Henry County Schools

Unit / Lesson Plan Template
Unit / Lesson Title: Earth's Atmosphere

Standard(s):
S6CS1 (a), S6CS2 (a-c), S6CS3 (a, b, d), S6CS4 (b), S6CS5 (a & b), S6CS6 (b&c), S6CS7 (b), S6CS8 (a), S6CS9 (a-d), 6CS10 (a-d)

S6E3(b); S6E4(a) S6E4(c); S6E6(a)

Enduring Understanding(s): **Students will understand that…** • **The relationship between the sun, air, and water causes weather and climate on Earth.**	**Essential Question(s):** • **(see daily lessons)**
Students will know…(Learning Targets): • **that land and water absorb and lose heat at different rates resulting in wind and severe weather (tornadoes)** • **The tilt of Earth affects seasons and climate.** • **Moisture evaporating from oceans leads to weather events** • **The sun is a major source of energy that leads to weather on Earth.**	**Students will be able to…(Performance Evidence):** • Discuss differences in the layers of Earth's atmosphere. • Explain how the spinning of Earth and temperature leads to global wind patterns. • Identify land features that cause local winds. • Demonstrate how air masses and fronts are formed by differences in air pressure and temperature. • Identify cloud types based on where/how they form. • Explain how earth's tilt causes seasons
Formative/Summative Assessment: • **write lab reports to conclude the activity** • **Lab reports** • **Concept Map/Mini Book** • **Quizzes/Test** • Warm-Ups • Foldables • Teacher demonstrations	**Differentiated Instruction Notes:** • **Small group as needed** • **Modified tests/quizzes** • **Reduced number assignments** • **Enrichment** • **Extension activities** • **Pull-out as needed** • **Flexible grouping strategies** • **Remediation** • **Study guides** • **Note-taking assistance**
Daily Lesson Plan (DLP) **DLP 1** **DLP 2** **DLP 3** **DLP_4**	**Key Vocabulary:** • Atmosphere

DLP_5	• Troposphere • Stratosphere • Ionosphere • Mesosphere • Thermosphere • Exosphere • Nitrogen • Oxygen • Pressure • Temperature • Ozone layer • Ultra violet • CFC's • radiation • conduction • convection • wind • Coriolis Effect • Global winds • Jet streams • Horse latitudes • Doldrums • Westerlies • Trade winds • Polar easterlies • seabreeze • landbreeze • rain shadow • Temperature • Wind vane • Anemometer • Humidity • Dew point • Precipitation • Cirrus • Cumulus • Stratus • Fog • Hail • Sleet • Snow • Rain • cumulonimbus

What professional learning and/or research based strategies will be implemented with this unit?:
Flexible grouping, inquiry, modeling, graphic organizers, foldables for collection / organizing information

How will we invoke higher order thinking skills throughout this unit? Students will create a model of a soil profile using everyday materials. Students will also categorize vocabulary words and explain their relationship, QAR strategies (Question/Answer Relationship technique), collecting evidence through experimentation and drawing conclusions based on data

Henry County Middle Schools
Eagle's Landing Middle School

Daily Lesson Plan for: __1/25-1/29_____
Week of: _1/25_____thru __1/29_____

DLP 1
Monday

Standard(s):
S6E3(b): relate various atmospheric conditions to stages of the water cycle

Lesson Plan Essential Question:
How does water cycle on Earth?

Opening (Activating/Thinking Strategies) (Hook):

Study Jam – Water Cycle

Work Session (Teaching Strategies and Materials):

Materials:

- Glencoe textbook pgs. 437
- Computer (per pair)
- Water Cycle Internet Sheet

Warm-Up: How does water cycle on Earth?

Teaching Strategies:

1. Students will discuss the Study Jam video with the teacher while answering the video quiz at the end. The teacher will stop video randomly and discuss the different stages of the water cycle.
2. Students will collect information on the water cycle by exploring an internet site with a water cycle interactive diagram/video.
3. Students will play a water cycle matching game on the computer and will draw the corrected water cycle on their lab sheet.
4. Students will take a virtual tour of the water cycle by exploring how a water droplet can travel to different locations on Earth (internet).

Key Vocabulary:

Water Cycle
Evaporation
Condensation
Precipitation
Transpiration
Water Vapor

Summarizing Strategies:

- Study Jam
- Internet Activity
- Discussion

Closing:

T.O.D: How is transpiration similar to evaporation?

Formative Assessment ☒ Summative Assessment ☐ Study jam, internet activity, student work
Accommodations/modifications for Special Education / RTI Students: pre-printed lab sheet, small group if needed, partner help Accommodations/modifications for Gifted Students:
Attach Rubrics and Graphic Organizers as Needed

Reflections:

1.) What went well with this lesson?
2.) What problems were encountered?
3.) What would I do differently next time?

Henry County Middle Schools
Eagle's Landing Middle School

Daily Lesson Plan for: __1/26_____
Week of: _1/25_____thru __1/29_____

DLP 2
Tuesday

Standard(s):
S6E3(b): relate various atmospheric conditions to stages of the water cycle

Lesson Plan Essential Question:
How does water cycle on Earth?

Opening (Activating/Thinking Strategies) (Hook):

Water Cycle Reader's Theater

Work Session (Teaching Strategies and Materials):

Materials:

- Glencoe textbook pgs. 437
- Readers Theater play – Water Cycle
- Water Cycle diagram sheet

Warm-Up: What energy source powers the water cycle? Why is the ocean so important to this cycle?

Teaching Strategies:

1. Students will select roles in a water cycle play and the class will read the play together. The play follows two water droplets who are traveling through various stages of the water cycle.
2. Students will use the play and the textbook to complete a diagram of the water cycle.
3. Students will use the information collected to create their own story, skit, or song about traveling through the water cycle.

Key Vocabulary:

Water Cycle
Evaporation
Condensation
Precipitation
Transpiration
Water Vapor

Summarizing Strategies:

- Water Cycle Reader's Theater
- Discussion
- Skit

Closing:

Water Cycle Matching Game

Formative Assessment ☒ Summative Assessment ☐
Reader's Theatre, matching game, discussion, student work

Accommodations/modifications for Special Education / RTI Students: pre-printed lab sheet, small group if needed, partner help Accommodations/modifications for Gifted Students:
Attach Rubrics and Graphic Organizers as Needed

Reflections:

1.) What went well with this lesson?
2.) What problems were encountered?
3.) What would I do differently next time?

Henry County Middle Schools
Eagle's Landing Middle School

Daily Lesson Plan for: __1/27_____
Week of: _1/25_____thru __1/29_____

DLP 3
Wednesday

Standard(s):
S6E3(b): relate various atmospheric conditions to stages of the water cycle

Lesson Plan Essential Question:
How does water cycle on Earth?

Opening (Activating/Thinking Strategies) (Hook):

Water Cycle Traveler Website (Review of the website using the projector of how water travels through the water cycle)

Work Session (Teaching Strategies and Materials):

Materials:

- Glencoe textbook pgs. 437
- Readers Theater play – Water Cycle
- Water Cycle diagram sheet
- Water Cycle RAFT instructions (for skit)
- Waves/currents mini-assessment

Warm-Up: What stage of the water cycle involves water heating up? Cooling down?

Teaching Strategies:

1. Students will take the mini assessment over waves/currents/tides.
2. Students will use the play and the textbook to complete a diagram of the water cycle.
3. Students will use the information collected to create their own story, skit, or song about traveling through the water cycle.
4. Students will perform song/skit if they choose to

Key Vocabulary:

Water Cycle
Evaporation
Condensation
Precipitation
Transpiration
Water Vapor

Summarizing Strategies:

- Water Cycle Reader's Theater
- Discussion
- Skit

Closing:

Student Sharing of skit/play/song/story

Formative Assessment ☒ Summative Assessment ☐
Reader's Theatre, matching game, discussion, student work

Accommodations/modifications for Special Education / RTI Students: pre-printed lab sheet, small group if needed,

partner help Accommodations/modifications for Gifted Students:
Attach Rubrics and Graphic Organizers as Needed

Reflections:

1.) What went well with this lesson?
2.) What problems were encountered?
3.) What would I do differently next time?

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Daily Lesson Plan for: __1/28_____
Week of: _1/25_____thru __1/29_____

DLP 4
Thursday

Standard(s):
S6E3(b): relate various atmospheric conditions to stages of the water cycle

Lesson Plan Essential Question:
How do we know air exists?

Opening (Activating/Thinking Strategies) (Hook):

Have one or two students come up and prove air exists

Work Session (Teaching Strategies and Materials):

Materials:

- Glencoe textbook pgs. 426-429
- Completed student diagrams of atmospheric layers.
- BTB solution, syringe (Activity 63 materials)

Warm-Up: If I asked you to show me that air exists, what could you do to help prove it?

Teaching Strategies:

5. Students will read about the composition of the atmosphere and the atmosphere layers.
6. Students will complete atmospheric layer diagrams.
7. Teacher will complete activity 63 to show that air exists.

Key Vocabulary:

Atmosphere
Troposphere
Stratosphere
Ionosphere
Mesosphere
Thermosphere
Exosphere
Nitrogen
Oxygen

Summarizing Strategies:

- Study layer diagram
- Air lab

Closing:

T.O.D: Explain how the air in the classroom is similar to and different from the air in your lungs.

Formative Assessment ☒ Summative Assessment ☐
Air lab, student work, discussion, questioning

Accommodations/modifications for Special Education / RTI Students: pre-printed lab sheet, small group if needed.
Accommodations/modifications for Gifted Students:

Attach Rubrics and Graphic Organizers as Needed

Reflections:

1.) What went well with this lesson?
2.) What problems were encountered?
3.) What would I do differently next time?

Daily Lesson Plan for: ___1/29_____
Week of: _1/25_____thru ___1/29_____

DLP 5
Friday

Standard(s):
S6E3(b): relate various atmospheric conditions to stages of the water cycle

Lesson Plan Essential Question:
How does atmospheric temperature change with altitude?

Opening (Activating/Thinking Strategies) (Hook):

Lab demonstration "Air has Pressure"– soda can (T.E. pg. 430)

Work Session (Teaching Strategies and Materials):

Materials:

- Glencoe textbook pgs. 430-433
- Atmosphere –section one notes (teacher resources)
- Computer with internet (per pair of students)

Warm-Up: (K-W: List what you already know and what you want to know about Earth's atmosphere)

Teaching Strategies:

1. Students will participate in an online simulation to show how each layer of the atmosphere varies in temperature and in pressure.
2. Students will complete a lab sheet during the simulation.
3. Students will read and complete chapter one notes about Atmosphere.

Key Vocabulary:

- Atmosphere
- Troposphere
- Stratosphere
- Ionosphere
- Mesosphere
- Thermosphere
- Exosphere
- Nitrogen
- Oxygen
- Pressure
- Temperature
- Ozone layer
- Ultra violet
- CFC's

Summarizing Strategies:

- Note taking worksheet
- Lab demo discussion

Closing:

Complete the "L" portion of the K-W-L started during the warm-up

Formative Assessment ☐ Summative Assessment ☐

- **Atmosphere lab simulation**
- **Lab demonstration**
- Completed student work

Accommodations/modifications for Special Education / RTI Students:
Accommodations/modifications for Gifted Students:

Attach Rubrics and Graphic Organizers as Needed

Reflections:

Henry County Middle Schools
Eagle's Landing Middle School

Daily Lesson Plan for: ___2/1_____
Week of: _2/1_____thru ___2/5_____

DLP 1
Monday

Standard(s):
S6E3(b): relate various atmospheric conditions to stages of the water cycle
S6E6(a): Explain the role of the sun as the major source of energy and its relationship to wind and water energy.

Lesson Plan Essential Question:
How does atmospheric temperature and pressure change with altitude?

Opening (Activating/Thinking Strategies) (Hook):

Atmospheric Layers demonstration: Using Playdoh, model how the atmosphere layers are compressed. Students should see why the troposphere (bottom layer) is the thinnest but most dense as well as why the thermosphere is the thickest but least dense layer.

Work Session (Teaching Strategies and Materials):

Materials:
- Glencoe textbook pgs. 430-433
- Atmosphere pre-assessment
- Atmosphere pre-assessment answer document
- Playdoh (four different colors)
- Answer sheet from Tuesday computer lab
- Overhead of the atmosphere layers

Warm-Up: (K-W: List what you already know and what you want to know about Earth's atmosphere)

Teaching Strategies:
1. Students will complete the pre-assessment for atmosphere.
2. Students will discuss computer lab and data collected during the lab.
3. Class discussion will cover: temperature changes in atmosphere, air pressure changes in atmosphere.
4. Students will read and complete chapter one notes about Atmosphere.

- HW: Students will begin working on the unit anticipation/study guide

Key Vocabulary:

- Atmosphere
- Troposphere
- Stratosphere
- Ionosphere
- Mesosphere
- Thermosphere
- Exosphere
- Nitrogen
- Oxygen
- Pressure
- Temperature
- Ozone layer
- Ultra violet
- CFC's

Summarizing Strategies:
- Student work
- Lab demo discussion
- Class discussion of computer lab

Closing:

Complete the "L" portion of the K-W-L started during the warm-up

Formative Assessment ☐ Summative Assessment ☐
- **Atmosphere lab simulation**
- **Lab demonstration**
- Completed student work

Henry County Middle Schools
Eagle's Landing Middle School

Daily Lesson Plan for: ___2/2_____
Week of: __2/1_____thru ___2/5_____

DLP 2
Tuesday

Standard(s):
S6E6(a): Explain the role of the sun as the major source of energy and its relationship to wind and water energy.

Lesson Plan Essential Question:
How is energy transferred throughout Earth's atmosphere?

Opening (Activating/Thinking Strategies) (Hook):

Use a hot-plate, beaker, water, and soda can to demonstrate the air pressure around us.

Work Session (Teaching Strategies and Materials):
Materials:

- Glencoe textbook pgs. 435-436
- Transparency
- Internet / united streaming access

Warm-Up: Teacher resources – chapter 15, section 2 – "Full of Hot Air"

Teaching Strategies:

1. Students will read about energy transferred throughout Earth's atmosphere.
2. Students will watch a demonstration to show how convection currents cook spaghetti noodles.
3. Students will watch a United Streaming video – "Heat Transfer," and will take a video quiz identifying examples of radiation, convection, & conduction.
4. Shaping – Up Review: Students will work in groups to identify facts / important concepts about Earth's atmosphere. (see instructional strategies notebook)

Key Vocabulary:

- radiation
- conduction
- convection

Summarizing Strategies:
Shape-up review, video discussion, demonstration discussion, examples of heat transfer

Closing:

T.O.D: Explain the difference between conduction and convection

Formative Assessment ☒ Summative Assessment ☐

- **Shaping-Up Review United Streaming – "Heat Transfer"** Completed group work Demonstration of convection

Accommodations/modifications for Special Education / RTI Students:
Accommodations/modifications for Gifted Students:

Attach Rubrics and Graphic Organizers as Needed

Henry County Middle Schools
Eagle's Landing Middle School

Daily Lesson Plan for: ___2/3_____
Week of: _2/1_____thru __2/5_____

DLP 3
Wednesday

Standard(s):
S6E4(a): Demonstrate that land and water absorb and lose heat at different rates and explain the resulting effects on weather patterns
S6E4(b): Relate unequal heating of land and water surfaces to form large global wind systems and weather events such as tornadoes and thunderstorms.

Lesson Plan Essential Question:
How do global winds move across the Earth?

Opening (Activating/Thinking Strategies) (Hook):
Brainpop - Winds

Work Session (Teaching Strategies and Materials):

Warm-Up: Teacher resources – chapter 15, section 3 – The growth of a mountain.

Materials:
- Glencoe textbook pgs. 339-443
- Transparency
- Global Winds diagram
- Colored pencils/crayons

Teaching Strategies:
1. Students will take a brief quiz over energy transfer in the atmosphere.
2. Teacher resources – chapter 15, section 3 – The growth of a mountain.
3. Students will read about causes of winds and varying wind types.

Students will create a wind belt diagram illustrating the global winds on Earth.

Key Vocabulary:
- wind
- Coriolis Effect
- Global winds
- Jet streams
- Horse latitudes
- Doldrums
- Westerlies
- Trade winds
- Polar easterlies

Summarizing Strategies:
Wind belt diagram
Completed student work
Oral discussion

Closing:
TOD: Answer the essential question.

Formative Assessment X Summative Assessment ☐
Energy Transfer Quiz

Accommodations/modifications for Special Education / RTI Students:
Accommodations/modifications for Gifted Students:

Attach Rubrics and Graphic Organizers as Needed

Reflections:
1.) What went well with this lesson?
2.) What problems were encountered?
3.) What would I do differently next time?

Henry County Middle Schools
Eagle's Landing Middle School

Daily Lesson Plan for: ___2/4_____
Week of: __2/1_____thru __2/5_____

DLP 4
Thursday

Standard(s):
S6E4(a): Demonstrate that land and water absorb and lose heat at different rates and explain the resulting effects on weather patterns
S6E4(b): Relate unequal heating of land and water surfaces to form large global wind systems and weather events such as tornadoes and thunderstorms.

Lesson Plan Essential Question:
How do landforms affect local winds?

Opening (Activating/Thinking Strategies) (Hook):
Wind- Acrostic

Work Session (Teaching Strategies and Materials):
Warm-Up: Why would it take longer to fly from east to west than it would from west to east? HINT: Think global winds.

Materials:
- Glencoe textbook pgs. 442-443
- Overhead / markers
- Transparency maps

Teaching Strategies:
1. Students will complete and discuss the global winds that flow across the Earth.
2. Students will correctly place arrows on a drawing of the Earth showing the direction of wind travel & will explain why it travels that way.
3. Students will read about causes of local winds.
4. Students will create diagrams illustrating land/sea breezes as well as a rain shadow.

Key Vocabulary:
- wind
- seabreeze
- landbreeze
- rain shadow

Summarizing Strategies:
- **Global wind arrow activity with student discussion**
- **Local wind diagrams**

Closing:
- Four-two-one – on the overhead, complete the four-two-one summarizing activity located in the instructional strategies notebook

Formative Assessment ☐ Summative Assessment ☐

Accommodations/modifications for Special Education / RTI Students:
Accommodations/modifications for Gifted Students:

Attach Rubrics and Graphic Organizers as Needed

Reflections:
1.) What went well with this lesson?
2.) What problems were encountered?