for homework.
11 min	Balloon Lab	Demo how electrons charge can affect objects. Rub a balloon on hair, put one end of tub light on head and balloon on other end and watch light light up. Second half run water, rub balloon on head then	Students active listening/raising hands asking question.	Balloon Running water Tubular light

Unit Plan: Elements

		put it near water and watch the water bend.		
Will Havill	7 <sup>th</sup>	7 <sup>th</sup> Grade Science (all classes)	12-4	

TEACHER

GRADE

CLASS/SUBJECT/TIME

DATE

Objective: Introduction to Elements

Subject Standards (District/State) P.PM

## DAILY LESSON PLAN

Time	(Content/What?) TASK ANALYSIS (The pieces of the puzzle)	(How?) TEACHING STRATEGIES	(Student Performance/Do?) CHECK FOR UNDERSTANDING (Include what you want the students to say)	(With?) RESOURCES/ MATERIALS (Include the actual pages needed)
2 mins	Launch	Daily Planner/Attendance (HALF DAY)(Video tape this lesson)	Students fill out planners	
1 min	Hand out flame test work sheets	Hand out work sheets to students	Students active listen	Flame test work sheets
12 min	Flame test	Demo flame test with Bunsen burners. Burn 6 different elements and magnesium strip(students look with peripheral vision at	Students observe and write down observations	Sodium Potassium

Unit Plan: Elements

		magnesium strip)		Lithium Copper Barium Strontium Bunsen burner Nichrome Loop( Burn impurities out of them use one per element) Magnesium strip
5min	Discussion	Discuss how scientists use this to determine chemical make up of stars	Students active listen	
8 min	Journal	Students journal on observations	Students will respond to journal question	Journal question

Will Havill

7<sup>th</sup>

7<sup>th</sup> Grade Science (all classes)

12-7

\_\_\_\_\_  
TEACHER

\_\_\_\_\_  
GRADE

\_\_\_\_\_  
CLASS/SUBJECT/TIME

\_\_\_\_\_  
DATE

Objective: Introduction to Elements

Subject Standards (District/State) P.PM

Unit Plan: Elements

# DAILY LESSON PLAN

Time	(Content/What?) TASK ANALYSIS (The pieces of the puzzle)	(How?) TEACHING STRATEGIES	(Student Performance/Do?) CHECK FOR UNDERSTANDING (Include what you want the students to say)	(With?) RESOURCES/ MATERIALS (Include the actual pages needed)
5min	Warm-up	Periodic Table Warm up	Students fill out warm-up	Warm up
1 mins	Launch	Daily Planner/Attendance Ask how weekend was	Students fill out planners	Planners
4min	Read out loud	Have students turn to page 15 in the packets. Wait for all to be there. Have a student read out loud the first paragraph. Then call on someone else to read next and so on for this page.	Turn to page 15, read out loud.	Unit Packets
5min	Read silently	Have students read silently page 15B	Students Read silently	
10 min	Discussion /Write on board	Discuss what they learned from reading 15 B (draw chart found on bottom of page 56 in book) Have them turn to page 57 in their book. Show them some of the Metals nonmetals and metalloids. Have students come up with a marker and write a property on the board of either Metal nonmetal or metalloids	Active listening Class discussion  Writing on board	Dry Erase board marker Unit packets  Books
30 mins	Homework	Have them turn to page 22 in their unit packets.  Explain to them what they are to do (pages 112-119	Working on their homework	Unit Packets and books

Unit Plan: Elements

		in their books will guide them)		Coloring Pencils
2 mins	Clean up	Clean up		

Will Havill

7<sup>th</sup>

7<sup>th</sup> Grade Science (all classes)

12-8

TEACHER

GRADE

CLASS/SUBJECT/TIME

DATE

Objective: Introduction to Elements

Subject Standards (District/State) P.PM

## DAILY LESSON PLAN

Time	(Content/What?) TASK ANALYSIS (The pieces of the puzzle)	(How?) TEACHING STRATEGIES	(Student Performance/Do?) CHECK FOR UNDERSTANDING (Include what you want the students to say)	(With?) RESOURCES/ MATERIALS (Include the actual pages needed)
3 min	Change Seats	Give new seats	Students stand back of class..give new seats	Seating Chart
2 mins	Launch	Daily Planner/Attendance	Students fill out planners	Planners

Unit Plan: Elements

15 mins	Finish Homework	Continue page 22 can use pages 112-119 in their books to help	Work on homework	Color pencils
30 Mins	Identifying Substances	Page 25 in their worksheets. Demo oxygen	Students will work on their work sheet	Page 25
1 mins	Finish early	If they finish early can read page 4 or 6 in Science Mag	Read science mag	Science mag

Will Havill

7<sup>th</sup>

7<sup>th</sup> Grade Science (all classes)

12-9

\_\_\_\_\_  
TEACHER

\_\_\_\_\_  
GRADE

\_\_\_\_\_  
CLASS/SUBJECT/TIME

\_\_\_\_\_  
DATE

Objective: Introduction to Elements

Subject Standards (District/State) P.PM

## DAILY LESSON PLAN

	(Content/What?) TASK ANALYSIS (The pieces of the puzzle)	(How?) TEACHING STRATEGIES	(Student Performance/Do?) CHECK FOR UNDERSTANDING (Include what you want the students to say)	(With?) RESOURCES/ MATERIALS (Include the actual pages needed)
Time				
2 mins	Launch	Daily Planner/Attendance	Students fill out planners	Planners

Unit Plan: Elements

13 mins	Atomic numbers	Review page 18-18b have students work on it	Working on page 18 18b	Worksheet page 18 18b
35 mins	Guided Reading	Students can work on Page 19 and 19b guided reading	Working on page 19 and 19 b	Worksheet 19 19b

Will Havill

7<sup>th</sup>

7<sup>th</sup> Grade Science (all classes)

12-10

TEACHER

GRADE

CLASS/SUBJECT/TIME

DATE

Objective: Introduction to Elements

Subject Standards (District/State) P.PM

## DAILY LESSON PLAN

Time	(Content/What?) TASK ANALYSIS (The pieces of the puzzle)	(How?) TEACHING STRATEGIES	(Student Performance/Do?) CHECK FOR UNDERSTANDING (Include what you want the students to say)	(With?) RESOURCES/ MATERIALS (Include the actual pages needed)
2 mins	Launch	Daily Planner/Attendance	Students fill out planners	Planners
3 mins	Hand in pg 22	Hand in page 22	Students hand in page 22	Pg22

Unit Plan: Elements

10 Mins	Science puns	Sciencespot.net science puns	Students will work on science puns	Pencil paper Doc cam running science puns sheet
10 mins	Atomic structure	Page 23 and 23b worksheets	Students will work on sheets 23 and 23 b	Worksheets 23 and 23b
25 mins	Bill Nye movie	Bill Nye Video	Active listening	Bill Nye Movie

Will Havill

7<sup>th</sup>

7<sup>th</sup> Grade Science (all classes)

12-11

TEACHER

GRADE

CLASS/SUBJECT/TIME

DATE

Objective: Introduction to Elements

Subject Standards (District/State) P.PM

## DAILY LESSON PLAN

	(Content/What?)	(How?)	(Student Performance/Do?)	(With?)
Time	TASK ANALYSIS (The pieces of the puzzle)	TEACHING STRATEGIES	CHECK FOR UNDERSTANDING (Include what you want the students to say)	RESOURCES/ MATERIALS (Include the actual pages needed)

Unit Plan: Elements

2 mins	Launch	Daily Planner/Attendance	Students fill out planners	Planners
5 min	Review 19 19b	Review pages 19 19b hand in	Students will correct and hand in pages 19 and 19b	Packet page 19 19b
43 min	Ruthaford lab	Review page 39 With students Pair off students Students will go in the hall and work on lab	Active listening Setting up lab Recording lab	Cardboard Stoppers Worksheet 39