

WEEKLY WORKOUT

Week 1

Weekly Science Question: Research and Respond


Can land forms change over time? Explain. Standard 12E

Rapid changes: landslides, volcanoes erupt,
earthquakes, asteroid impact

Slow changes: weathering & erosion

p. 170-183

Word of the Week:

| | |
|---|--|
| <p>Word...</p> <p>sedimentary</p> <p><u>sedimentary</u></p> | <p>Definition...</p> <p>rock that formed when sediments were pressed & cemented together</p> <p>p. 481</p> |
| <p>Visualization...</p>  | <p>Way to remember it...</p> <p>Will vary!</p> |

write the word

draw a picture

4
how will you remember this?

WEEKLY WORKOUT

Week 2

Weekly Science Question: Research and Respond

Why do magnets attract? Standard 12D

Magnetism is a force that pulls across a distance. Every magnet has two poles (N/S). Like poles repel, opposites poles attract. Magnets produce a force around it. Attract objects made of iron and a few other materials. p. 304 - 305

Word of the Week:

| | |
|-------------------------|---|
| Word... friction | Definition... a force between two surfaces rubbing against each other; friction works against motion p. 456 |
| Visualization... | Way to remember it... |

WEEKLY WORKOUT

Week 3

Weekly Science Question: Research and Respond

What kind of animals are diurnal? Standard 12A & 12B

Animals that are awake during
the day.

(use other dictionary)

Word of the Week:

| | |
|----------------------------|--|
| Word... fossil fuel | Definition... a fuel that formed from the decayed remains of ancient plants & animals p.456 |
| Visualization... | Way to remember it... |

WEEKLY WORKOUT

Week 4

Weekly Science Question: Research and Respond

What causes a rainbow? Standard 12C

A rainbow is created when white light from the sun passes through tiny droplets of water in the air.

p. 312

Word of the Week:

| | |
|---------------------------|---|
| Word... refraction | Definition... the bending of light rays as they move from one material into another material p. 479 |
| Visualization... | Way to remember it... |

WEEKLY WORKOUT

Week 5

Weekly Science Question: Research and Respond

What effects seasonal changes? Standard 12F

Caused by the tilt of the Earth. Different parts of Earth have different amts. of daylight & darkness at the same time of year, & are receiving different amts. of direct sunlight p.220

Word of the Week:

| | |
|--------------------------------------|---|
| <p>Word...</p> <p>rotation</p> <hr/> | <p>Definition...</p> <p>the spinning of a planet or moon on its axis</p> <p>p.481</p> |
| <p>Visualization...</p> | <p>Way to remember it...</p> |

WEEKLY WORKOUT

Week 6

Weekly Science Question: Research and Respond

What is the Milky Way? Standard 12F

Our galaxy. Our solar system is a tiny part of the Milky Way galaxy.

p.235

Word of the Week:

| | |
|--|---|
| <p>Word...</p> <p>constellations</p> <hr/> | <p>Definition...</p> <p>a group of stars that ancient people thought formed a picture in the sky</p> <p>p.448</p> |
| <p>Visualization...</p> | <p>Way to remember it...</p> |

WEEKLY WORKOUT

Week 7

Weekly Science Question: Research and Respond

Do moons and planets produce light? Explain. Standard 12F

No. Moons & planets reflect the sun's light.

p.223

Word of the Week:

| | |
|----------------------|--|
| Word... force | Definition... a push or pull p.456 |
| Visualization... | Way to remember it.. |

WEEKLY WORKOUT

Week 8

Weekly Science Question: Research and Respond

How many days does it take the Earth to revolve around the sun? Standard 12F

365 $\frac{1}{4}$ days. We say 365... then have a leap year every 4th year.

p.220

Word of the Week:

| | |
|------------------------|--|
| Word... density | Definition... the amount of mass in a known volume of an object or substance p.450 |
| Visualization... | Way to remember it... |

WEEKLY WORKOUT

Week 9

Weekly Science Question: Research and Respond

What are conditions of equilibrium? Standard 12D

things in balance (i.e. weights, levers,
or pulleys)

force left = force right
force up = force down

} objects at equilibrium

work equals force times distance

↓
to break equilibrium a force must be applied to move an object a certain distance

p. 280
ScienceSaurus
BOOK

Word of the Week:

| | |
|-------------------------------------|--|
| <p>Word...</p> <p>metamorphosis</p> | <p>Definition...</p> <p>the changes in form that some insects go through during their life cycle</p> <p>p. 468</p> |
| <p>Visualization...</p> | <p>Way to remember it...</p> |

WEEKLY WORKOUT

Week 10

Weekly Science Question: Research and Respond

What is the difference between a producer, consumer, and decomposer? Standard 12A & 12B

- Producers make their own food (plants) p. 133
- Consumers get energy from eating other organisms (animals) p. 134
- Decomposers feed on dead materials and waste (earthworms, molds, bacteria) p. 136

Word of the Week:

| | |
|--------------------------|---|
| Word... insulator | Definition... a material that does not let heat energy or electricity pass through it easily p. 461 |
| Visualization... | Way to remember it... |

WEEKLY WORKOUT

Week 11

Weekly Science Question: Research and Respond

What are three different types of clouds and what is the weather associated with each? Standard

- Cirrus means feathery. May be followed by rain or snow in a few hours.
 - Cumulus means piled up. Fair weather.
 - Stratus means layers. Brings light rain or drizzle
- p. 207

Word of the Week:

| | |
|-----------------------------|---|
| Word... condensation | Definition... the process of changing from a gas to a liquid p. 447 |
| Visualization... | Way to remember it... |

WEEKLY WORKOUT

Week 12

Weekly Science Question: Research and Respond

What is an inherited characteristic? Standard 12A & 12B

A trait that is passed from parents to offspring.

p. 82

Word of the Week:

| | |
|---------------------------------|---|
| Word... natural resource | Definition... materials in the environment that are useful to people p. 470 |
| Visualization... | Way to remember it... |

WEEKLY WORKOUT

Week 13

Weekly Science Question: Research and Respond

What are the three R's of recycling? Give a brief explanation of each. Standard 13A & 13B

• reduce : decrease amt. used

• reuse: use again

• recycle: broken down to original material & made again.

p. 346 - 349

Word of the Week:

| | |
|-------------------------|--|
| Word... variable | Definition... anything that can change in an experiment p. 490 |
| Visualization... | Way to remember it... |

WEEKLY WORKOUT

Week 14

Weekly Science Question: Research and Respond

What are the steps of the scientific method? Standard 11A&11B

1. ask a question
2. make a hypothesis
3. plan investigation
4. collect data
5. organize data
6. explain results
7. think of new questions
8. share results.

p. 4

Word of the Week:

| | |
|---------------------------|--|
| Word... hypothesis | Definition... an idea that can be tested by an experiment or an observation p. 460 |
| Visualization... | Way to remember it... |

WEEKLY WORKOUT

Week 15

Weekly Science Question: Research and Respond

What are some differences and similarities between mammals and amphibians? Standard 12A & 12B

| MAMMALS | BOTH | AMPHIBS. |
|-------------------|----------------|--------------------------------|
| • land and water | • land / water | • young in water / old on land |
| • have fur / hair | • lungs | • have smooth, moist skin |
| • lungs | | • gills then lungs |
| • give birth | | • lay eggs |

p. 150

Word of the Week:

| | |
|--------------------------|---|
| Word... migration | Definition... the seasonal movement of animals from one place to another p. 469 |
| Visualization... | Way to remember it... |

WEEKLY WORKOUT

Week 16

Weekly Science Question: Research and Respond

How is a flood good for the land? Standard 12E

By depositing eroded materials that help fertilize the soil.

p.183

Word of the Week:

| | |
|------------------------|--|
| Word... erosion | Definition... the movement of weathered materials by water, wind, or ice p.454 |
| Visualization... | Way to remember it... |

WEEKLY WORKOUT

Week 17

Weekly Science Question: Research and Respond

How do we describe weather? Standard

Using measurements like -

temperature, wind direction & speed,
precipitation, humidity, air pressure

p.200 - 205

Word of the Week:

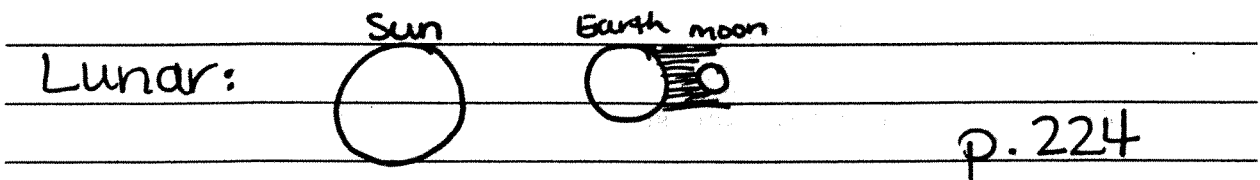
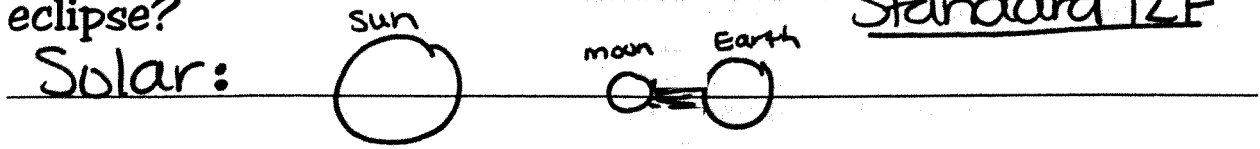
| | |
|---|--|
| <p>Word...</p> <p>precipitation</p> <hr/> | <p>Definition...</p> <p>water that falls to Earth's surface as rain, snow, sleet, or hail</p> <p>p.476</p> |
| <p>Visualization...</p> | <p>Way to remember it...</p> |

WEEKLY WORKOUT

Week 18

Weekly Science Question: Research and Respond

What is the difference between a solar eclipse and a lunar eclipse? Standard 12F



p. 224

Word of the Week:

| | |
|----------------------------------|--|
| <p>Word...</p> <p>mass</p> <hr/> | <p>Definition...</p> <p>the amount of matter in an object or substance</p> <p>p. 467</p> |
| <p>Visualization...</p> | <p>Way to remember it...</p> |

WEEKLY WORKOUT

Week 19

Weekly Science Question: Research and Respond

What are the three states of matter? Give an example of each.

Standard 12C

| | | |
|-------|--------|-------------|
| SOLID | Liquid | GAS |
| ice | water | vapor/steam |

p. 262-263

Word of the Week:

| | |
|-------------------------|---|
| Word... contract | Definition... to get shorter (or smaller) p. 448 |
| Visualization... | Way to remember it... |

WEEKLY WORKOUT

Week 20

Weekly Science Question: Research and Respond

Why is it important to repeat an experiment when testing a hypothesis? Standard 11A & 11B

To collect enough data to support or disprove a hypothesis.

p.17

Word of the Week:

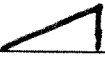





| | |
|--------------------------------------|---|
| Word... accuracy _____ | Definition... (use other dictionary) |
| Visualization... | Way to remember it... |

WEEKLY WORKOUT

Week 21

Weekly Science Question: Research and Respond

List the simple machines. (There are six.) Standard 12D

- | | |
|---|---|
| 1. inclined plane  | 2. wedge  |
| 3. screw  | 4. lever  |
| 5. wheel & axle  | 6. pulley  |
| p. 280-283 | |

Word of the Week:

| | |
|------------------------|---|
| Word... gravity | Definition... the force that pulls objects toward each other p. 459 |
| Visualization... | Way to remember it... |

WEEKLY WORKOUT

Week 22

Weekly Science Question: Research and Respond

Why is evidence important in science? Standard 11A & 11B

Proof!

Word of the Week:

| | |
|---------------------------------------|--|
| <p>Word...</p> <p>prototype</p> <hr/> | <p>Definition...</p> <p>(use other dictionary)</p> |
| <p>Visualization...</p> | <p>Way to remember it...</p> |

WEEKLY WORKOUT

Week 23

Weekly Science Question: Research and Respond

What is the difference between renewable and nonrenewable resources? Standard 12E

Renewable: nature can produce over & over again.

Nonrenewable: nature cannot replace
p. 320

Word of the Week:

| | |
|---|--|
| <p>Word...</p> <p>decomposition</p> <hr/> | <p>Definition...</p> <p>(use other dictionary)</p> |
| <p>Visualization...</p> | <p>Way to remember it...</p> |

WEEKLY WORKOUT

Week 24

Weekly Science Question: Research and Respond

Why does the sun and other stars appear to move throughout the day/year? Standard 12F

The Earth moves around the sun. Earth's movement, both rotation & revolution make objects in the sky APPEAR to move
p.236

Word of the Week:

| | |
|---------------------------------|--|
| Word... revolve <hr/> | Definition... to make one complete trip around the sun p.480 |
| Visualization... | Way to remember it... |

WEEKLY WORKOUT

Week 25

Weekly Science Question: Research and Respond

How do fossils form? Standard 12E

i.e. most fossils found in sedimentary rock. Organisms long ago were trapped in sediments. When sediments hardened, signs of the organism could be found in the rock. p.185

Word of the Week:

| | |
|----------------------------|---|
| Word... river delta | Definition... a large flat area of land at the mouth of a river p.450 |
| Visualization... | Way to remember it... |

ISAT Vocabulary

Note: This list was compiled after an analysis of the IL Assessment Framework for the Fourth Grade ISAT.

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Scientific method

will use this vocabulary

Standard 11A & 11B - 20%

Design technology w/ Electricity

| | | | | |
|-------------------|---------------------------|-------------------------------------|-----------------------|---------------------|
| Observe | Compare | Evidence | Form Hypotheses | Conduct experiments |
| Organize data | Construct charts | Construct graphs | Analyze data | Report data |
| Display results | Identify a design problem | Analyze design solutions | Propose a solution | Test a solution |
| Rebuild or modify | Retest | Prototype (Design solution) (model) | Find patterns in data | Draw conclusions |

Draw visual graph of each step. variable

force on that

Standard 12A & 12B - 20% - Life Science

| | | | | |
|--|--|---------------------------------|---------------------------|------------------|
| Mammal | Bird | Reptile | Amphibian | Insect |
| Arachnid | Living | Non-living | Cycle | Metamorphosis |
| Basic needs of animals (air, water, food, shelter) | Basic needs of plants (nutrients, air, water, light) | Structure (part) Function (job) | Inherited characteristics | Learned behavior |
| Food chain | Food web | Producers | Consumers | Decomposers |
| Herbivores | Carnivores | Diurnal | Nocturnal | Warm Blooded |
| Cold Blooded | Hibernation | Migration | Human impact | Energy flow |

awake during day

one hour

Do we have these?

National Geographic: Theme Sets

- Desert Animals
- Ocean Animals
- Forest Animals
- Rainforest Animals

Standard 12D - Force & Motion - 10%

| | | | | |
|--|---|---|--|--|
| Force defined as a push or a pull | Balanced force | Unbalanced force | When forces are balanced the motion or rest of the object does not change. | Basic forces - friction - magnetism - gravity |
| Identify which force is operating in a scenario. - friction - gravity - magnetism | Simple machines - lever - inclined plane - pulley - screw - wheel & axle | How simple machines function. (How they apply force with advantage) | Match simple machine to a task. | Identify <u>equilibrium conditions</u> . (Example: diagram of balanced weights or levers or pulleys) |

Standard 13 - A&B - 20%

| | | | | |
|--|--|--|--|------------------------------|
| Explain why similar results are expected when things are done in similar ways. | Identify safety procedures. (Don't taste substances, keep clothes and hair away from flames) | Identify basic safety equipment. (gloves, goggles, lab coats, tongs) | Impact of technology on environments (local, national, global) | Measuring tools |
| Estimate Contribution | Accuracy | Occupations | Discovery | Careers |
| Conflicting results | Reduce | Reuse | Recycle | Reproducible results |
| | Repeated experiment | Scientific results must be reproducible | Scientists study different subjects but in similar ways | Honesty in reporting results |