

Slides 1 & 2

 The Heavens Declare the Glory of God... The Law of the Lord is Perfect, Restoring the Soul Psalm 19 The Universe IfMyPeople.us 	The Universe Putting Back the Awe of God's Creation A Six-Part Series 1. Building Blocks 2. Goldilocks 3. To the Moon! 4. Our Neighborhood 5. Stars 6. Galaxies
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Building Blocks

Why does ice float? Why does it matter? Why don't atoms (or the universe itself) scatter instead of forming marvelous structures that support life? The answers to these and other questions leaves little doubt they were designed by a intelligent, loving being to make a universe of order, design, and beauty.

Goldilocks

Not too hot, not too cold, this planet is just right. A LOT of things need to be just so to support life on earth, from heat, gravity, radiation and a raft of other things. Demonstrating Jesus' incredible intelligence and design makes short work of conventional science "just so" life-on-earth-by-accident stories.

To the Moon

Earth's moon is the source of light, bringer of tides & eclipses (and romance). Unlike other planets' moons, ours is unique in many ways. Ways that make life on earth possible

Our Neighborhood

Our tiny planet has a host of neighbors, big & small that provide beauty, awe, wonder, and protection!. See how God wisely placed these sentinels near our world and some fun facts about them.

Stars

The nuclear source of power and light for earth. Stars fill our sky at night and demonstrate only a God Wonders could make such a marvelous creation. Join us as learn how our very unique sun differs from most other stars created by God to bring us safe stable life.

Galaxies

Vast, almost unimaginably huge, these collections of stars and dust and other wonders pepper our vast, God-made universe with beauty, awe, and wonder.

Slide 3

Be Like Newton:

- Come With a Curious Mind
- “Have You Ever Asked Yourself...”
- Aim: The Glory of God Not the Spotlight of Foolishness

Curious Mind: Don't Take things for granted.

Have You Ever: Be child like in asking how and why etc.

Aim: Great are the works of the LORD; They are studied by all who delight in them. — Psalm 111:2 Tonight (and this series) is for worship.

Slide 4

The Big Ideas

- The Laws of God's Creation:
 - Are Exquisite
 - Show the Profound Wisdom of Jesus, Our Creator
 - Show the Desperate Need for a Savior
 - Show God's Word is True

This excursion into God's Creation is more to glorify God through the beauty and profundity of the Creation giving us a break from refutations to evolution / long ages.

The aim is to show these rules of created things must have exact, precise qualities or else they could not contain the reason for which they were made: a Bride for Christ.

Only an infinitely wise Creator could, in seven days, produce the thousands of substances, values, precision, and beauty. This list is merely a speck, a demonstration of this wisdom. It is hoped the reader gains curiosity.

This profound beauty, marred by the ugliness of our sin demonstrated our need for forgiveness if reconciliation is to be made possible

(Col 1:19-20 For it was the Father's good pleasure for all the fullness to dwell in Him, and through Him to reconcile all things to Himself, having made peace through the blood of His cross; through Him, I say, whether things on earth or things in heaven.)

Science, the observation and study of nature, merely *confirms* the Bible's truth.

This is a time of worship – Psalm 111:2

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God's Law Extends to His Creation:

“Thus says the LORD, ‘If My covenant for day and night stand not, and the fixed patterns of heaven and earth I have not established, then I would reject the descendants of Jacob and David My servant, not taking from his descendants, rulers over the descendants of Abraham, Isaac and Jacob. But I will restore their fortunes and will have mercy on them.’ ”
– Jeremiah 32:25-26

Thoughts:

Nature must obey God's law, humans do not.

God is a God of order, not confusion.

We can take great comfort in the promises; if there was morning and evening yesterday, then God's Word is sure.

Slide 6

God's Law Extends to His Creation:

“Can you lead forth a constellation in its season, And guide the Bear with her satellites? “Do you know the ordinances of the heavens, Or fix their rule over the earth? – Job 38:32-33

Thoughts:

On the other hand, knowing (some things) and being able to do them separates God from humanity.

We are puny things

Slide 7

God's Laws of Nature

Laws of Chemistry
Laws of Planetary Motion
Laws of Physics
Laws of Mathematics
Laws of Logic

Laws of Chemistry Water

Laws of Physics - Laws of Planetary Motion

Thermodynamics – Three Laws

Laws of Mathematics - Fibonacci Series

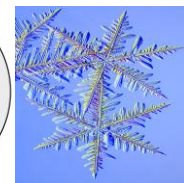
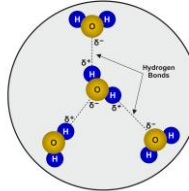
Laws of Logic – Classical Rationality

Slide 8

Laws of Chemistry – Illustrated Wondrous Water

Why Does Ice Float?

- The Hydrogen Bond
 - Cools by Day Heats at Night
 - High Boiling & Melting Point
 - Allows Trees to Draw moisture From Soil
 - Produces Unique Snowflakes



Laws of Chemistry

Why Does Ice Float? – Because solid water (ice) is lighter than water! That makes it unique chemically

Other fun facts about water:

It is a “universal solvent”, in plants, animals, all living things. It dissolves many solids for use in nourishment and critical compounds and industrial processes.

It makes possible delicious food by dissolving things.

It produces surface tension that makes capillary action, the process of water “climbing” up plants possible. (It also makes high jumpers think first, jumping into water requires the breaking of surface tension which can break bones or worse.

(How can you overcome surface tension?

Slide 9

Laws of Chemistry – Illustrated Wondrous Water

Why Does Ice Float?

- Solid Water (Ice) is *Lighter* Than Liquid
- Allows for Ice Bergs, Ice at the Top of the Oceans
- Boiled Off Water or Popsicle Earth



Substance	Phase	Heat Capacity by Volume
Air	gas	0.0012
Granite	solid	0.79
Soil	solid	0.8
Sand	solid	0.835
Brick	solid	0.84
Glass, silica	liquid	0.84
Concrete	solid	0.88
Asphalt	solid	0.92
Gasoline	liquid	1.64
Wood	solid	1.7
Water	liquid	4.181

Slide 10

Laws of Planetary Motion – Illustrated Kepler's Laws

Law of Orbits
Law of Areas
Law of Periods

Johanes Kepler; corrected circular orbit theory of Copernicus

1st Law of Ellipses, – not circular, but an ellipse, a squashed circle

2nd Law of Equal Areas – The area swept by a planet at any time is equal to the area in another part of the orbit in the same time.

3rd Law of Harmonies – There is a simple relationship between how long it takes to complete a revolution and how far from the sun it is.

Why are these important?

- Like all the laws we see today, it's true anywhere in the universe, here in our solar system, or thousands of light years in another galaxy.
- It's understandable by human beings and intended to be understood
- It glorifies the Creator-God, the Lord Jesus Christ and is good for us: Psalm 92:4-5 – “For You, O Lord, have made me glad by what You have done, I will sing for joy at the works of Your hands. How great are Your works, O Lord! Your thoughts are very deep.”

Laws of Physics – Illustrated Thermodynamics

- 1st – No More No Less –
“You Can’t Win”
- 2nd – Decay of Useful
Energy – “You Can’t Tie”
- 3rd – No Disorder at 0°K –
“You Can’t Stop Playing”

• 1st: You can't win
Energy is conserved
 $\Delta U = Q - W$

• 2nd: You can't tie
Entropy always increases
 $\delta S = \delta Q/T ; \Delta S > 0$

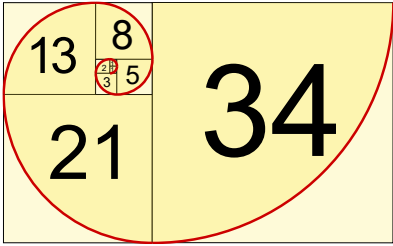
• 3rd: You can't stop playing
Can't get to 0 K
 $\lim_{T \rightarrow 0} S = \text{const} ; \lim_{T \rightarrow 0} C = 0$

- 1st Law of Conservation of Matter & Energy, – Gen 1:31 – 2:1: “God saw all 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 completed, and all their hosts.”
- 2nd Law of Entropy – Why your coffee gets cold, passing from useful energy to heating the room which is non-useful
- 3rd Law of Impossibility to Get to Absolute 0° K (absolute zero) – something of an absurdity, for instance you could detect it only by a sensor radiating energy which would raise its temperature. It could not exist with any other material, the energy would conduct from high to low, and you have the 2nd Law making this happen, too.
- 1st $\Delta U = Q - W$, where ΔU is the change in internal energy, Q is heat added to the system, and W is work done by the system.
- 2nd $\Delta S \geq \delta Q/T$, where ΔS is the change in entropy, δQ is the heat transfer, and T is the absolute temperature.
- 3rd Don't ask me.

Slide 12

Laws of Mathematics – Illustrated
Profound Beauty

Fibonacci Sequence: 0,1,1,2,3,5,8,13,21,34, ...



Leonardo Pisano Bogollo lived between 1170 and 1250 was nicknamed Fibonacci (son of Bonacci) discovered this curiosity almost a thousand years ago.

Take 0 + 1 which are given, add the last number to become 2, add 1 (the last number) to 2 for 3. Add 2 (the last number) to 3 for 5, and so on.

Put them into cubes and you have the makings of a spiral

Source: <https://www.mathsisfun.com/numbers/fibonacci-sequence.html>

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Laws of Mathematics – Illustrated
Golden Ratio

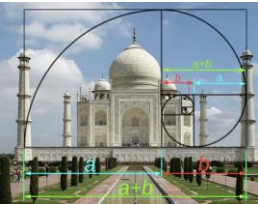
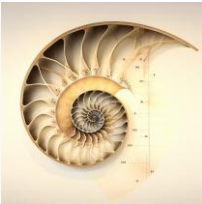
Golden Ratio “ ϕ ” 1.618034

$3/2 = 1.5$

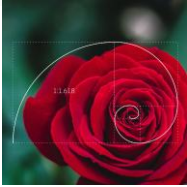
$5/3 = 1.666$

... = ...

$377/233 = 1.618025$



Photography



If we divide the last number by the one before it, we get something called the golden ratio. We see it EVERYWHERE and often miss it. What we do see is its beauty. It has a pleasing symmetry. Animals, plants, architecture, photography to name a few.

The point: God loves beauty and variety and embeds it “Cross Platform.” Only our God does this. We didn’t invent it, we *discovered* it.

Source: <https://www.mathsisfun.com/numbers/fibonacci-sequence.html>

Slide 14

Laws of Logic – Illustrated

Law of Identity

Law of Non-Contradiction

Law of Excluded Middle

Law of Identity – ($a=a$) each thing is identical to itself. It doesn't change throughout the proposition (idea to be thought out)

Law of Non-Contradiction – $\neg(p \wedge \neg p)$ A cannot be non A at the same time, in the same sense or context.

Law of Excluded Middle – $p \vee \neg p$ every proposition is either true or not true.

Proposition example:

Sally has a cold. A cold is a sickness. Therefore Sally is sick. Two premises and a conclusion.

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Laws of Logic – Spiritual

Law of Identity – Exo 20:2

Law of Non-Contradiction – Exo 20:3

Law of Excluded Middle – Mat 12:30

For since the creation of the world His invisible attributes, His eternal power and divine nature, have been clearly seen, being understood through what has been made, so that they are without excuse. For even though they knew God, they did not honor Him as God or give thanks, but they became futile in their speculations, and their foolish heart was darkened. - Romans 1:20-21

These have spiritual parallels:

Law of Identity – Exo 20:2

Law of Non-Contradiction – Exo 20:3

Law of Excluded Middle – Mat 12:30

When nations reject God they reject these laws.

They commit these further errors and receive this warning:

Isa 5:20 - Woe to those who call evil good, and good evil; Who substitute darkness for light and light for darkness; Who substitute bitter for sweet and sweet for bitter!

But there is an antidote...

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God's Law Points to Our Need for Christ

For the anxious longing of the creation waits eagerly for the revealing of the sons of God.

For the creation was subjected to futility, not willingly, but because of Him who subjected it, in hope that the creation itself also will be set free from its slavery to corruption into the freedom of the glory of the children of God.

For we know that the whole creation groans and suffers the pains of childbirth together until now. – Romans 8:19–22

When we are revealed the corruption of nature is set free (for a while 2 Pet 3:7)

When we are saved we become Sons of God. - Romans 8:15

When we hear the Gospel and respond we are saved – Romans 10:14,17

WE NEED THE GOSPEL

Slide 17 - Appendix

Appendix: Laws of Mathematics – Illustrated
Profound Simplicity

$$z_{n+1} = z_n^2 + c$$

Navigate to this address to display the Mandelbrot set on your device:

<https://tilde.club/~david/m/#>