

Year 10 The Heat is On

Date: 3/8/15 Monday	Topic: Greenhouse Effect Simulation Results and the Greenhouse Effect	Module: 6	Time: 1:48 - 3:38	Duration: 50min
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What do the learners already know? Students already know the basics of energy calculations and the law of conservation of energy.
 Where do the learners need to be? Students will consolidate their knowledge so that they are better able to apply it in assignments.
 How do the learners best learn? Students learn best through theoretical work which can be applied in activities and hands on experimentation, combining verbal, visual, and kinetic learning..

Curriculum Outcomes: : Energy conservation in a system can be explained to describing energy transfers and transformations

Student Outcomes:

Know	Understand	Be Able To
All	The contributing factors to the greenhouse effect	How the greenhouse effect occurs
	Identify greenhouse gases	
Most	The energy transfers in the greenhouse effect	Why increased emissions increase the greenhouse effect
	Differentiate between the greenhouse effect and the enhanced greenhouse effect	
Some		

Assessment:

Risk Assessment: Nil

Introductory Phase:

Time	Teacher Direction:	Student Activity:	Check for Understanding:	Resources:
1:48 - 1:55	Roll call. Overview of lesson.			

Body of Lesson:

Time	Teacher Direction:	Student Activity:	Check for Understanding:	Resources:
1:55 - 2:05	Class discussion on Phet Greenhouse Effect Simulation			Workbooks and student answers from simulation
2:05 - 2:36	GO through the greenhouse effect and enhanced greenhouse effect on board.			

Consolidation:

Time	Teacher Direction:	Student Activity:	Check for Understanding:	Resources:

2:36 2:38	Take students through enhanced greenhouse effect research task for next lesson			
Homework:				
Review carbon and nitrogen cycles				
Evaluation:				
Student:		My Teaching: Great to see controlled questioning (hands up when you have an answer then random selection) Good look at pattern spotting		

Year 10 The Heat is On

Date: 4/8/15 Tuesday	Topic: The Enhanced Greenhouse Effect - Research Task	Module: 4	Time: 11:26am - 12:16pm	Duration: 50min
<p>What do the learners already know? Students already know the basics of energy calculations and the law of conservation of energy.</p> <p>Where to the learners need to be? Students will expand their knowledge of conservation of energy to environmental systems.</p> <p>How do the learners best learn? Students learn best through theoretical work which can be applied in activities and hands on experimentation, combining verbal, visual, and kinetic learning..</p>				
Curriculum Outcomes: : Energy conservation in a system can be explained to describing energy transfers and transformations				
<p>Student Outcomes:</p> <p>Know Understand Be Able To</p> <p>All How to identify greenhouse gases How the greenhouse effect is increased Predict what might happen if greenhouse emissions increase</p> <p>Most Processes which contribute to the greenhouse effect How different processes disrupt the carbon and nitrogen cycles Assess methods of reducing the greenhouse effect</p> <p>Some</p>				
Assessment:				
Risk Assessment: Nil				
Introductory Phase:				
Time	Teacher Direction:	Student Activity:	Check for Understanding:	Resources:

11:26 - 11:30	Roll call. Ensure students know what will need to be done during the lesson.			
Body of Lesson:				
Time	Teacher Direction:	Student Activity:	Check for Understanding:	Resources:
11:30 - 12:10		Students to work through Enhanced Greenhouse Effect Task sheet		Enhanced Greenhouse Effect Task sheet
Consolidation:				
Time	Teacher Direction:	Student Activity:	Check for Understanding:	Resources:
12:10 - 12:16	Ensure students are on track with Part A of their Inquiry			
Homework:				
Evaluation:				
Student:		My Teaching: Spot on timing....		

Year 10 The Heat is On

Date: 5/8/15 Wednesday	Topic: Climate Change - Stile	Module: 7	Time: 2:40 - 3:30	Duration: 50min
<p>What do the learners already know? Students will have knowledge of energy conservation and initial knowledge of the carbon cycle</p> <p>Where to the learners need to be? Students will summarise knowledge of the carbon cycle, and apply knowledge to the nitrogen cycle</p> <p>How do the learners best learn? Students learn best through theoretical work which can be applied in activities and hands on experimentation, combining verbal, visual, and kinetic learning..</p>				

Curriculum Outcomes: : Energy conservation in a system can be explained to describing energy transfers and transformations				
Student Outcomes: Know Understand Be Able To All How climate change is assessed How past climate patterns have been assessed Explain how the greenhouse effect affects life on Earth Most Some				
Assessment:				
Risk Assessment: Nil				
Introductory Phase:				
Time	Teacher Direction:	Student Activity:	Check for Understanding:	Resources:
2:38 - 2:44	Roll call. Overview of lesson	Students to get set up on Stile		
Body of Lesson:				
Time	Teacher Direction:	Student Activity:	Check for Understanding:	Resources:
2:44 - 3:25		Students to work through A Changing Climate: Cold Adventures		Laptops, Stile page
Consolidation:				
Time	Teacher Direction:	Student Activity:	Check for Understanding:	Resources:
3:25 - 3:30	Check where students are up to with Part A of Inquiry and how far they are with the Stile work			
Homework:				
Students to complete Part A of Inquiry to hand up in the next lesson.				
Evaluation:				
Student:		My Teaching:		

Date: 6/8/15 Thursday	Topic: Inquiry - Class Discussion of Questions and Methods	Module: 5	Time: 12:18pm - 1:08pm	Duration: 50min
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What do the learners already know? Students should have a solid knowledge of the theories and calculations behind this assignment.
 Where to the learners need to be? Students will consolidate their knowledge of how to apply these theories and calculations.
 How do the learners best learn? Students learn best through theoretical work which can be applied in activities and hands on experimentation, combining verbal, visual, and kinetic learning..

Curriculum Outcomes: : Energy conservation in a system can be explained to describing energy transfers and transformations

Student Outcomes:
 Know Understand Be Able To
 All
 Most
 Some

Assessment: This is a summative task and will be assessed according to the MYP criteria.

Risk Assessment: Nil

Introductory Phase:

Time	Teacher Direction:	Student Activity:	Check for Understanding:	Resources:
12:18 - 12:28	Roll call. Hand in Part A of Inquiry. Explanation of lesson.	Students to hand in Part A of Inquiry		

Body of Lesson:

Time	Teacher Direction:	Student Activity:	Check for Understanding:	Resources:
12:28 – 12:45		Students to break into pairs and ask each other questions about their projects		
12:45 - 1:00		Students to break into larger groups based on research methods and discuss how they will approach these.	Expt, survey, internet,	
1:00 - 1:04	Class discussion of what was found during discussion.			

Consolidation

Time	Teacher Direction:	Student Activity:	Check for Understanding:	Resources:
1:04- 1:08	Continuing on, students to assess how the information they gained from today's session can be used to improve their project/research methods.			
Homework:				
Evaluation:				
Student: Why computers during discussions		My Teaching: Good time signposting		

Year 10 The Heat is On

Date: 7/8/15 Friday	Topic: Finish Stile	Module: 3	Time: 10:16am - 11:06am	Duration: 50min
<p>What do the learners already know? Students know the carbon cycle, and the principles of conservation of energy, Where to the learners need to be? Students will gain a basic knowledge of the nitrogen cycle. How do the learners best learn? Students learn best through theoretical work which can be applied in activities and hands on experimentation, combining verbal, visual, and kinetic learning..</p>				
Curriculum Outcomes: :				
<p>Student Outcomes:</p> <p style="text-align: center;">Know Understand Be Able To</p> <p>All How climate change is assessed How past climate patterns have been assessed Explain how the greenhouse effect affects life on Earth</p> <p>Most Some</p>				
Assessment:				
Risk Assessment: Nil				
Introductory Phase:				
Time	Teacher Direction:	Student Activity:	Check for Understanding:	Resources:

10:16 - 10:20	Roll call. Ensure student know what needs to be done during the lesson			
Body of Lesson:				
Time	Teacher Direction:	Student Activity:	Check for Understanding:	Resources:
10:20 - 11:00		Students to complete Stile page Then on to the competition		Laptops, Stile page
Consolidation:				
Time	Teacher Direction:	Student Activity:	Check for Understanding:	Resources:
11:00 - 11:06	Brief introduction to next week's task			
Homework:				
Evaluation:				
Student:		My Teaching: All very peaceful		