

PLAN of the DAY:

- 1) Receive You're on the Air for the Environment handouts.
- 2) Pick new seats for the rest of the school year (subject to change at my discretion if behavior problems arise).
- 3) **HIGHLY RECOMMENDED:**
Unit 4, Lessons 4-7 (especially Lesson 7, Climate Change). This will need to be on your time (homework) at this point in the 4th quarter.
- 4) Extra Credit with restrictions: Unit 4, Lesson 6 - Climate, and Lesson 7 - Climate Change.

ESS3.D: Global Climate Change

- Human activities, such as the release of greenhouse gases from burning fossil fuels, are major factors in the current rise in Earth's mean surface temperature (global warming). Reducing the level of climate change and reducing human vulnerability to whatever climate changes do occur depend on the understanding of climate science, engineering capabilities, and other kinds of knowledge, such as understanding of human behavior and on applying that knowledge wisely in decisions and activities.

PS3.B: Conservation of Energy and Energy Transfer

- When the motion energy of an object changes, there is inevitably some other change in energy at the same time.

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ALL of the handouts for the project are on my weebly page (linked here). Scroll to 4th Quarter, right column.

If you lose your handout, you are responsible to print out a new one from HAC or my weebly page.

The project consists of three handouts:

- 1) Unit 4: The You're On the Air - for the Environment Climate Change - Humans and the Environment - Public Service Announcement Project Scoring Rubric
- 2) Group Task Agreement Sheet
- 3) Humans and the Environment Group Project Guide

These handouts will be collected for a PROCESS GRADE.

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Turned in BEFORE you present your commercial so I can record your grade.

Name _____ Class _____ Date _____

You're On the Air - for the Environment Unit 4 Climate Change-Humans and the Environment - Public Service Announcement
Project Scoring Rubric (Project Value = 32 points)

Your ROAD MAP to an A

Project Component	4 (4 points)	3 (3.4 points)	2 (3 points)	1 (2.6 points)
Creativity x2	The commercial / public service announcement is very creative and definitely appeals to the viewers of the chosen channel.	The commercial / public service announcement is reasonably creative and mostly appeals to the viewers of the chosen channel.	The commercial / public service announcement is minimally creative and somewhat appeals to the viewers of the chosen channel.	The commercial / public service announcement is not creative and does not appeal to the viewers of the chosen channel.
Factual Content x3	The commercial / public service announcement identifies and completely describes a local or regional climate change issue that has an impact on people locally and in other places. The content is factual and based on sound science.	The commercial / public service announcement identifies and reasonably describes a local or regional climate change issue that has an impact on people locally and in other places. The content is mostly factual and mostly based on sound science.	The commercial / public service announcement identifies or describes a local or regional climate change issue that has an impact on people locally or other places. The content is somewhat factual and somewhat based on sound science.	The commercial / public service announcement neither identifies nor describes a local or regional climate issue that has an impact on people locally or other places. The content is not factual and not based on sound science.
Persuasiveness x3	Suggestions for how the issue may be addressed by individuals in a community are completely developed, creative and based on the science underlying the issue.	Suggestions for how the issue may be addressed by individuals in a community are nearly complete in their development, reasonably creative and based on the science underlying the issue.	Suggestions for how the issue may be addressed by individuals in a community are somewhat developed, minimally creative and not always based on the science underlying the issue.	Suggestions for how the issue may be addressed by individuals in a community are brief and hard to follow, not creative and/or are not based on the science underlying the issue.

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Group Task Agreement Sheet

Activity: You're on the Air - For the Environment! Project

My signature below shows my commitment to complete the following tasks and contribute to the success of my group's project.

Group Member (yours first)	Assigned Tasks (yours first)
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Complete once you decide on your project topic.

Materials Needed:

Plan of Action:

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Write down the ideas your group discussed in a bulleted list using the space provided. Be as detailed as possible, but do not over-think or get "bogged down" with too much detail here.

Consider this space a place to provide an "overview" of your commercial topic.

Name _____ Class _____

Project Guide: You're On the Air - for the Environment

All organisms affect their environment. Some interactions are positive, such as bees pollinating flowers to produce the honey and foods we eat. Other impacts are negative such as overgrazing grasslands in the savannahs of Africa or human destruction of the rain forest for farming. In this project, you will work in small groups (3-6 students) to create a commercial or public service announcement to air on television (the Smart Board) playing the role of the Public Service Announcers. Your task is to make viewers aware of a local, regional and global issue related to global climate change with your focus on the Chesapeake Bay region. You may provide a broad overview of the issues associated with climate change or tackle a specific topic within climate change such as fossil fuel extraction, processing, transport, and/or use. Be sure to discuss an issue or issues that occur in one place and have an impact on people in those areas and other places. The environmental issue you choose for this project must be a local or regional one (Cove Point Liquefaction Project, Panda Mattawoman natural gas plant, fracking in Pennsylvania and West Virginia, compressor station in Myersville Maryland, etc.).
Use the space below to brainstorm what your group will discuss about climate change in your commercial/public service announcement. Remember, according to the rubric, you must talk about cause, effect, solutions, and resource use in your commercial.

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Use this space to brainstorm ways to effectively "sell" your ideas. Your commercial will "market" ideas for solutions.

Think about ways in which advertisers try to reach YOU in their commercials.

A bulleted list works well in this space, too.

Your audience will vary based on the channel you select to make your public service announcement (i.e. MTV, Sci-fi, Comedy, Cartoon, Cooking, DIY, BET, UPN, Lifetime, Nickelodeon, ESPN, etc.). In this challenge, your group must convince typical viewers to take an active role in the local environment and raise awareness AND action about your specific environmental issue. Decide who your audience is and ways in which you may convince them to become better caretakers of our fragile planet. Use the space below to develop some ideas. Use and attach a separate sheet of paper if necessary.

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This part of the project guide provides the most space. Here, you will at least outline the contents of your commercial putting information and persuasive argument(s) in the order in which those ideas will appear in your commercial. You may even use this space to script your commercial. Not enough space? Attach a sheet of paper with additional ideas/information to the end of this guide.

You may wear costumes and create appropriate backgrounds for your telecast. A successful commercial will appeal to the viewers of the chosen channel and will identify and describe a local/regional issue that affects people where it occurs AND in other places. Suggestions for how the issue can be addressed (SOLUTIONS!) by individuals in a community must be included. You and I will use the same rubric to evaluate each group's telecast. The telecast may be no longer than 3 minutes, no shorter than 30 seconds.

You may find it useful to develop a script for your broadcast. Use the space below to prepare your screenplay. Use and attach a separate sheet of paper if necessary.

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Humans and the Environment CLIMATE CHANGE Unit – approved Internet research sites:

- ALL STUDENTS **MUST VISIT**
 1) <http://www.chesapeakearea.com/changingchesapeake/>
 2) ONE (1) of the CARBON CYCLE web pages, AND
 3) **AT LEAST TWO** DIFFERENT CLIMATE CHANGE WEBSITES FOR THEIR RESEARCH.

Carbon Cycle:

All About Carbon Dioxide (text and animations, click on Greenhouse Effect, Greenhouse Gases, too) <https://www3.epa.gov/climatechange/kids/basics/today/carbon-dioxide.html>

ES0106 Observe an animation showing evidence of the carbon cycle. http://www.classzone.com/books/earth_science/terc/content/visualizations/es0106/es0106page01.cfm?chapter_no=visualization

Climate Change:

Climate Change (Read The Basics. Then, click on the links to What is Climate Change, Greenhouse Gases, Impacts on Weather, Health Effects, Take Action. <https://kidsenvirohealth.nlm.nih.gov/topic/003/climate-change/>

Climate Kids: NASA's Eyes on the Earth <http://climatekids.nasa.gov/>

EPA Climate Change Kids Site <http://www.epa.gov/climatechange/kids/index.html>

Climate Change <https://www3.epa.gov/climatechange/>

U.S. Geological Survey Water Science for Schools and Students <http://water.usgs.gov/edu/watercycle-kids.html>

Methane

Methane vs. Carbon Dioxide: A Greenhouse Gas Showdown <http://www.onegreenplanet.org/animalsandnature/methane-vs-carbon-dioxide-a-greenhouse-gas-showdown/>

Natural Gas: Methane's contributions to global warming <http://www.greenpeace.org/usa/global-warming/issues/natural-gas/>

Arctic Methane Emissions 'Certain to Trigger Warming' <http://www.climatecentral.org/news/arctic-methane-emissions-certain-to-trigger-warming-17374>

Page 1 of 3

I have selected the ONLY sites you will use for this project.

Pick and choose the sites that support your chosen environmental issue affecting the Chesapeake Bay region.

Everyone who has NOT elected to read Unit 4 Lessons 6 & 7 MUST view AT LEAST TWO (2) of the Climate Change web pages listed as part of the research!

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The actual commercial may be:

- 1) "Filmed" using a personal electronic device that can be easily uploaded to the PC running the Smart Board;
or
- 2) Acted out in person in front of the class.
- 3) We may have access to one iPad per group and devote one class day to "filming" outdoors during class time.
- 4) I will use the scoring rubric to grade your commercials for a PRODUCT grade.

Mar 29-3:15 PM

Choose your new seats wisely.

While it may seem fun to sit next to your best friend in class, if your best friend distracts you from getting your work done or has a poor work ethic, you may want to consider seating with partners with a solid work ethic with whom you get along.

There are RULES to how the groups may be arranged.

Listen carefully, then get with your group and pick a table according to the rules.

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These are the RULES:

There may be 6 to 8 groups.

NO group may have fewer than 3 students.

NO group may have more than 6 students.

Tables 3 & 4 **MUST** be either 3 students per group on each side of those tables, one group of 6, 5, or 4 students.

Tables 1, 2, 5, and 6 may have no fewer than 3 students and no more than 4 students.

I will need a few moments to write down the new seating arrangement.

Mar 29-3:15 PM

IF YOU WERE ABSENT 4/24 (B-day) or 4/24 (A-day) you have a homework assignment that is a PRODUCT grade.

Carefully remove page 175 from your workbook and complete.

Turn in NO LATER THAN 5/3 (B-day) or 5/4 (A-day).

First Last

Lesson 2

Lesson Review

Vocabulary
Fill in the blank with the term that best completes the following sentences.

- A _____ cloud is thin, wispy, and made of ice crystals.
- The temperature at which water vapor condenses is the _____.
- _____ is condensed water vapor that forms very close to Earth's surface.

Key Concepts

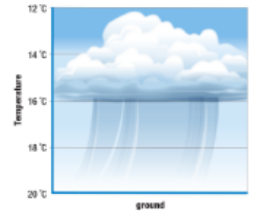
- Compare** What are two differences between stratus clouds and cirrus clouds?

- List** What are the four classes of clouds based on altitude?

- Describe** What are three ways in which clouds affect climate?

- Explain** What part do tiny, solid particles in the atmosphere play in cloud formation?

Critical Thinking
Use this diagram to answer the following questions.



8 Analyze What is the dew-point temperature at which cloud formation began?

9 Explain Why doesn't cloud formation take place until the dew-point temperature is reached?

10 Apply What kind of clouds would you expect to form at the leading edge of a cold front, where warm air is gradually being pushed above cold air?

TAN MORIN BIN

© Houghton Mifflin Harcourt Publishing Company Lesson 2 Clouds and Cloud Formation 175

Apr 24-6:36 AM

IF YOU WERE ABSENT 4/24 (B-day) or 4/24 (A-day) you have a homework assignment that is a PRODUCT grade.

Carefully remove page 175 from your workbook and complete.

Turn in NO LATER THAN 5/3 (B-day) or 5/4 (A-day).

First Last

Lesson **3**

Lesson Review

Vocabulary
For each pair of terms, explain how the meanings of the terms differ.

- 1 *front and air mass*

- 2 *high-pressure system and low-pressure system*

- 3 *jet streams and global wind belts*

Key Concepts

- 4 **Apply** If the weather becomes stormy for a short time and then becomes colder, which type of front has most likely passed?

- 5 **Describe** Explain how an ocean current can affect the temperature and the amount of moisture of the air mass above the current and above nearby coastlines.

- 6 **Synthesize** How does the water cycle affect weather?

Critical Thinking
Use the diagram below to answer the following question.

Cool air descends Warm air rises

- 7 **Interpret** How does the movement of air affect the type of weather that forms from high-pressure and low-pressure systems?

- 8 **Explain** How does the polar jet stream affect temperature and precipitation in North America?

- 9 **Describe** Explain how changes in weather are caused by the interaction of air masses.

Lesson 3 What Influences Weather? 193

TAN MORIN BIN

Apr 24-6:36 AM

EXTRA CREDIT OPPORTUNITY with RESTRICTIONS:

Complete Unit 4, Lesson 6, **CLIMATE**, read pages 225-236, and answer questions 1-29 (omit 8) for 10 points.

Complete Unit 4, Lesson 7, **CLIMATE CHANGE**, read pages 238-252 and answer questions 1-29 (omit 23) for 10 points.

RESTRICTIONS:

You may **ONLY** receive **EXTRA CREDIT** if you have **completed ALL** of the work leading **UP TO Lessons 6 & 7 FOR CREDIT**
Unit 4, Lessons 1, 2 AND 3 MUST BE COMPLETED ON TIME!

DUE DATES:

May 1st (B-Day)

May 2nd (A-DAY)

Apr 20-6:27 AM

For those Absent: Unit 4, Lesson 2 & Lesson 3 Lesson Reviews for a **PRODUCT GRADE**, be sure to have your workbook ready for me to check the assigned readings in Unit 4: Weather and Climate:

Lesson 1 Elements of Weather. Read pages 154-162. Answer questions 1-21 (omit 12).

Lesson 2 Clouds and Cloud Formation Read pages 164-174. Answer questions 1-23 (omit 12, 17 & 18).

STEM: Evaluating Technological Systems pages 176-177. Answers questions 1 & 2.

Lesson 3 What Influences Weather Read pages 180-192. Answer questions 1-25 ALL

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REMINDER: DURING 4th QUARTER

I NO LONGER accept **LATE assignments** UNLESS due to reasonable absence or as noted on the following page.

All assignments **MUST BE ON TIME** or **EARLY**.

NO EXCEPTIONS!

Mar 29-3:15 PM

The first set of assignments below were started 3rd quarter. If you scored less than the total point value (circled), you may complete to update and "fix" your score by May 1st (B-day) & May 2nd (A-day).

04/03 PROC Pts: 19.00 Wgt: 1.00 READ Unit 2, Oceanography: Lesson 1 Earth's Oceans and the Ocean Floor, pages 52-62. Answer Questions 1 - 19 (omit 14).	04/03 PROC Pts: 22.00 Wgt: 1.00 Unit 3, Earth's Atmosphere: Lesson 3 Wind in the Atmosphere, pages 132 - 142. Answer Questions 1 - 22 (omit 9, 14 & 15).	04/05 PROC Pts: 22.00 Wgt: 1.00 READ Unit 2, Oceanography: Lesson 2 Ocean Waves, pages 66 - 76. Answer Questions 1 - 22 (omit 13 & 14).	04/05 PROC Pts: 26.00 Wgt: 1.00 READ Unit 2, Oceanography: Lesson 3 Ocean Currents, pages 80 - 92. Answer Questions 1 - 26 (omit 17 & 18).
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The second set of assignments below **MUST BE COMPLETED ON TIME** for full credit.

04/19 PROD Pts: 30.00 Wgt: 1.00 Unit 2: Global Transfer of Energy through Global Oceans Poster Presentation (Page 96, 2nd checkbox)	04/25 PROC Pts: 21.00 Wgt: 1.00 Unit 4: Weather and Climate: Lesson 1 Elements of Weather. Read pages 154-162. Answer questions 1-21 (omit 12).	04/25 PROC Pts: 23.00 Wgt: 1.00 Unit 4: Weather and Climate: Lesson 2 Clouds and Cloud Formation Read pages 164-174. Answer questions 1-23 (omit 12, 17 & 18).	04/25 PROC Pts: 2.00 Wgt: 1.00 Unit 4: Weather and Climate: STEM - Evaluating Technological Systems pages 176-177. Answers questions 1 & 2.	04/25 PROC Pts: 25.00 Wgt: 1.00 Unit 4: Weather and Climate: Lesson 3 What Influences Weather Read pages 180-192. Answer questions 1-25 ALL	05/02 PROC Pts: 0.00 Wgt: 1.00 EXTRA CREDIT: Complete Unit 4, Lesson 6, CLIMATE, read pages 225-236, and answer questions 1-29 (omit 8)	05/02 PROC Pts: 0.00 Wgt: 1.00 EXTRA CREDIT: Complete Unite 4, Lesson 7, CLIMATE CHANGE, read pages 238-252 and answer questions 1-29 (omit 23)
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Apr 20-2:21 PM

Attachments



WeatherThings_Climate+Change_2Mb.mp4