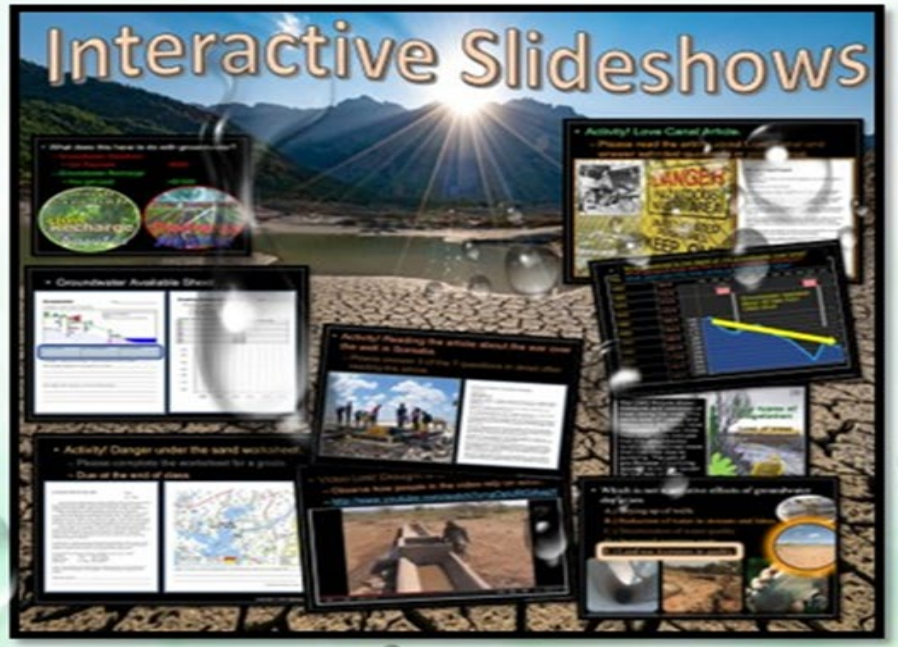
ENTIRE WATER UNIT

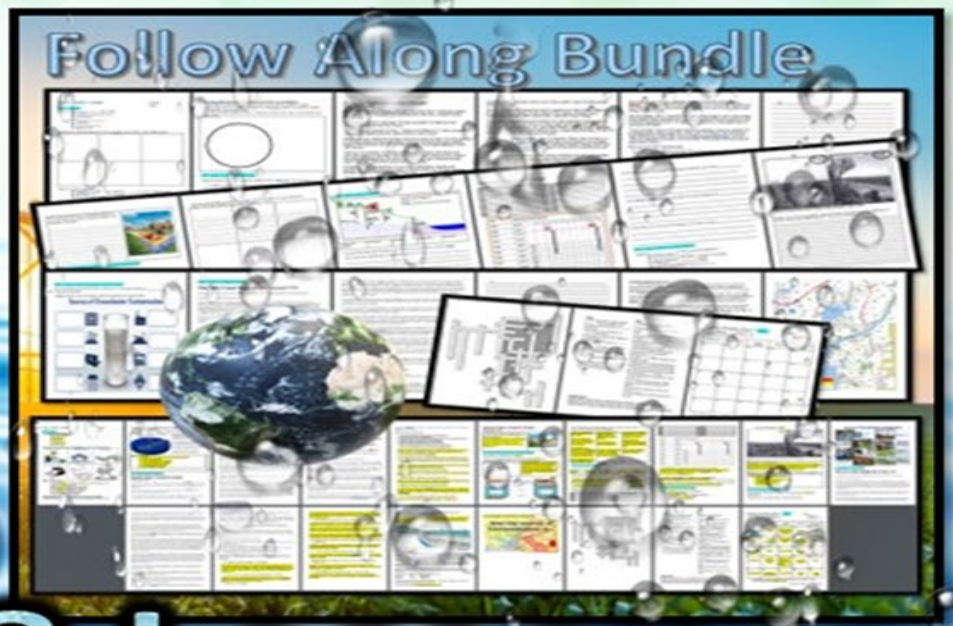
Preview is a compressed file

3 Parts 27 Lessons


WATER ON EARTH
8 Lessons


Interactive Slideshows


Readings, Video Links, Activities,
Assessments, all Built-in


Follow Along Bundle

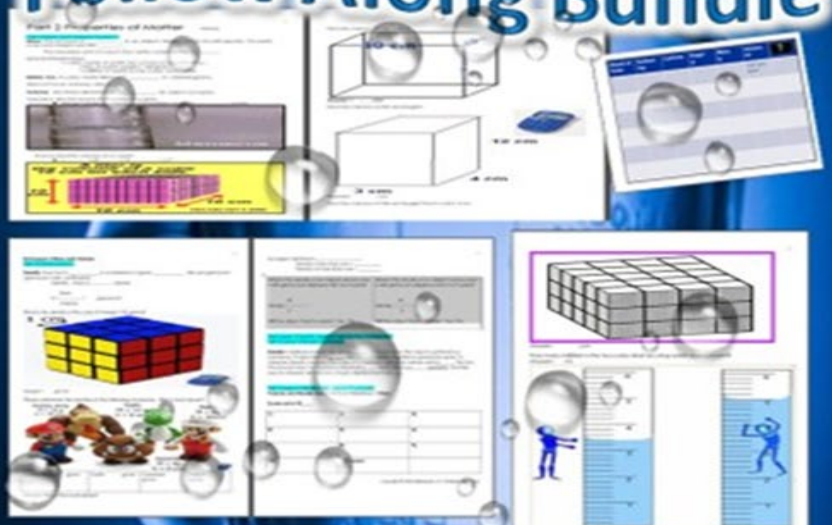
8 Lessons

Volume and Density Unit

6 Lessons

Interactive Slideshows

Follow Along Bundle

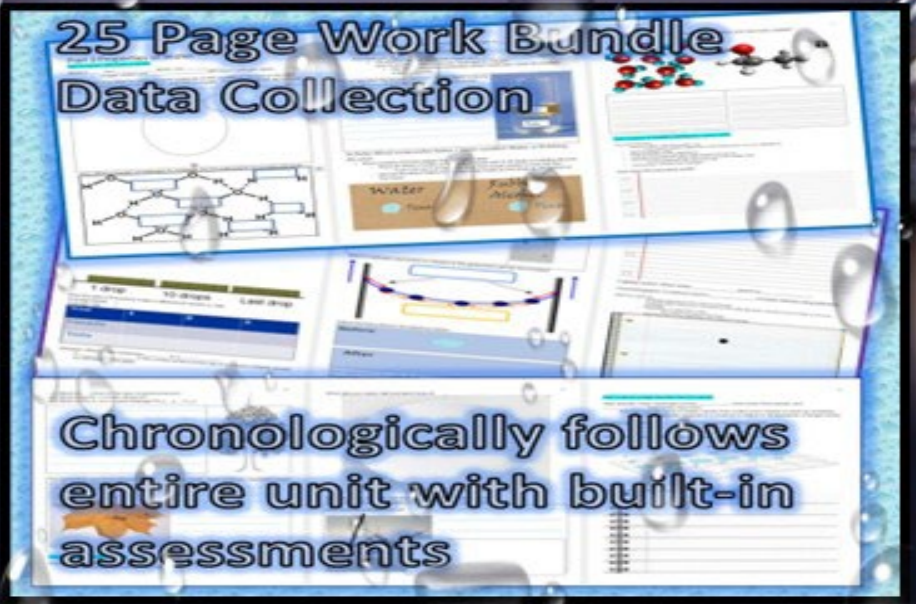


6 Pages

6 Lessons


Properties of Water
15 Lessons


Full of hands-on activities
Bluish
Purple
Reddish
Orange
Yellowish
Least Dense
Most Dense
Water level
Graphic Designer
Cohesive Forces


25 Page Work Bundle
Data Collection
Chronologically follows entire unit with built-in assessments


Answer Keys, Games, Editable, Everything you need is included

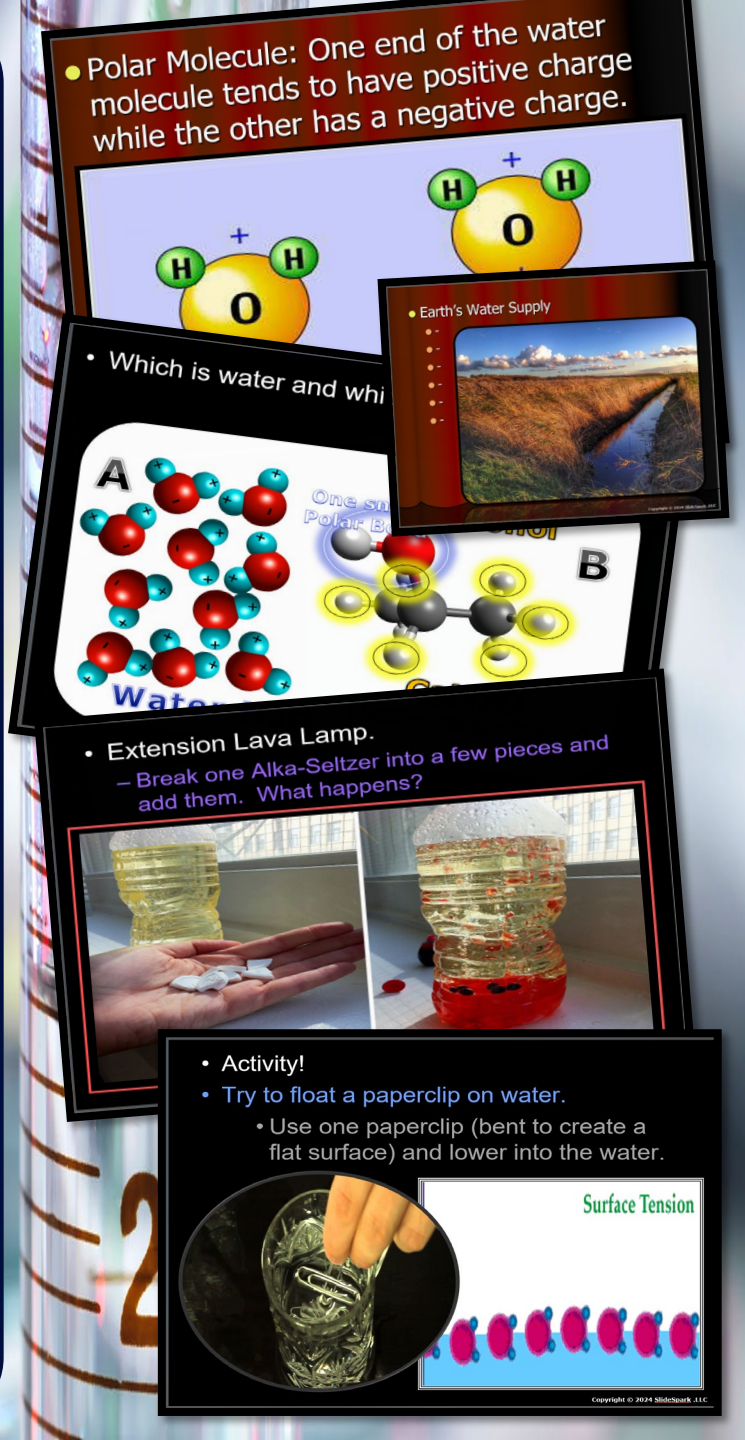
15 Lessons

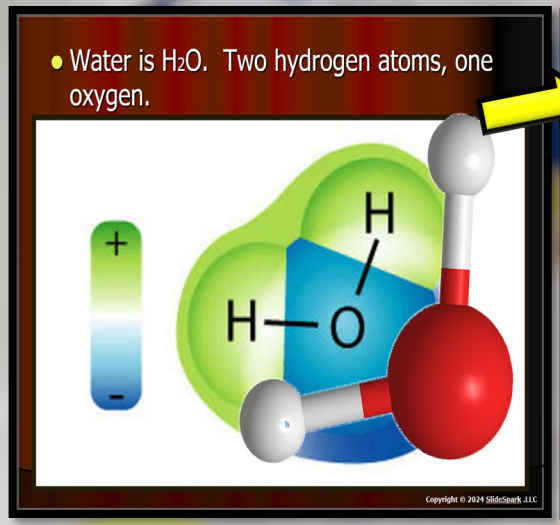
SlideSpark Science

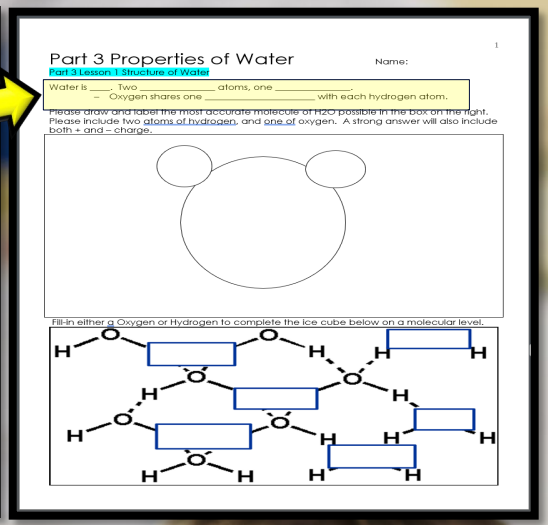
MIDDLE-LEVEL EDUCATIONAL RESOURCES

Interactive slideshows provide the roadmap for an amazing learning experience for students in grades 5-9. A Detailed set of work bundles chronologically follow the digital learning, providing a clear and intuitive roadmap to understanding. As the teacher or student advances through a slideshow, exciting hands-on activities, fantastic visuals, fill-in notes, review opportunities, video links, assessments, and much more are strategically placed throughout. Interactive learning unfolds step by step and supported by the work bundle to reach all types of learners. Everything you need to run to an amazing learning experience is provided in this one-of-a-kind science curriculum.

Each unit in the curriculum is designed to help teachers deliver the best possible learning experience for their students. Our interactive science slideshows are filled with questions and answers, important fill-in notes, hands-on activities, projects, games, built-in quizzes, and end of the unit assessment pieces. Students follow along with a work bundle that documents the entire learning experience for a fantastic review and assessment piece.

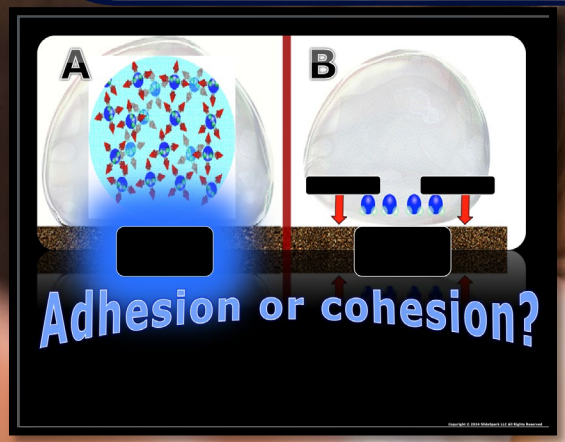


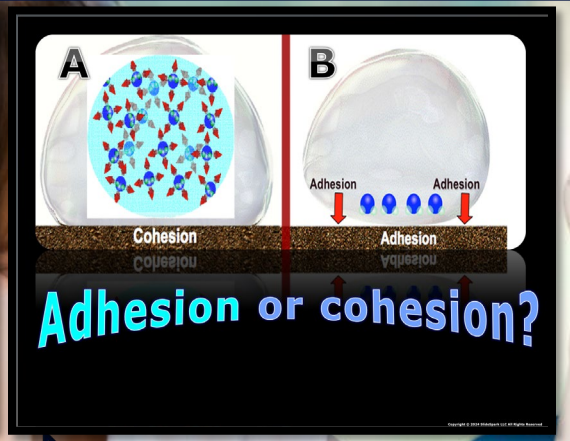




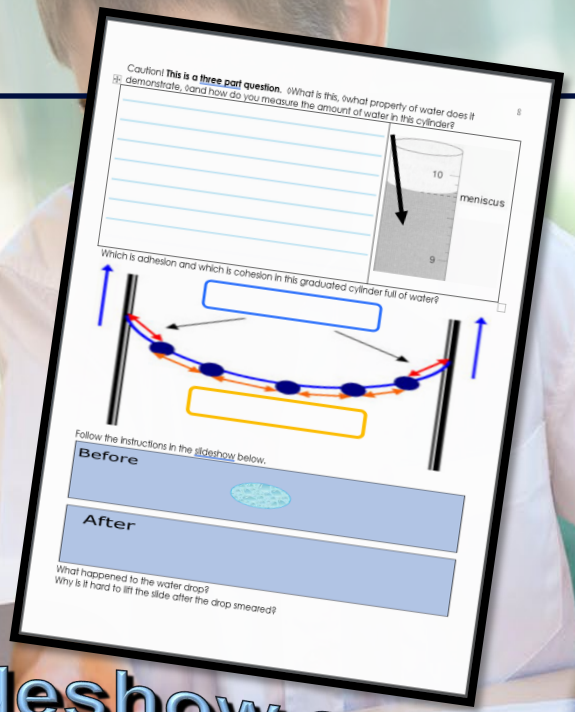
Red Slide Notes: Help students record important information in a fun and easy-to-understand way. Designed red-colored slides contain a few pieces of crucial information that students must record into their work bundle to complete the notes. Students will use these important notes throughout the work bundle.

The set-up of the slideshows are designed to make learning fun and interactive for students. With a mix of questions and answers, teachers can use these slides to get their students thinking and actively participating in their education. Plus, the answers are always revealed on the next slide, providing students with immediate feedback and helping teachers assess their understanding.





Next Slide



Slideshow supports Work Bundle

Lesson Planning

Daily lessons space exciting hands-on activities, red slide notes, video and academic links, projects, simulations, readings, built-in quizzes, and review opportunities throughout the slideshows. A typical day may have many different learning styles being targeted. Daily lesson planning becomes advancing through the slideshow roadmap the night before. Each lesson is roughly 50 minutes, but sometimes things can speed up or slow down. The best strategy is just to go at your classes own pace. The work bundle chronologically follows the interactive slideshow and you can always spend extra time assessing the quality of the writing within. If you don't quite finish a lesson, you can always pick it up the next day where you left off. The only real trick in timing is not starting a larger activity if you don't have the available time to complete. The slideshows have been designed to be a low stress, go at your classes own pace experience. Most activities are designed to be cost effective, using general materials that can be gathered from your local stores.

Part 1 Lesson 1 Water on Earth

Part 1 Lesson 2 Water the Resource

Part 1 Lesson 3 Water Conservation

Part 1 Lesson 4 Groundwater

Part 1 Lesson 5 Groundwater Depletion

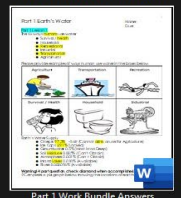
Part 1 Lesson 6 Contamination

Part 1 Lesson 7 Pollution and Wrap Up

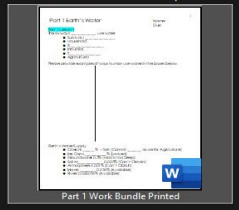
Part 1 Lesson 8 Review Game

Part 1 Lesson 9 Review Game Answers


Part 1 Materials List


Part 1 Work Bundle Answers


Part 1 Work Bundle Digital

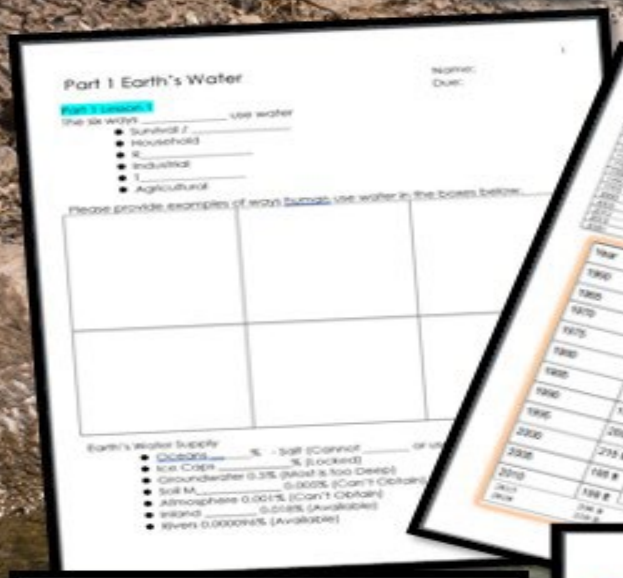

Part 1 Work Bundle Printed

One clear, organized bundle guides students through notes, review, and assessments with ease.

Follow Along Work Bundle

Each science unit comes with several work bundles. The bundles should be printed before the unit begins and distributed to the students on the first day of the unit. The work bundles will be due shortly after the completion of the unit. The work bundle will become a resource for the review games, crossword puzzles, and will be collected for assessment. The work bundle follows the entire learning experience and will be used every day. They are chronological to the lessons and provide places to record fill-in notes, answer questions, collect data, graph and much more. An answer version is provided that can that be distributed to your support professionals. A digital version of the work bundle and some writable .pdf versions are provided if you want to go paperless. These work bundles are perfect for students looking for an easy and organized way to track their progress and stay on top of their studies.

WATER ON EARTH
Work Bundle


Part 1: Earth's Water

Name:
Due:

Part 1 Lesson 1

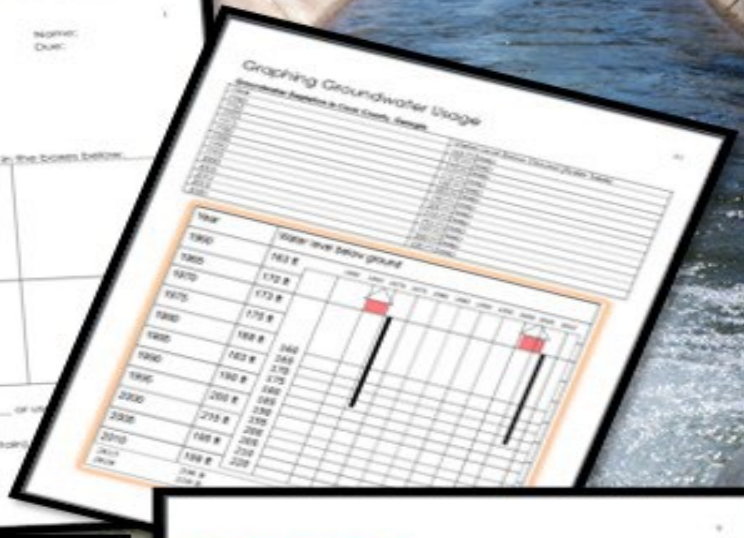
The six ways _____ use water

- Survival /
- Household
- R_____
- Industrial
- I_____
- Agricultural

Please provide examples of ways humans use water in the boxes below.

Earth's Water Supply

- Oceans _____ % - Salt (Cannot _____ or
- Ice Caps _____ % (Locked)
- Groundwater 0.3% (Most is too Deep)
- Soil M_____ 0.003% (Can't Obtain)
- Atmosphere 0.001% (Can't Obtain)
- Inland _____ 0.018% (Available)
- Rivers 0.0000916% (Available)


Graphing Groundwater Usage

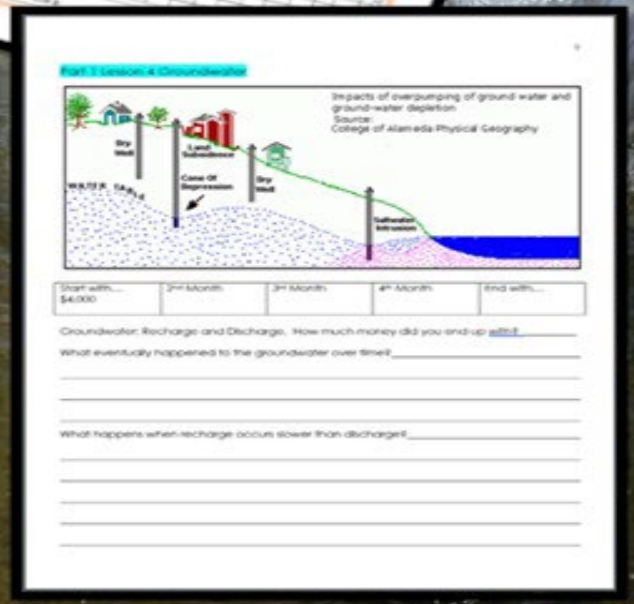
Year	Water level below ground
1950	163 ft
1955	
1970	170 ft
1975	173 ft
1990	176 ft
1995	168 ft
1940	163 ft
1995	190 ft
2000	200 ft
2005	215 ft
2010	188 ft
2015	199 ft


Part 1 Lesson 4 Groundwater Contamination

Groundwater Contamination: The act of contaminating or _____ the groundwater.

Please label a few sources of groundwater contamination

Sources of Groundwater Contamination

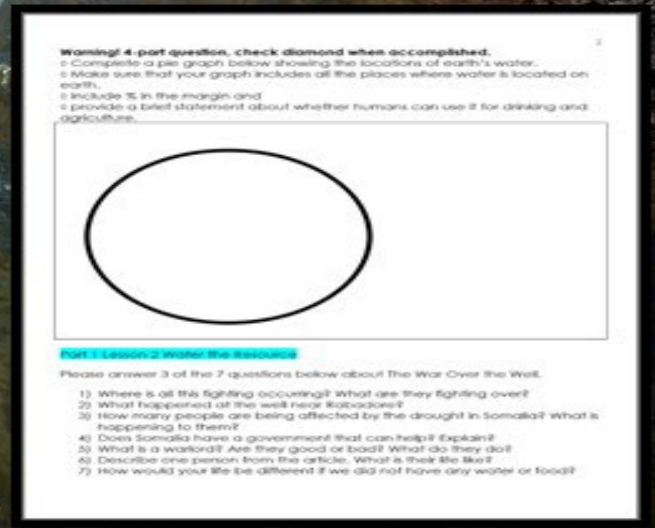

Part 1 Lesson 4 Groundwater

Start with... $4,000	2nd Month	3rd Month	4th Month	End with...

Groundwater Recharge and Discharge. How much money did you end up with? _____

What eventually happened to the groundwater over time? _____

What happens when recharge occurs slower than discharge? _____


Warning! 4-part question, check diamond when accomplished.

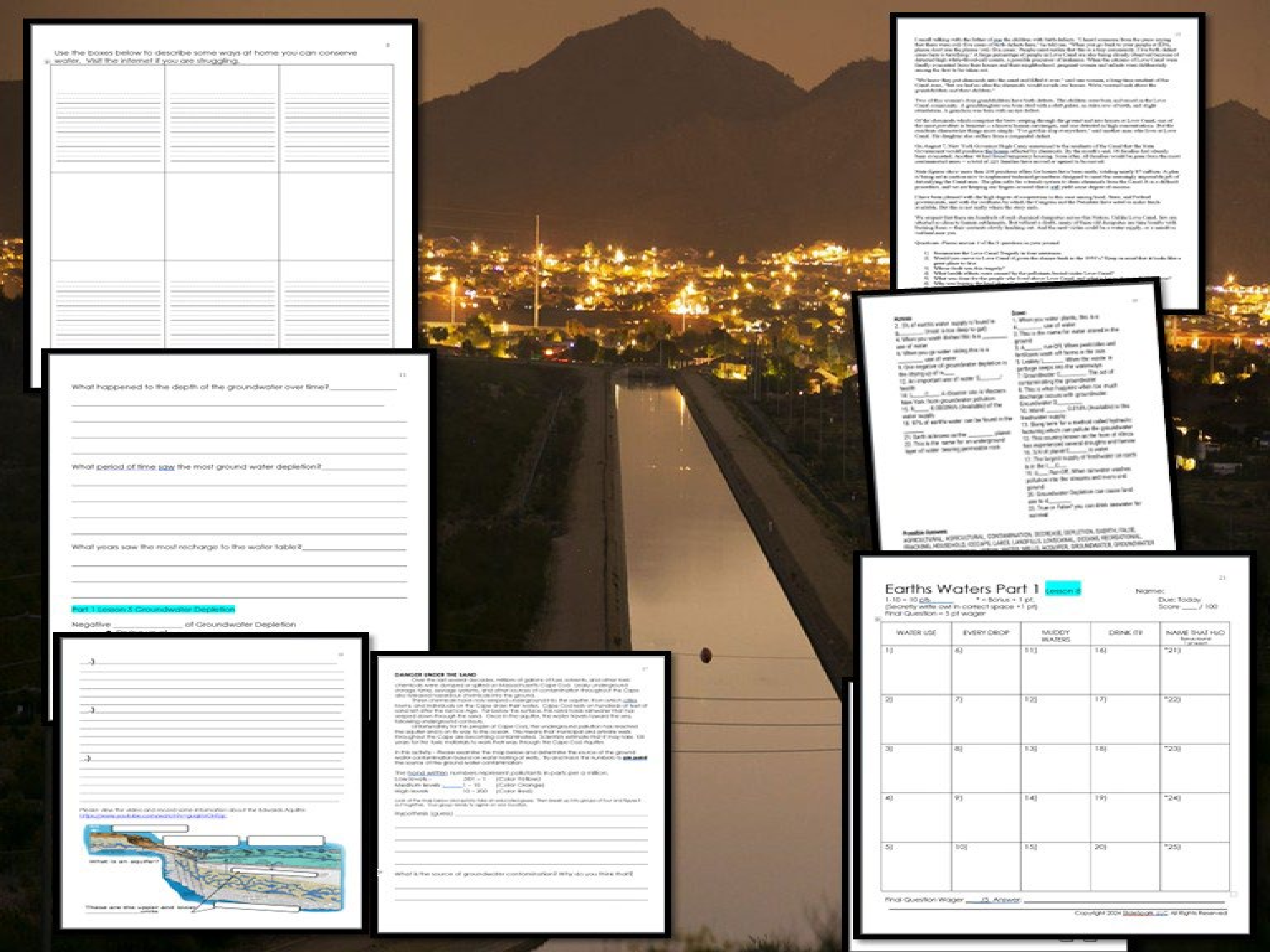
- ◇ Complete a pie graph below showing the locations of earth's water.
- ◇ Make sure that your graph includes all the places where water is located on earth.
- ◇ Include % in the margin and
- ◇ provide a brief statement about whether humans can use it for drinking and agriculture.

Part 1 Lesson 2 Water the Resource

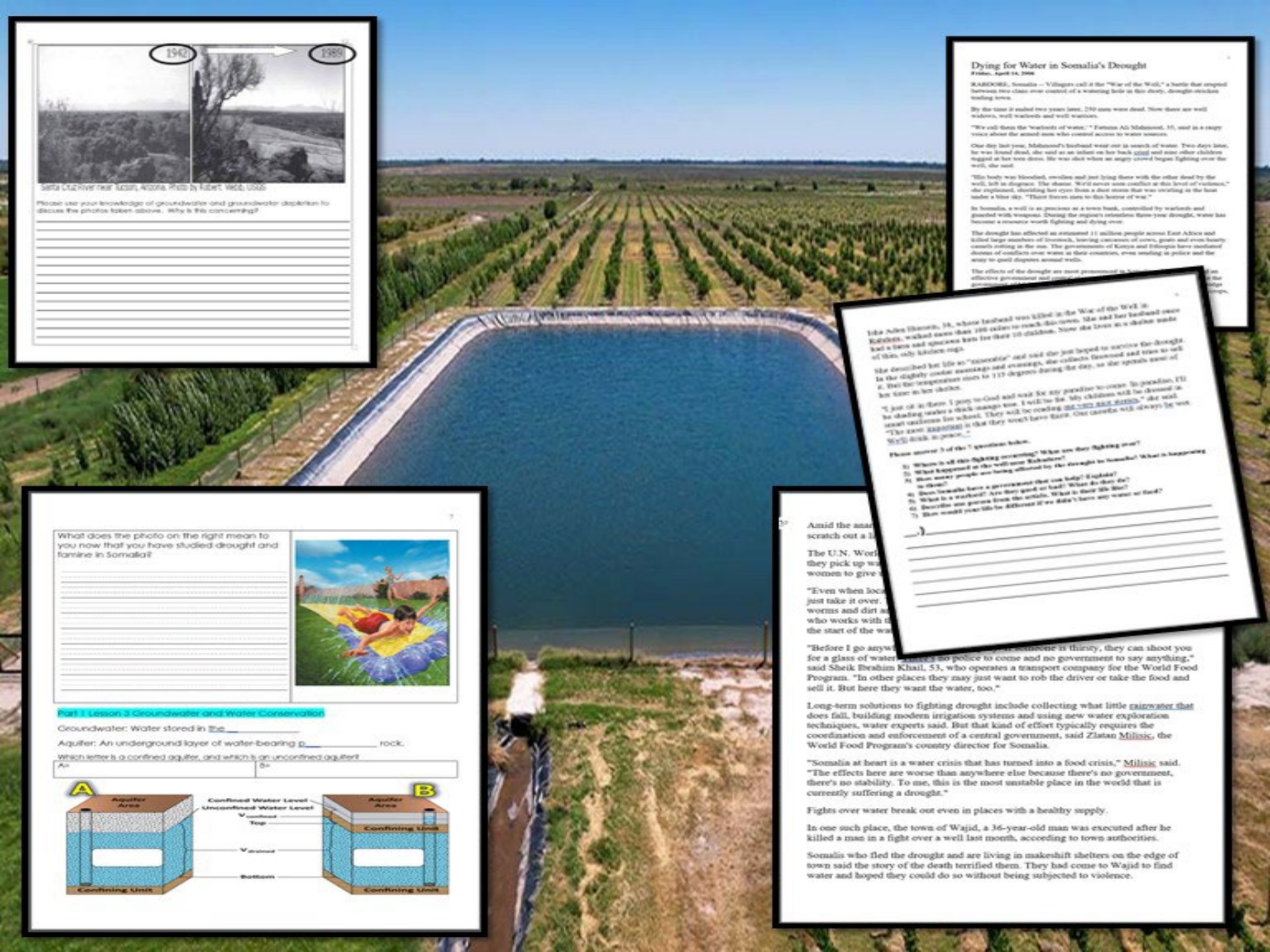
Please answer 3 of the 7 questions below about The War Over the Well.

1) Where is all this fighting occurring? What are they fighting over?
2) What happened at the well near Ilalvadale?
3) How many people are being affected by the drought in Somalia? What is happening to them?
4) Does Somalia have a government that can help? Explain?
5) What is a warlord? Are they good or bad? What do they do?
6) Describe one person from the article. What is their life like?
7) How would your life be different if we did not have any water or food?

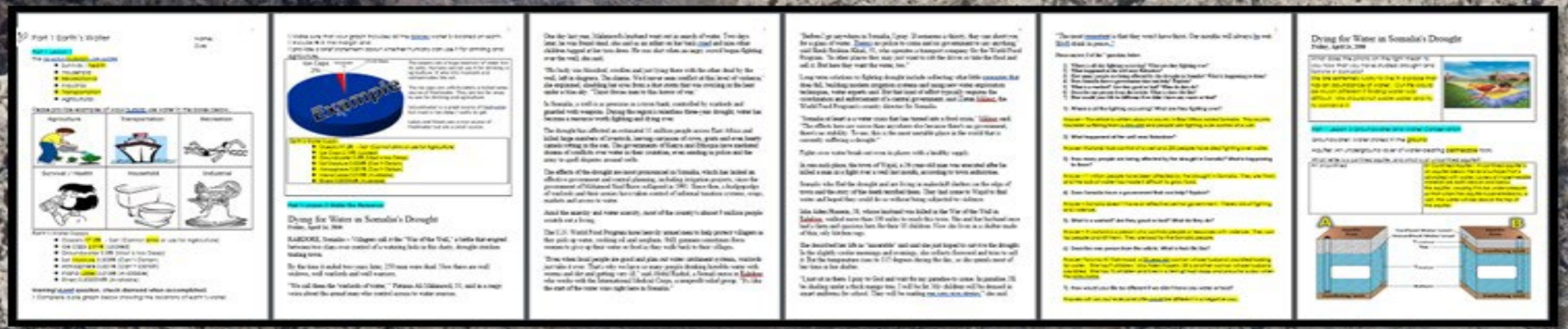
Part 1

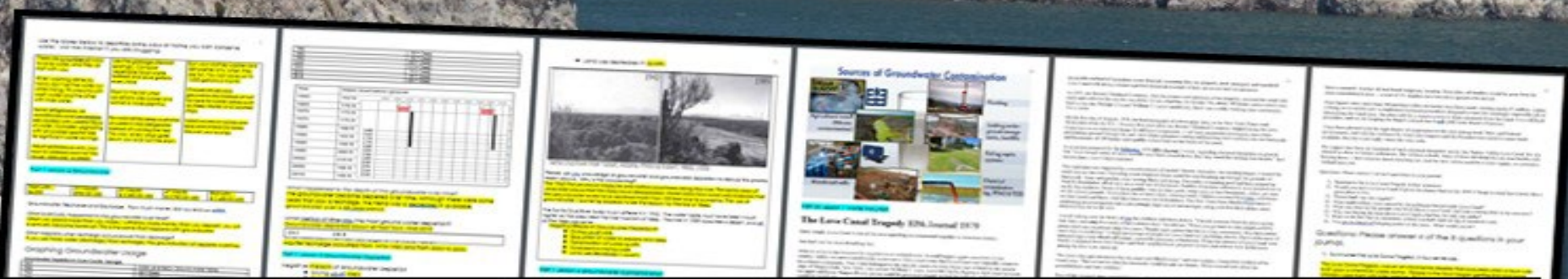


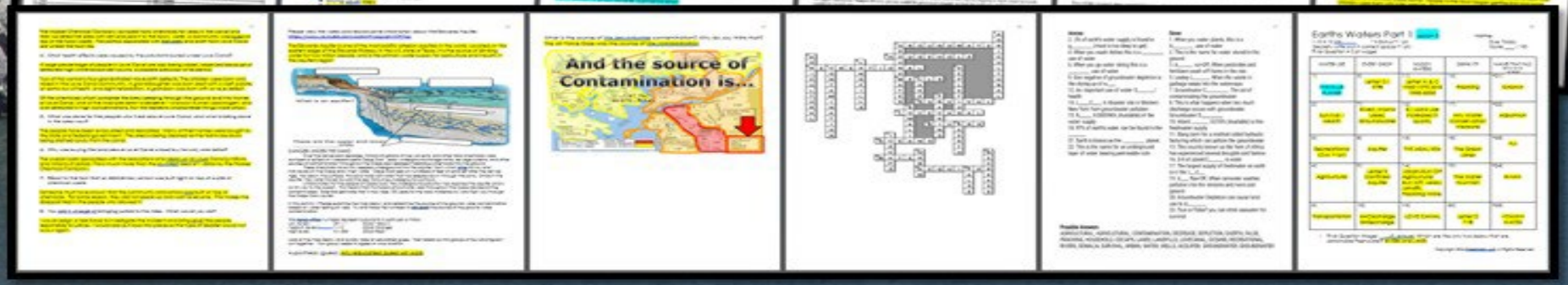
Use the boxes below to describe some ways at home you can conserve water. Visit the internet if you are struggling.
What happened to the depth of the groundwater over time?
What period of time saw the most ground water depletion?
What years saw the most recharge to the water table?
Part 1 Lesson 5 Groundwater Depletion
Negative ______ of Groundwater Depletion
DANGER UNDER THE SAND
Hypothesis (guess)
What is the source of groundwater contamination? Why do you think that?
What is an aquifer?
Earths Waters Part 1 Lesson 8
Name:
Due: Today
Score ___ / 100
1-10 = 10 pts
* = Bonus + 1 pt.
(Secretly write owl in correct space +1 pt)
Final Question = 5 pt wager
WATER USE
EVERY DROP
MUDDY WATERS
DRINK IT!
NAME THAT H₂O
Final Question Wager


1940
1989
Santa Cruz River near Tucson, Arizona. Photo by Robert Webb, USGS
Please use your knowledge of groundwater and groundwater depletion to discuss the photos taken above. Why is this concerning?
Dying for Water in Somalia's Drought
Friday, April 14, 2006
RABDORE, Somalia -- Villagers call it the "War of the Well," a battle that erupted between two clans over control of a watering hole in this dusty, drought-stricken trading town.
By the time it ended two years later, 250 men were dead. Now there are well widows, well warlords and well warriors.
"We call them the 'warlords of water,'" Fatuma Ali Mahmood, 35, said in a raspy voice about the armed men who control access to water sources.
One day last year, Mahmood's husband went out in search of water. Two days later, he was found dead, she said as an infant on her back cried and nine other children tugged at her torn dress. He was shot when an angry crowd began fighting over the well, she said.
"His body was bloodied, swollen and just lying there with the other dead by the well, left in disgrace. The shame. We'd never seen conflict at this level of violence," she explained, shielding her eyes from a dust storm that was swirling in the heat under a blue sky. "There forces men to this horror of war."
In Somalia, a well is as precious as a town bank, controlled by warlords and guarded with weapons. During the region's relentless three-year drought, water has become a resource worth fighting and dying over.
The drought has affected an estimated 11 million people across East Africa and killed large numbers of livestock, leaving carcasses of cows, goats and even heavily camels rotting in the sun. The governments of Kenya and Ethiopia have mediated dozens of conflicts over water in their countries, even sending in police and the army to quell disputes around wells.
Please answer 3 of the 7 questions below.
What does the photo on the right mean to you now that you have studied drought and famine in Somalia?
Part 1: Lesson 3 Groundwater and Water Conservation
Groundwater: Water stored in the
Aquifer: An underground layer of water-bearing p rock.
Which letter is a confined aquifer, and which is an unconfined aquifer?
A=
B=
A
B
Aquifer Area
Confined Water Level
Unconfined Water Level
Top
Bottom
Confining Unit
Aquifer Area
Confining Unit
Confining Unit
Amid the anar
scratch out a l
The U.N. Worl
they pick up wa
women to give
"Even when loc
just take it over
worms and dirt a
who works with t
the start of the wa
"Before I go anyw someone is thirsty, they can shoot you for a glass of water no police to come and no government to say anything," said Sheik Ibrahim Khail, 53, who operates a transport company for the World Food Program. "In other places they may just want to rob the driver or take the food and sell it. But here they want the water, too."
Long-term solutions to fighting drought include collecting what little rainwater that does fall, building modern irrigation systems and using new water exploration techniques, water experts said. But that kind of effort typically requires the coordination and enforcement of a central government, said Zlatan Milisic, the World Food Program's country director for Somalia.
"Somalia at heart is a water crisis that has turned into a food crisis," Milisic said. "The effects here are worse than anywhere else because there's no government, there's no stability. To me, this is the most unstable place in the world that is currently suffering a drought."
Fights over water break out even in places with a healthy supply.
In one such place, the town of Wajid, a 36-year-old man was executed after he killed a man in a fight over a well last month, according to town authorities.
Somalis who fled the drought and are living in makeshift shelters on the edge of town said the story of the death terrified them. They had come to Wajid to find water and hoped they could do so without being subjected to violence.

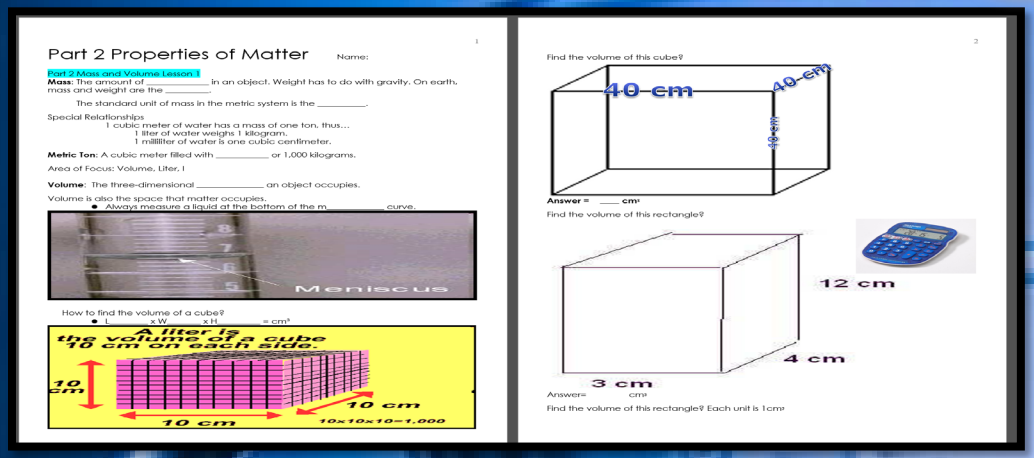
Answer Version







Part 2 Volume and Density



Part 2 Properties of Matter

Name:

Part 2 Mass and Volume Lesson 1

Mass: The amount of _____ in an object. Weight has to do with gravity. On earth, mass and weight are the _____.

The standard unit of mass in the metric system is the _____.

Special Relationships
1 cubic meter of water has a mass of one ton, thus…
1 liter of water weighs 1 kilogram.
1 milliliter of water is one cubic centimeter.

Metric Ton: A cubic meter filled with _____ or 1,000 kilograms.

Area of Focus: Volume, Liter, l

Volume: The three-dimensional _____ an object occupies.

Volume is also the space that matter occupies.
- Always measure a liquid at the bottom of the m_____ curve.

Meniscus

How to find the volume of a cube?
- L x W x H = cm³

A liter is the volume of a cube 10 cm on each side.
10 cm
10 cm
10 cm
10x10x10=1,000

Find the volume of this cube?

40 cm
40 cm
40 cm

Answer = ___ cm³

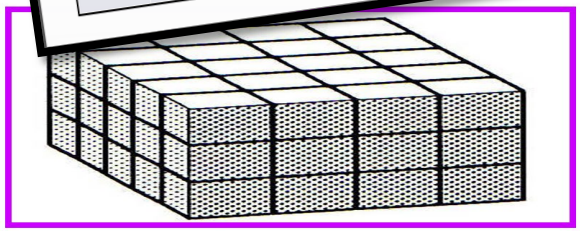
Find the volume of this rectangle?

12 cm
4 cm
3 cm

Answer= cm³

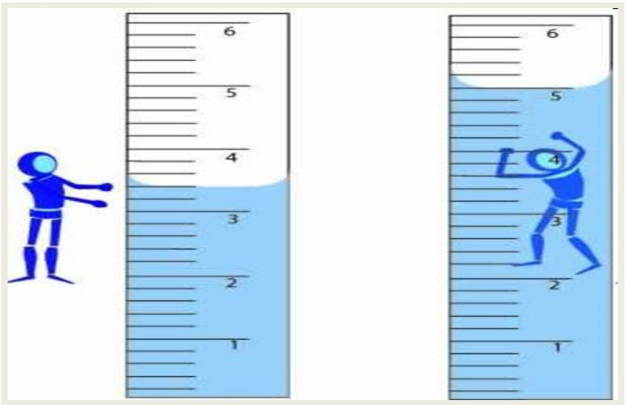
Find the volume of this rectangle? Each unit is 1cm³

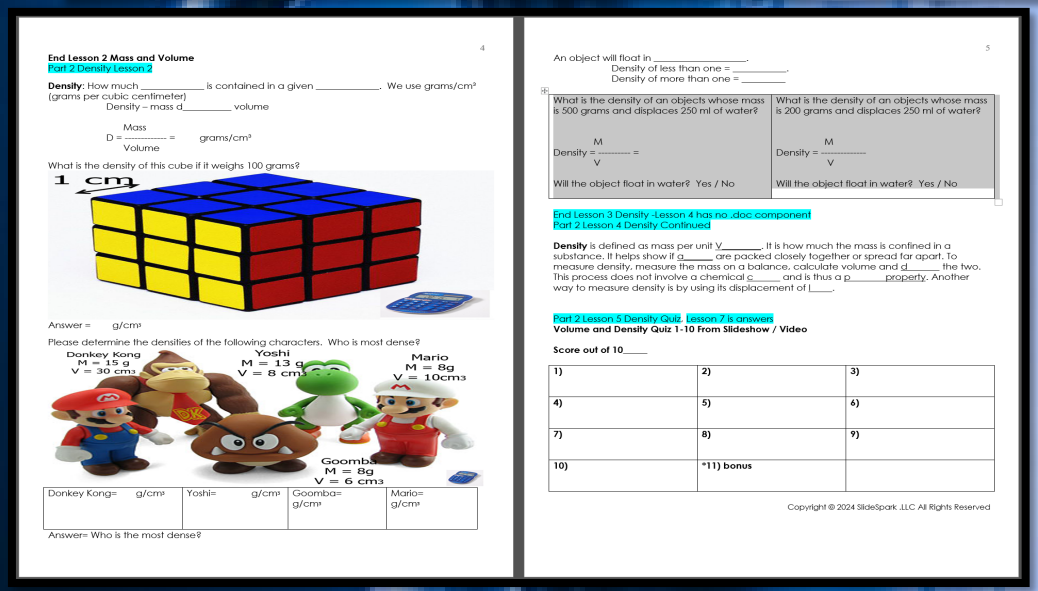
Brand of Soda	Sodium mg	Calories	Sugar g	Mass g	Volume. ml	?
					Can you find?	



Answer= cm³

How many milliliters is the toy scuba diver by using water displacement?
Answer= ml





End Lesson 2 Mass and Volume
Part 2 Density Lesson 2

Density: How much _____ is contained in a given _____. We use grams/cm³ (grams per cubic centimeter)
Density – mass d_____ volume

D = Mass / Volume = grams/cm³

What is the density of this cube if it weighs 100 grams?

1 cm

Answer = g/cm³

Please determine the densities of the following characters. Who is most dense?

Donkey Kong M = 15 g V = 30 cm³
Yoshi M = 13 g V = 8 cm³
Mario M = 8g V = 10cm³
Goomba M = 8g V = 6 cm³

Donkey Kong= g/cm³	Yoshi= g/cm³	Goomba= g/cm³	Mario= g/cm³

Answer= Who is the most dense?

An object will float in _____.
Density of less than one = _____.
Density of more than one = _____

What is the density of an objects whose mass is 500 grams and displaces 250 ml of water?	What is the density of an objects whose mass is 200 grams and displaces 250 ml of water?
Density = M / V =	Density = M / V =
Will the object float in water? Yes / No	Will the object float in water? Yes / No

End Lesson 3 Density -Lesson 4 has no .doc component
Part 2 Lesson 4 Density Continued

Density is defined as mass per unit V_____. It is how much the mass is confined in a substance. It helps show if a_____ are packed closely together or spread far apart. To measure density, measure the mass on a balance, calculate volume and d_____ the two. This process does not involve a chemical c_____ and is thus a p_____property. Another way to measure density is by using its displacement of l____.

Part 2 Lesson 5 Density Quiz Lesson 7 is answers
Volume and Density Quiz 1-10 From Slideshow / Video

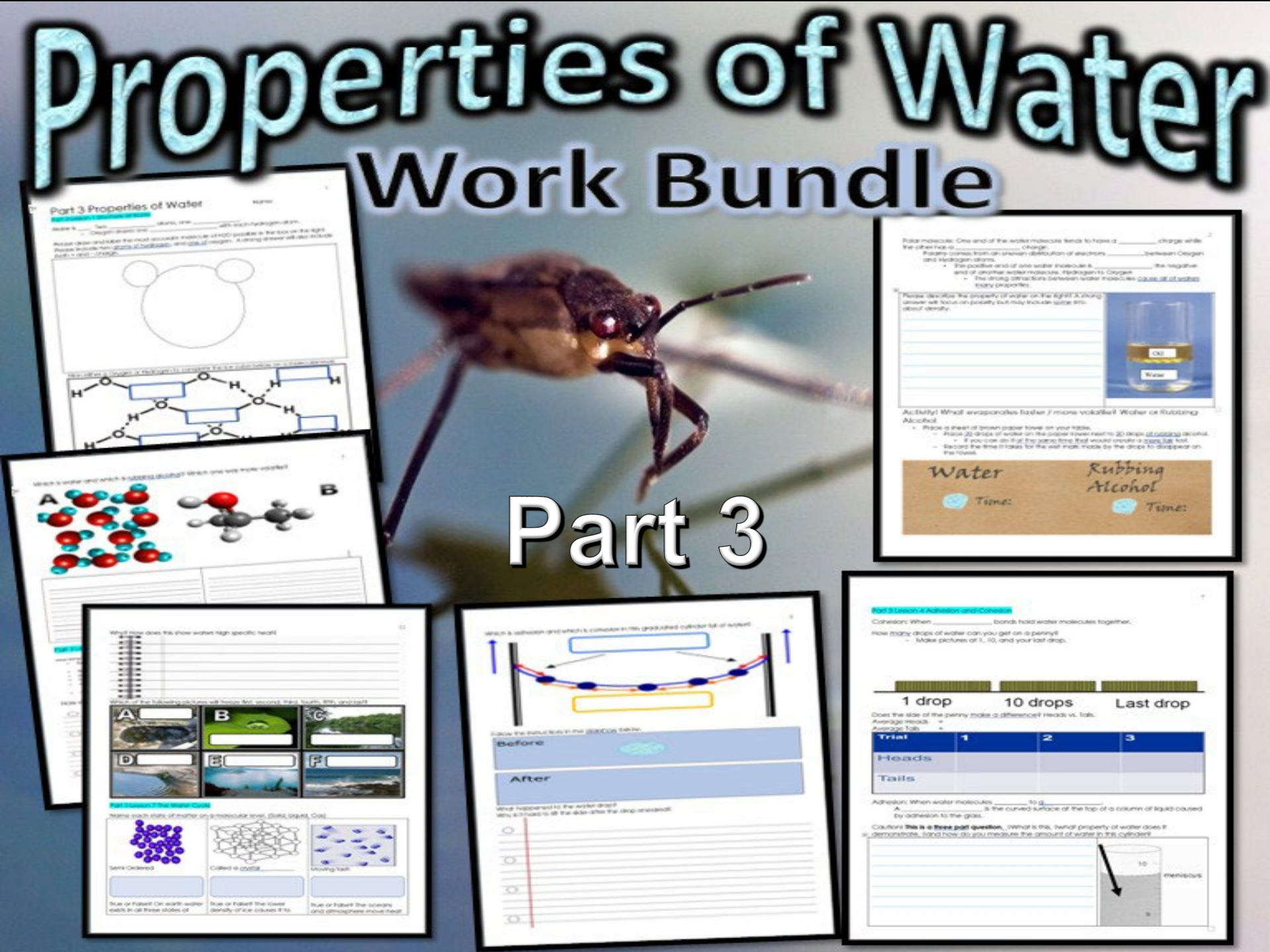
Score out of 10_____

1)	2)	3)
4)	5)	6)
7)	8)	9)
10)	*11) bonus	

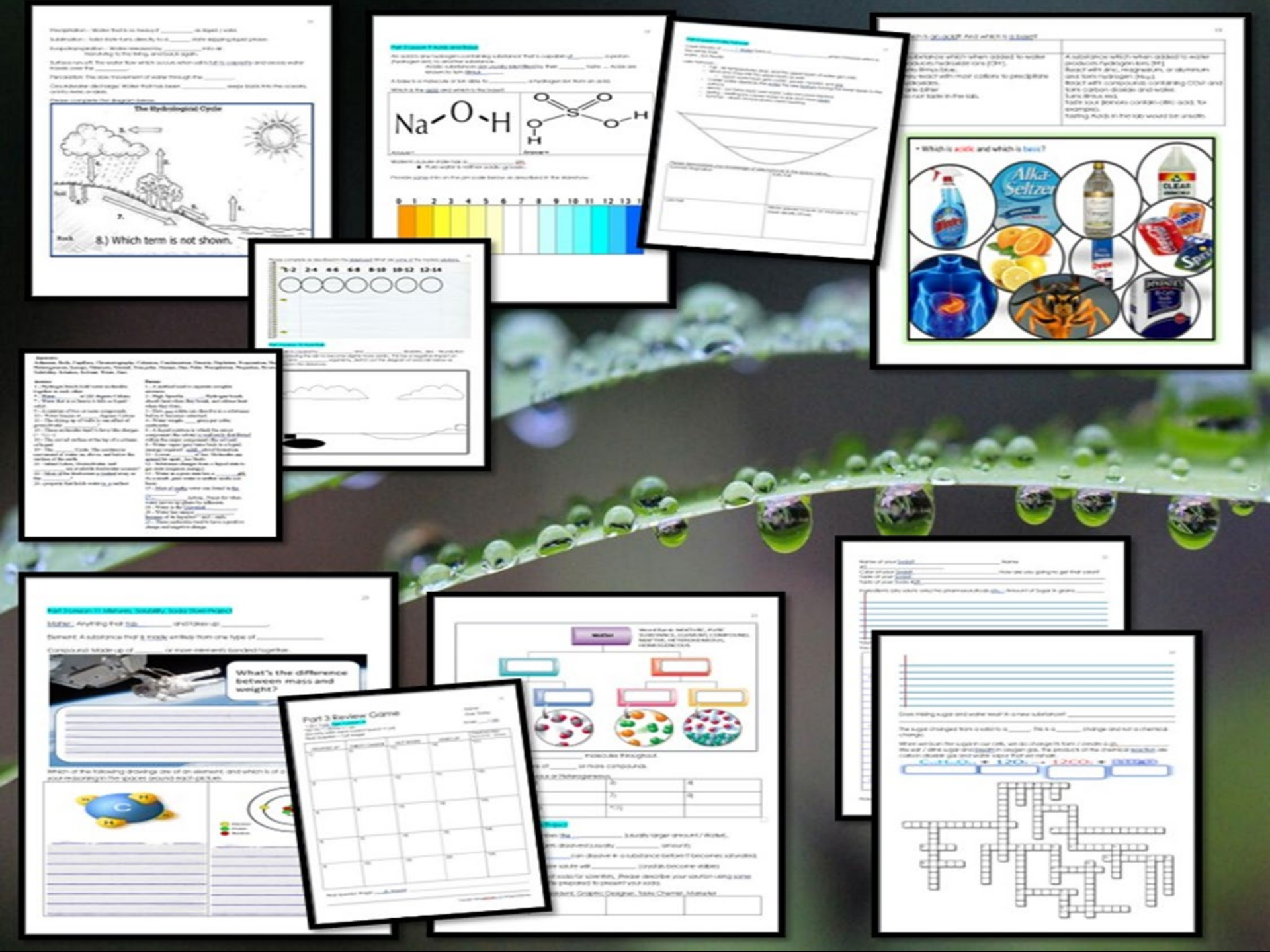
6 Pages

Properties of Water

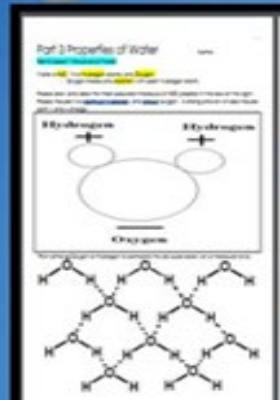
Work Bundle

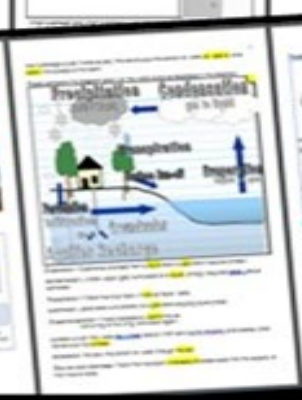


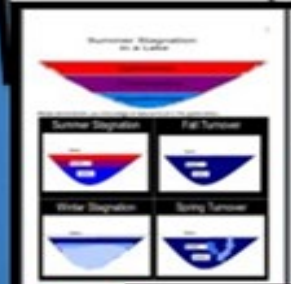
Part 3

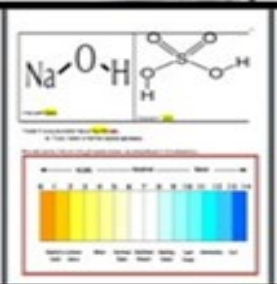

The Hydrological Cycle
8.) Which term is not shown.
Na O H
What's the difference between mass and weight?
Part 3 Review Game
• Which is acidic and which is basic?
Alka-Seltzer

Answer Version



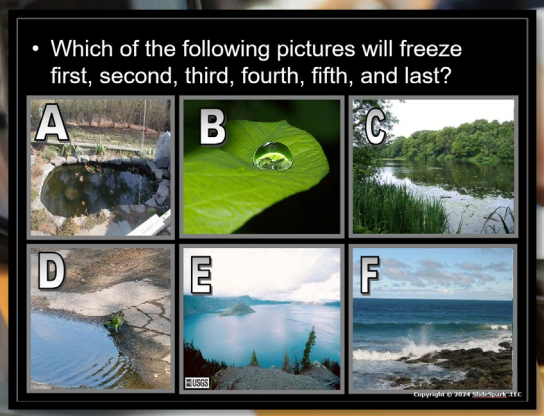


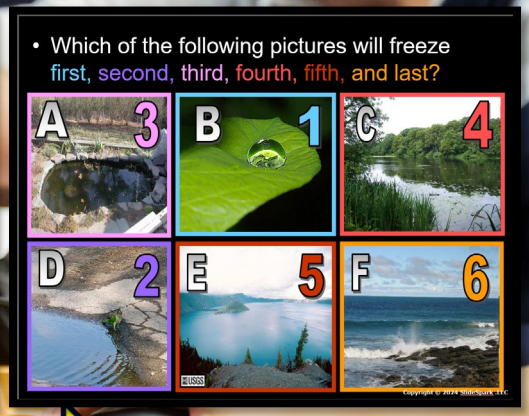




Built-in Questions

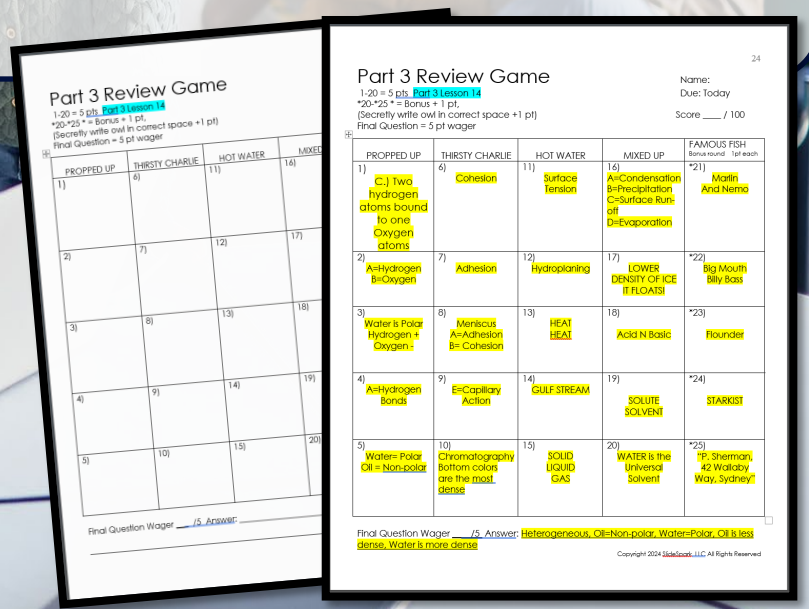
Many slides will have relevant terms covered with a box. When advancing through the slideshow an outline around the box will glow with a bright color. The next slide will make the box disappear. These slides allow the teacher to call upon students or table groups / check for understanding before advancing. The team at SlideSpark has found that using this technique helps to keep the students focused. Constantly recalling and reviewing information learned is necessary when moving through a large unit. The slideshows don't just give everything away for free. Students should be able to demonstrate knowledge before moving on. Some slides have full questions instead of just covered terms. In these slides, the teacher should encourage small group work. The teacher can then call upon one or two groups to share before advancing the slide. The next slide will always reveal the correct answer.





Review Game / Assessments

Each of the 11 Units concludes with a review quiz. Answers are provided in slideshow form so students can self assess. A blank template sheet is provided in the work bundle. Students can benefit from working together in small table groups with quiet communication. You can decide if you want to allow the use of work bundles or not. These are a nice review opportunity and get the students looking through their work bundles for the answers.



WATER ON EARTH

Quiz Game

Part 1

- The oceans make up this % of all the water on planet earth?
- A.) .097%
- B.) .97%
- C.) 9.7%
- D.) 97%

6

- Earth is known as the blue planet as it has this glow from space.
  - This blue is from all the water on our planet.

1

- This is the name for an underground layer of water-bearing permeable rock.

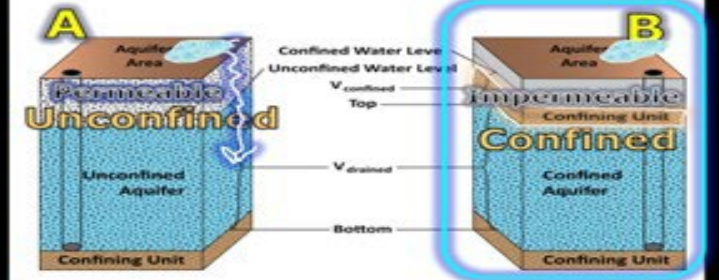
8

- Name some sources of usable and obtainable freshwater on planet earth? Two Points each
  - Rivers, Inland Lakes, Groundwater

7

Which one is confined?

9



- Name this sea in Kazakhstan that has vanished as a result of poor water planning.

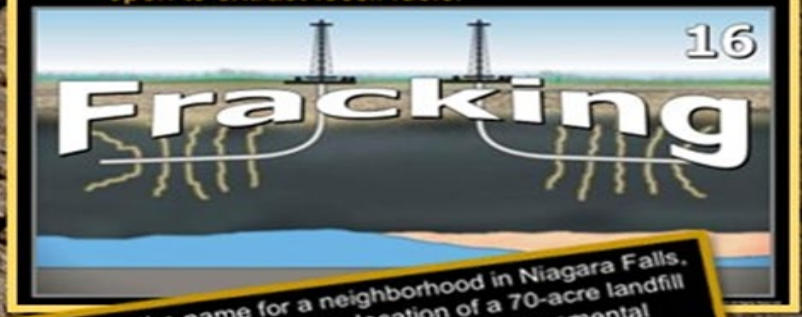
13

- Which is not a negative effects of groundwater depletion
  - A.) Drying up of wells
  - B.) Reduction of water in streams and lakes
  - C.) Deterioration of water quality
  - D.) Increased pumping costs
  - E.) Land use decreases in quality

12

Name 3 sources of groundwater contamination?

- This is the slang term for hydraulic fracturing.
  - It's a procedure of creating fractures in rocks and injecting fluid into cracks to force them further open to extract fossil fuels.



Wha[illegible] years saw the most discharge from the aquifer in Georgia?

Year	Water level below ground
1960	163 ft
1965	170 ft
1970	173 ft
1975	175 ft
1980	168 ft
1985	183 ft
1990	190 ft
1995	200 ft
2000	215 ft
2005	195 ft
2010	199 ft

This was the name for a neighborhood in Niagara Falls, New York, infamous as the location of a 70-acre landfill that became the site of an enormous environmental disaster in the 1970s.

15


3
Recreation


Which is recharge and which is discharge to the aquifer?
A
B
10
Discharge
Recharge


4
Agricultural


2
Survival / Health


Transportation
5

What is the name of this source of freshwater?

The Great Lakes

Does anyone know the names?

18

- Name 5 ways to conserve water? Keep it simple and short. (1 point each)

WATER CONSERVATION AROUND THE HOUSE

Let's Share!

17

The Earth surface is covered with roughly this percentage of water?

20

A.) 3%
B.) 25%
C.) 40%
D.) 71%
E.) 100%

- Which is not a source of the water on planet Earth?

19

SOIL MOISTURE
Rivers
Lakes
Clouds
Atmosphere
Living Things
Oceans
Water Fountain
Ice Caps
GROUNDWATER

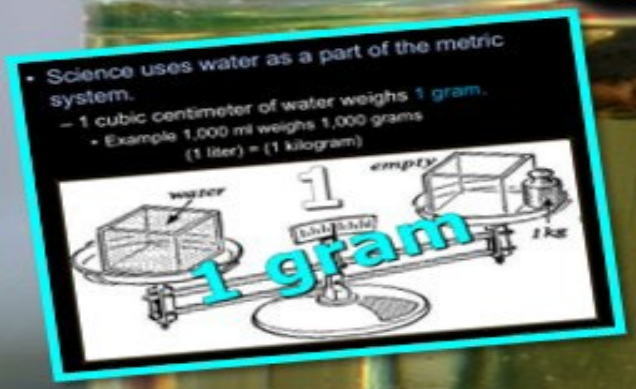
- Which are the only two below that are obtainable Freshwater?

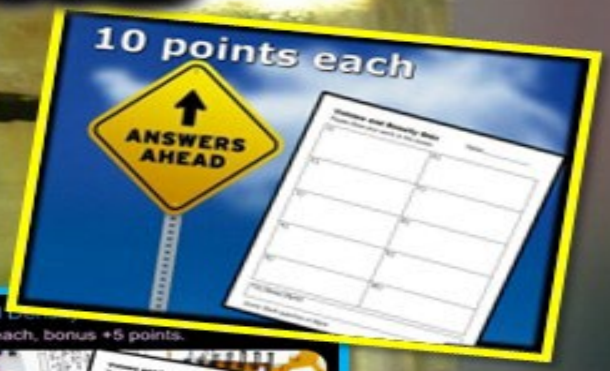
SOIL MOISTURE
Rivers
Lakes
Clouds
Atmosphere
Living Things
Ice Caps
Oceans

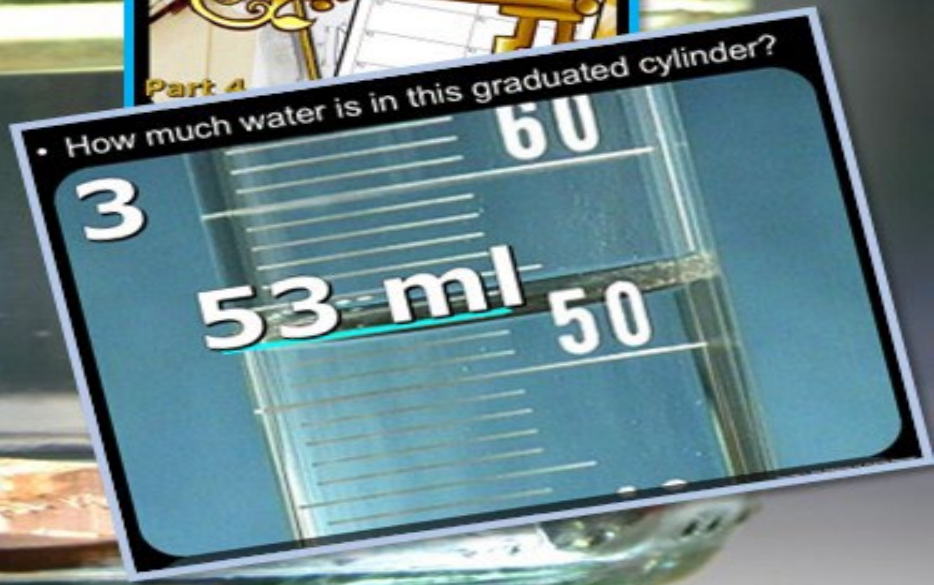
VOLUME & DENSITY

QUIZ GAME

Part 2



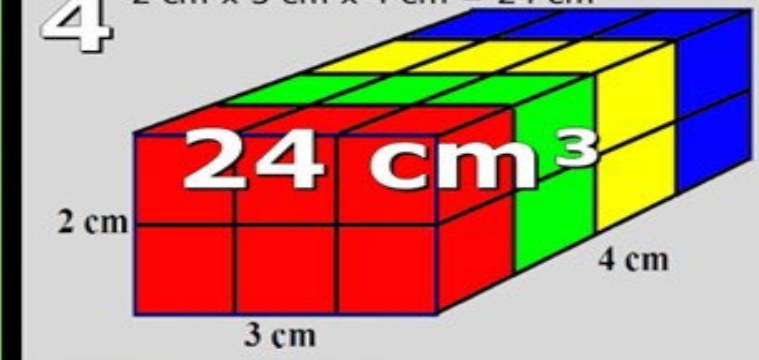




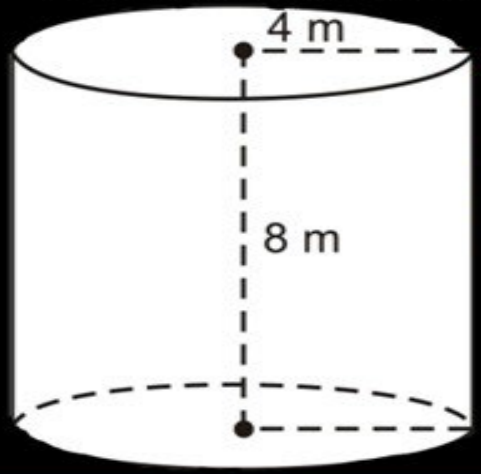
- What's the volume of this rectangle?

4

2 cm x 3 cm x 4 cm = 24 cm³



- What's the volume of this cylinder?



Volume = π x r² x h
- PEMDAS – Must do exponents first
- Volume to be...

3.14 (4²) x 8=
3.14 (16) x 8=
3.14 (16) x 8=401.92 cm³

5

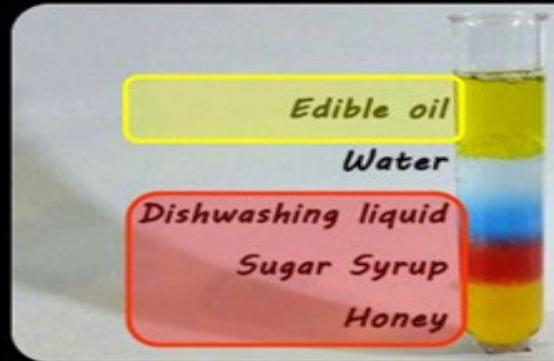
- The wooden block has density less than…

8

Less than 1 g/cm³
(It floats in water)

- Name one liquid more dense than water, and one liquid less dense than water?

10



- What is the density of this cube?

9

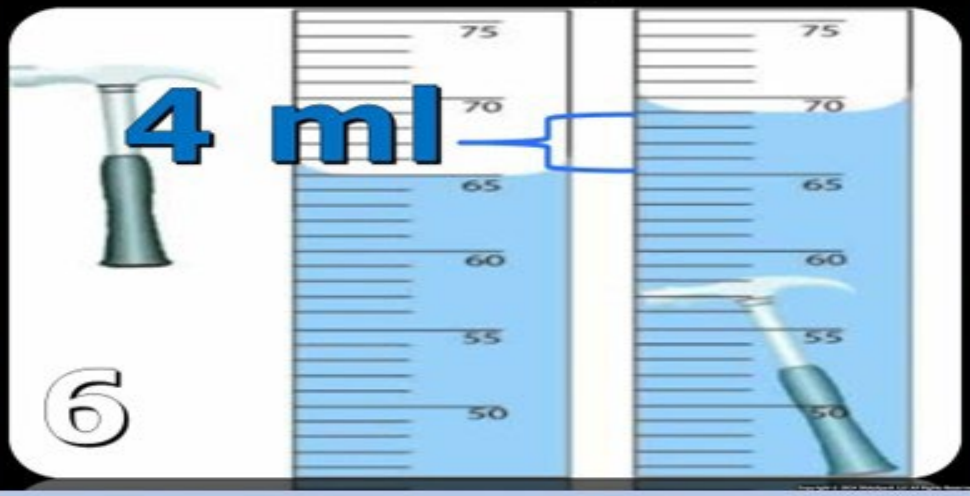
1.16 g/cm³
Weighs 145 g

- Density: Is how much mass is contained in a given volume. We use grams/cm³
  - (grams per cubic centimeter)

What is the formula for finding density?

7

- What's the volume of the toy hammer?



- Density: Is how much mass is contained in a given volume. We use grams/cm³
  - (grams per cubic centimeter)

What is the formula for finding density?

7

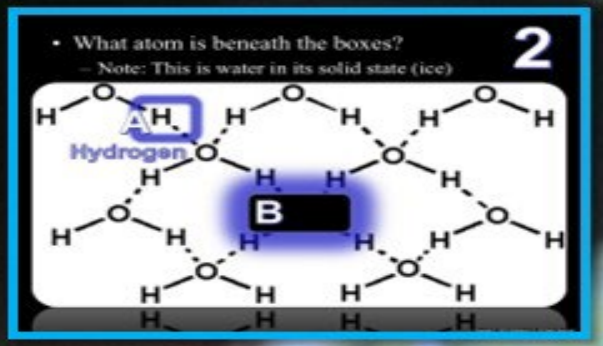
- Density = Mass divided by volume

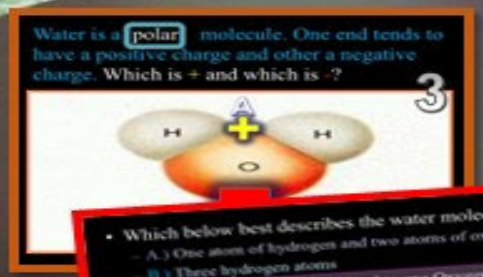
$$D = \frac{\text{mass}}{\text{volume}} = \text{grams/cm}^3$$

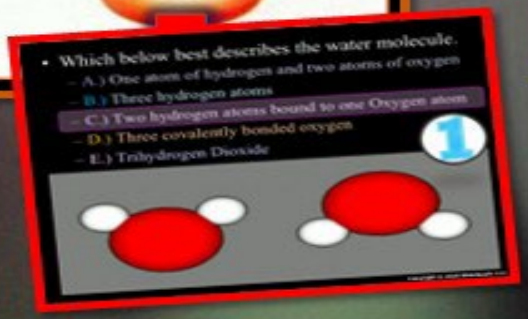
Properties of Water

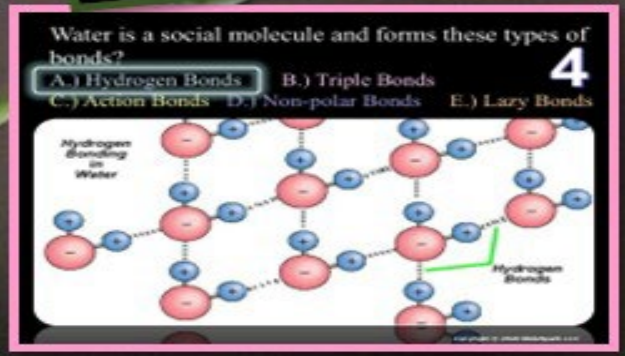
QUIZ GAME

Part 3









Fill-in the missing term

M n s S

8

- Name this method to used to separate a complex mixture?
  - Which color is the least dense?

10

Chromatography

Blue / Purple

Most Dense

- Name this property of water?

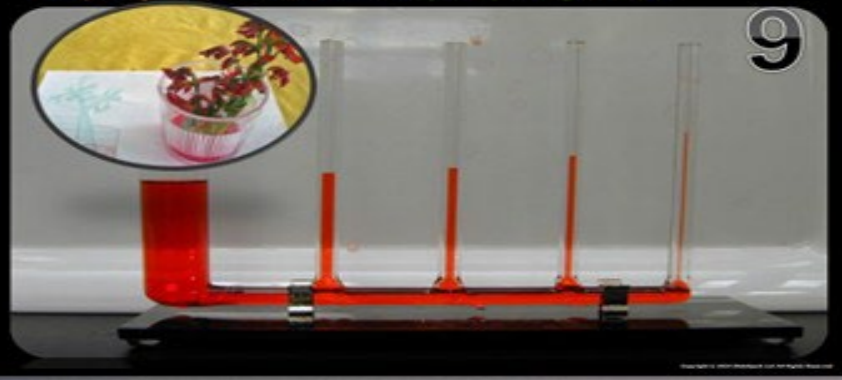
11

Surface Tension

- These images best represent the term…

A.) Osmosis B.) Surface Tension C.) Neutral pH

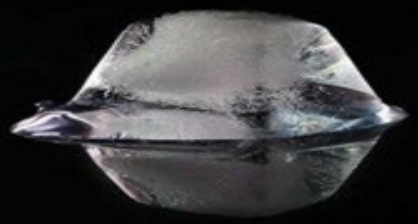
D.) High Specific Heat E.) Capillary Action



9

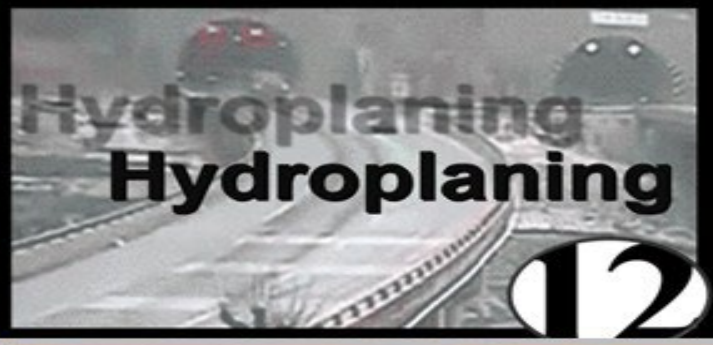
Water Cycle

- Hydrogen bonds absorb [redacted] when they break, and release [redacted] when they form.



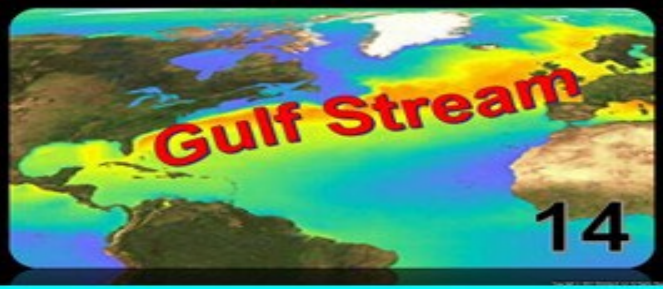
13

- What's the name for when a car loses control of the road as it rides on top of the water?



12

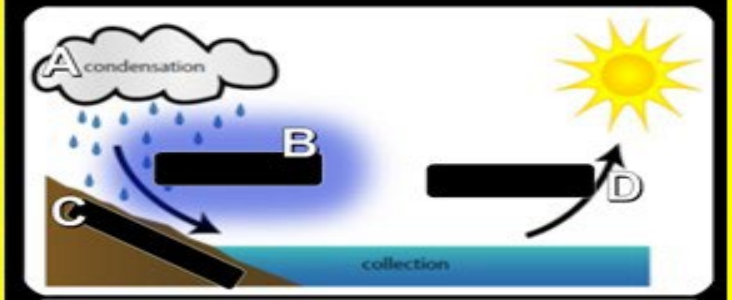
- What is the name of this warm water current that that travels NE along the United States toward Europe.



14

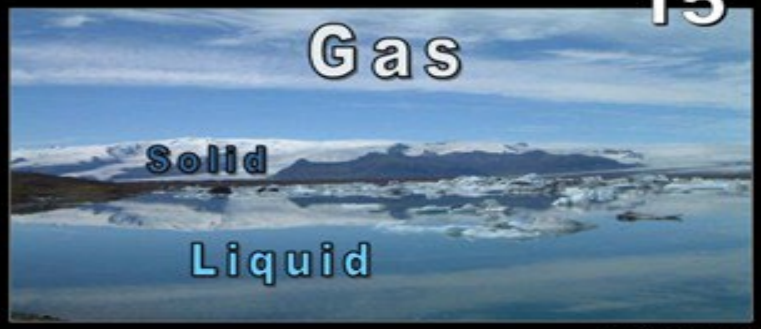
- Name the parts of the hydrologic cycle below?

16



- Waters exists in these states of matter on planet earth?

15



- Homogeneous or Heterogenous?
- Which is polar and which in non-polar?
- Which is less dense?

Heterogeneous

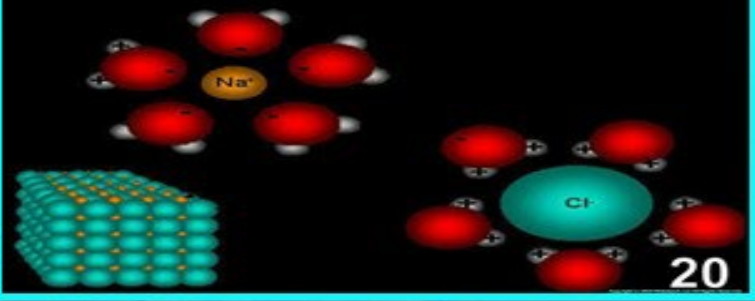
Oil Non-polar

Polar Water

Solvents

- The polarity of water pulls in other molecules and surrounds them with water molecules.

This makes water the...

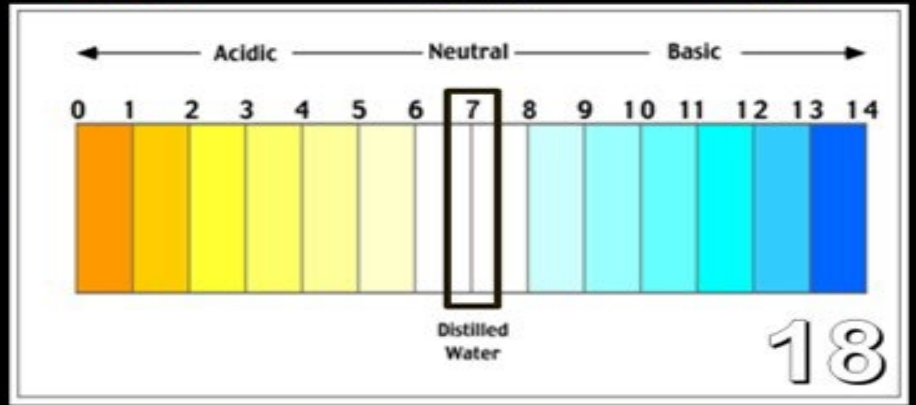


20

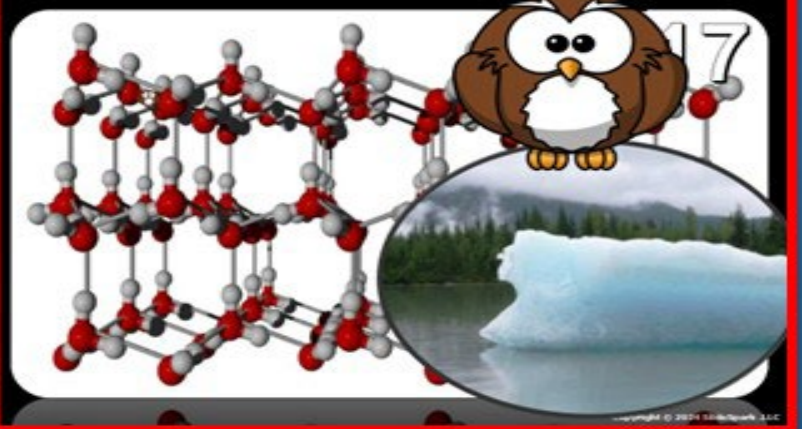
- Solution: A liquid mixture in which the minor component (the solute) is uniformly distributed within the major component (the solvent).

pH

- Where does water fall on the pH scale?
- Acidic -Neutral -Basic

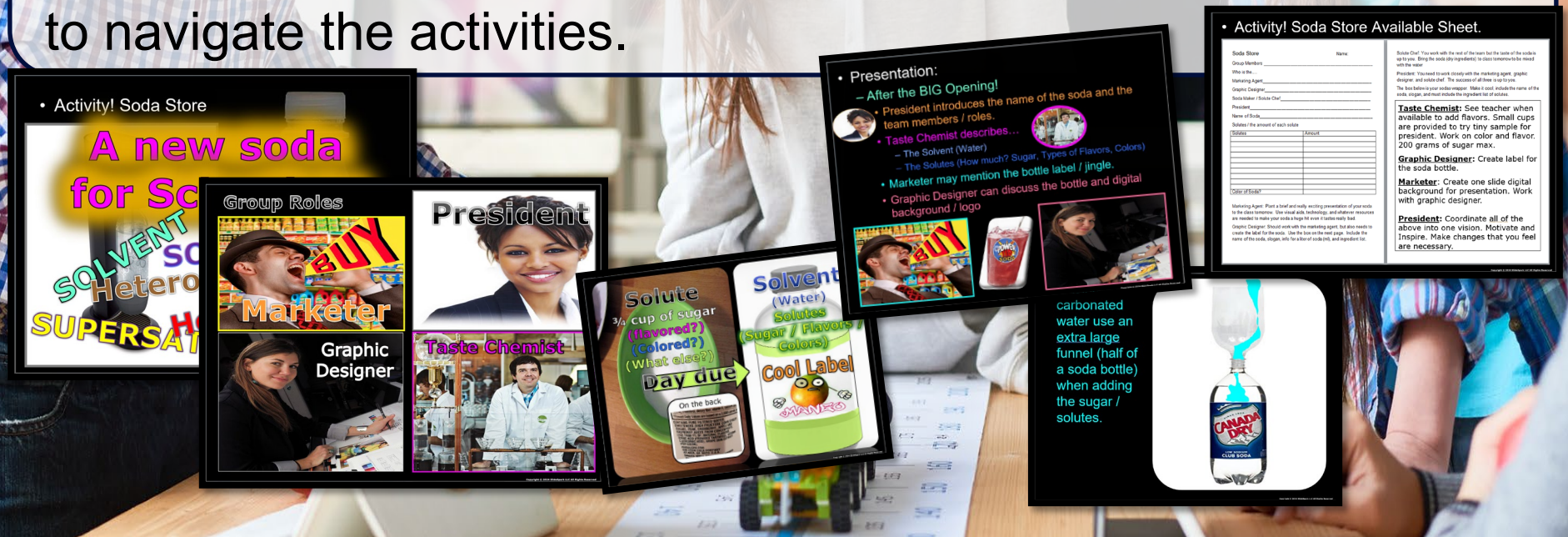


- The Lower Density of **ICE**. It **Floats**!



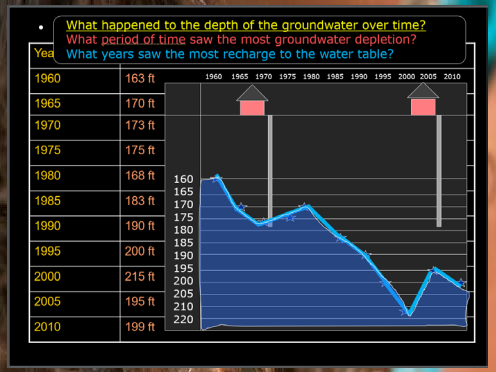
Activities / Labs

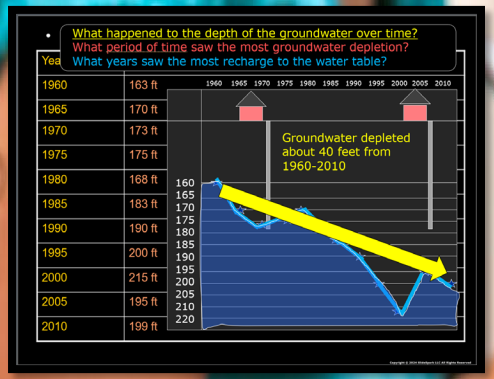
Our science activities are designed to help students explore and understand complex scientific concepts in an engaging and interactive way. Each science unit includes several hands-on activities that encourage students to collect data and think critically about the world around them. Our easy-to-follow slideshow provides detailed visuals, simple materials, and clear directions, making it easy for both students and teachers to navigate the activities.

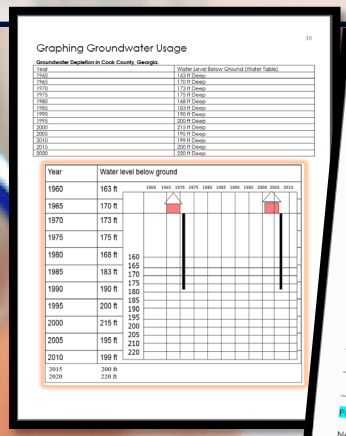


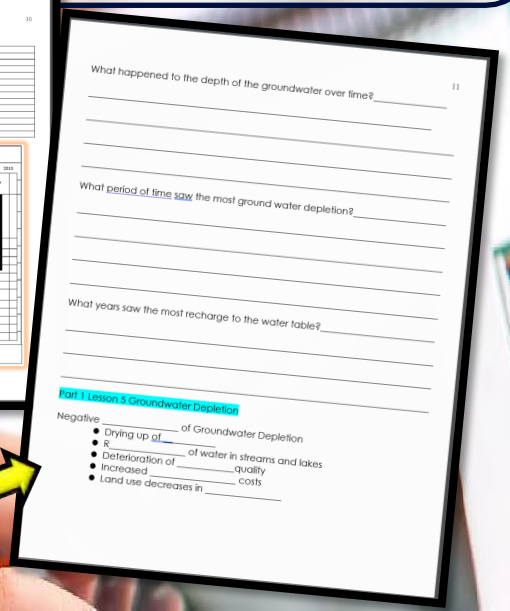
Built-in Questions

Each unit contains several built-in assessment questions that students answer in their work bundle. With the question revealed before the answer, the teacher can easily call on individual students or table groups to respond. These provide an effective and efficient way for teachers to assess student learning.









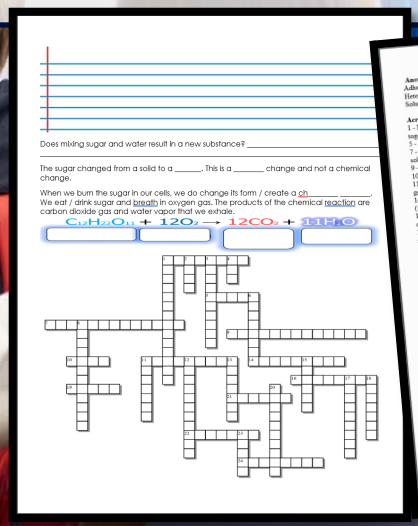
Questions in Work Bundle

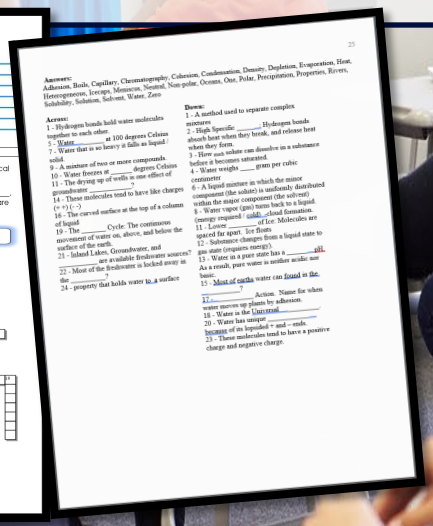
Built-in Video Links

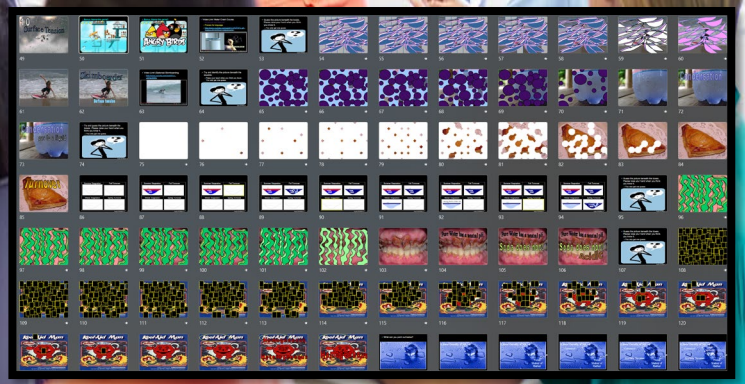
Our science education program is designed with the modern, multimedia learner in mind, and our video links are a perfect complement to our educational materials. These short clips are embedded into the slideshow at just the right places for a fantastic review. Whether you're studying biology, chemistry or physics, our video links are an excellent way to reinforce your learning.

Games and Review

Games are a fantastic way for students to learn scientific concepts while having fun. We incorporate a variety of games into our curriculum, including interactive quizzes and puzzles that challenge students to think critically about the material. Our Hidden Box Games are a particularly popular feature, which conclude each unit by revealing a picture related to the topic. Students try to guess what the picture might be, making learning an engaging experience.







The Owl - Each Part of the slideshow has a small clipart Owl hiding somewhere in a slide. The owl is incredibly small and blended into just the right slide. If a student spots the “Owl” they can raise their hand high into the air. When you call upon the student they can say “Owl" and be the student who spotted the Owl. Each PowerPoint Review game also has an owl hiding in it worth one point. Remind the students that they secretly write the word "owl" rather than yell it out during the review games. The Owl search is not included in every lesson. A slide at the beginning of the lesson will alert the students that today is an “Owl’ day. Everything arrives editable so delete if you wish. You will find that some students will become the expert owl hunters in the group.

Google Classroom Compatible

Our digital learning programs are designed for students to learn science in a flexible and engaging environment. Our Google Classroom-compatible units provide a seamless learning experience whether your students are in the classroom or learning from home. Our step-by-step slideshows and student work bundles ensure that students can complete their work independently. The PowerPoint Slideshows and step-by-step work bundles can easily be loaded to your Google Drive and posted in your Google Classroom. These are great for daily lessons, students who need additional time, and for a student who was absent and looking to catch up in their work bundle.

Part 1 Lesson 2 Water the R...

Google Slides

Part 1 Lesson 1 Water on Ear...

Google Slides

Part 1 Lesson 6 Contaminati...

Google Slides

Part 1 Lesson 3 Water Cons...

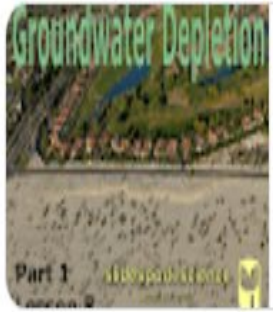
Google Slides

Part 1 Lesson 4 Groundwater

Google Slides

Part 1 Lesson 8 Review Game

Google Slides



Part 1 Lesson 5 Groundwate...

Google Slides

Part 1 Lesson 7 Pollution an...

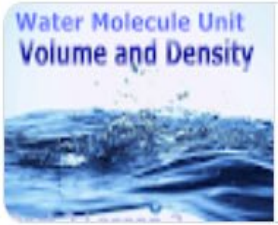
Google Slides

Part 2 lesson 4 Density ...

Google Slides

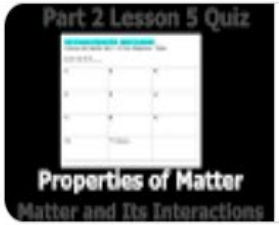
Part 2 lesson 1 Mass and...

Google Slides



Part 2 lesson 2 Calculati...

Google Slides



Part 2 lesson 5 Density ...

Google Slides

Part 2 lesson 3 Optional ...

Google Slides

Part 2 lesson 6 Density ...

Google Slides

Part 3 Lesson 10 Acid Rain

Google Slides

Part 3 Lesson 2 Polarity Lav...

Google Slides

Part 3 Lesson 5 Surface Ten...

Google Slides

Part 3 Lesson 4 Adhesion C...

Google Slides

Part 3 Lesson 9 Acids and B...

Google Slides

Part 3 Lesson 6 Specific Heat

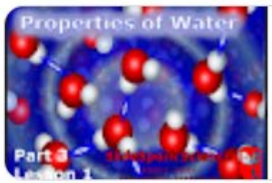
Google Slides

Part 3 Lesson 3 Oil Spill at S...

Google Slides

Part 3 Lesson 8 Lake Turnov...

Google Slides



Part 3 Lesson 1 Structure of ...

Google Slides

Part 3 Lesson 7 Water Cycle...

Google Slides

Part 3 Lesson 13 Quiz Wrap ...

Google Slides

Part 3 Lesson 14 Review Ga...

Google Slides

Part 3 Lesson 12 Soda Store

Google Slides

Part 3 Lesson 11 Solubility t...

Google Slides

Water Molecule Unit

Water Unit

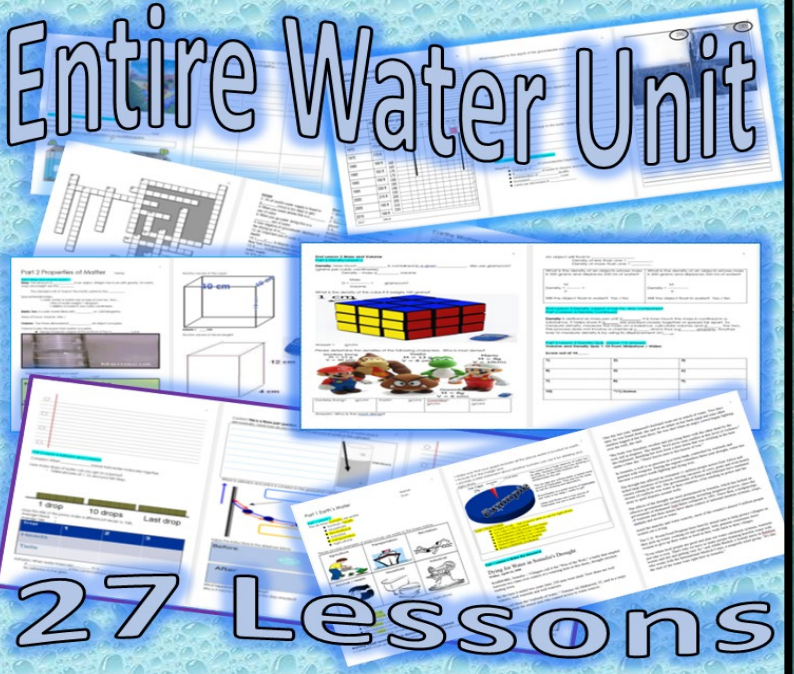
20 Lessons (5th-7th – Medium Difficulty) Part 1 has 8 Lessons and 21 Page Work Bundle, Part 2 has 5 Lessons and 5 Page Work Bundle, Part 3 has 14 Lessons and 25 Page Work Bundle

Water Unit Part 1 Download: Ways Humans Use Water, Earth's Water Supply, Water % on Earth and Locations, Water Shortages, Case Study of a Well in Somalia controlled by Warlords, Groundwater, Ground Depletion vs Recharge, Negatives of Groundwater Depletion, Water Conservation, Aquifers, Types of Aquifers, Groundwater Pollution, Case Study of Love Canal Tragedy, Edwards Aquifer, Danger Under the Sand Groundwater Pollution Activity, Box Game Review, Crossword Puzzle, End Unit Assessment with Answer Version so Students can Self-Assess

Water Unit Part 2 Download: Volume and Density: Mass, Metric Ton, Volume, Finding Volume of Objects and Measuring, Volume of Irregular Shaped Object by means of Water Displacement, Finding Density, Finding the Density of a Student Optional Activity, Going Rafting Activity, Volume and Density Quiz with Answer Version so students can Self-Assess

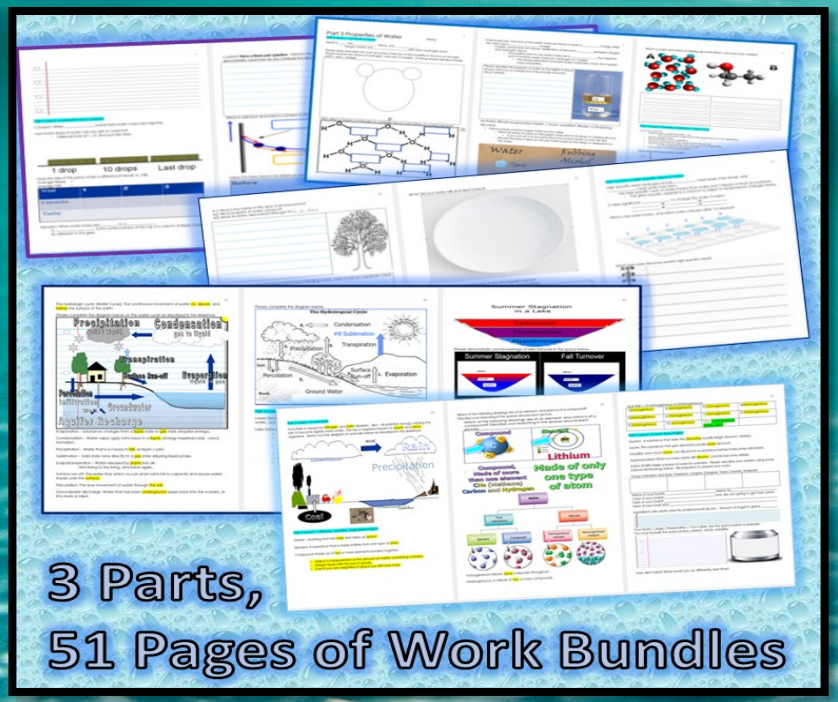
Water Unit Part 3: Properties of Water, The Water Molecule, Polar and Non-polar molecules, Volatility Activity with Alcohol vs. Water, Making a Lava Lamp Activity, Oil Spill at Sea Clean Up Project, Properties of Water, Cohesion, Adhesion, Water Drops on a Penny Activity, Capillary Action, Paper Chromatography Activity with filter paper, Capillary Action, Surface Tension, Swirly Milk Activity, High Specific Heat of Water, The Gulf Stream, Ocean Currents, Water Cycle, Terms of the Water Cycle, Condensation, Precipitation, Evaporation High Specific Heat, Ice Cube Tray Activity, Neutral pH, Acids, Bases, Acid Base Activity, Lower Density of Ice, Water is the Universal Solvent, Mixtures, Homogeneous Mixtures, Heterogeneous Mixtures, Mixture Activity, Solutions, Solvent, Solute, Supersaturation, Soda Store Project where Students Make and market and brand of Soda to Scientists, Box Game Review, Crossword Puzzle, End Unit Assessment with Answer Version so Students can Self-Assess

Entire Water Unit



27 Lessons

Full of hands-on activities



3 Parts, 51 Pages of Work Bundles

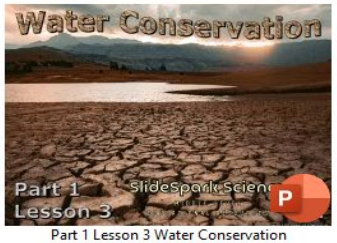
Hundreds of Amazing and Interactive Slides

Part 1: Ways Humans Use Water, Earth's Water Supply, Water % on Earth and Locations, Water Shortages, Case Study of a Well in Somalia controlled by Warlords, Groundwater, Ground Depletion vs Recharge, Negatives of Groundwater Depletion, Water Conservation, Aquifers, Types of Aquifers, Groundwater Pollution, Case Study of Love Canal Tragedy, Edwards Aquifer, Danger Under the Sand Groundwater Pollution Activity

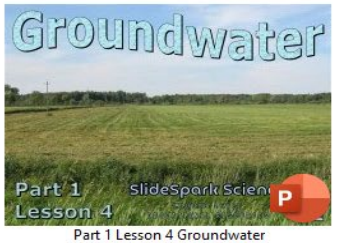
Water Unit Part 1 Download

Part 1 Lesson 1 Water on Earth

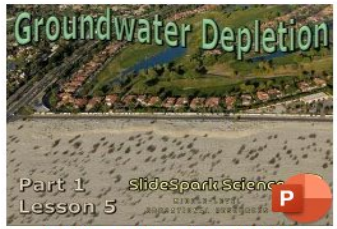
Part 1 Lesson 2 Water the Resource



Part 1 Lesson 3 Water Conservation



Part 1 Lesson 4 Groundwater



Part 1 Lesson 5 Groundwater Depletion

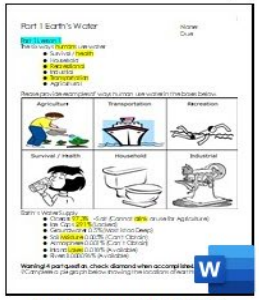
Part 1 Lesson 6 Contamination

Part 1 Lesson 7 Pollution and Wrap Up

Part 1 Lesson 8 Review Game

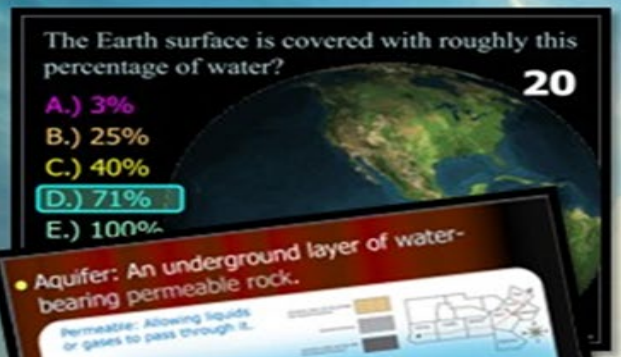
Part 1 Lesson 9 Review Game Answers

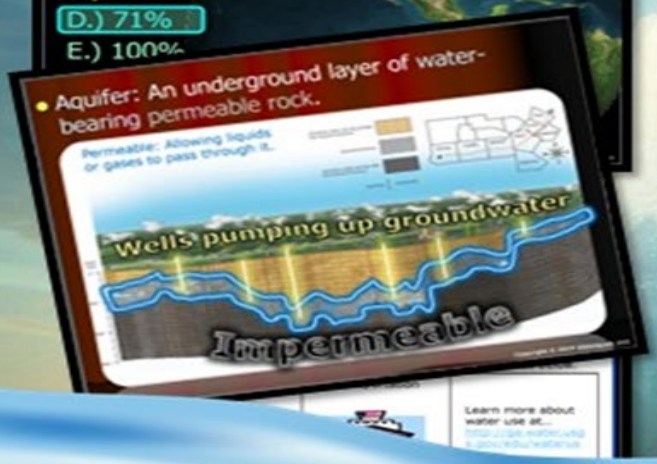

Part 1 Materials List

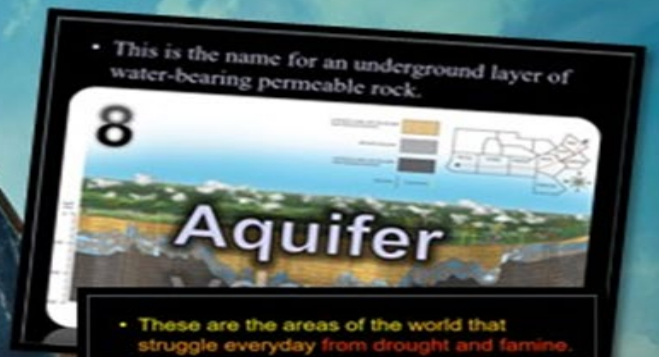

Part 1 Work Bundle Answers

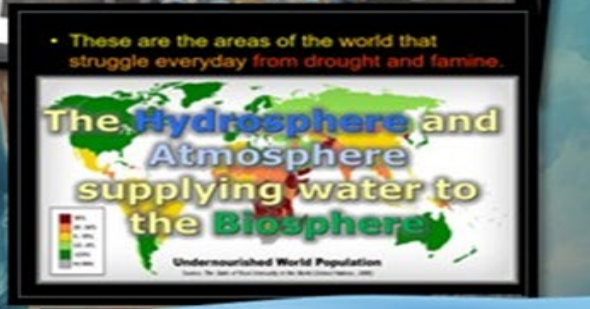

Part 1 Work Bundle Printed

WATER ON EARTH



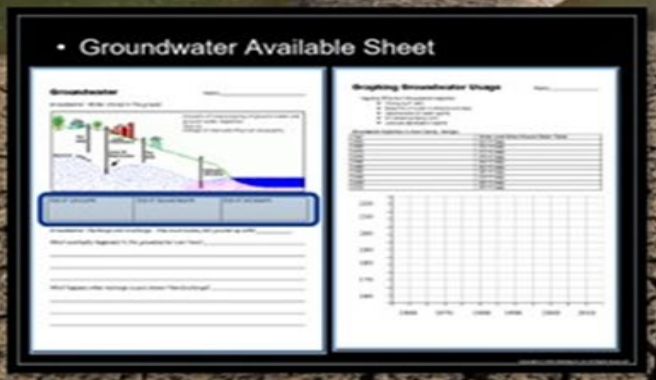


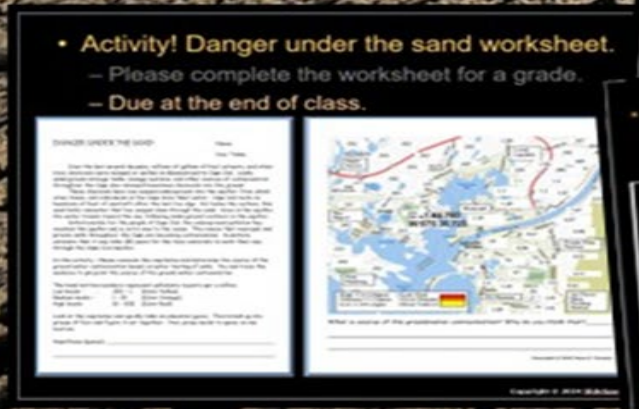




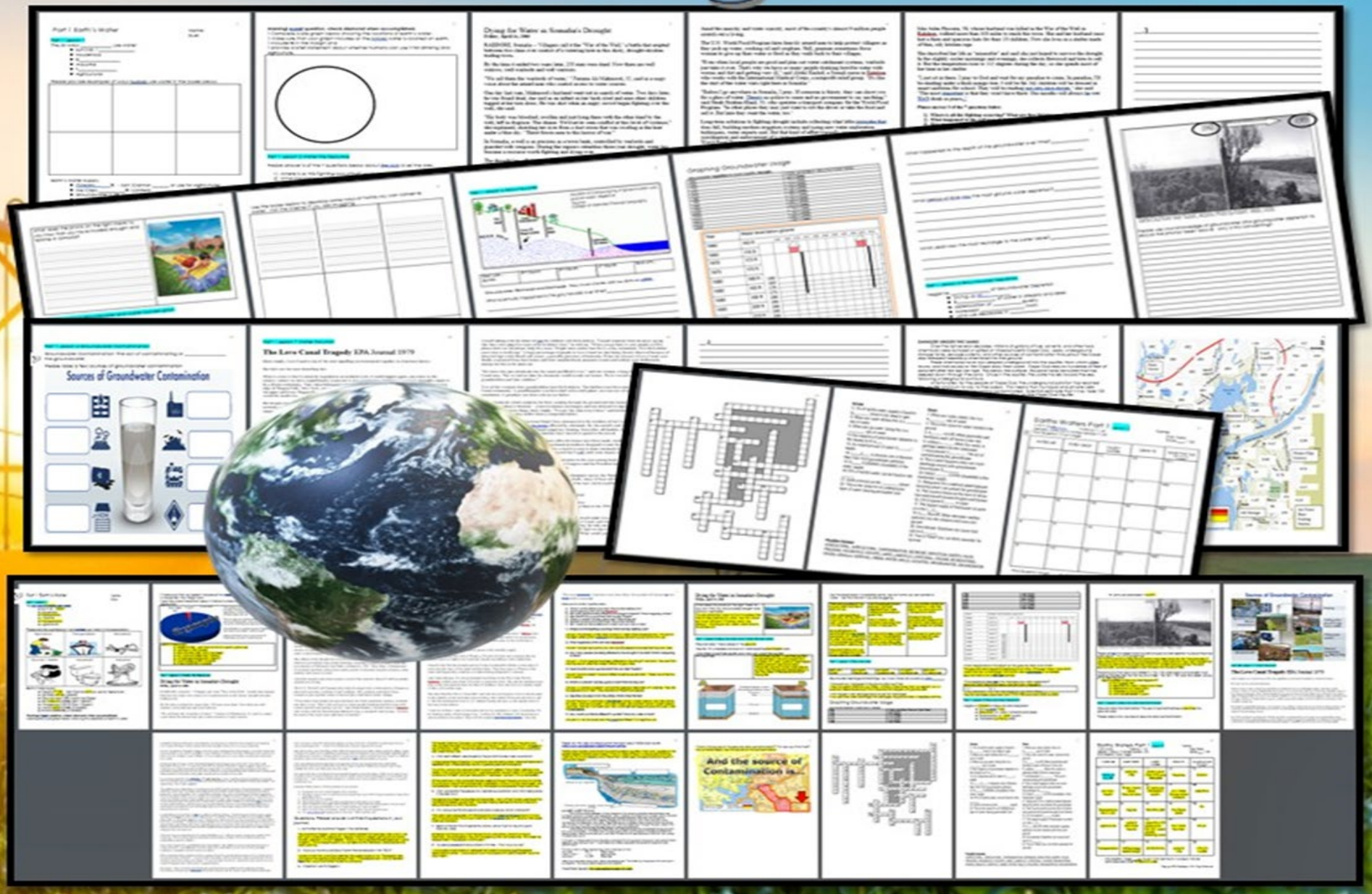
8 Lessons

Interactive Slideshows

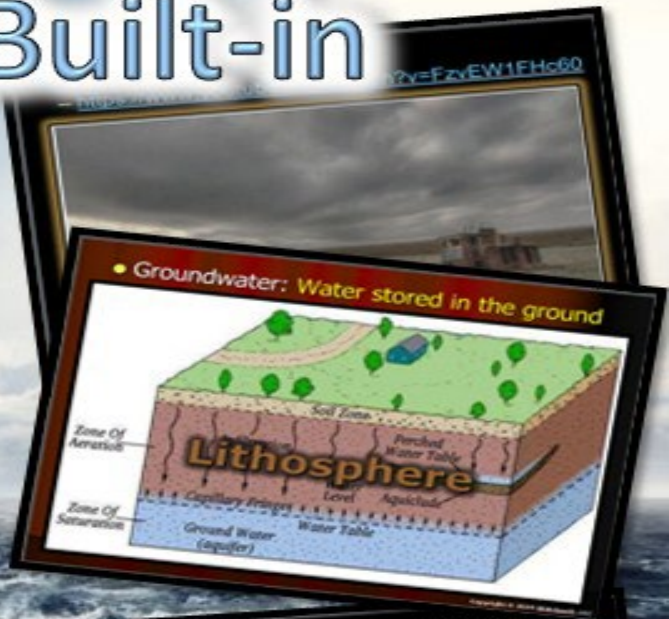


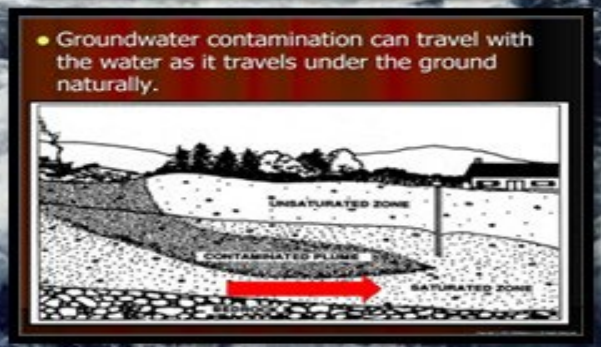


Follow Along Bundle

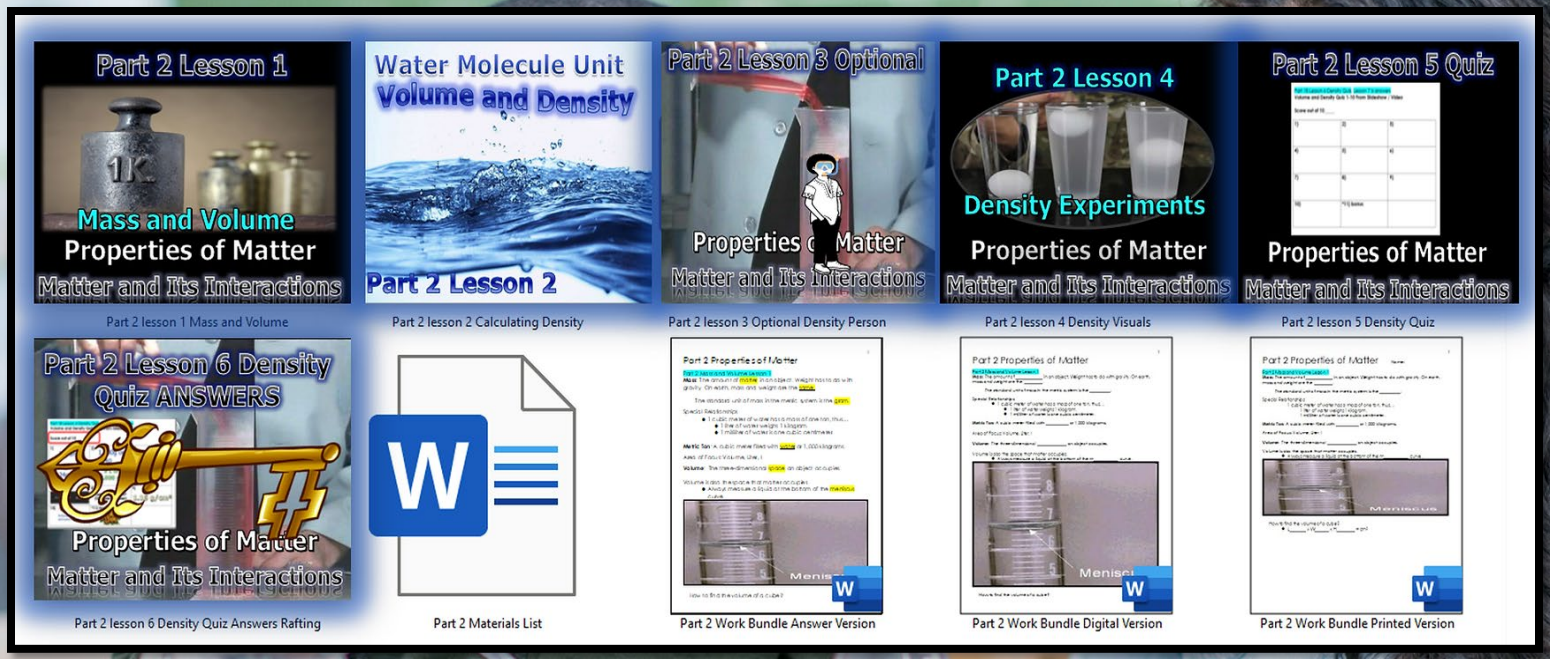


Readings, Video Links, Activities, Assessments, all Built-in





Part 2 Volume and Density: Mass, Metric Ton, Volume, Finding Volume of Objects and Measuring, Volume of Irregular Shaped Object by means of Water Displacement, Finding Density, Finding the Density of a Student Optional Activity, Going Rafting Activity

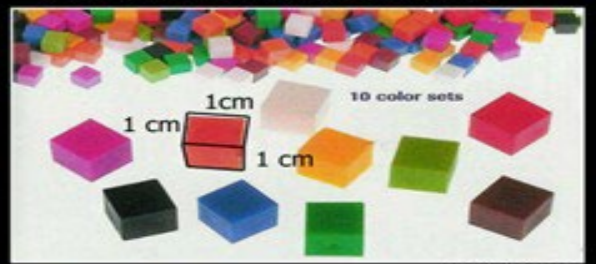


Water Unit Part 2 Download

Volume and Density Unit

- Mass: The amount of matter in an object. Weight has to do with gravity.
  - On Earth, your mass and your weight are the same.

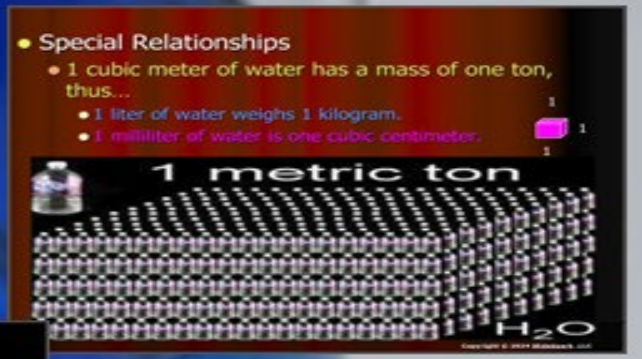
- Each box is a gram. A gram is the weight of one centimeter cubed full of water.



- Science uses water as a part of the metric system.
  - 1 cubic centimeter of water weighs 1 gram.
    - Example 1,000 ml weighs 1,000 grams (1 liter) = (1 kilogram)

- Name one liquid more dense than water, and one liquid less dense than water?

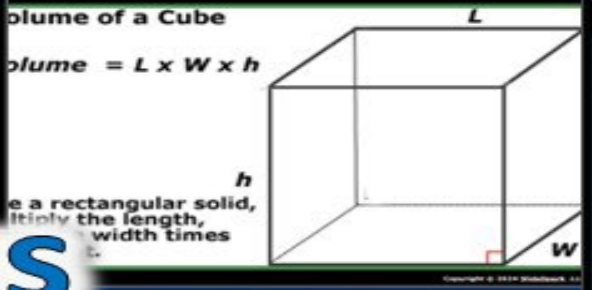
- Special Relationships
  - 1 cubic meter of water has a mass of one ton, thus...
    - 1 liter of water weighs 1 kilogram.
    - 1 milliliter of water is one cubic centimeter.



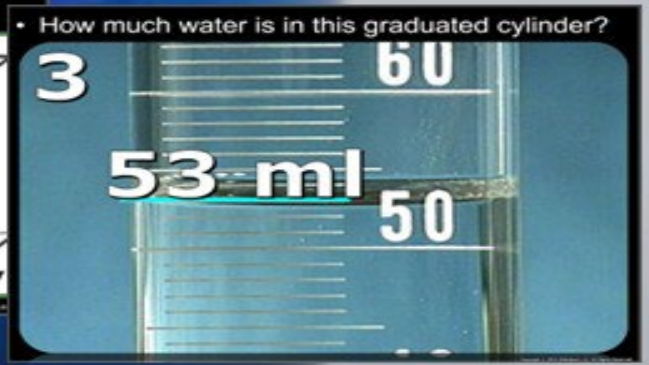
- How much is Bowser by water displacement?

Answer?
500 ml

How do you find the volume of a cube?
– Length x Width x Height = _____cm3

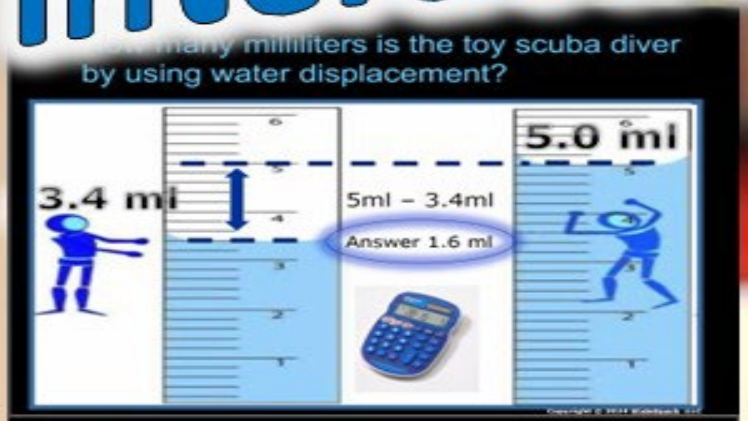


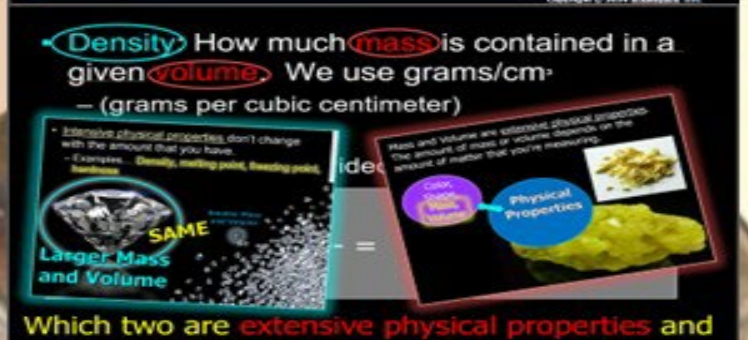
- How much water is in this graduated cylinder?

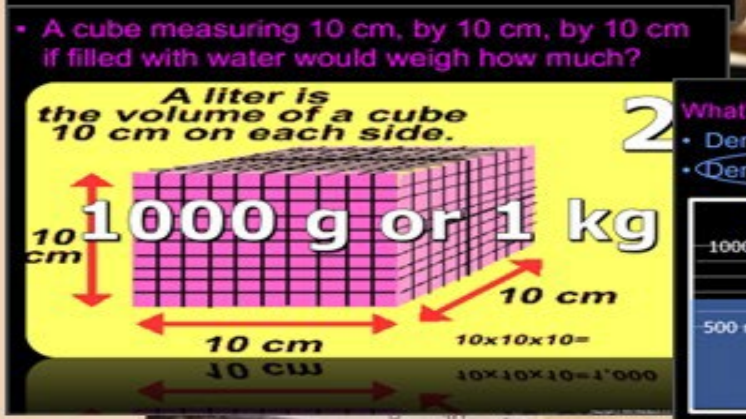


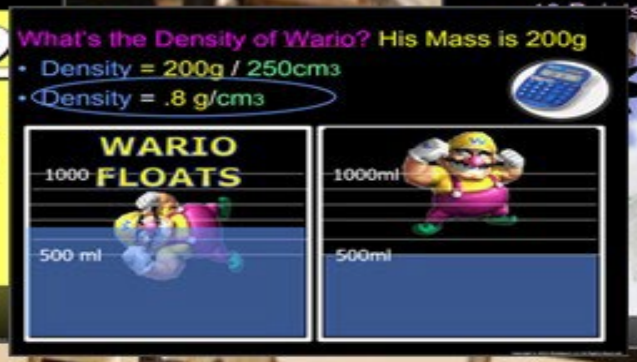
6 Lessons

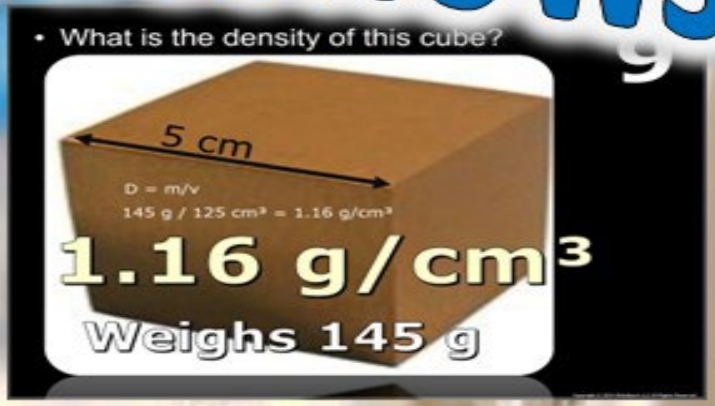
Interactive Slideshows

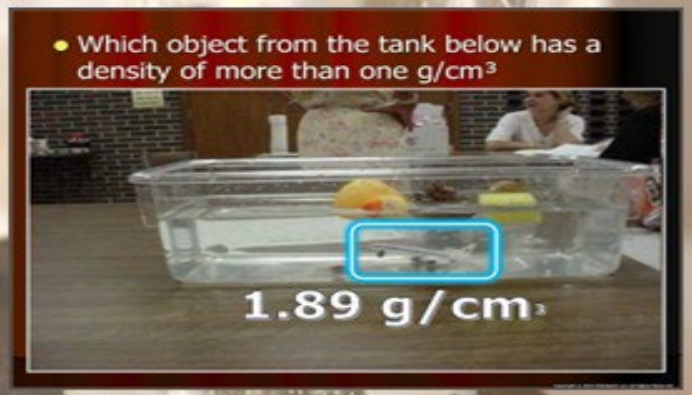


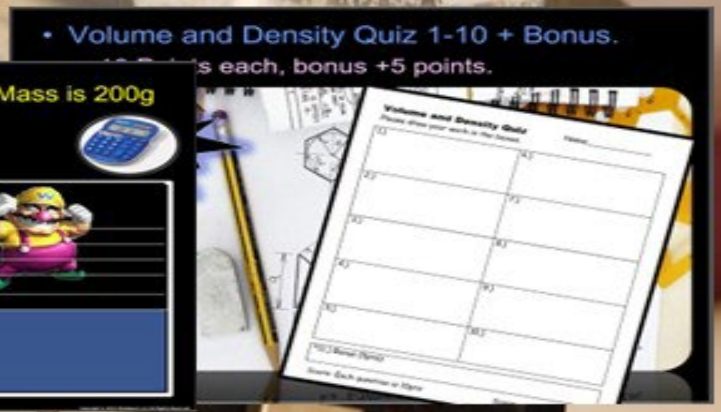




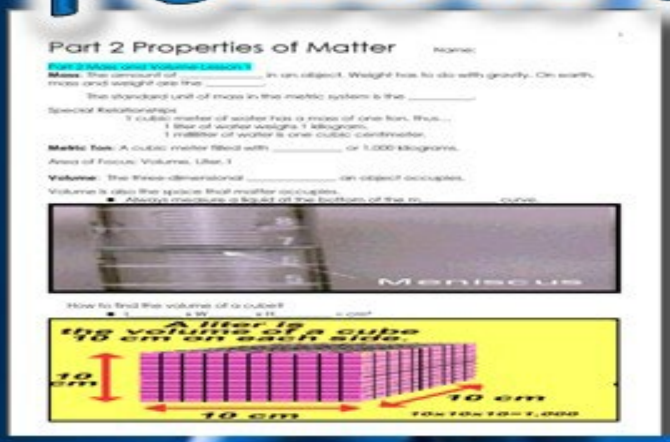


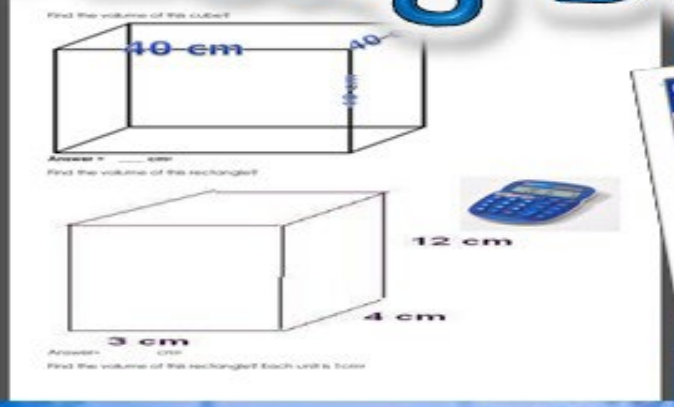


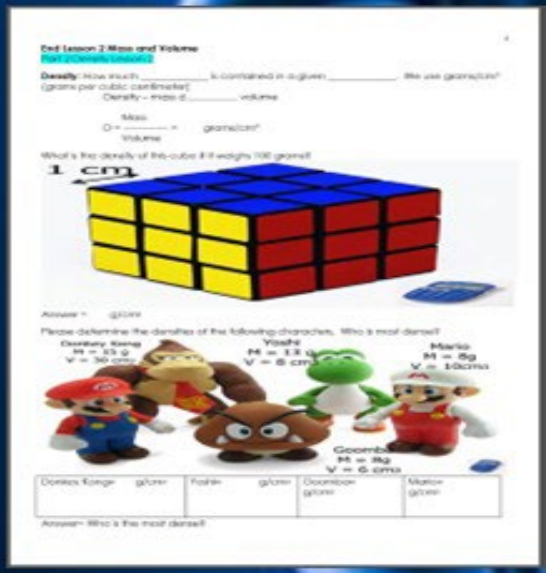


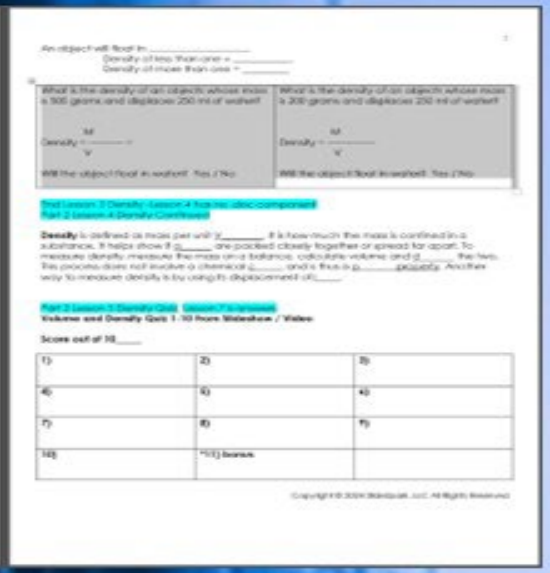


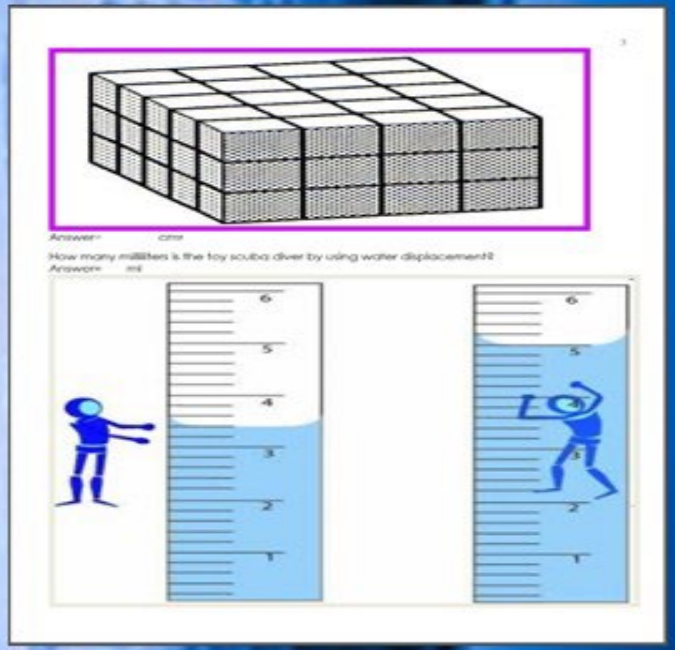
Follow Along Bundle











6 Pages

Activities, Assessments, Keys, and more all built-int

- Demo: Magic Ice Cube? (Optional)
  - Teacher will place ice cubes into the two different containers filled with fluid.
  - Observe what happened and try to explai

Ethyl Alcohol has a density of .79 g/cm³

Ethyl Alcohol

Water

Water has a density of 1g/cm³

Materials less dense than ethyl alcohol will fl in it, while materials more dense will sink.

- Which one will float in water? Diet Coke

Brand of Soda	Sodium	Calories	Sugar	Mass	Volume. H_2O
Coke	45mg	140	39g	388g	375 ml
Sunkist	70mg	190	50g	387g	375 ml
Mt. Dew	65mg	170	46g	387g	375 ml
Diet Coke	40mg	0	0	379g	375 ml
Sprite	60mg	140	38g	380g	375 ml
					375 ml

- Demonstration: "Magic" Salt?
  - Teacher to place eggs into two clear containers filled with water.
  - Next teacher adds salt to one of the container stirring periodically.
  - What happened? Why?

- Layering liquids with different densities.
- Use a clear container and add the following in this order….
  - Corn Syrup
  - Water (food Coloring)
  - Vegetable Oil

Note: When pouring avoid getting on the side.

tional Worksheet. Density A-L

- Density: Is how much mass is contained in a given volume. We use grams/cm³
  - (grams per cubic centimeter)

What is the formula for finding density?

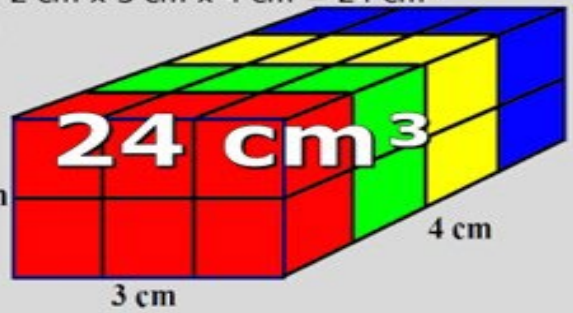
7

- Activity (Optional) Finding density.
  - Go back to the irregular shaped objects them in grams and determine their dens
    - Which objects will float, and which will sink?
    - Remember your answer is in grams / cm³

- What's the volume of this rectangle?

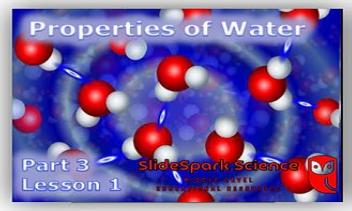
4

2 cm x 3 cm x 4 cm = 24 cm³



Part 3: Properties of Water, The Water Molecule, Polar and Non-polar molecules, Volatility Activity with Alcohol vs. Water, Making a Lava Lamp Activity, Oil Spill at Sea Clean Up Project, Properties of Water, Cohesion, Adhesion, Water Drops on a Penny Activity, Capillary Action, Paper Chromatography Activity with filter paper, Capillary Action, Surface Tension, Swirly Milk Activity, High Specific Heat of Water, The Gulf Stream, Ocean Currents, Water Cycle, Terms of the Water Cycle, Condensation, Precipitation, Evaporation High Specific Heat, Ice Cube Tray Activity, Neutral pH, Acids, Bases, Acid Base Activity, Lower Density of Ice, Water is the Universal Solvent, Mixtures, Homogeneous Mixtures, Heterogeneous Mixtures, Mixture Activity, Solutions, Solvent, Solute, Supersaturation, Soda Store Project where Students Make and market and brand of Soda to Scientists.

Water Unit Part 3



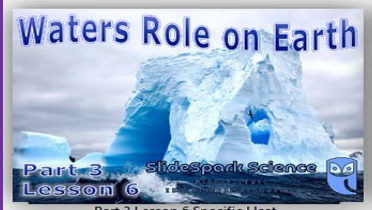
Part 3 Lesson 1 Structure of Water

Part 3 Lesson 2 Polarity Lava Lamp

Part 3 Lesson 3 Oil Spill at Sea

Part 3 Lesson 4 Adhesion Cohesion

Part 3 Lesson 5 Surface Tension



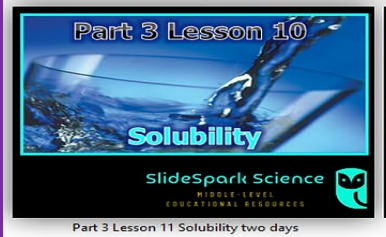
Part 3 Lesson 6 Specific Heat

Part 3 Lesson 7 Water Cycle two days

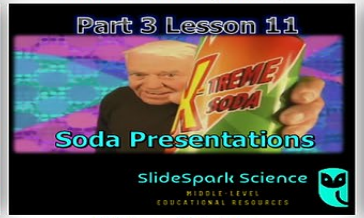
Part 3 Lesson 8 Lake Turnover

Part 3 Lesson 9 Acids and Bases

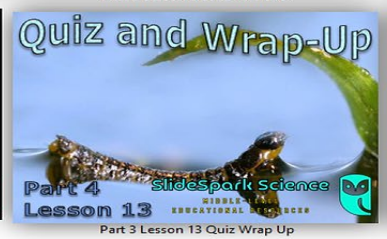
Part 3 Lesson 10 Acid Rain



Part 3 Lesson 11 Solubility two days



Part 3 Lesson 12 Soda Store

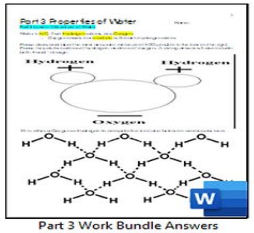


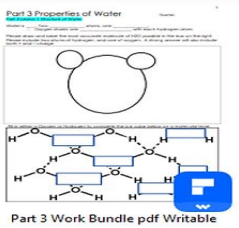
Part 3 Lesson 13 Quiz Wrap Up

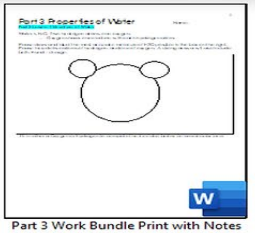
Part 3 Lesson 14 Review Game

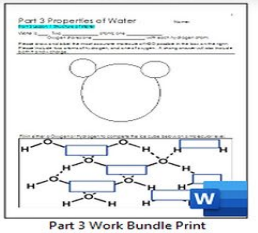
Part 3 Lesson 15 Review Game Answers


Part 3 Materials List


Part 3 Work Bundle Answers

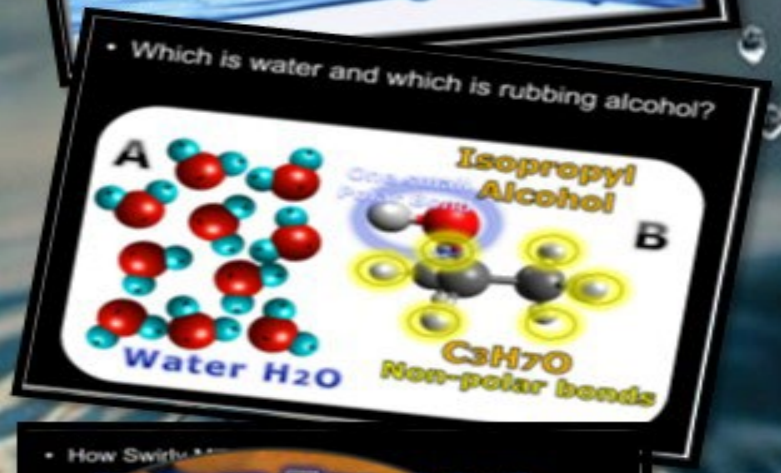

Part 3 Work Bundle pdf Writable

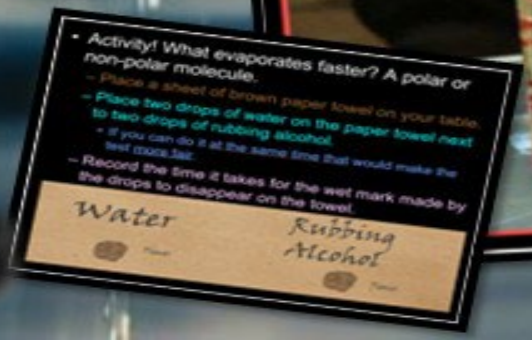

Part 3 Work Bundle Print with Notes


Part 3 Work Bundle Print

Properties of Water

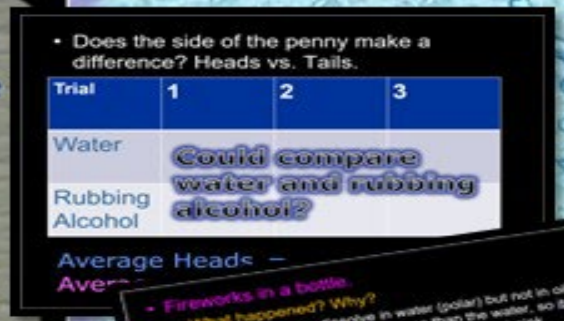
Preview is a compressed file

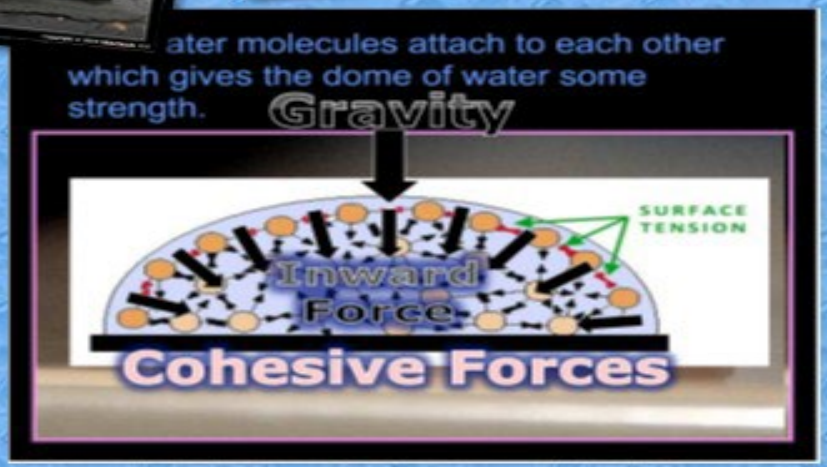




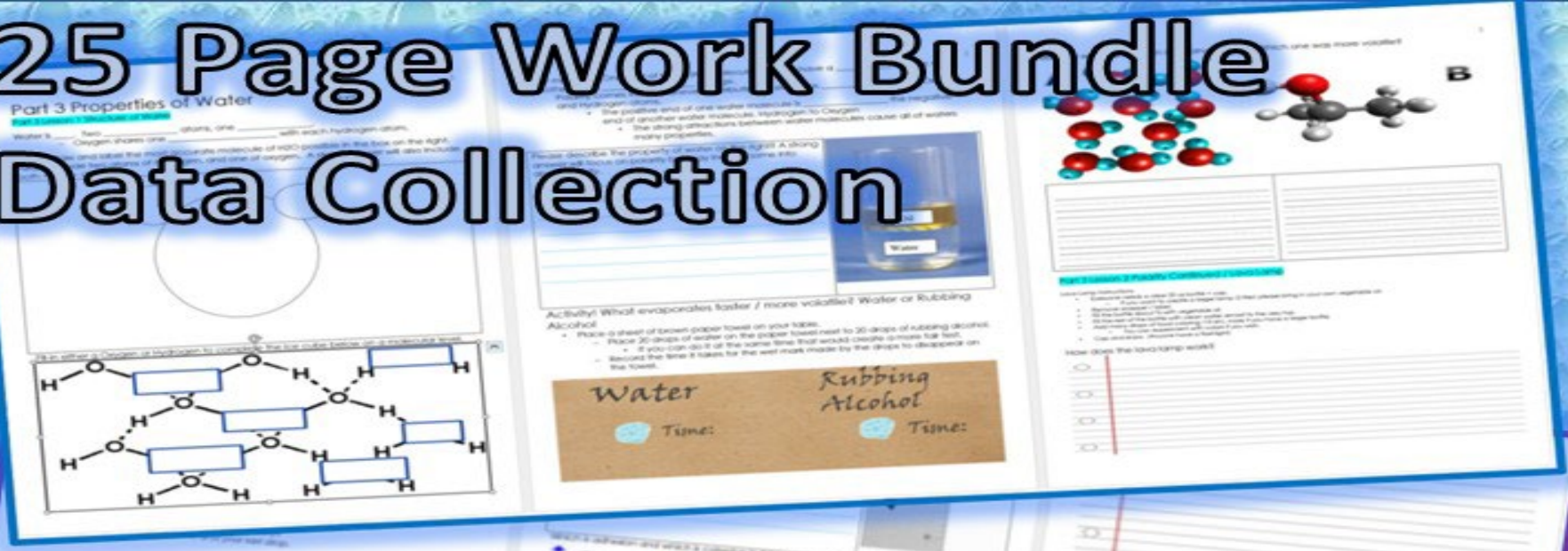
15 Lessons

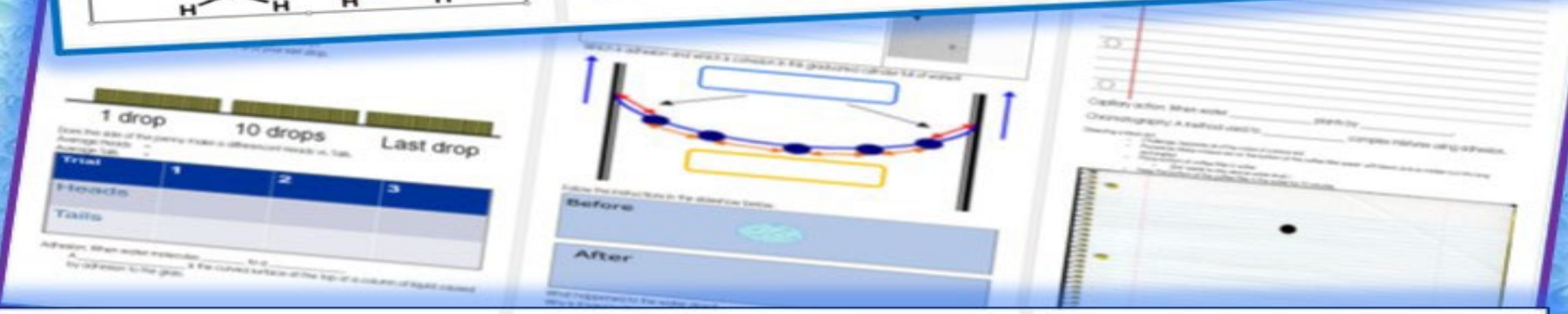
Full of hands-on activities



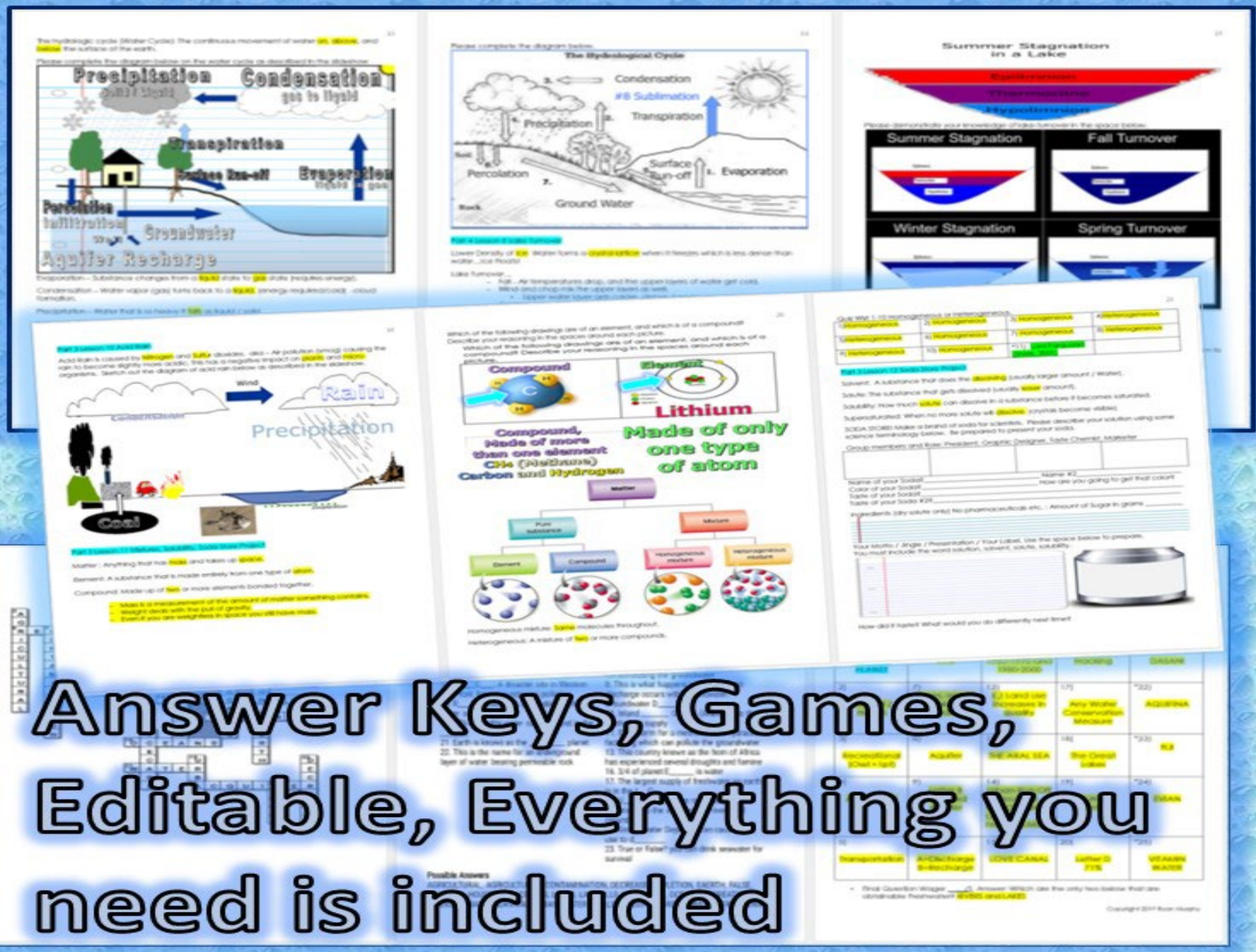


25 Page Work Bundle
Data Collection





Chronologically follows entire unit with built-in assessments


Precipitation
Condensation
Transpiration
Evaporation
Groundwater
Aquifer Recharge
The Hydrological Cycle
Condensation
#8 Sublimation
Transpiration
Precipitation
Surface Run-off
Evaporation
Percolation
Ground Water
Summer Stagnation in a Lake
Summer Stagnation
Fall Turnover
Winter Stagnation
Spring Turnover
Wind
Rain
Precipitation
Coal
Compound
Element
Lithium
Compound, Made of more than one element
CH4 (Methane) Carbon and Hydrogen
Made of only one type of atom
Matter
Pure substance
Mixture
Elements
Compound
Homogeneous mixture
Heterogeneous mixture
Answer Keys, Games, Editable, Everything you need is included

Curriculum Guide

Number of Lessons in each unit (50 min, daily lessons) and difficult rating scale / intended grade level.

=Easier,


= More difficult,


=Most difficult

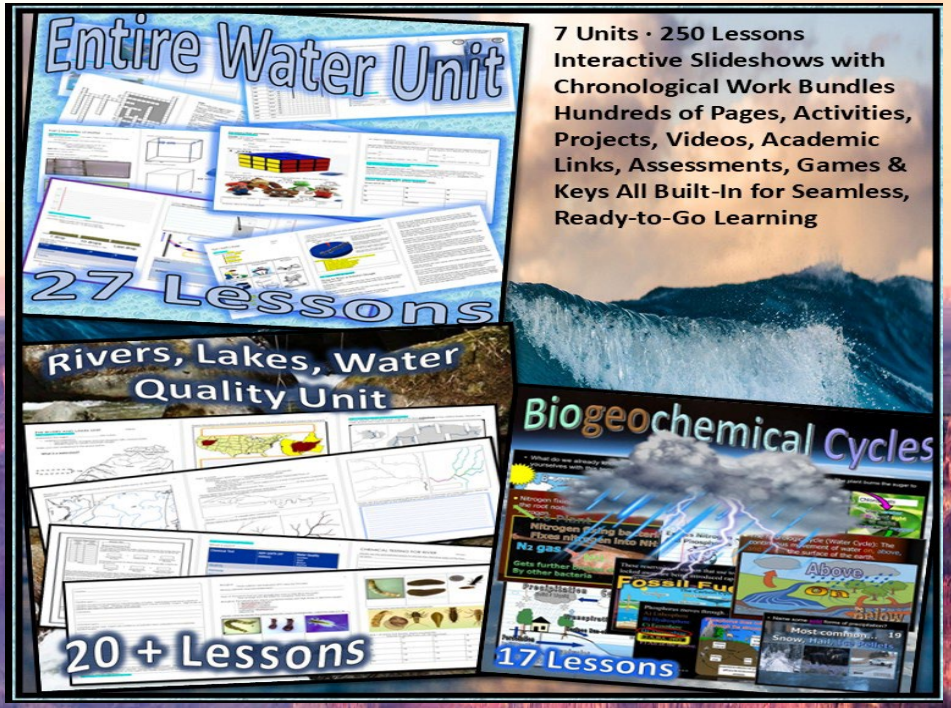
Earth Science Units	Daily Lessons	Intended Grade	
Geology Topics Unit	60 Lessons	6-8 medium difficulty	MORE DIFFICULT
Weather and Climate Unit	40 Lessons	6-8 medium difficulty	MORE DIFFICULT
Astronomy Unit	60 Lessons	6-8 medium difficulty	MORE DIFFICULT
Weathering, Soil Sciences	28 Lessons	5-7 easier	EASIEST
Rivers and Water Quality	25 Lessons	5-7 easier	EASIEST
Water Molecule Unit	20 Lessons	5-7 easier	EASIEST
Biogeochemical Cycles Unit	16 Lessons	5-7 easier	EASIEST

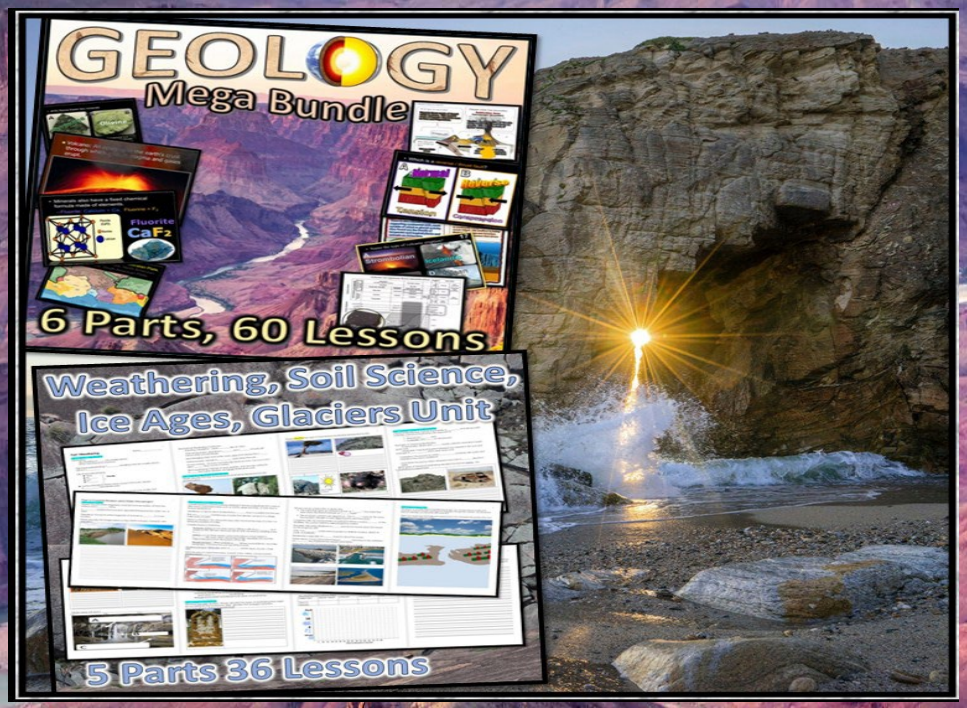
Earth Science Curriculum

Earth Science Curriculum

SlideSpark Science

MIDDLE-LEVEL EDUCATIONAL RESOURCES



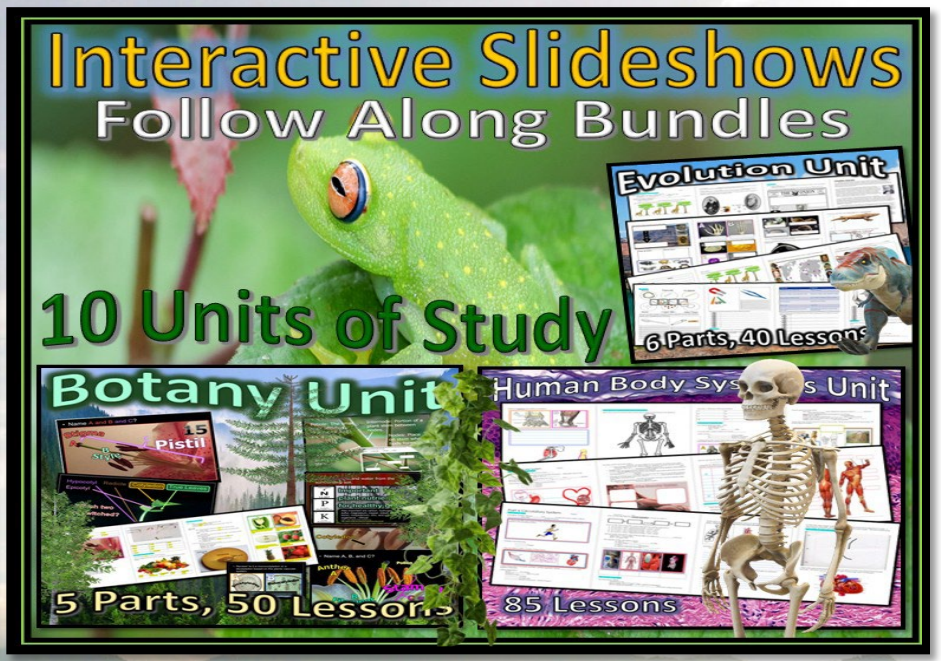


Life Science Units

	Daily Lessons	Intended Grade	
Ecology Feeding Levels Unit	13 Lessons	5-6 easier	
Ecology Interactions Unit	30 Lessons	5-6 easier	
Ecology Abiotic Factors Unit	13 Lessons	5-6 easier	
Botany Unit	50 Lessons	5-7 easier	
Evolution and Natural Selection	40 Lessons	5-7 easier	
Taxonomy and Classification	50 Lessons	6-8 medium difficulty	
Infectious Diseases Unit	30 Lessons	7-9 more difficult	
DNA and Genetics Unit	42 Lessons	8-10 most difficult	
Human Body Systems Unit	85 Lessons	6-8 medium difficulty	
Cell Biology Unit	30 Lessons	8-10 most difficult	

Life Science Curriculum


Life
Science
Curriculum
SlideSpark Science
MIDDLE-LEVEL
EDUCATIONAL RESOURCES


Interactive Slideshows
Follow Along Bundles
10 Units of Study
Evolution Unit
6 Parts, 40 Lessons
Botany Unit
5 Parts, 50 Lessons
Human Body Sys s Unit
85 Lessons


Cellular Biology Unit
Form Follows Function
30 Lessons of 50 minutes
DNA and Genetics Unit
40 Lessons
Infectious Diseases
30 Lessons


Taxonomy and Classification Unit
6 Parts
50 Lessons
Ecology Interactions Unit
30 Lessons
Ecology Feeding Le
Full Unit
Ecology Abiotic Factors Unit
27 Lessons

Physical Science	Daily Lessons	Intended Grade	
Laws of Motion and Machines Unit	33 Lessons	8-10 most difficult	
Matter Energy and the Environment	58 Lessons	7-10 medium difficulty	
Atoms and Periodic Table Unit	44 Lessons	8-10 most difficult	
Science Skills Unit	30 Lessons	5-7 medium difficulty	

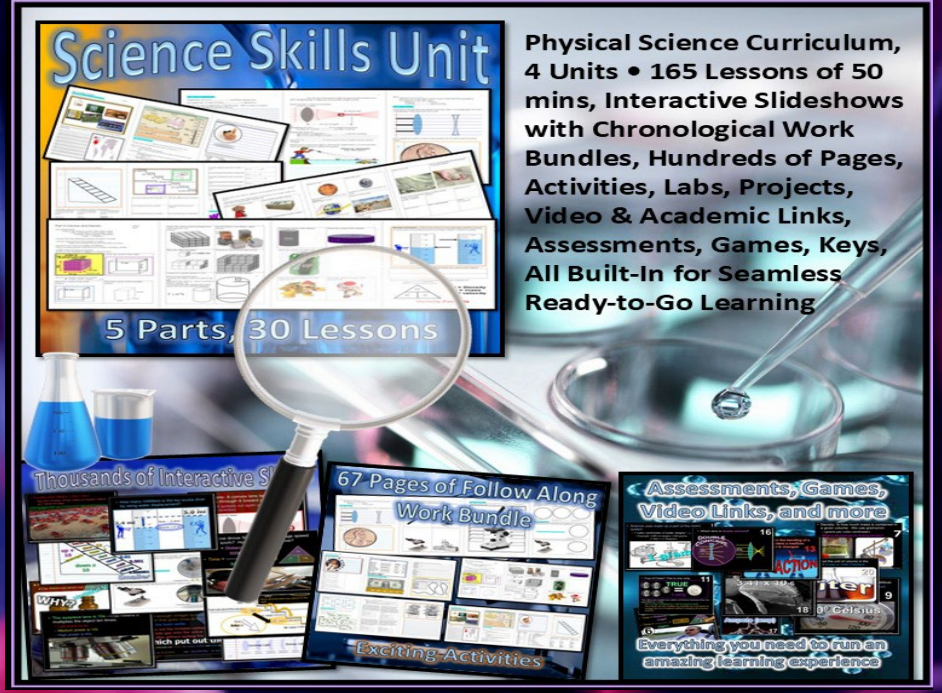
Physical Science Curriculum

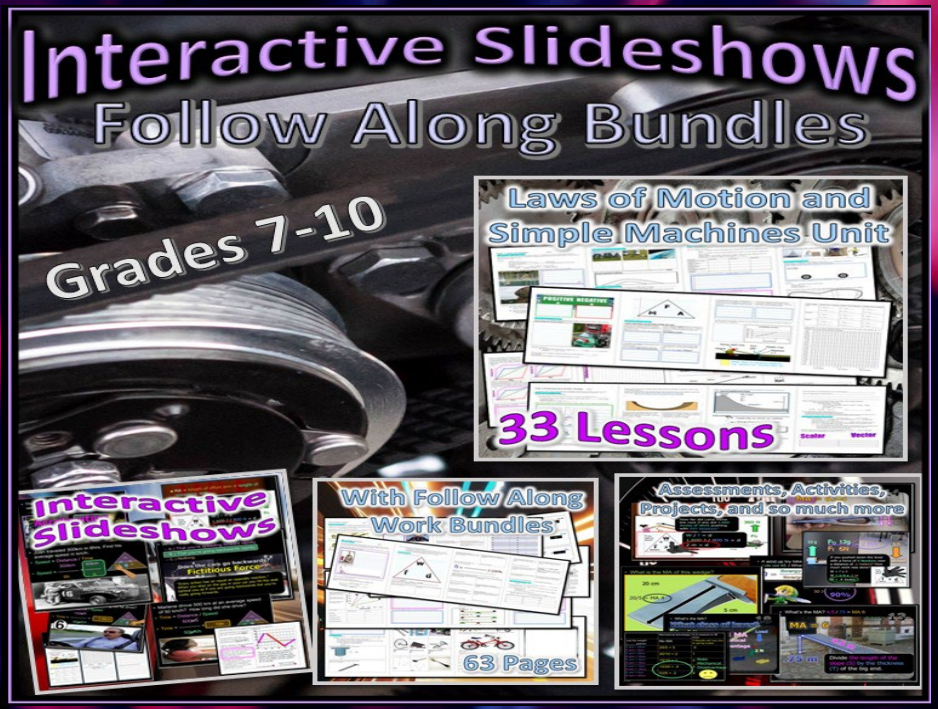
Entire SlideSpark Science Curriculum

Physical Science Curriculum

SlideSpark Science

MIDDLE-LEVEL EDUCATIONAL RESOURCES





Dear Valued Educator,

Our fully editable .pptx and .doc resources are perfect for educators looking to bring enthusiasm and creativity to their lessons. We encourage you to make changes to fit your needs and style. As science educators, we're committed to providing students with the tools they need to succeed in the classroom and beyond. Each unit in the curriculum includes a range of resources that have been developed through extensive research and use in a busy classroom. Our teaching approach is designed to make science education engaging and exciting for learners of all ages. We offer a one-of-a-kind science curriculum that will challenge, inspire, and educate students to become tomorrow's scientists and leaders. Join us today and learn more about how our program can help you achieve your classroom goals.

With appreciation,

Support@SlideSpark.net

Thank you for your time and interest in our Science curriculum. We strive to provide students with engaging and informative lessons that will spark their curiosity and encourage scientific exploration. Should you have any questions or concerns, please do not hesitate to contact us. Thank you again for considering our curriculum, and we wish you all the best in your educational journey.

Sincerely,

Support@slidespark.net

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