Nottoway County Public Schools

LESSON PLAN Week 14 Day 1

Lesson Title: Nuclear Fusion **Date:** 11/15

Name: **K. Harris** **Subject/ Grade** **8th Science**

Prescribed Learning Outcome(s) What is the standard for the lesson?
PS. 5abc

Instructional Objective(s) What will the student be able to do as it aligns to the standard?
The student will describe fusion (the basic process, where it occurs, and what elements are involved) with at least 85% accuracy.

Materials and Resources:

Teacher	Students
smartboard, computer, youtube	chromebooks

Lesson Activities (Aligned to the standard and cognitive level presented in the standard):
The lesson should incorporate the following essentials: content, process, product and evaluation. Activities described should include hook, direction instruction, guided practice/ independent practice, and closure.

Teacher Activities (Describe what the teacher will be doing at various points in the activity.)	**Student Activities** (Describe what the student will be doing at various points in the activity.)	Time
Hook: Journal: *6th grade FB* What type of clouds are thunderstorm clouds?	The student will answer as best they can on their own and then add to their answer after class discussion.	8 mins
DI- Notes 3a- Fusion	The student will participate in class discussion during the lecture and fill in the blanks in the cloze notes as we move through the lecture.	40 mins
Closure: We are the stuff of stars- Supernova video on youtube	Discuss what process happens in a supernova and relate it to how we get heavier elements	12 mins

Differentiated Instruction (DI) (How will individual needs of learners be met through the lesson?):
Students will be given more time and will be paired with a highly capable buddy. Students will be given notes with blanks filled in and a highlighter to highlight the blanks as we get to them.

Assessment and Evaluation (How will you know the student learned the skill?):
Quick Quiz 8, Unit Three Test, NRG PBL

Extensions (What extensions need to be made to support student learning?):
Encourage students to begin researching ways to generate electricity

LESSON PLAN Week 14 Day 2

Nottoway County Public Schools

Lesson Title: Nuclear Fission **Date:** 11/16

Name: **K. Harris** **Subject/ Grade** **8th Science**

Prescribed Learning Outcome(s) What is the standard for the lesson?
PS. 5abc

Instructional Objective(s) What will the student be able to do as it aligns to the standard?
The student will describe fission (the basic process, where it occurs, and what elements are involved) with at least 85% accuracy.

Materials and Resources:

Teacher	Students
smartboard, computer, youtube	chromebooks

Lesson Activities (Aligned to the standard and cognitive level presented in the standard):
The lesson should incorporate the following essentials: content, process, product and evaluation. Activities described should include hook, direction instruction, guided practice/ independent practice, and closure.

Teacher Activities (Describe what the teacher will be doing at various points in the activity.)	**Student Activities** (Describe what the student will be doing at various points in the activity.)	Time
Hook: Journal: *LS FB* Put in order smallest □ biggest community biosphere population organism ecosystem biome	The student will answer as best they can on their own and then add to their answer after class discussion.	8 mins
DI- Notes 3b- Fission	The student will participate in class discussion during the lecture and fill in the blanks in the cloze notes as we move through the lecture.	40 mins
Closure: Most Radioactive Places on Earth - youtube	Discuss what process happens in a supernova and relate it to how we get heavier elements	12 mins

Differentiated Instruction (DI) (How will individual needs of learners be met through the lesson?):
Students will be given more time and will be paired with a highly capable buddy. Students will be given notes with blanks filled in and a highlighter to highlight the blanks as we get to them.

Assessment and Evaluation (How will you know the student learned the skill?):
Quick Quiz 8, Unit Three Test, NRG PBL

Extensions (What extensions need to be made to support student learning?):
Encourage students to begin researching ways to generate electricity

LESSON PLAN Week 14 Day 3

Lesson Title: The Great Debate - Research Day **Date:** 11/17

Nottoway County Public Schools

Name: **K. Harris** **Subject/ Grade** **8th Science**

Prescribed Learning Outcome(s) What is the standard for the lesson?
PS. 5abc

Instructional Objective(s) What will the student be able to do as it aligns to the standard?
The student will identify at least three pros and three cons of using nuclear power to generate electricity with at least 85% accuracy.

Materials and Resources:

Teacher	Students
Smartboard, computer, resources from library	chromebooks

Lesson Activities (Aligned to the standard and cognitive level presented in the standard):
The lesson should incorporate the following essentials: content, process, product and evaluation. Activities described should include hook, direction instruction, guided practice/ independent practice, and closure.

Teacher Activities (Describe what the teacher will be doing at various points in the activity.)	**Student Activities** (Describe what the student will be doing at various points in the activity.)	Time
Hook: Journal: Illustrate the fusion of hydrogen into helium in the sun.	The student will answer as best they can on their own and then add to their answer after class discussion.	8 mins
The GREAT DEBATE: Research: provide directions and answer questions as students do their research.	The student will use the document provided to gather information about nuclear power and form an opinion about nuclear power as a whole.	40 mins
Closure: Finish watching supernova/most radioactive places videos from days 1/2.	Students will actively watch the videos	12 mins

Differentiated Instruction (DI) (How will individual needs of learners be met through the lesson?):
Students will be given more time and will be paired with a highly capable buddy. Students will have a teacher follow up during the research portion to make sure they understand the assignment and get some notes taken.

Assessment and Evaluation (How will you know the student learned the skill?):
Quick Quiz 8 and Unit Three Test

Extensions (What extensions need to be made to support student learning?): Look up Hisashi Ouchi! Whoa!

LESSON PLAN Week 14 Day 4

Lesson Title: THE GREAT DEBATE **Date:** 11/18

Name: **K. Harris** **Subject/ Grade** **8th Science**

Prescribed Learning Outcome(s) What is the standard for the lesson?
PS. 5abc

Instructional Objective(s) What will the student be able to do as it aligns to the standard?
The student will be able to identify at least three pros and three cons of using nuclear power to generate electricity with at least 85% accuracy.

Materials and Resources:

Teacher	Students
Smartboard, computer	chromebooks

Lesson Activities (Aligned to the standard and cognitive level presented in the standard):
The lesson should incorporate the following essentials: content, process, product and evaluation. Activities described should include hook, direction instruction, guided practice/ independent practice, and closure.

Teacher Activities (Describe what the teacher will be doing at various points in the activity.)	**Student Activities** (Describe what the student will be doing at various points in the activity.)	Time
Hook: Journal: Illustrate the fission of Uranium into lighter elements in a nuclear reactor	The student will answer as best they can on their own and then add to their answer after class discussion.	8 mins
GP/IP- Preparation for the GREAT DEBATE	. The students will break into groups of 4-5 that all have the same mindset about nuclear power (for or against) and will come up with AT LEAST one thing for each person to say, using yesterday's research.	20 mins
GP/IP- THE GREAT DEBATE	The students will take turns sharing what they discovered in their research that supports their opinion about Nuclear power. All students will share at least one thing.	20 mins
Closure: Exit Ticket (think-pair-share):Discuss with a partner if today's discussion changed your mind about nuclear power, or made you more sure about your opinion.	Students will discuss today's debate	2 mins

Differentiated Instruction (DI) (How will individual needs of learners be met through the lesson?):
Students will be given more time and will be paired with a highly capable buddy.

Assessment and Evaluation (How will you know the student learned the skill?):
Quick Quiz 8, Unit Three Test, NRG PBL

Extensions (What extensions need to be made to support student learning?): Look up Fukushima!

LESSON PLAN Week 14 Day 5

Lesson Title: Fission/Fusion Lab **Date:** 11/19

Name: **K. Harris** **Subject/ Grade** **8th Science**

Prescribed Learning Outcome(s) What is the standard for the lesson?
PS. 5abc

Instructional Objective(s) What will the student be able to do as it aligns to the standard?
The student will describe fission (the basic process, where it occurs, and what elements are involved) with at least 85% accuracy. The student will describe fusion (the basic process, where it occurs, and what elements are involved) with at least 85% accuracy. The student will be able to identify at least three pros and three cons of using nuclear power to generate electricity with at least 85% accuracy.

Materials and Resources:

Teacher	Students
Smartboard, computer, bubble solution and two wands, fission/fusion drawing examples, Fukushima article	chromebooks, colored pencils, pencil, Notes 3b

Lesson Activities (Aligned to the standard and cognitive level presented in the standard):

The lesson should incorporate the following essentials: content, process, product and evaluation. Activities described should include hook, direction instruction, guided practice/ independent practice, and closure.

Teacher Activities (Describe what the teacher will be doing at various points in the activity.)	**Student Activities** (Describe what the student will be doing at various points in the activity.)	Time
Hook: Journal: List TWO pros and TWO cons of Nuclear Power	The student will answer as best they can on their own and then add to their answer after class discussion. They will draw on their own paper.	8 mins
GP/IP- Fission/Fusion Lab	The student will participate in class discussion and draw models of fission and fusion.	50 mins
Closure: Please complete the survey about yesterday's GREAT DEBATE!	Students will complete the google form	2 mins

Differentiated Instruction (DI) (How will individual needs of learners be met through the lesson?):
Students will be given more time and will be paired with a highly capable buddy. Students will be offered small group and have access to read aloud extensions on their chromebooks.

Assessment and Evaluation (How will you know the student learned the skill?):
Quick Quiz 8, Unit Three Test

Extensions (What extensions need to be made to support student learning?): Look up Chernobyl and Three Mile Island!