



## Standards Alignment (NGSS, NSES):



High-Adventure Science:

Will the air be clean enough to breathe?

### NGSS Alignments

#### Science and Engineering Practices:

1. Asking questions (for science) and defining problems (for engineering)
2. Developing and using models
3. Planning and carrying out investigations
4. Analyzing and interpreting data
5. Using mathematics and computational thinking
6. Constructing explanations (for science) and designing solutions (for engineering)
7. Engaging in argumentation from evidence
8. Obtaining, evaluating, and communicating information

#### Crosscutting Concepts:

1. Patterns
2. Cause and effect: Mechanism and explanation
3. Scale, proportion, and quantity
4. Systems and system models
5. Energy and matter: Flows, cycles, and conservation
7. Stability and change

#### Disciplinary Core Ideas:

##### **ESS3.C: Human Impacts on Earth Systems**

Scientists and engineers can make major contributions by developing technologies that produce less pollution and waste and that preclude ecosystem degradation. (HS-ESS3-4)

# **NSES**

## **Grades 5-8**

Standard 8AI1.3: Use appropriate tools and techniques to gather, analyze, and interpret data

Standard 8AI1.4: Develop descriptions, explanations, predictions, and models using evidence

Standard 8AI1.5: Think critically and logically to make the relationships between evidence and explanations

Standard 8ASI2.5: Scientific explanations

Standard 8DESS1.8: Atmospheric properties

Standard 8DESS1.11: Effects of living organisms

Standard 8FSPSP1.7: Environments may contain substances that are harmful to human beings

Standard 8FSPSP4.2: Analysis of risks evaluates hazards and determines options

## **Grades 9-12**

Standard 12ASI1.3: Use technology and mathematics

Standard 12ASI1.4: Formulate scientific explanations and models

Standard 12ASI1.5: Analyze alternative explanations

Standard 12ASI1.6: Communicate a scientific argument

Standard 12ASI2.5: Scientific explanations

Standard 12ASI2.6: Communicating results of scientific inquiry

Standard 12CLS4.5: Human effects on ecosystems

Standard 12FSPSP5.1: Normal adjustments of Earth may be hazardous for humans

Standard 12FSPSP5.2: Human activities can enhance potential for hazards

Standard 12FSPSP5.4: Natural hazards require humans to assess potential danger and risk

Standard 12FSPSP6.5: Humans have a major effect on other species