

The Facing History School

Living Environment Fall 2017
Lindsay & Chandra



Welcome to 11th Grade Science!

Class Description

This course was designed to introduce many concepts in biology, while also integrating other disciplines of science. You will be introduced to topics like experimental design, ecological relationships, resource scarcity and human impact on the environment. The culminating assignment of this course is the final Panel Project, in which you will use all of the knowledge you have gained to design, implement, and analyze an experiment. You will present your work in **January** by writing an in depth paper and by creating an interactive panel presentation and defending your work with a partner.

Panels

At the end of the semester students must present a panel. This involves compiling research, completing an investigation, and writing a paper, as well as presenting the project and answering questions verbally. Its vital that you meet deadlines throughout the semester in order to be prepared for this work.

Grade Breakdown:

40% Learning Tasks - Classwork and Homework
30% Formative Assessments
30% Summative Assessments

Important Dates: (dates are tentative and subject to change)

10/13- Panel Project Design Approval Due

10/16 - PLANTING DAY

10/20 - Typed Introduction, Background, Methods

11/6 - First Full Panel Draft Due with Corrections

11/22 -Full Corrected Draft Due

FIRST WEEK OF DECEMBER - DEPARTMENT PANEL READS

12/11- Corrected FINAL Panel Due

1/10 - Power Point Draft Due (Mock Presentations in Class)

END OF JANUARY - FINAL PANEL PRESENTATION

Supplies:

Some supplies will be provided, however students will be responsible for bringing a **notebook**. This notebook should contain ONLY Science material. A multi-subject notebook or divided binder is acceptable, as long as Science notes have their own section. This notebook's maintenance will be checked for a grade. The school provided supplies in the classroom will be monitored, and any loss or damage will be the responsibility of the student. Students should have **a pen or pencil every day**, and come to class ready to learn and participate. Students are also required to have a **folder**, which will be maintained with handouts and returned work.

The Facing History School

Progress Reports

Grades are available online through Pupilpath, and will be updated regularly. If you don't already have one please create an account so that you keep track of your grades individually.

Contact Information

If you have any questions, please don't hesitate to contact us:

Email: lindsayb@facinghistoryschool.org, chandram@facinghistoryschool.org

Course Overview

Semester Long EQ: How far should humans go when changing the world around us?

Units	Essential Question	Objectives	CCLS	Materials/Re sources	Assessments
1. Experimental Design	<i>How do we prove something is true?</i>	11.1 - I can explain the steps of the Scientific Method. 11.2 - I can make both qualitative and quantitative observations. 11.3 - I can create a testable experimental question. 11.4 - I can write a testable hypothesis. 11.5 - I can define and identify the control and experimental group. 11.6 - I can define and identify the independent and dependent variables. 11.7 - I can define and identify constants. 11.8 - I can identify different types of experimental errors (random errors and bias). 11.9 - I can revise an experiment to limit random errors and bias. 11.10 - I can write a basic procedure that someone else could follow. 11.11 - I can synthesize relevant research to justify a hypothesis. 11.12 - I can design a valid experiment with all the required components.	RST.11-12.1 RST.11-12.2 RST.11-12.4 RST.11-12.7 RST.11-12.8 RST.11-12.9	Various texts, articles, online resources, experimental materials, videos, online simulations	Diagnostic, Writing Hypotheses Mini-Lab, Writing Procedures Mini-Lab, Experimental Design Project, Panel Draft #1, A Layer

The Facing History School

		<p>11.13 - I can justify the choice of which data to collect.</p> <p>11.14 - I can accurately collect and represent relevant data.</p> <p>11.15 - I can support my conclusion by using evidence from data.</p> <p>11.16 - I can justify how the conclusion answers the experimental question.</p>			
<p>2. Ecological Relationships</p>	<p><i>Is every community member equally important?</i></p>	<p>11.17 - I can define energy and describe several forms of energy.</p> <p>11.18 - I can explain the Law of Conservation of Energy.</p> <p>11.19- I can compare and contrast different methods living things use to get energy.</p> <p>11.20 - I can create and interpret a food chain.</p> <p>11.21- I can create a food web and describe how energy is moving from living thing to living thing.</p> <p>11.23 -I can explain how energy is lost or stored in an ecosystem.</p> <p>11.24 - I can predict how changes in a food web may affect the other community members.</p> <p>11.25- I can explain the process of photosynthesis.</p> <p>11.26- I can relate plant structures to the process of photosynthesis.</p> <p>11.27 - I can use my knowledge of energy relationships to provide evidence to support my view of a social issue.</p>	<p>RST.11-12.1</p> <p>RST.11-12.2</p> <p>RST.11-12.4</p> <p>RST.11-12.7</p> <p>RST.11-12.8</p> <p>RST.11-12.9</p>	<p>Various texts, articles, online resources, experimental materials, videos, online simulations</p>	<p>Chromatography Project, Panel Draft #2, A-Layer</p>

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<p>3. Sustainability and Human Impact</p>	<p><i>Who should decide how energy is supplied and used in my community?</i></p>	<p>11.28 - I can describe abiotic factors that impact human populations. 11.29 - I can differentiate between climate and weather. 11.30 - I can predict the impact of the water cycle on human populations. 11.31 - I can predict the impact of the carbon cycle on human populations. 11.32 - I can predict the impact of the nitrogen cycle on human populations. 11.33 - I can connect the biogeochemical cycles and how they are changed by human activities. 11.34 - I can compare renewable and nonrenewable energy sources. 11.35 - I can develop a logical argument for or against the use of different energy sources. 11.36 - I can analyze climate data to interpret the effects of human activity on our environment. 11.37 - I can develop a logical argument for or against the use of different energy sources. 11.38 - I can predict the impact of climate change on New York City based on evidence. 11.39 - I can develop a logical argument for or against different</p>	<p>RST.11-12.1 RST.11-12.2 RST.11-12.4 RST.11-12.7 RST.11-12.8 RST.11-12.9</p>	<p>Various texts, articles, online resources, experimental materials, videos, online simulations</p>	<p>Climate Change Experiments Final Panel Draft, A-Layer</p>

The Facing History School

		types of energy use in my community.			
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