INTERACTIVE NOTEBOOK INSTRUCTIONS

Making an Interactive Notebook is like Scrapbooking while you learn! The best part is it involves every skill you want to teach your student; Reading, writing, motor skills, critical thinking and creativity are all involved in the design and creation process!! The more engagement you can facilitate the more retention they will have! The other great thing about Interactive notebooks is you can customize them to the age and skill level of your student! Students who are just learning to write their letters can use simple elements, students who can do more advanced Copy work can use more advanced Copy elements and students who are strong writers can use SUMMARIZE elements, etc. For some Activities you may have to use more than one page per lesson to fit all the elements for that assignment. ALWAYS Have the student lay out the elements before gluing. All lessons are mastery and skills based rather than organized by grade level. There is an example template for six basic levels in the first lesson so you know what interactive notebook pages should look like. Each level has additional verses and Extension activities to use for a total of 12 level options. Feel free to let students use this as a guide or to customize it! The Elements can be customized with your own prompts as you like!

Each day a portion of the Parsha is read aloud to younger students or can be read by the older students as they progress, out loud in class. The entire day's lesson is based around the Parsha and the entire day is interactive!!! The goal is to keep your students engaged and interested in what they are learning. Instead of sitting them in front of textbooks and worksheets, they are literally making their own resources themselves as they go- which means they are invested in the process! This interaction guarantees that they will learn more!!!!

Rather than shoveling in facts, figures, and history dates in bulk we incorporate CIRCULAR learning. This means we introduce the topics and little by little. Year by year they revisit these same topics, always deepening their knowledge of them, and RETAINING what they have learned, because they are not being overloaded! We focus on simplicity for you as a teacher (because we know you are also a Spouse and a Parent!), and for your students as learners. No more shuffling stacks of papers and subjects and trying to match up multiple age lessons with one another. No more filing completed work, THEY ARE MAKING THEIR OWN PORTFOLIO AS THEY GO! Each Lesson begins with you reading a Class lesson aloud to everyone. This has all the basic information about the topic and just like the PARSHA will be read again and again year after year so they KNOW IT! Meanwhile their individual notebook pages give them more in depth information year by year!!!

The “You will know them by their LOVE challenge” can be used to motivate kindness and cooperation. use stickers and set your own reward goals! Make extra copies as needed.

INTERACTIVE NOTEBOOK INSTRUCTIONS

Each day a portion of the Parsha is read aloud, and Memory verses should be practiced. Then they do their TORAH page which includes: Copy work, handwriting, or writing a summary, depending on skill level. Each year the should be progressing to be more and more capable of taking on the higher level activities (Spelling & Vocabulary starts at Level 2, Grammar is added for level 3, Writing begins at Level 4 and up etc.) All language lessons are based around the same passages!!!!!

Daily Sequence is as follows:
(OPTIONAL)
WEEKLY PARENT WEBINARS every SUNDAY @ 8 PM CST to discuss Weekly Lessons
WEEKLY STUDENT Zoom Homeroom with AJA & Class every MONDAY @ 8 AM CST
(1) Read TORAH passage given on the WEEKLY PLANNER, then have students complete one DAILY TORAH page at their level.
(OPTIONAL) Work through Daily Living Words Hebrew Lesson if opting to teach Hebrew.
(2) Read or Review WEEKLY LANGUAGE LESSON ONLINE (Older kids should be able to read it themselves but may have some questions you can answer after reading the lesson to the younger set).
(3)Have students complete the appropriate LANGUAGE SKILLS ACTIVITY/ACTIVITIES corresponding to their level.
(4) On Monday Read the WEEKLY SCIENCE LESSON.
On Tuesday Read the WEEKLY HISTORY LESSON
On Wed. watch the SCIENCE video together and explore the SCIENCE RESOURCES.
On Thurs READ the WEEKLY GEOGRAPHY LESSON
On Friday have each Student PRESENT one Notebook page of their choice to the Class.
(5) Have Student Complete the appropriate SCIENCE/HISTORY/GEOGRAPHY skills practice activity corresponding to their level after the LESSON TIME M-Th.
(6) Complete external MATH Lessons/ Activities (We recommend Math U See)

This entire Sequence should take about 4 hours with some practice. Afternoons can be spent reading Books from the Book Lists, journaling, or working on weekly writing assignments (older students). If you want to do a M- Th schedule just double up the History and Geography. The Extra Language Lesson for Friday can be assigned for 'Homework' on Thursday and the Torah Page can be completed on Shabbat if you like.

You can use a regular notebook, blank SketchBook, or looseleaf notebook paper and a 3 inch binder (which is what we recommend) Lined paper is helpful for Writing tasks. When finished, place each complete page in the Interactive Notebook and have older students fill in the TABLE OF CONTENTS as they go! (make additional xerox copies as needed) At the end of the year your student will have an awesome interactive self-created textbook that works through everything they learned for the year! THIS ALSO SATISFIES THE STATES PORTFOLIO REQUIREMENT!!!!!

YOU WILL KNOW THEM BY THEIR LOVE CHALLENGE

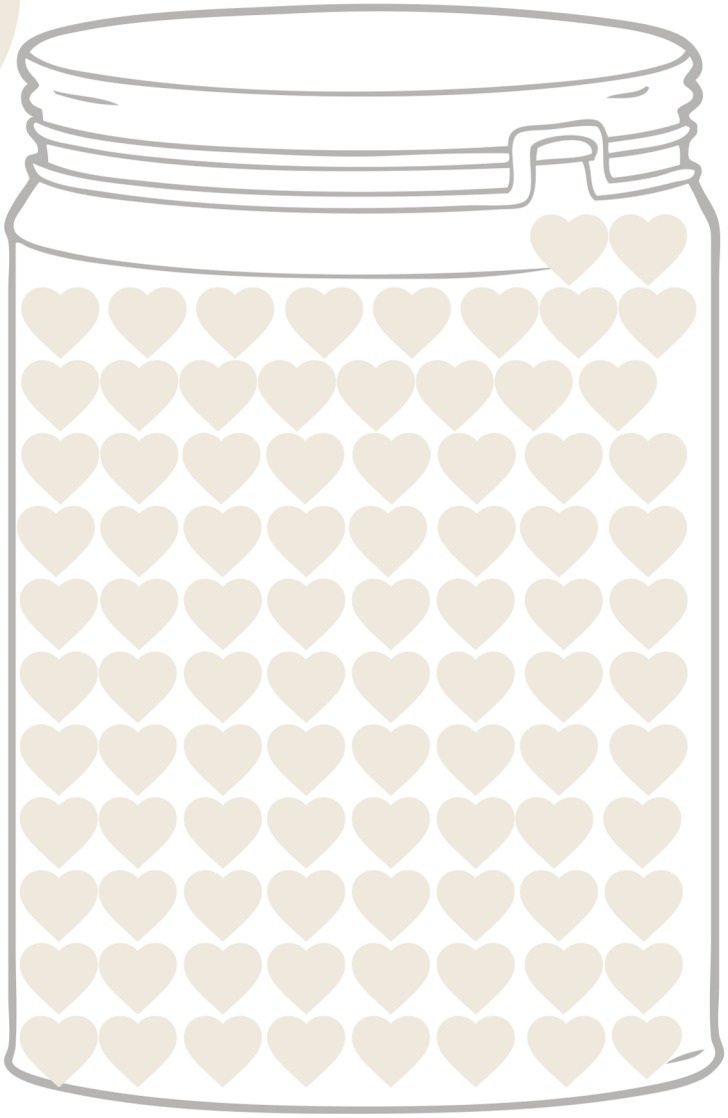
GOAL!!!!

_____

90 HEARTS

_____

_____



Name: _____

_____

Start Date : _____

GOAL ACHIEVED :

REWARDS _____

TABLE OF CONTENTS

DATE	ASSIGNMENT	PAGE



WEEKLY LEVELS 4+ LESSON PLANNER

B'RSHEET

DATES:

ATTENDANCE:	2 M	3 T	4 W	5 T	6 F

DAILY TORAH PASSAGES

1	Genesis 1:1-2:3 ; John 1:1-18
2	Genesis 2: 4- 3:26 ; Matt. 1:1-17 ; 4:1-11
3	Genesis 4 ; Matthew 5:1-12
4	Genesis 5:1- 6:8; Luke 2:1-40
5	Isaiah 42:1- 43:13

WEEKLY MEMORY VERSES

LEVEL

1	Genesis 1:1 / John 1:4
2	Genesis 1:28/ John 1:9-13
3	Genesis 2:1-3/ John 1:14-18
4	Genesis 1:1-8/ John 1:19-28
5	Genesis 1:1-19/ John 1:29-34
6	Genesis 1:1-31/ Isaiah 42:10-13

ADDITIONAL ACTIVITIES:

Day 1

Day 2

Day 3

Day 4

Day 5

SCHEDULE

Day	ACTIVITIES
1	Torah
	Language Pages
	Science Page
	Math (external curriculum)
2	Torah
	Language Pages
	History Page
	Math (external curriculum)
3	Torah
	Language Pages
	Science Page
	Math (external curriculum)
4	Torah
	Language Pages
	Geography Page
	Math (external curriculum)
5	Torah
	Language Pages
	Language Review Page
	Science Page
	Math (external curriculum)

NOTES:



WEEKLY LESSON PLANNER B'RSHEET

DATES:

2	3	4	5	6
M	T	W	T	F
ATTENDANCE:					

WEEKLY PARSHA: B'rsheet: Genesis 1:1- 6:8

HAFTARAH: Isaiah 42:1- 43:13

BRIT cHADASHA: John 1:1-18, Matthew 1:1-17 ; 4:1-11 ; 5:1-12, Luke 2:1-40

DAILY TORAH PAGES

1 _____

2 _____

3 _____

4 _____

5 _____

DAILY TORAH VERSES FOR LANGUAGE ACTIVITY PAGES

1 _____

2 _____

3 _____

4 _____

5 _____

5 _____

ADDITIONAL ACTIVITIES:

Day 1

Day 2

Day 3

Day 4

Day 5

SCHEDULE

Day	ACTIVITIES
1	
2	
3	
4	
5	

NOTES:



Week One

B'resheet

בְּרֵאשִׁית

Teacher/Parent: The weekly PARSHA (Hebrew for "portion") is broken down into 4 daily sections and the fifth day we read the HAFTARAH ("the releasing" as it is read at the end)
Read each daily reading aloud and answer any questions.

Day One: Read Genesis 1:1-2:3 ; John 1:1-18
Day Two: Read Genesis 2: 4- 3:26 ; Matthew 1:1-17 , Matthew 4:1-11
Day Three: Read Genesis 4 ; Matthew 5:1-12
Day Four: Read Genesis 5:1- 6:8; Luke 2:1-40
Day Five: Read Haftarah Isaiah 42:1- 43:13

SUGGESTED DISCUSSION QUESTIONS:
Which day did He create light?
Which day did He create the sun, Moon and stars?
What do you think the light in verses 3 & 4 means!? What is the light being discussed in John 1?
Why do you think Elohim put the tree of Knowledge in the Garden?
Why do you think Eve listened to the Serpent?
Why did Cain kill Abel?
Why was Noah different from the other people on Earth in his day?
Who do you think Isaiah 42 is talking about?

Weekly Memory Verses:

Level 1
(1) In the Beginning Elohim created the Heavens and the Earth. Genesis 1:1
(2) In him was life, and the life was the light of men. John 1:4

Level 2
(1) And Elohim blessed them; and Elohim said unto them: 'Be fruitful, and multiply, and replenish the earth, and subdue it; and have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that creeps upon the earth.'
Genesis 1:28
(2) The true light, which gives light to everyone, was coming into the world. He was in the world, and the world was made through him, yet the world did not know him. He came to his own, and his own people did not receive him. But to all who did receive him, who believed by his Name, he gave the right to become children of Elohim, who were born, not of blood nor of the will of the flesh nor of the will of man, but of Elohim. John 1:9-13







Week One

B'resheet

Weekly Memory Verses:

Level 3

(1) And the heaven and the earth were finished, and all the host of them. And on the seventh day Elohim finished His work which He had made; and He rested on the seventh day from all His work which He had made. And Elohim blessed the seventh day, and sanctified it; because in it He rested from all His work which Elohim in creating had made. Genesis. 2:1-3

(2) And the Word became flesh, and dwelt among us, and we have seen His glory, glory as the only Son from the Father, full of grace and truth. Yochanan bore witness about him and cried out, "This is He of whom I said, 'He who comes after me ranks before me, because he was before me.'" For from his fullness we have all received, grace upon grace. For as the Torah was given by Moshe; grace and truth came through Yeshu Messiah. No one has ever seen Elohim; the only Elohim. He who is at the Father's side has made him known. John 1: 14-18

Level 4

(1) In the beginning, Elohim created the heavens and the Earth. And the Earth was without form and void, and darkness was over the face of the deep. And the Spirit of Elohim was hovering over the waters. And Elohim said, "Let there be light," and there was light. And Elohim saw the light that it was good. And Elohim separated the light from the darkness. Elohim called the light day, and the darkness he called Night. And there was evening and there was morning, day one. And Elohim said, "Let there be and expanse in the midst of the waters, and let it separate waters from waters. And Elohim made the expanse and separated the waters that were under the expanse from waters that were above the expanse. And it was so. And Elohim called the expanse 'Heavens.'Amd there was evening and there was morning, the second day.

Genesis 1:1-8

(2) And this is the testimony of Yochanan (John), when the Jews sent priensts and Levites from Yerushalaim (Jerusalem) to ask him, " Who are you?" He confessed, and did not deny, but confessed, "I am not the Messiah." And they asked him, "What then? Are you Elijah?" He said, "I am not." "Are you the Prophet?" And he answered, "No." So they said to him "Who are you?" We need to give an answer to those who sent us. What do you say about yourself?" He said, " I am the voice of one crying out in the wilderness, "Make straight the way of the Master,' as the prophet Yeshayahu said." Now they had been sent from the Pharisees. They asked him, "Then why are you baptizing, if you are neither the Messiah, not Elijah, nor the Prophet?" Yochanan answered them, "I baptize you with water but among you there stands one you do not know, even he who comes after me, the strap of whose sandal I am not worthy to untie. These things took place in Bethany across the Jordan, where Yochanan was baptizing." John 1:19-28





Week One

B'resheet

Weekly Memory Verses:

Level 5:

(1) In the beginning, Elohim created the heavens and the Earth. And the Earth was without form and void, and darkness was over the face of the deep. And the Spirit of Elohim was hovering over the waters. And Elohim said, "Let there be light," and there was light. And Elohim saw the light that it was good. And Elohim separated the light from the darkness. Elohim called the light day, and the darkness he called Night. And there was evening and there was morning, day one. And Elohim said, "Let there be and expanse in the midst of the waters, and let it separate waters from waters. And Elohim made the expanse and separated the waters that were under the expanse from waters that were above the expanse. And it was so. And Elohim called the expanse 'Heavens.' And there was evening and there was morning, the second day. And Elohim said, "Let the waters under the heavens be gathered together into one place, and let the dry land appear." And it was so. Elohim called the dry land Earth, and the waters that were gathered together he called Seas. And Elohim saw that it was good. And Elohim said, "Let the earth sprout vegetation, plants yielding seed, and fruit trees bearing fruit in which is their seed, each according to its kind, on the earth." And it was so. The earth brought forth vegetation, plants yielding seed according to their own kinds, and trees bearing fruit in which is their seed, each according to its kind. And Elohim saw that it was good. And there was evening and there was morning, the third day. And Elohim said, "Let there be lights in the expanse of the heavens to separate the day from the night. And let them be for signs and for appointed times, and for days and years, and let them be lights in the expanse of the heavens to give light upon the earth." And it was so. And Elohim made the two great lights—the greater light to rule the day and the lesser light to rule the night—and all the stars. And Elohim set them in the expanse of the heavens to give light on the earth, to rule over the day and over the night, and to separate the light from the darkness. And Elohim saw that it was good. And there was evening and there was morning, the fourth day.
Genesis 1:1-19

(2)The next day John saw Yeshua coming toward him and said, "Look, the Lamb of YAH, who takes away the sin of the world! This is He of whom I said, 'A man who comes after me has surpassed me because He was before me.' I myself did not know Him, but the reason I came baptizing with water was that He might be revealed to Israel."
Then John testified, "I saw the Spirit descending from heaven like a dove and resting on Him. I myself did not know Him, but the One who sent me to baptize with water told me, 'The man on whom you see the Spirit descend and rest is He who will baptize with the Holy Spirit.' I have seen and testified that this is the Son of Elohim" John 1:29-34





Week One

B'resheet

Weekly Memory Verses:

Level 6 :

(1) In the beginning, Elohim created the heavens and the Earth. And the Earth was without form and void, and darkness was over the face of the deep. And the Spirit of Elohim was hovering over the waters. And Elohim said, "Let there be light," and there was light. And Elohim saw the light that it was good. And Elohim separated the light from the darkness. Elohim called the light day, and the darkness he called Night. And there was evening and there was morning, day one. And Elohim said, "Let there be an expanse in the midst of the waters, and let it separate waters from waters. And Elohim made the expanse and separated the waters that were under the expanse from waters that were above the expanse. And it was so. And Elohim called the expanse 'Heavens.' And there was evening and there was morning, the second day. And Elohim said, "Let the waters under the heavens be gathered together into one place, and let the dry land appear." And it was so. Elohim called the dry land Earth, and the waters that were gathered together he called Seas. And Elohim saw that it was good. And Elohim said, "Let the earth sprout vegetation, plants yielding seed, and fruit trees bearing fruit in which is their seed, each according to its kind, on the earth." And it was so. The earth brought forth vegetation, plants yielding seed according to their own kinds, and trees bearing fruit in which is their seed, each according to its kind. And Elohim saw that it was good. And there was evening and there was morning, the third day. And Elohim said, "Let there be lights in the expanse of the heavens to separate the day from the night. And let them be for signs and for appointed times, and for days and years, and let them be lights in the expanse of the heavens to give light upon the earth." And it was so. And Elohim made the two great lights—the greater light to rule the day and the lesser light to rule the night—and all the stars. And Elohim set them in the expanse of the heavens to give light on the earth, to rule over the day and over the night, and to separate the light from the darkness. And Elohim saw that it was good. And there was evening and there was morning, the fourth day. And Elohim said, "Let the waters swarm with swarms of living creatures, and let birds fly above the earth across the expanse of the heavens." So Elohim created the great sea creatures and every living creature that moves, with which the waters swarm, according to their kinds, and every winged bird according to its kind. And Elohim saw that it was good. And Elohim blessed them, saying, "Be fruitful and multiply and fill the waters in the seas, and let birds multiply on the earth." And there was evening and there was morning, the fifth day.
And Elohim said, "Let the earth bring forth living creatures according to their kinds—livestock and creeping things and beasts of the earth according to their kinds." And it was so. And Elohim made the beasts of the earth according to their kinds and the livestock according to their kinds, and everything that creeps on the ground according to its kind. And Elohim saw that it was good. Then Elohim said, "Let us make man in our image, after our likeness. And let them have dominion over the fish of the sea and over the birds of the heavens and over the livestock and over all the earth and over every creeping thing that creeps on the earth." So Elohim created man in his own image, in the image of Elohim he created him;
male and female he created them. And Elohim blessed them. And Elohim said to them, "Be fruitful and multiply and fill the earth and subdue it, and have dominion over the fish of the sea and over the birds of the heavens and over every living thing that moves on the earth."And Elohim said, "Behold, I have given you every plant yielding seed that is on the face of all the earth, and every tree with seed in its fruit. You shall have them for food. And to every beast of the earth and to every bird of the heavens and to everything that creeps on the earth, everything that has the breath of life, I have given every green plant for food." And it was so. And Elohim saw everything that he had made, and behold, it was very good. And there was evening and there was morning, the sixth day.Thus the heavens and the earth were finished, and all the host of them. And on the seventh day Elohim finished his work that he had done, and he rested on the seventh day from all his work that he had done. So Elohim blessed the seventh day and made it holy, because on it Elohim rested from all his work that he had done in creation.
Genesis 1: 1-31 & 2:1-3

(2) Sing to YHVH a new song, his praise from the end of the earth,
you who go down to the sea, and all that fills it, the coastlands and their inhabitants.
Let the desert and its cities lift up their voice, the villages that Kedar inhabits;
let the habitants of Selah sing for joy, let them shout from the top of the mountains.
Let them give glory to YHVH, and declare his praise in the coastlands.
The Lord goes out like a mighty man, like a man of war he stirs up his zeal;
he cries out, he shouts aloud, he shows himself mighty against his foes.
Isaiah 42:10-13





Week One

B'resheet

Weekly TORAH WRAP UP:

Parsha WRAP-UP (READ THIS AT THE END OF THE WEEK TO REVIEW!)

Elohim creates the world in six days. On the first day He makes light- separating it from darkness. On the second day He creates the Firmament again by dividing the waters above (atmosphere) from the waters below (what becomes the Ocean and Seas). On the third day He divides Dry Land from Seas, and commands the earth to bring forth trees and all green plants. On the fourth day He creates the sun, moon and stars and ordains them as a 'Star Clock' to give light and provide a calendar in the Sky. On the fifth day He creates Fish, birds and reptiles.On the sixth day land animals, and then the humankind are made. After all of this Elohim declares the very first SHABBAT. On it, He ceases from all his work, and sanctifies the Seventh Day as a day of rest FOREVER.

ELOHIM forms the first human from the dust of the earth, and blows into its nostrils a NEFESH (living soul) ADAM is a single person, but seeing that "it is not good for ADAM to be alone," He takes a rib from ADAM, forms it into a woman, and presents her to Him as a perfect help-meet and companion.
Adam and Eve (cHavvah) are placed in the Garden of Eden, and given just one positive and one negative commandment. They are told to be fruitful and multiply and more importantly to SUBDUE THE EARTH AMD ITS CREATURES. They are also commanded not to eat from the "Tree of Knowledge of Good and Evil." The clever serpent seduces Eve by bringing the desirability of the fruit to her attention. He thus tricks her into transgression against YHVH, and she shares the forbidden fruit with ADAM, and he eats too. Because of their sin they are sent out of the garden and sentenced to face death and a return to the soil from which they were formed. They are each told that because of their sin it is only through struggle and hardship they will survive now. They are banished from the Garden of Eden forever.
Upon leaving the garden, Eve gives birth to Cain and later to Abel. Cain is a tiller of soil and Abel a shepherd of flocks. They quarrel and Cain murders Abel, becoming a wanderer amd a vagabond. After the loss of both sons, Adam and Eve have a third son, named Seth. It is through Seth's descendant, 8 generations later, that Noah is brought forth who is described as PERFECT among his generations.

Discussion Questions:

Do you notice that the process of creation involved setting one thing apart from another; What do you think this means? What does it tell us about life?
Why do you think Adam was not happy without Eve?
Why was Eve tempted to eat from the only tree she was told not to eat from?
Have you ever felt tempted to do something you know you should not do?
Why do you think YHVH allows us to be tempted?
How does the Torah teach us we can overcome temptation?
What part of the Pasha did you enjoy the best this week?
Were there parts you found boring?
What are the lessons YHVH wants us to learn from this Parsha?





OUTLINE ELEMENTS

B'RESHEET

B'resheet

בְּרֵאשִׁית

בְּרֵאשִׁית

B'RESHEET

B'resheet

בְּרֵאשִׁית

בְּרֵאשִׁית

B'RESHEET

B'resheet

בְּרֵאשִׁית

בְּרֵאשִׁית

B'RESHEET

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בְּרֵאשִׁית

בְּרֵאשִׁית

B'resheet

B'RESHEET בְּרֵאשִׁית

בְּרֵאשִׁית

B'rsheet TORAH Reading & Journaling Elements for Level 6 & 6 EXTENSION

Cut out the Prompts and paste them in your notebook for each day. Then write 4-5 paragraphs to discuss each Prompt. Extension Level Students use the Strongs Concordance to find the first Hebrew word of each passage and discuss how it relates to the topic.

Day 1-

READ: Genesis 1:1-2:3 & John 1:1-18 from your Bible.

How does what we know scientifically about light relate to these passages? Do you think science can explain the way Elohim Created everything?

Day 2-

READ: Genesis 2:4-19 & Matthew 1:1-17 from your Bible.

How does what we understand about Human history relate to the narrative of Adam and Eve's fall from grace?

Day 3-

READ: Genesis 4 & Matthew 5:1-12 from your Bible.

What do you think YHVH meant when he warned Cain that "sin is crouching at your door and its desire is to rule over you"?

Day 4-

READ: Genesis 5:1-6:8 & Luke 2:1-40 from your Bible.

How do you think the genetics of mankind were affected by the actions of the Nephilim?

Day 5-

READ: Isaiah 42:1-43:13 from your Bible.

What does verse 42:16 mean? How does it relate to this weeks TORAH Portion?

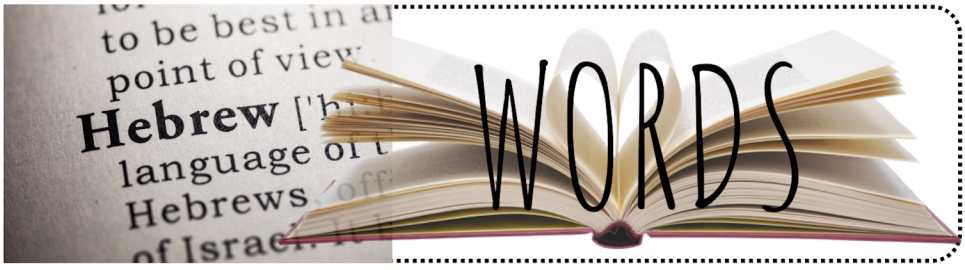
DAILY LANGUAGE ACTIVITIES FOR LEVEL 6

DAY	TASK	COMPLETE
1	**COPY:** PSALM 109 by hand in your nicest handwriting onto tracing paper with wide ruler notebook paper behind it on a clipboard. Cut it out and put it over decorative paper. Add this as a page in your notebook! **OPTIONAL - Copy Psalms 1:1 in HEBREW*	
2	**RESEARCH & DISCUSS:** Write a 12 page essay discussing and comparing the Creation narrative in Genesis to the creation story of at least three cultures. Compare and Contrast. Analyze the themes and archetypes present in Pagan creation myths and discuss which makes the most sense. It will be due at the end of this week.	
3	**LOOK UP & COPY** the entries for ten STRONGS # HEBREW words found in this weeks PARSHA. **USE ELEMENTS BELOW**	
4	**WRITE** a poem about any topic in this weeks Parsha, such as creation, Adam & Even in Eden or Cain & Abel !	
5	**CREATIVE WRITING**: Write a pretend News article to announce the creations of EARTH to the angels in Heaven.	

WRITING REFRESHER:

A ***RESEARCH PAPER*** *must use the MLA Method to cite all sources.*
if you need to brush up on how to use MLA citations scan the QR code.

SCAN ME



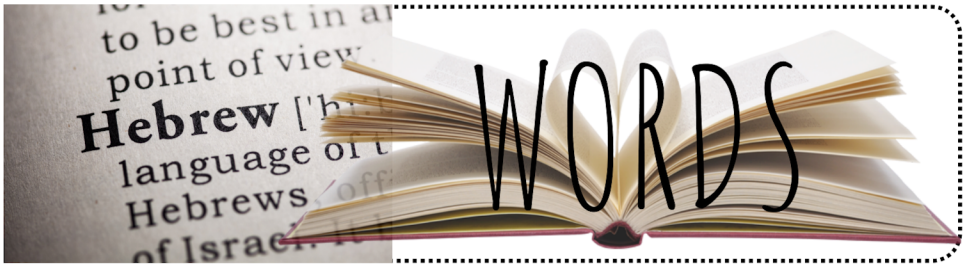
DAY 3 ELEMENTS





DAILY LANGUAGE ACTIVITIES FOR LEVEL 6 - EXTENSION

DAY	TASK	COMPLETE
1	**COPY:** PSALM 119:1-8 by hand in your nicest handwriting onto tracing paper with wide ruler notebook paper behind it on a clipboard. Cut it out and put it over decorative paper. Add this as a page in your notebook! **OPTIONAL - Copy Psalms 1:1 in HEBREW*	
2	**TERM PAPER ASSIGNMENT:** Write a 12 - 15 page essay about your faith and how it will help influence your decisions in adulthood pertaining to marriage and career. Research how faith influences various other demographics, different from your own and include as many statistics and evidence as you can. Cite all sources. Be thorough and comprehensive and do not fill this paper with fluff. It will account for 25% of your final grade this year! If you are happy with it you may even use it in a college admission application! The paper is due at mid-term. (week 18)	
3	**LOOK UP & COPY** the entries for ten STRONGS # HEBREW words found in this weeks PARSHA. **USE ELEMENTS BELOW**	
4	**WORK ON YOUR TERM PAPER**	
5	**WORK ON YOUR TERM PAPER**	



DAY 3 ELEMENTS





B'rsheet Science Daily Pages

Level 6 Day 1



VOCABULARY

WAVE

PARTICLE

PHOTON

QUANTUM MECHANICS

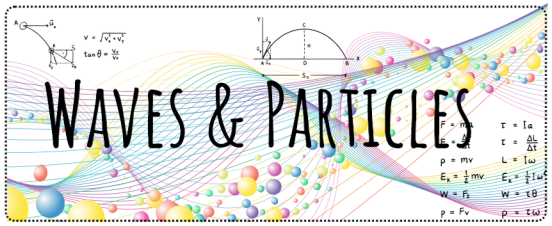
Define the Vocabulary words and briefly summarize the theory of General Relativity. Research and take notes on Quantum Electrodynamics. Then use all the Elements to create a 5 paragraph article about QED.

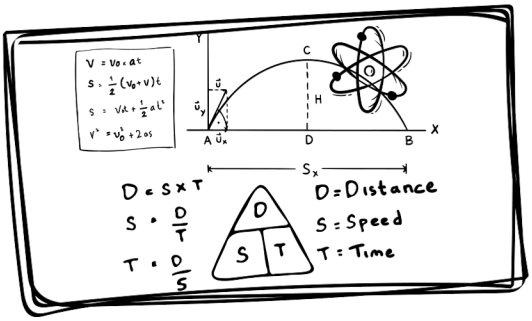
GENERAL RELATIVITY

And Elohim saw that the light was good. And Elohim separated the light from the darkness.Genesis 1:4

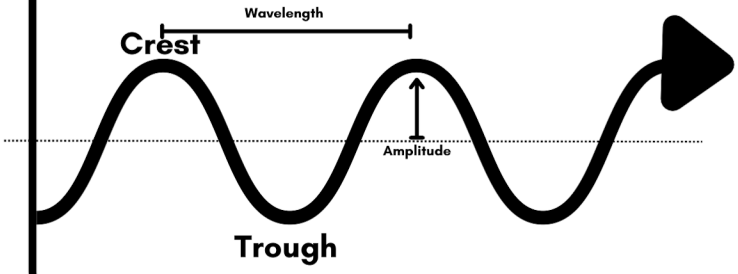
B'rsheet Science Daily Pages

Level 6 Day 1



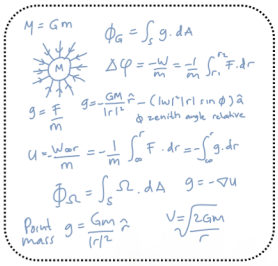


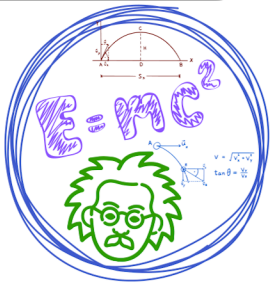
Wave Behavior

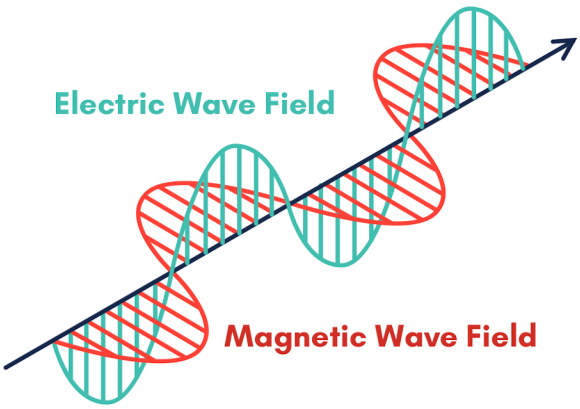


Particle Behavior

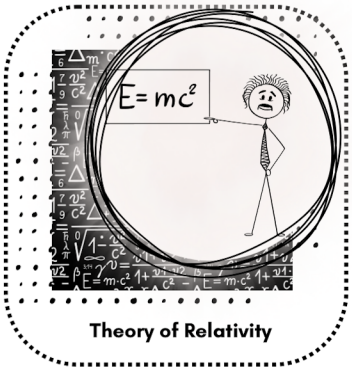








Electromagnetic Wave



Use these elements to add interesting details to your article. Be sure to add in the missing labels and any extra information to make these diagrams complete!

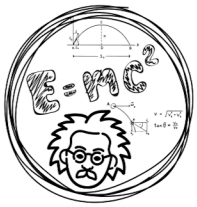
Einsteins General Relativity

This important theory informs us that Gravity is the warping of space-time caused by the presence of mass-energy. Motion through warped space-time has the appearance of a force.

Day 1

B'rsheet Science Daily Pages LEVEL 6- Extension

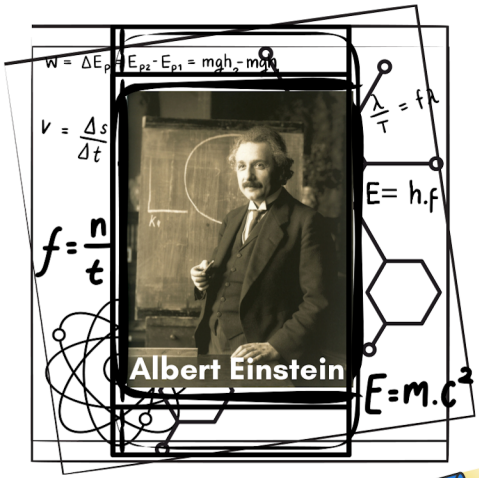
WAVE PARTICLE: DUALITY

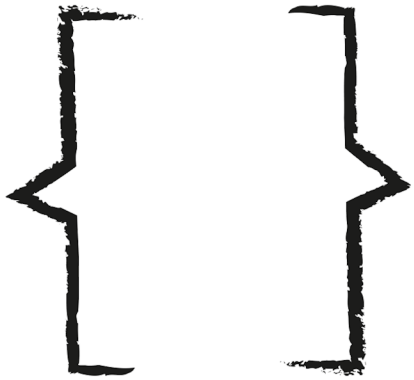


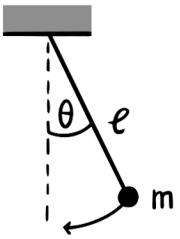
QUANTAM ELECTRODYNAMICS

VOCABULARY

Read the lesson on the next page, and then create a vocabulary list based on this article. Write a 5 paragraph summary about wave- particle duality, doing research to expand on the specific work of each of the scientists mentioned. Use the Elements to add a creative touch to your essay, or draw your own!



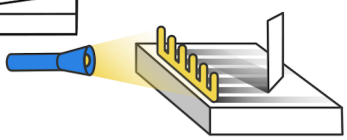


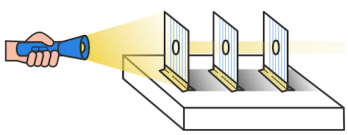


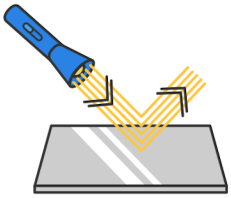
$$\omega = \sqrt{\frac{g}{\ell}}$$

$$T = 2\pi\sqrt{\frac{\ell}{g}}$$

$$f = \frac{1}{2\pi}\sqrt{\frac{g}{\ell}}$$







And Elohim saw that the light was good. And Elohim separated the light from the darkness.Genesis 1:4

B'rsheet Science Daily Pages- LEVEL 6 Extension

Day 1



Quantum Electrodynamics, also called QED, is a theory that explains how light and matter interact and rectifies the apparent contradictions between quantum mechanics and special relativity. QED states that charged particles interact by absorbing and releasing PHOTONS. It builds on the foundation laid by wave-particle duality.

Wave-particle duality refers to the fundamental concept in quantum mechanics that particles can exhibit both wave-like and particle-like properties. This intriguing phenomenon was first proposed by Albert Einstein in 1905. Later this proposal was solidified by experiments performed on 1909 by Geoffry Taylor and then by Louis de Broglie in 1924, who developed his theory of electron waves, which was the idea that particles such as electrons and photons could possess wave characteristics. This revolutionized our understanding of the nature of matter and energy, challenging the classical notion of objects solely behaving as either waves or particles. The wave-particle duality concept suggests that particles can display wave-like properties, such as interference and diffraction patterns. On the other hand, they can also exhibit particle-like behavior, with discrete energy levels and momentum. This duality is not limited to subatomic particles; it extends to larger entities, like atoms and even molecules. The experimental evidence supporting wave-particle duality is extensive.

The famous double-slit experiment, conducted by Thomas Young in the early 19th century, demonstrated the interference patterns generated by light passing through two closely spaced slits. This experiment provided strong evidence that light could behave as a wave. Prior to this, Newtonian Physics postulated that light was made up of small particles called "corpucles" (little particles) which travel in a straight line. This was called the corpuscular theory of light. Later, the discovery of electron diffraction by C. J. Davisson and L. H. Germer in 1927 solidified the wave-like nature of particles. They observed that electrons, when fired at a crystalline target, produced an interference pattern similar to that of light waves passing through a diffraction grating. This experiment confirmed the wave-particle duality for electrons. In 1965 Sin-Itiro Tomonaga, Julian Schwinger and Richard Feynman were jointly awarded the Nobel Prize in Physics for their work in the field of QED, an extension of wave-particle duality.

In conclusion, wave-particle duality is a fundamental concept in quantum mechanics that reveals the dual nature of particles, exhibiting both wave-like and particle-like properties. Its existence has been supported by numerous experimental observations and has revolutionized our understanding of the behavior of matter and energy. This concept has wide-ranging implications and applications, shaping fields such as quantum mechanics, microscopy, and spectroscopy. Wave-particle duality has practical applications in areas like microscopy and spectroscopy. Electron microscopes utilize the wave nature of electrons to achieve higher resolution imaging compared to traditional optical microscopes. In spectroscopy, the wave-like behavior of particles allows scientists to determine the energy levels and transitions of atoms and molecules. All of these technologies have changed the wolrd we live in in huge ways.

1905 - Einstein publishes his four famous research papers on the photoelectric effect and special relativity.

1909 - Geoffery Taylor proves wave-particle duality theory explains lights abiliry to behave both ways.

1921 - Albert Einstein wins Nobel Prize in Physics for his discovery of the law of the photoelectric effect

1927 - Louis De Broglie proves wave-particle duality theory applies to matter also.

1965 - Tomonaga, Schwinger & Richard Feynman were jointly awarded the 1965 Nobel Prize in Physics for their work in this area

B'rsheet HISTORY Daily Page Level 6

Day 2

Ancient Babylon

Fold the Hammurabbis Code booklet in half on the red line and glue the back down. Add the Title to the front. Cut out the Elements and add them to your essay.

After the fall of Sumer, the Babylonian Empire arose. Hammurabbi was an Ancient King of Babylon who developed the oldest known written code of laws. Many of the laws bear some resemblance to the Torah for example:

Death penalty for adultery or kidnapping.

Liability for medical expenses in the case of unprovoked assault.

Eye for an eye and tooth for a tooth for cases of serious injury due to assault.

Hammurabbis Code & the Torah





SCAN ME

To Learn More about Hammurabbi!

Read the selection of Hammurabbi's code and compare to Sh'mot (Exodus) 21:15-27:

195. If a child should strike his father, they shall cut off his hand.
196. If an awīlu* should blind the eye of another awīlu, they shall blind his eye.
197. If he should break the bone of another awīlu, they shall break his bones.
198. If he should blind the eye of a commoner or break the bone of a commoner, he shall weigh and deliver sixty shekels**.
199. If he should blind the eye of an awīlu's slave or break the bone of an awīlu's slave, he shall weigh and deliver one-half of his value (in sliver).
200. If an awīlu should knock out the tooth of another awīlu of his own rank, they shall knock out his tooth.
201. If he knock out the tooth of a commoner, he shall weigh and deliver twenty shekels of silver.
202. If an awīlu should strike the cheek of an awīlu who is of status higher than his own, he shall be flogged in the public assembly with sixty stripes of an ox whip.
203. If a member of the awīlu-class should strike the check of another member of the awīlu-class who is his equal, he shall weigh and deliver sixty shekels of silver.
204. If a commoner should strike the check of another commoner, he shall weigh and deliver ten shekels of silver.
205. If an awīlu's slave should strike the check of a member of the awīlu-class, they shall cut off his ear.
206. If an awīlu should strike another awīlu during a brawl and inflict upon him a wound, that awīlu shall swear, "I did not strike intentionally," and he shall satisfy the physician (i.e., pay his fees).
207. If he should die from his beating, he shall also swear ("I did not strike him intentionally"); if he (the victim) is a member of the awīlu-class, he shall weigh and deliver thirty shekels of silver.
208. If he (the victim) is a member of the commoner-class, he shall weigh and deliver twenty shekels of silver.
209. If an awīlu strikes a woman of the awīlu-class and thereby causes her to miscarry her fetus, he shall weigh and deliver ten shekels of silver for her fetus.
210. If that woman should die, they shall kill his daughter.

*- This term refers to a member of the upper noble class.
**- A shekel is a unit of currency

B'rsheet HISTORY Daily Page Level 6

Day 2

211. If he should cause a woman of the commoner-class to miscarry her fetus by the beating, he shall weigh and deliver five shekels of silver.
212. If that woman should die, he shall weigh and deliver thirty shekels of silver.
213. If he strikes an awīlu's slave woman and thereby causes her to miscarry her fetus, he shall weigh and deliver two shekels of silver.
214. If that slave woman should die, he shall weigh and deliver twenty shekels of silver.

Translation by Martha T. Roth in Law Collections from Mesopotamia and Asia Minor, 2nd ed., SBL Writings from the Ancient World 6 (Atlanta: Scholars Press, 1997), pp, 120-22.

After reading both selections write a 5 paragraph essay comparing the two codes of law. Note any similarities and differences in these selection. At the same time consider and discuss the differences in the polytheistic religion of ancient Sumer and the monotheism of the Tanakh. How do you think this affected the two codes? What does Hammurabbis code tell us about the class systems and value of human life?









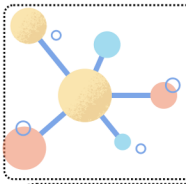






B'rsheet Science Daily Pages

Level 6 Day 3



ATOMS



All matter is made of **molecules** and all molecules are made of **ATOMS**! That means that even Adam, the first created Human was made of ATOMS! Molecules are so small we can't see them with our eyes- but atoms are even TINIER!!! Atoms can be different sizes and are measured in nanometers, ranging from 0.1 to 0.5 nanometers. Because of their small size atoms can not be seen with the maked eye. The width of a human hair is about 100,000 times larger than a nanometer!!! These tiny pieces of matter each have unique qualites and are called **ELEMENTS**. The Periodic table allows us to study the unique qualities of these different kinds of atoms. Most ELEMENTS on the periodoc table, such as Gold and Silver for example, are solids at room temperature, but can be heated and melted into a liquid. Other elements such as oxygen or helium are gasses at room temperature. Only two elements are liquid at room temperature, mercury, and bromine.

Molecules are composed of one or more Atoms that are joined together. When the atoms are the same kind of atom it is called an **ELEMENT**, if they are different kinds of atoms joined together is called a **COMPOUND**. The word 'atom' comes from the Greek word '*tomos*' which means '*cut*' the a- means '*not*' so together '*atmos*'= not cut, as until recently it was impossible to divide an atom, though using quantum mechanics, physicists can now divide the once indivisible atom!

Because protons and neutrons are heavier than electrons they stay in the center of the atom, this cluster of subatomic particles is referred to as the nucleus. Surrounding the nucleus is a cloud of electrons which are lighter in weight. These are attracted to the positively charged protons in the nucleus by the **electromagnetic force** because they have opposite electric charges. Electromagnetic Force is one of the four fundamental forces. Charged particles generate electric fields, and positively charged particles, such as protons push away positively charged particles and attract negatively charged ones (like electrons), and vice versa.

The molecules in a gas move faster because the space between thier molecules mean they are freer to move than they are in liquid form. In a liquid the molecules have slightly less room but they are still able to flow around one another which is what makes liquids flow while mostly sticking together. In solid matter by comparison, the molecules are tightly packed together so they gently vibrate, because all states of matter remain in motion at all times. However in solids, they are not able to move freely so they simply vibrate. These difference in the density of molecules is what determines the state of matter of a given element.

VOCABULARY

Matter
Matter is what a physical object is made of.

Molecule
A molecule is the smallest unit of matter, and is made of one or more atoms.

Element
A substance made of only one kind of atom.

Compound
A substance made of more than one kind of atom joined together.

Nanometer
A unit of measurement used to measure atoms.

Subatomic particle
Particles that are smaller than atoms, and of which they are composed; such as protons, neutrons, and electrons.

Electromagnetic Force
One of the four fundamental forces which explains the interactions between positive and negatively charged particles and substances.

Research and write 3 paragraphs about Isotopes and how they are defined.

In the beginning was the Word, and the Word was the circumcision of ELOHIM, and of ELOHIM- He was the fulfillment. He was in the beginning with Elohim. All things were made through him, and without him was not any thing made that was made. John 1: 1-3

(Translated from Gaster Hebrew Manuscript)

Day 3

B'rsheet Science Pages LEVEL 6- Extension

ATOMS & MASS

Atomic number, atomic mass, and relative atomic mass

Each Element on the periodoc table is composed of a specific type of Atom. Every type of atom has a set of characteristics These characteristics are the: **Atomic number, atomic mass,** and **relative atomic mass**.

Atoms of each element contain a characteristic number of protons which is what defines what type of atom it is. For instance, all atoms with only one proton are hydrogen atoms! The number of protons in an atom is called the **atomic number.** The number of neutrons for a specific element can vary however. **Isotopes** are forms of the same atom that differ in their number of neutrons. The elements **mass number** is equal to the sum of the protons + neutrons in that element. Because of this, you can figure out how many neutrons an atom has by subtracting the number of protons, or atomic number, from the mass number.

The **atomic mass** of an atom is related to but different from the atomic number. It is usually expressed in atomic mass units or **amu**. Generally, an atom's atomic mass will be very close to its mass number, but will be followed by decimals.

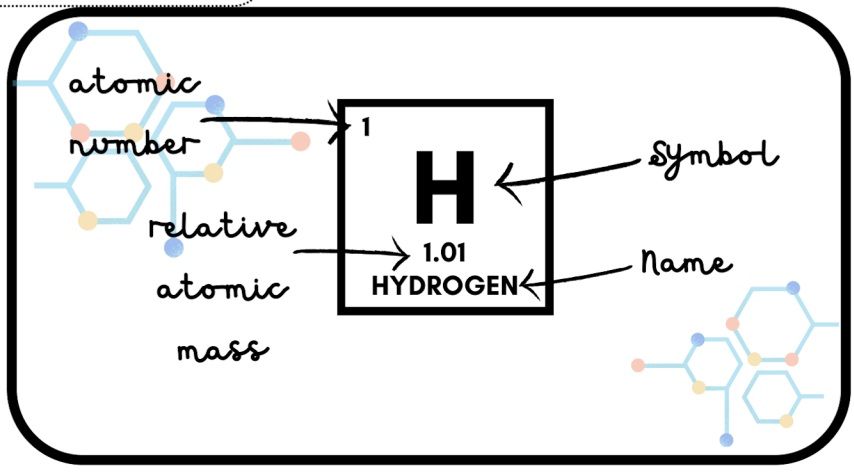
Since an element's isotopes have different numbers of neutrons they also have different atomic masses. To determine the exact atomic mass of an isotope you must therefore know the atomic masses of all the different isotopes in a sample as well as how big a fraction of the sample it makes up. For this reason scientists often speak of an elements relative atomic mass—sometimes called the atomic weight—for an element. The **relative atomic mass** is an average of the atomic masses of all the different naturally occurring isotopes of each element, weighted by the abundance of those isotopes on earth.

VOCABULARY

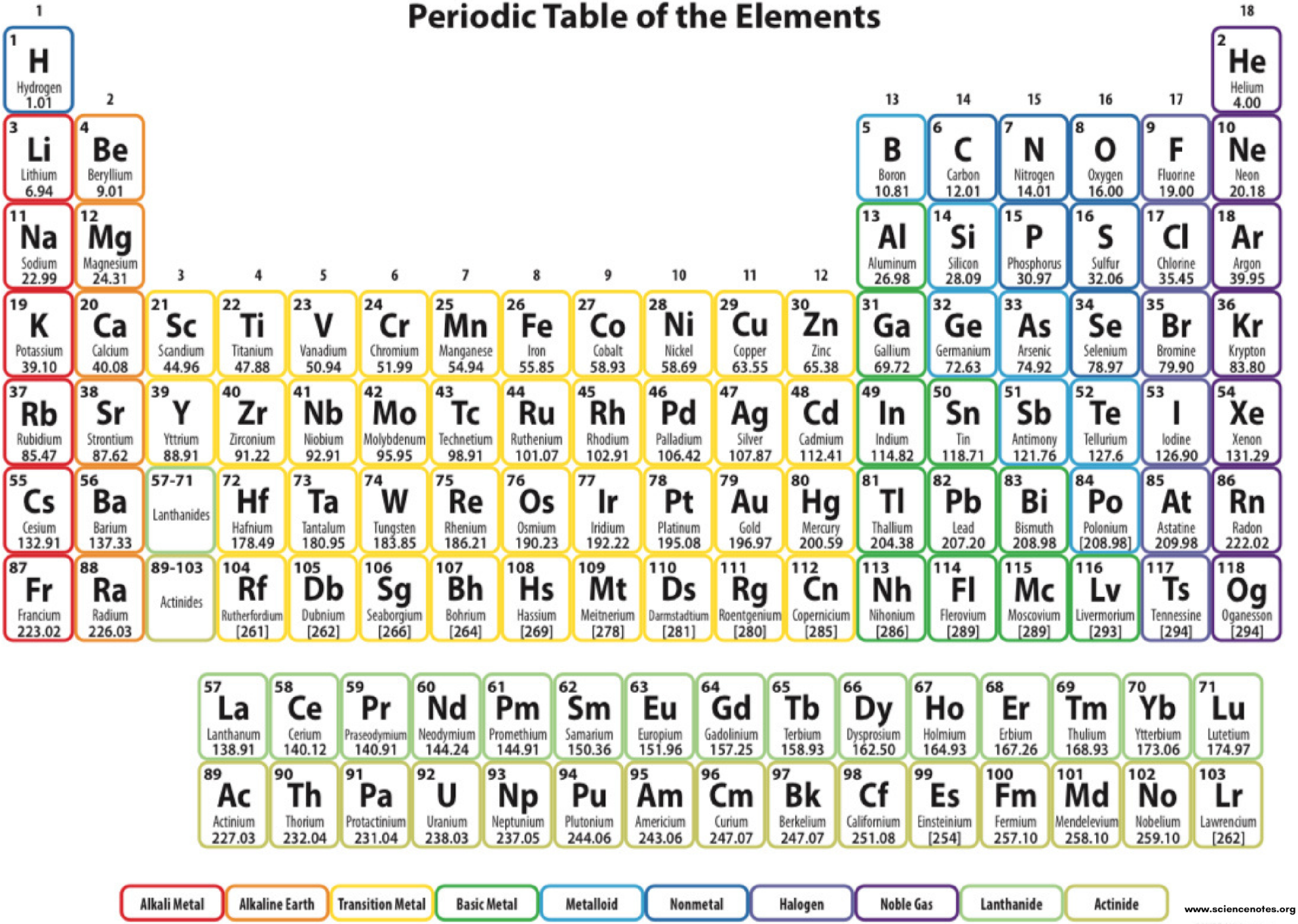
- ELEMENT
- ATOMIC NUMBER
- ATOMIC MASS
- RELATIVE ATOMIC MASS
- ISOTOPES

Fill in the definitions for each term then cut out the entire Vocabulary block and other elements to glue onto your notebook page. Scan the QR code at the bottom left to learn more about how molecules move.

SCAN ME / SCAN ME / SCAN ME / SCAN ME / SCAN ME / SCAN ME /



Periodic Table of the Elements



www.sciencenotes.org

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B'rsheet Science Daily Pages LEVEL 6- Extension

ATOMS & MASS

The atomic number indicates the number of protons and the number of electrons in an atom. Each element has a unique atomic number. The atomic mass is used to calculate the number of neutrons by subtracting the atomic mass from the atomic number.

Use the Periodic Table of Elements to complete the following.

1. Determine the number of protons, neutrons and electrons for the following elements.

Element Symbol	Full Name of Element	Protons	Neutrons	Electrons
H				
Li				
B				
O				

2. Which element has a greater number of protons – Potassium (K) or Selenium (Se)? _____

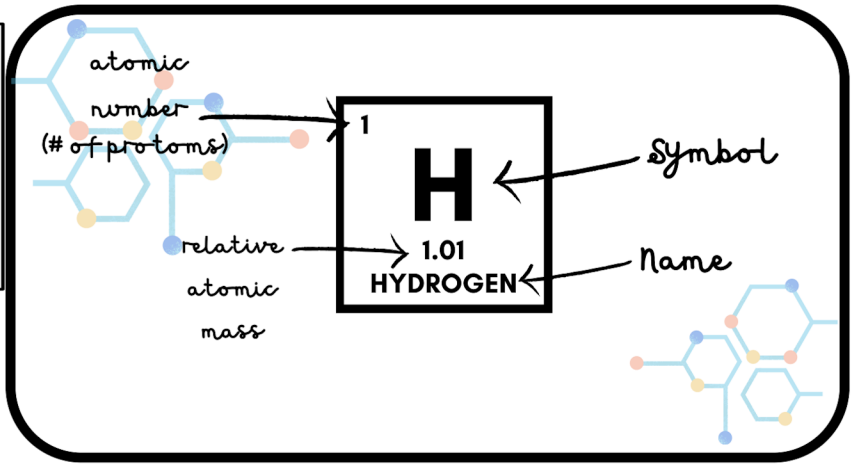
3. Which element has a smaller number of electrons – Copper (Cu) or Silver (Ag)? _____

4. Which element has a greater number of neutrons – Magnesium (Mg) or Tin (Sn)? _____

Formula for calculating number of electrons in an element:

atomic # - atomic mass* = # of neutrons

*For decimal numbers round DOWN



B'rsheet GEOGRAPHY Daily Page Level 6

Day 4

GEOGRAPHY OF THE MIDDLE EAST



You are going to create a Game that can be used to help you memorize facts about the geography of the Middle East!

1. Print the Map out onto cardstock.

2. Carefully cut the outline out and paste it onto a piece of foam or poster board. Paste the Game Title on or make your own. This will be your game board.

3. Decorate each country using the flags from below, or alternatively use markers or colored pencils to decorate each country using the pattern of its flag. Be creative!

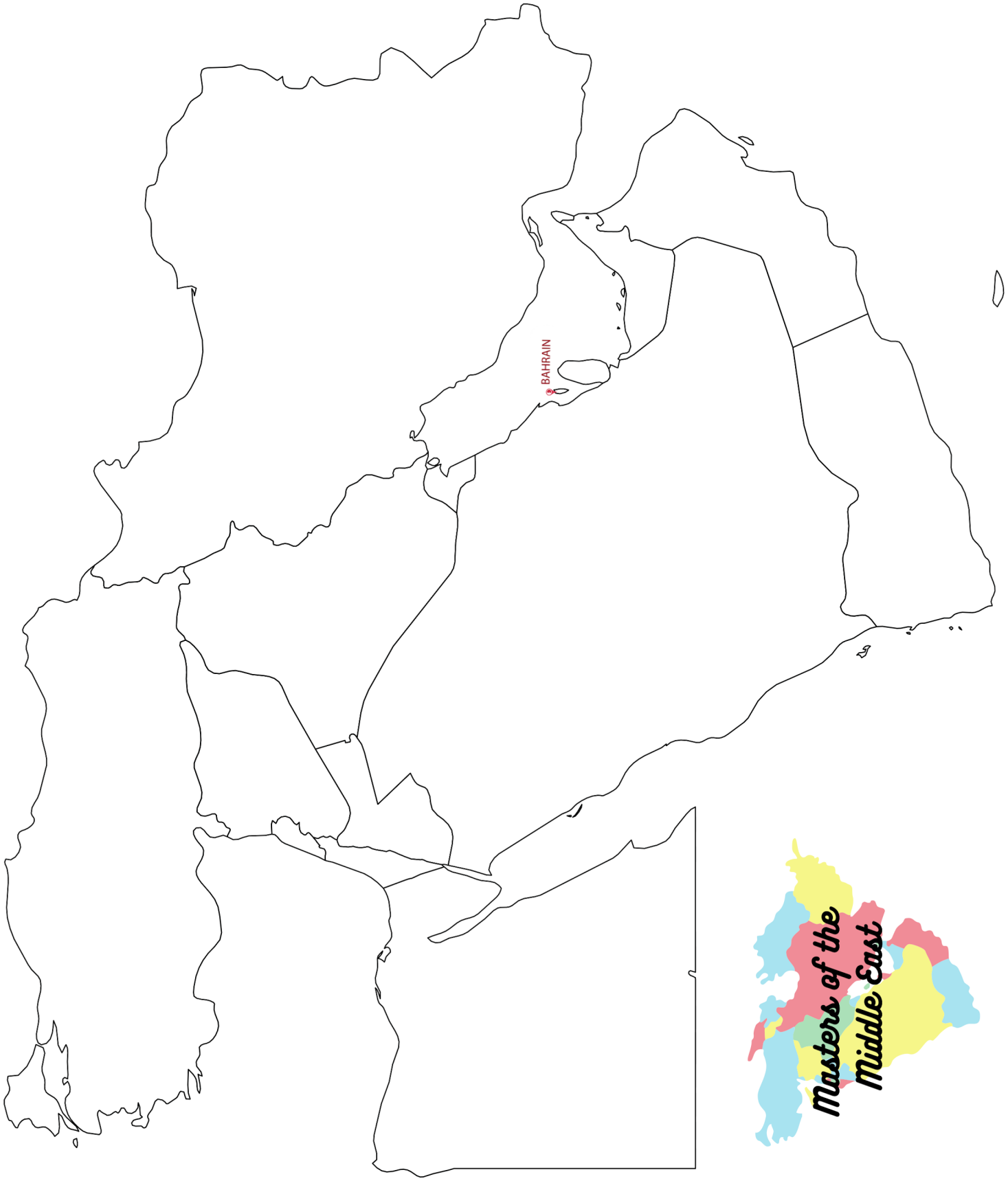
4. Print the Trivia Cards onto cardstock and draw a spot on the game-board for the deck to rest.

5. Print the game Instructions and glue them onto the top corner of the game-board.

6. Use the photos and accents from the level 6 page & this page, or use your own creativity to decorate the edges of the board.

7. Print and cut out the Development Tokens onto card-stock as well. Now you are ready to play!



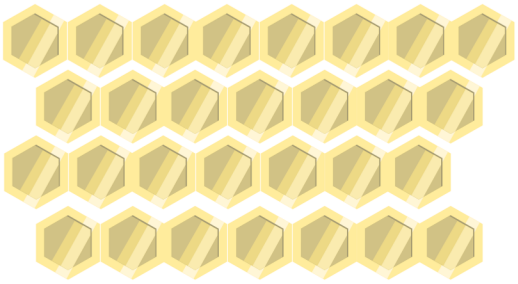


Masters of the Middle East

Trivia Cards

Which Middle Eastern Country is partly in Asia and partly in Europe? A: Turkiye	Which 3 Continents Meet in the Middle East? A: Europe, Africa, and Asia	Name five countries in the Middle East A: (At least 5) Israel, Lebanon, Syria, Jordan, Iran, Iraq, Turkiye, Saudi Arabia, Yemen, United Arab Emirates, Oman, Qatar, Kuwait, Egypt, Bahrain, *optionally Afghanistan, Turkmenistan, Pakistan	What percentage of the worlds oil is produced in the Middle East? A: 80%	Which three languages are most prominent in the Middle East? A: Arabic, English, Hebrew
What are three most prominent rivers in the Middle East? A: Tigris, Euphrates, and Nile Rivers	What is the smallest country in the Middle East? A: Bahrain	What are the 6 major Zones in the Middle East? A: The Nile Valley, Mesopotamia, The Levant, The Arabian Peninsula, The Zagros Mtns, Taurus Mtns.	What are the 2 major BIOME types in the Middle East? A: Desert, Mediterranian	What are the major ethnic groups of the middle East? A: Arabs and Jews
What areas of the Middle East support agriculture with fertile soils? A: The Levant, and Mesopotamia	What is the major Resource exported from the desert regions of the Middle East? A: Petroleum, Oil	Which Mountain range is renowned for its rich resources of metals and minerals? A: The Taurus Mountains	Which Country supports Hezbollah & Hamas? A: Iran	What year did Israel become a state? A:1948
Which country controls the Temple Mount? A: Jordan	What are the 7 major Seas of the Middle East? A: The Mediterranean Sea, Red Sea, Dead Sea, Black Sea, Arabian Sea, Caspian Sea, and Aral Sea	What Resources are found in the Zagros Mountains? A: Lumber and Stone	When did the Israeli- Palestinian conflict begin? A: After world War 1	Which Island Nation is in the Middle East? A: Bahrain – off the coast of the Arabian Peninsula
What is the most populous country in the middle East? A: Egypt	What. is the largest country in the Middle East? A: Saudia Arabia			

GAME INSTRUCTIONS: Each Player takes turns answering trivia questions asked by another player who draws the card for them. If they get it right, they get to add a development token to the country of their choice. The first player to place a development token on each country "owns" that country for the rest of the game. The player with the most countries OR development tokens wins. To decide the winner between most tokens. and most countries all trivia cards are reshuffled and those Players have to face off in a speed round where another player reads each card and the first one to answer keeps the card. The player with the most cards at the end of the speed round wins.



B'rsheet GEOGRAPHY Daily Page Level 6 - EXTENSION Day 4

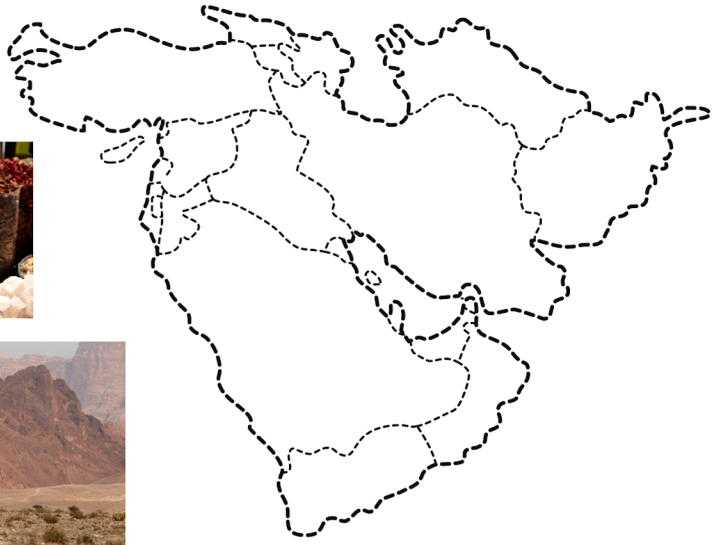
Geography of the Middle East

Study this week's Geography Lesson Guide, and then take the quick Geography quiz.

LESSON GUIDE
SCAN ME

QUIZ
SCAN ME

Write an essay about the geography culture and history of the Middle East. Your essay should be a minimum of 7-10 paragraphs. Be sure to include at least one paragraph addressing the political and cultural tension over Israel and the Temple Mount. Discuss what the importance of Israel to world politics tells us about the truth of the Tanakh! Include the map (add labels & color), photographs and accents to embellish your essay and give it extra flair. Consider a unique binding or adding other fun details to make it your own! It may take you several days or a week to complete this paper but put your best efforts into it! Don't forget to properly site all sources you use to compile your paper! The QR codes below will help you if you need to brush up on proper citations:





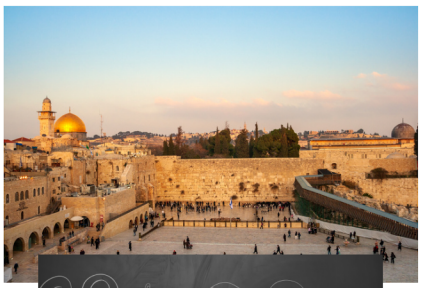








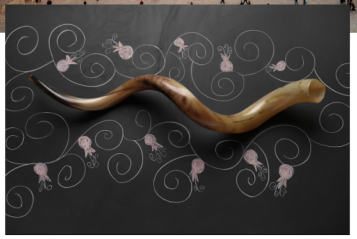












B'rsheet Science Daily Page Level 6 Day 5



The Industrial and Green Revolutions

The industrial revolution, which was a period of rapid industrialization and technological advancements in the 18th and 19th centuries, had a profound impact on various aspects of society, including agriculture. Alongside this transformative era, another significant revolution took place in the agricultural sector known as the Green Revolution. The industrial revolution brought about a series of innovations and advancements in machinery, transportation, and manufacturing processes. These developments revolutionized the way goods were produced and transformed societies from agrarian-based economies to industrialized ones. With the introduction of machines such as the steam engine, farmers were able to increase their productivity and efficiency in cultivating crops and rearing livestock.

Simultaneously, a revolution was taking place in the agricultural landscape known as the Green Revolution. The Green Revolution, which occurred primarily between the 1940s and 1960s, aimed to increase agricultural productivity through the adoption of modern farming techniques, the development of high-yield crop varieties, and the use of synthetic fertilizers and pesticides. This movement was driven by the need to address the pressing issue of global food security and feed the growing population. The Green Revolution not only introduced new farming methods but also transformed the agricultural industry by promoting the use of advanced technologies and scientific knowledge.

Farmers were encouraged to adopt mechanized farming practices, such as using tractors for plowing and harvesting. Moreover, they were advised to apply fertilizers and pesticides to increase crop yields and protect plants from pests and diseases. Furthermore, the Green Revolution led to the development of high-yield crop varieties, which were bred to be more resistant to pests, diseases, and environmental stresses. These improved cultivars, often referred to as hybrid or genetically modified crops, exhibited remarkable characteristics such as increased yield potential, shorter growth cycles, and enhanced nutritional content. This breakthrough in crop breeding significantly contributed to increased agricultural production and helped alleviate food shortages in many parts of the world.

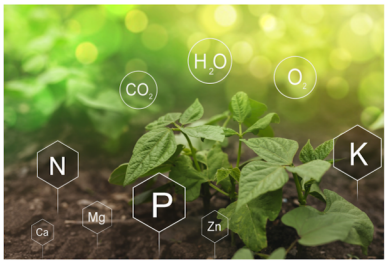
Both the industrial revolution and the Green Revolution played vital roles in shaping modern agriculture. The technological advancements of the industrial revolution laid the foundation for mechanized farming, enabling higher efficiency and larger-scale production. Similarly, the Green Revolution's emphasis on improving agricultural practices greatly contributed to increased crop yields. These revolutions brought about lasting impacts on agriculture by increasing productivity, enhancing food availability, and supporting the sustenance of a growing population. Collectively, they paved the way for the agricultural systems we have today, ensuring that food remains accessible to people worldwide.

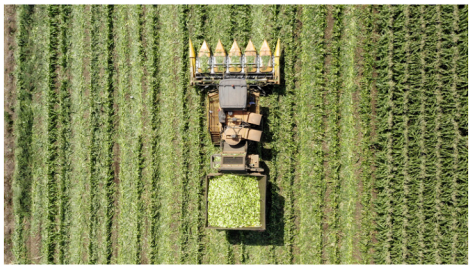
B'rsheet Science Daily Page Level 6 Day 5

After reading the Lesson, consider the following questions and write a 5 paragraph essay that answers these questions. Use the elements to accent your essay.

- How did the Industrial Revolution and the Green Revolution impact agriculture on a global scale, considering the concept of globalization and the spread of technology and ideas?
- Discuss the role of the Industrial Revolution and the Green Revolution in the decline of traditional agricultural practices and values. How did these revolutions contribute to the transformation of agricultural systems and the adoption of modern methods?
- Explore the positive and negative consequences of the Industrial Revolution and the Green Revolution in terms of sustainability and environmental impact in agriculture. How did these revolutions shape the way we produce food and manage natural resources?
- Reflect on the social and cultural changes brought about by the Industrial Revolution and the Green Revolution in relation to agriculture. How did these revolutions alter the traditional roles and relationships within farming communities, and what are the implications for the preservation of cultural heritage and traditional knowledge?















B'rsheet Science Daily Pages Level 6 - EXTENSION

Internal Combustion Engines





An internal combustion engine is a device that produces power by burning fuel inside its cylinders. The engine consists of several parts, including cylinders, pistons, valves, and a crankshaft. When fuel and air are mixed in the cylinders and ignited, it creates a controlled explosion that pushes the pistons down. This motion is converted into rotational energy by the crankshaft, which then drives the wheels of a vehicle or powers other machinery. Internal combustion engines are commonly used in cars, motorcycles, lawn mowers, and many other types of vehicles and equipment.

RESEARCH

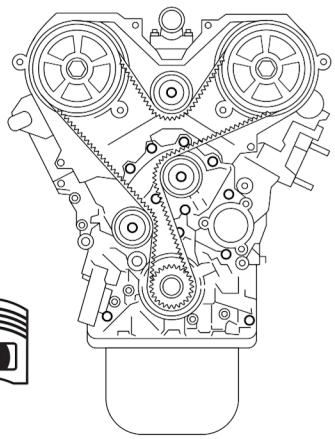
The most important part of the industrial revolution was arguably the internal combustion engine. Research internal combustion engines and write a 3 paragraph essay on how they work. Use the elements to accent your essay.

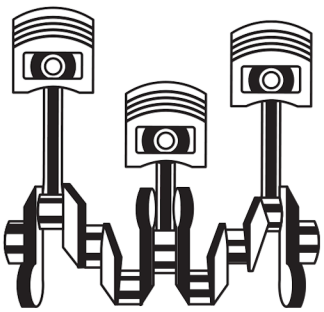
Scan the QR Cade to learn about Internal Combustion Engines!

Scan me





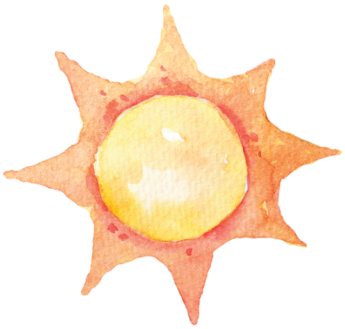




ACCENTS





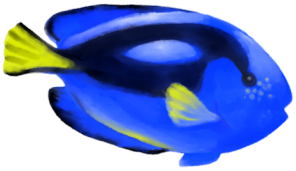





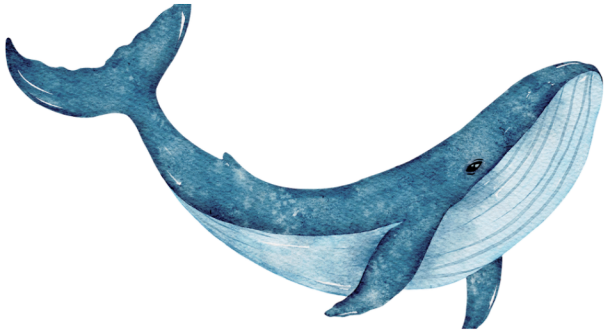










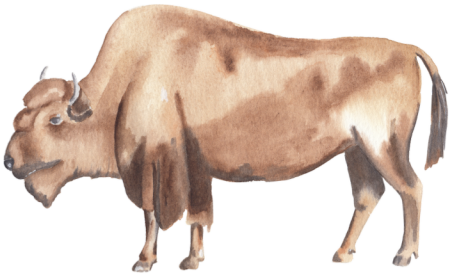


OUTLINE ELEMENTS

















OUTLINE ELEMENTS

































B'RSHEET ACCENTS









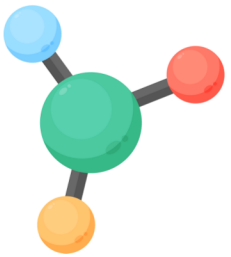


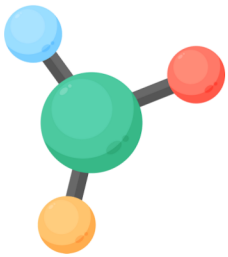




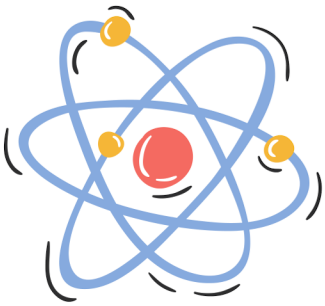








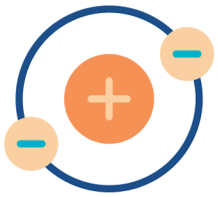








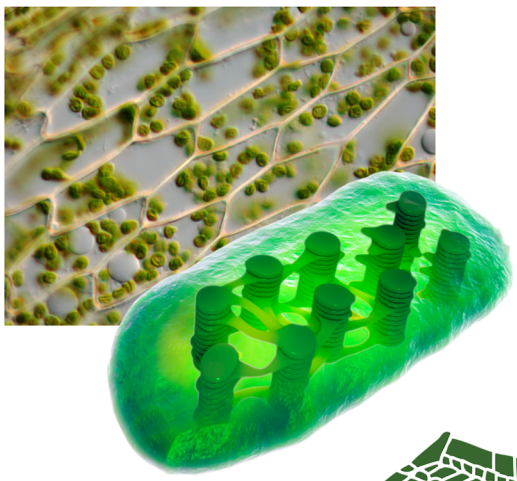




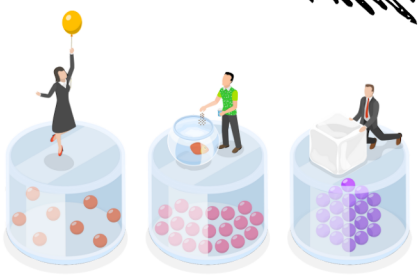




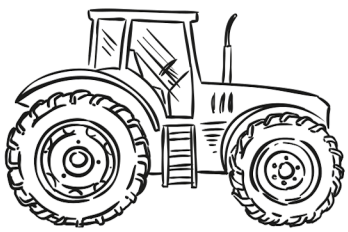


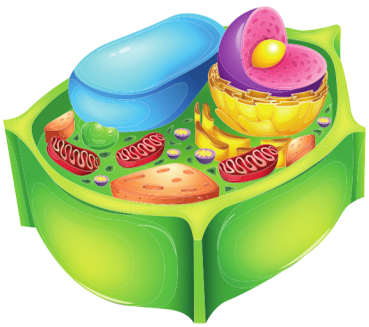












PLANT CELL





