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Introduction

Core Earth & Space Science I is one of the three courses in the Core Science I Collection. It is an introductory course that teaches about types and impacts of weather and climate, the Earth and the solar system, seasons, the water cycle, types of natural resources, air and water quality, and conservation of natural resources. The Course has 15 lessons organized in 4 Units with 15 lesson assessments. The Course's learning objectives align with Common Core Science objectives for grades K to 2. There are 202 audio-supported instruction pages, 39 printable activity sheet pages, 103 defined vocabulary words, and a set of 150 Quiz questions.

Unit 1: Weather

Lesson 1: Weather & Climate

Common Core Standards

- ESS2.A Earth Materials and Systems
- ESS2.D Weather and Climate

Learning Objectives

- to learn about the concept of weather
- to learn about the concept of climate

Defined Vocabulary Words

- weather, climate, temperature, overcast, wind, windy, calm, humidity, humid, precipitation

Activity Type

- Write the weather words in the chart under the word that they relate to.

Lesson Components

Total Learning Objects – 27

Instruction Pages - 15

Activity Pages - 2

Quiz Questions – 10 total questions; 5 randomly selected to populate quiz

Test Questions – 50 total questions; 10 total per Lesson of which 3 are randomly selected to populate test

Lesson 2: Weather Instruments

Common Core Standards

- ESS2.D Weather and Climate

Learning Objectives

- to learn about instruments used to measure temperature, precipitation, and wind
- to learn about Customary and Metric units of measurement for measuring weather conditions

Defined Vocabulary Words

- weather, thermometer, temperature, Fahrenheit degrees, Celsius degrees, weather vane, rain gauge

Activity Type

- Draw a picture of the instrument used to measure temperature. What is it called?
- Draw a picture of the instrument used to measure the direction the wind is blowing. What is it called?
- Draw a picture of the instrument used to measure the amount of rain that has fallen. What is it called?

Lesson Components

Total Learning Objects – 24

Instruction Pages - 10

Activity Pages - 4

Quiz Questions – 10 total questions; 5 randomly selected to populate quiz

Test Questions – 50 total questions; 10 total per Lesson of which 3 are randomly selected to populate test

Lesson 3: Extreme Weather Conditions

Common Core Standards

- ESS1 Earth in the Universe
- ESS1.C The History of the Earth
- ESS2 Earth's Systems
- ESS2.A Earth Materials and Systems
- ESS3: Earth and Human Activity
- ESS3.B Natural Hazards

Learning Objectives

- to learn about the main types of storms
- to learn about droughts and floods
- to learn about seasons for severe weather

Defined Vocabulary Words

- weather, storms, thunderstorm, hurricane, tornado, blizzard, drought, flood

Activity Type

- Match the storm with the description.

Lesson Components

Total Learning Objects – 25

Instruction Pages - 13

Activity Pages - 2

Quiz Questions – 10 total questions; 5 randomly selected to populate quiz

Test Questions – 50 total questions; 10 total per Lesson of which 3 are randomly selected to populate test

Lesson 4: Clouds and Precipitation**Common Core Standards**

- ESS2.C The Roles of Water in Earth's Surface Processes

Learning Objectives

- to learn about the main types of clouds
- to learn about the types of precipitation

Defined Vocabulary Words

- cirrus clouds, stratus clouds, cumulus clouds, precipitation, hail, sleet, fog, snow

Activity Type

- Fill in the blank with the type of cloud that matches the description.
- Fill in the blanks with the letters below to identify the types of precipitation.

Lesson Components

Total Learning Objects – 25

Instruction Pages - 11

Activity Pages - 4

Quiz Questions – 10 total questions; 5 randomly selected to populate quiz

Test Questions – 50 total questions; 10 total per Lesson of which 3 are randomly selected to populate test

Unit 2: Impacts of Weather**Lesson 1: Weather & Plants****Common Core Standards**

- ESS2.A Earth Materials and Systems
- ESS2.B Plate Tectonics and Large-Scale System Interactions
- ESS2.C The Roles of Water in Earth's Surface Processes

Learning Objectives

- to learn how plants respond to the change in seasons
- to learn about deciduous trees

Defined Vocabulary Words

- bud, shoot, wilt, autumn, deciduous, evergreens, dormant

Activity Type

- Draw pictures of what happens to plants in each season.

Lesson Components

Total Learning Objects – 23

Instruction Pages - 11

Activity Pages - 2

Quiz Questions – 10 total questions; 5 randomly selected to populate quiz

Test Questions – 50 total questions; 10 total per Lesson of which 3 are randomly selected to populate test

Lesson 2: Weather & Animals

Common Core Standards

- ESS2.A Earth Materials and Systems
- ESS2.B Plate Tectonics and Large-Scale System Interactions
- ESS2.C The Roles of Water in Earth's Surface Processes

Learning Objectives

- to learn about physical adaptations animals make to the change in seasons
- to learn about behavioral adaptations animals make to the change in seasons
- to learn about how people adapt to the change in seasons

Defined Vocabulary Words

- adaptation, behavioral adaptation, physical adaptation, shed, survive, migration, hibernation, transportation, environment

Activity Type

- Draw some clothes you would wear and activities that occur in each season.

Lesson Components

Total Learning Objects – 28

Instruction Pages – 16

Activity Pages - 2

Quiz Questions – 10 total questions; 5 randomly selected to populate quiz

Test Questions – 50 total questions; 10 total per Lesson of which 3 are randomly selected to populate test

Lesson 3: Migration

Common Core Standards

- ESS2.A Earth Materials and Systems
- ESS2.C The Roles of Water in Earth's Surface Processes

Learning Objectives

- to learn about the concept of migration
- to learn why animals migrate
- to learn about some animals that migrate

Defined Vocabulary Words

- behavioral adaptation, seasonal, migration, adaptation, survive, elevations, provinces, hibernate, shallow, tadpoles, aphids

Activity Type

- Draw a picture of an animal that migrates and write a sentence telling why it migrates.

Lesson Components

Total Learning Objects – 27

Instruction Pages - 15

Activity Pages - 2

Quiz Questions – 10 total questions; 5 randomly selected to populate quiz

Test Questions – 50 total questions; 10 total per Lesson of which 3 are randomly selected to populate test

Lesson 4: Hibernation

Common Core Standards

- ESS2.A Earth Materials and Systems
- ESS2.C The Roles of Water in Earth's Surface Processes

Learning Objectives

- to learn about the concept of hibernation
- to learn why animals hibernate
- to learn about some animals that hibernate

Defined Vocabulary Words

- behavioral adaptation, hibernation, den, adaptation, survive, thaw, hollow, burrow

Activity Type

- Draw a picture of an animal that hibernates and write a sentence telling why it is hibernating.

Lesson Components

Total Learning Objects – 25

Instruction Pages - 13

Activity Pages - 2

Quiz Questions – 10 total questions; 5 randomly selected to populate quiz

Test Questions – 50 total questions; 10 total per Lesson of which 3 are randomly selected to populate test

Unit 3: Earth & Sun

Lesson 1: Our Sun

Common Core Standards

- ESS1.A The Universe and Its Stars
- ESS1.B Earth and the Solar System

Learning Objectives

- to learn about the sun as a source of energy and heat
- to learn about shadows

Defined Vocabulary Words

- source, energy, survive, shadow, shade

Activity Type

- Fill in the blanks using the following words: light, shade, sun, moon, warm, shadow, sources, and frozen.
- Draw something and its shadow. Be sure to draw the sun too.

Lesson Components

Total Learning Objects – 24

Instruction Pages - 10

Activity Pages - 4

Quiz Questions – 10 total questions; 5 randomly selected to populate quiz

Test Questions – 50 total questions; 10 total per Lesson of which 3 are randomly selected to populate test

Lesson 2: The Earth

Common Core Standards

- ESS1.A The Universe and Its Stars
- ESS1.B Earth and the Solar System

Learning Objectives

- to learn about parts of the Globe
- to learn about the Earth's rotation and why we have day and night
- to learn about the Earth's revolution and why we have seasons

Defined Vocabulary Words

- Globe, sphere, axis, tilted, equator, Pole, hemisphere, rotate, revolving, revolution, orbit, lunar

Activity Type

- Draw the words listed. The Earth rotating, The Moon revolving, The Earth revolving, The Globe (Label the Equator, the axis, and the poles.)

Lesson Components

Total Learning Objects – 34

Instruction Pages - 21

Activity Pages - 3

Quiz Questions – 10 total questions; 5 randomly selected to populate quiz

Test Questions – 50 total questions; 10 total per Lesson of which 3 are randomly selected to populate test

Lesson 3: Seasons

Common Core Standards

- ESS1.B Earth and the Solar System

Learning Objectives

- to learn about the changes that come about with each season
- to learn that seasons happen in a regular cycle and why they occur

Defined Vocabulary Words

- revolve, axis, tilted, Pole, seasons, precipitation, sleet, equator, hemisphere

Activity Type

- Draw a picture of each season.

Lesson Components

Total Learning Objects – 28

Instruction Pages – 16

Activity Pages - 2

Quiz Questions – 10 total questions; 5 randomly selected to populate quiz

Test Questions – 50 total questions; 10 total per Lesson of which 3 are randomly selected to populate test

Lesson 4: The Water Cycle

Common Core Standards

- ESS2.C The Roles of Water in Earth's Surface Processes

Learning Objectives

- to learn the steps of the water cycle: evaporation, condensation, precipitation, run-off
- to learn about the role of energy from the sun in driving the water cycle

Defined Vocabulary Words

- cycle, evaporation, condensation, precipitation, collection, run off, water vapor, steam, hail, sleet, waterways, groundwater

Activity Type

- Draw the four steps of the water cycle.

Lesson Components

Total Learning Objects – 27

Instruction Pages – 15

Activity Pages - 2

Quiz Questions – 10 total questions; 5 randomly selected to populate quiz

Test Questions – 50 total questions; 10 total per Lesson of which 3 are randomly selected to populate test

Unit 4: Natural Resources

Lesson 1: Our Natural Resources

Common Core Standards

- ESS3.A Natural Resources

Learning Objectives

- to learn what are natural resources, how they are used, and why they are important
- to learn about types of renewable and non-renewable resources

Defined Vocabulary Words

- natural resource, cellulose, lumber, fuel, renewable, non-renewable

Activity Type

- Water is a natural resource. Name two ways we use water.
- Plants are a natural resource. Name two ways we use plants.
- What are some other natural resources?

Lesson Components

Total Learning Objects – 26

Instruction Pages - 12

Activity Pages - 4

Quiz Questions – 10 total questions; 5 randomly selected to populate quiz

Test Questions – 50 total questions; 10 total per Lesson of which 3 are randomly selected to populate test

Lesson 2: Air & Water Quality

Common Core Standards

- ESS3.C Human Impacts on Earth Systems

Learning Objectives

- to learn about the different kinds of pollution and their impact on people

Defined Vocabulary Words

- pollution, incinerator, smog, petroleum

Activity Type

- Draw a poster to tell people why pollution is bad.

Lesson Components

Total Learning Objects – 21

Instruction Pages - 9

Activity Pages - 2

Quiz Questions – 10 total questions; 5 randomly selected to populate quiz

Test Questions – 50 total questions; 10 total per Lesson of which 3 are randomly selected to populate test

Lesson 3: Conserving Our Natural Resources

Common Core Standards

- ESS3.C Human Impacts on Earth Systems

Learning Objectives

- to learn about conservation and its importance
- to learn about the three R's of conservation: reduce, reuse, and recycle
- to learn about endangered and extinct species and the protection of habitats

Defined Vocabulary Words

- natural resource, precious, spoil, conservation, conserve, recreation, habitat, endangered, extinct, reduce, reuse, recycle

Activity Type

- Draw how you will practice the three R's.

Lesson Components

Total Learning Objects – 27

Instruction Pages - 15

Activity Pages - 2

Quiz Questions – 10 total questions; 5 randomly selected to populate quiz

Test Questions – 50 total questions; 10 total per Lesson of which 3 are randomly selected to populate test

Reading & Writing Word Skills

Unit 1: Lesson 1

Words Ending in 'tion' Sounding Like 'shun'
tion in **precipitation**

Also: transportation, creation, emotion, nation, imagination, vibration, question, relation, relationship, temptation, and vacation.

Words with ea: Short 'e' and Long 'e' Sounds
short e: weather, feather, and leather.

long e: appear, beat, cream, clean, defeat, eat, fear, lead, leap, mean, meat, near, reap, scream, seat, and team.

Words with 't' and a 'ch' Sound:

the second **t** in **temperature**

Also: moisture, capture, furniture, picture, and lecture.

Unit 1: Lesson 2

Words with 'ai' and a Long 'a' Vowel Sound

rain, brain, main, and pain.

bail, hail, mail, nail, pail, quail, rail, sail, tail, chair, fair, and stair.

Words with 'ge' and a Soft 'g' Sound

gauge and language.

cage, engage, page, rage, stage, and signage.

huge and oblige.

Unit 1: Lesson 3

Words with the 'rr' Sound

rr in **hurricane**

Also: hurry, furry, flurry, scurry, worry, sorry, barrel, marry, and carry.

Words with ou and an ow Sound

ouch, couch, pouch, cloud, loud, drought, proud, found, mound, pound, sound, house, mouse, doubt, pout, shout, mouth, and south.

Words with ou and Sounds Other Than ow

ah sound: bought, brought, fought,

oo sound: through

uh sound: could, should, would

Words with c without a hard c sound

sh sound: ocean, delicious, and precious.

soft c or s sound: cent, center, ceiling, celery, cereal, circle, scenery, science
pace, race, ice, mice, nice, twice, juice, juicy, icy, and racy.

Words Sounds with oo

oo sound: zoo, moo, too, mood, food, room, zoom, moon, fool, school, stool, and tool.

uh sound: blood and flood.

modified uh sound: good, hood, and stood.

Unit 1: Lesson 4**Words with the Long 'o' Vowel Sound**

ow in **snow**

Also: blow, crow, tow, mow, sow, bow

but: now, cow, bow.

Words with ai and Long 'a' Vowel Sound

ai in **hail**

Also: jail, mail, nail, quail, rail, sail, and tail.

gain, grain, main, pain, train, paid, and trait.

Unit 2: Lesson 1**Words Ending in 'ous' Sounding Like 'us'**

ous in **deciduous**

Also: courteous, delicious, and precious.

Unit 2: Lesson 2**Words Ending in 'tion' Sounding Like 'shun'**

tion in **adaptation**

Also: transportation, creation, emotion, nation, imagination, intention, vibration, question, relation, relationship, temptation, and vacation.

Words with s with a z Sound

season, reason, treason, please, tease, pleasant, peasant, pheasant, physical, and physician.

Words with s with a zh sound (sounds like 'ja')

pleasure, treasure, measure, and measurement.

Words as Verbs, '-ing verb form', and Nouns

migrate - migrating - migration

hibernate - hibernating - hibernation

transport - transporting - transportation

adapt - adapting - adaptation

Unit 2: Lesson 3**Words With a 'ph' That Sounds Like 'f'**

ph in **elephant**

Also: telephone and photograph

Unit 2: Lesson 4**Words with a Double 'l'****ll in hollow**

fellow, follow, swallow, million, brilliant
all, ball, call, fall, small, mall, stall, tall, wall
doll, roll, roller, stroll
bull, dull, gull, pull, sully, sullen
Bill, hill, Jill, kill, pill, still, will
bell, fell, hell, sell, tell, well

Unit 3: Lesson 1**Words with 'igh' and long 'i' Sound**

high, sigh, and thigh.
fight, flight, fright, light, might, night, right, sight, and tight.

Words with 'ck' and a 'k' Sound

block, clock, crock, dock, flock, lock, mock, pocket, rock, rocket, sock, socket, buck, duck, luck, muck,
puck, suck, stuck, deck, wreck, quick, pick, pickle, sick, trick, trickle, wick, attack, back, jacket, lack,
pack, packet, rack, racket (but tennis racquet), sack, tack, wack.

Unit 3: Lesson 2**Words That Are OPPOSITE in Meaning**

night -- day
winter -- summer
north -- south
east -- west
light -- dark
close -- far
closer -- further or farther
toward -- away
wet -- dry
hot -- cold
warm -- cool

Unit 3: Lesson 3**Weather Descriptions in Comparative and Superlative Forms**

dry
wet
rainy
cool
cold
warm
hot
windy

Unit 3: Lesson 4**Words Ending in 'tion' Sounding Like 'shun'****tion** in **precipitation**

Also: collection, creation, emotion, nation, imagination, vibration, relation, relationship, temptation, and vacation.

Compound Words and Word Pairs with Ground

compound words: groundbreaker, groundhog, groundskeeper, groundsheet, and groundwater.

word pairs: ground ball, ground beetle, ground cloth, ground floor, and ground squirrel.

Compound Words and Word Pairs with Rain

compound words: rainbow, raincoat, raindrop, rainwash, rainwater, and rainwear.

word pairs: rain check, rain forest, and rain gauge.

Unit 4: Lesson 1**Words with 'ea' and Long 'e' Sound**

appearance, beach, beam, bean, beard, breathe, cheat, clean, clear, cream, deal, dear, each, eagle, ear, easy, eat, fear, flea, gear, hear, ideal, leaf, lean, leap, leash, leave, meal, mean, meat, near, neat, pea, peach, peak, please, reach, read (present tense), sea, seat, scream, speak, steal, steam, stream, teach, team, tease, treat, tweak, and zeal.

Words with 'ea' Short 'e' Sound

already, bread, breakfast, breath, cleanser, dead, deaf, feather, health, heavy, instead, jealous, lead (metal), leather, measurement, pleasure, read (past tense) ready, spread, steady, sweat, sweater, thread, threat, treasure, wealth, weather, and zealous.

Words with 'ea' and Sounds Other Than Long or Short 'e'

long a sound: bear, break, great, pear, tear, steak, swear, tear, and wear.

e-a sound: area, cereal, create, idea, and react.

a-r sound: heart

u-r sound: earn, earth, learn, and pearl.

Words with 'oo' and oo Sound

boom, boot, bloom, broom, cartoon, cool, drool, hoot, food, fool, goose, loop, loose, moo, mood, moon, moose, noon, pool, raccoon, roof, room, root, school, shoot, soon, spool, stool, too, tool, tooth, troop, zoo, and zoom.

Words with 'oo' and Sounds Other Than oo

uh sound: book, brook, crook, good, hood, look, took, wood, and wool.

long o sound: door and floor.

Words with 't' and a 'ch' Sound

capture, Christian, congratulations, future, question, lecture, picture, statue, and stature.

Unit 4: Lesson 2**Words With 'c' and a 'z' Sound**

is, has, use, cause, applause, resource, disease chose, choose, hose, lose, nose, pose, rose, rise, raise, praise, please, and tease.

Unit 4: Lesson 3**Words Ending in 'tion' Sounding Like 'shun'****tion in conservation**

Also: adaptation, condition, extinction, hibernation, migration, precipitation, preservation, protection, and vacation.