Out of the Stars: Celebrating Our Evolutionary Roots!
Summer camp for teens

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It was a pleasure to be able to expand the **Out of the Stars Evolution summer camp curriculum** [created by Aubree Smith] for use with our new **high school** campers. We essentially used the original curriculum [for grade school ages] and added two guest lectures from a parent professor who holds her PhD in primatology and human evolution.

Additionally, we **inserted songs by a rap artist Baba Brinkman**. His CD *The Rap Guide To Evolution* is GREAT!!! Information about him and his music (including lyrics) can be found at www.babasword.com.

One of the most meaningful afternoon activities, in addition to the **bead necklaces**, was the daily creation of their own **personal altar boxes**. Jennifer Kranzke brought this idea from seeing it at another camp. After decorating their small wooden boxes with either markers or modge podge art, the youth selected several prayers and/or meditations to laminate and keep in their box [see following page of text choices]. The youth also created small shrinky-dink pieces of chalice art along with a small 5"x 3" piece of decorated altar cloth. The youth were able to quietly reflect on what they'd discussed and what it meant to them as they decorated a new element of their altar box each afternoon.

We also added a day at a local water park — only for the high school group. This was not attached to the curriculum in any real way; it was simply a fun way for the youth to continue to bond in a fun and active way after such thoughtful reflection throughout the week.

Following is the daily curriculum as it was modified for our high school group. We look forward to adding to and editing portions in the years to come. This year we had several parents who are professors at a local university who'd heard about the evolution camp and were eager to send their children.

> **The Out of the Stars curriculum provided a very vital and necessary alternative to Vacation Bible Schools that are so prevalent in our conservative Christian valley.**

Possible readings for teens to choose, cut, laminate, and place in their personal ALTAR BOXES

Breathing in, I relax body and mind.
Breathing out, I smile.
Dwelling in the present moment,
I realize this is the only moment.
You might call on the spirits of Earth, Air, Fire, and Water.
Or you can create your own entering prayer. I say:
Open my eyes, that I might see your face
in everyone I encounter this day, myself included.
Open my ears, that I might hear your voice in whatever forms it takes.
Open my hands, that I might freely give whatever is mine to share.
Open my heart, that I might live and love more fully in you.

We light this chalice,
for the light of truth,
the warmth of love,
and the fire of commitment.
We light this symbol of our faith,
as we gather together.

Meditation
Tim Haley
Amid all the noise in our lives, we take this moment to sit in silence --
to give thanks for another day;
to give thanks for all those in our lives who have brought us warmth and love;
to give thanks for the gift of life.
Let us open ourselves, here, now,
to the process of becoming more whole -- of living more fully;
of giving and forgiving more freely;
of understanding more completely the meaning of our lives here on this earth.

Opening Words
- Barbara J. Pescan
One of the old ones stood up into the morning light
and spoke to those who had come back to the river:
"Now we have come again to this place; it is a good thing.
My life apart from you is not as strong.
"Yes, I have danced and I have told the stories at my own fire
and I have sung to all the six directions.
"But when I am with you, my friends,
I know better who it is in me that sings."

Chalice Lighting
Eric Heller-Wagner
Blessed is the fire that burns deep in the soul.
It is the flame of the human spirit touched into being by the mystery of life.
It is the fire of reason; the fire of compassion; the fire of community;
the fire of justice; the fire of faith.
It is the fire of love burning deep in the human heart;
the divine glow in every life.

Chalice Lighting

-Kathy Huff
Divine spark from sacred dark
Symbol of our holy intent
Illuminate this hour.

Chalice Lighting
- Amarette Callaway
In memory of all the flames that didn't die –
in the midst of darkness,
in spite of the darkness,
we light this flame today.

Chalice Lighting
-George Kimmich Beach
In the mystery of life about us there is light.
It gives us a place to be, to grow, to rejoice together.
It opens the pathways to love.
In this place of friendship there is freedom.
Let the light we kindle go before us,
Strong in hope, wide in good will,
Inviting the day to come.

Chalice Lighting
-Bets Wienecke
May this flame, symbol of transformation since time began,
fire our curiosity, strengthen our wills,
and sustain our courage as we seek
what is good within and around us.

Singing the Living Tradition Hymn #362
O flaming chalice, symbol of a free faith,
Burn with the holy oil of helpfulness and service.
Spread warmth and light and hope;
Warm hearts grown cold with indifference;
Light dark places with justice; rekindle hope in despair.
May we bring fuel for thy fire of love.
May the oil of loving kindness flow from us to thy leaping flame.
May hands of service shelter thee,
That no winds of hate may extinguish thy brightness.
May thy light and warmth be eternal.
May we be keepers of thy flame.

He who experiences the unity of life sees his own Self
in all beings, and all beings in his own Self,
and looks on everything with an impartial eye.
Buddha

The only real failure in life is not to be true to the best one knows.
Buddha

The way is not in the sky. The way is in the heart. Buddha

Out of the Stars: Celebrating our Evolutionary Roots!

Day 1

Objectives:

1. Getting to know each other
2. Group name and chant.
3. Present the lessons: Big Bang through the Galactic Phase (Great radiance through the birth of the sun) and Hadeon through Proterzoic (Birth of the earth through multicellular life)

1. Getting to know each other
    a. The campers need to get to know each other and each camper needs to recognize as a unique individual. To accomplish this, engage the youth in energizers and team building activities. Deep Fun has several examples as well.

    b. Listen to "Darwin's Acid" (#16) – Baba Brinkman *The Rap Guide To Evolution*

2. Group name and chant
    a. Belonging to a group helps members feel a sense of belonging at the camp. Campers will then identify with their group and begin to feel an increased connection to other members of the group. It is important that the group agree on the camp name and chant. To help with this process we have two dark colored bags. One of the bags has the names of animals and the other has the names of stars or galaxies. We call these bags the star bag and the creature bag. Have the youngest youth put their hand in the bag and pull out a star, and then have the next youngest youth pull out a creature. Make a star-creature name using one or the other or both. For example, "Polaris Polar Bears" or "Andromedea Anteaters", or "Milky Way Mongooses". The chant should be exciting and show pride in the group.

3. Present the lessons:
    First lesson: Big Bang through the Galactic Phase (Great radiance through the birth of the sun)

    a. Step one: Name your knowing: Ask the youth "What do you know about the beginning of the universe?" Encourage listening, respect, and inquiry. Discourage arguments. If scientific questions arise, write down the question. The questions can be researched either by a youth volunteer or the counselor and addressed later in the day.

b. Step two: Critical reflection: Ask the youth, “Why do you want to know about the universe?” or “How do you feel when you think about the start of the universe?”

c. Step three: Story and vision. Read Born with a big bang By Jennifer Morgan.

d. Step four: Ask the youth “What part of the story did you like best?” In the book, the universe is talking to you. Do you think the universe can talk with you? Have you ever felt a communion with a creature, plant or a storm? What about God speaking?

e. Step five: Integration and response. Ask the youth, “None of your great grandparents could have learned this in school because scientists didn’t even know this story back then. It’s all so new, as are ways of talking about it i.e. story, music, movies, books, discussions… How do you think our beliefs are different because of all this knowledge?

Lesson two: Hadeon through Proterozoic (Birth of the earth through mulitcellular life)

a. Step one: Name your knowing. Ask the youth, “What do you know about the birth of the earth?” and “Do you know how life on earth started?” Encourage listening, respect and inquiry. Discourage arguments. If scientific questions arise, again write them down and either have a camper or group of campers research the question and report back later or the counselor may report back from their later research.

b. Step two: Critical reflection. Ask the youth, “Why is our earth important?” and “How do you feel when you think about the first creatures?”

c. Step three: Story and vision. Read *From lava to life* by Jennifer Morgan (pages 4 – 23 only)

d. Step four: Dialogue. Ask the youth what was their favorite part of the story/rap music

e. Step five: Integration and response. Ask the youth “What do you think of bacteria now?”

f. To set the stage for tomorrow’s guest evolutionary biologist speaker the youth can listen to “Performance, Feedback, Revision” (#15) –Baba Brinkman *The Rap Guide To Evolution*

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Day 2

Objectives:

1. Welcome the campers

2. Worship discussion: Guest: Dr. Kaberi Gupta, Ph.D Expert in primatology, human evolution.
    a. Listen to “”Sexual Selection” (#13) Baba Brinkman *The Rap Guide To Evolution.*

    b. Discussion title: “So you think you’ve got Game?”

    c. Kaberi will engage the youth in a discussion on Sexual Selection- how our current behaviors about how we try to attract mates have their evolutionary roots in early primates. Examples of current mating rituals in primates, birds and other animals will be compared and contrasted with young adults and their evolutionary roots will be discussed.

3. Present the lessons: Paleozoic Era through the Jurassic Era (Birth of animals through the age of the dinosaur) and Cenezoic Era through present time (Age of mammals and birds to present)

    First lesson: Paleozoic Era through the Jurassic Era (Birth of animals through the age of the dinosaur)

    a. Step one: Name your knowing: Ask the youth, “What do you know about the first animals to live on the earth?” and “What do you know about dinosaurs?” Encourage listening, respect, and inquiry. Discourage arguments. If scientific questions arise write them down and encourage a camper or two to research and report back their findings.

    b. Step two: Critical reflection. Ask the youth, “Why is our earth important?” and “How do you feel when you think about dinosaurs?”

    c. Step three: Story and vision. Read *From lava to life* by Jennifer Morgan (pages 24 to the end)

    d. Step four: Dialogue. Ask the youth, “What were your favorite creatures from the book?”

    e. Step five: Integration and response. Ask the youth, “How will knowing about life on our planet help you throughout your life?”

Second lesson: Cenozoic Era through Present time (Age of mammals and birds to present)

a. Step one: Name your knowing: Ask the youth, “What do you know about how humans evolved?” and “What do you know about mammals?” What’s different about mammals? (Answer= milk, hair, social behavior, play, brains have cortex, language, symbols)

b. Step two: Critical reflection: Ask the youth, “How do you feel when you think about our primate ancestors?”

c. Step three: Story and vision. Read: *Mammals Who Morph* by Jennifer Morgan- or music, or Connie Barlow DVD

d. Step four: Dialogue. Ask the youth, “What part of this story did you like best?”

e. Step five: Integration and response. Ask the youth, “How will knowing about our family tree change your life?” or “How do you think your life is different because you know about the story of the universe?”

f. End with “I’m A African” (#5) -Baba Brinkman *The Rap Guide To Evolution*

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Day 3

1. Greet campers – Check in

2. Listen to "Creationist Cousins" (#6) –Baba Brinkman *The Rap Guide To Evolution*

3. Guest speaker: Dr. Kaberi Gupta, Ph.D "Human Evolution v. Intelligent Design" Dr. Gupta will engage the youth in a discussion on human evolution; pointing out the mountain of robust empirical evidence for evolution compared to the lack of evidence for Intelligent Design. Current political/educational trends and issues will be discussed also.

4. Listen to "D N A" –Baba Brinkman *The Rap Guide To Evolution*

5. 10:00 Camp Worship: Water Communion

    a. In the sanctuary to be led by minister Bryan Jessup

Cosmic Beads – Begin if there is time between Dr. Gupta's discussion and the Water Communion. Continue after lunch

Cosmic beads are a string of beads that represent important moments in the history of the universe. The beads trace the story of the universe from the Big Bang until the present time. Beadwork is preceded by a guided meditation and the camp counselor explains the significance of each bead as the children are stringing it on a leather cord.

Step one: Explain to the campers that you are going to lead them in a meditation. A meditation is a way of focusing your mind. Say, "Today we will focus our minds before we work on our beads. We will build on the meditation from the beadwork before." At the beginning of the second through fourth bead session, ask the campers to try to remember what they meditated on in the preceding bead sessions, remind them if they need you to.

Step two: Have the campers get comfortable. Let them know they can lie down or sit eyes open or closed. (Closed is preferred) Ask the campers to breathe deeply through their noses, in and out. Do this yourself. Once every one is comfortable and breathing, begin reading the first cosmic bead meditation below. When you are done with your reading, pause for 5 - 15 seconds. At the end of this time, let the campers know that they should open their eyes slowly and "Come back to the room". Tell them they should sit up slowly, if they are lying down, and stretch a little. This may take some campers a minute or two.

Step three: Bring out the beads and explain the stringing of the beads and what each one represents.

INSTRCUTIONS FOR STRINGING THE BEADS

1. Tie a knot at the end of the cord
2. After explaining each bead, slide each bead onto the cord.
3. Tie a knot at the end of each bead session to secure the beads.
4. Store the beads in each person's bag.

The high school youth will create their Cosmic Bead necklaces on Thursday and Friday. The rest of the campers have been doing short sessions each day throughout the week.

Session one Cosmic Bead Meditation

Once you were only a speck, but you could not stay small. You grew and grew and grew until you were ready to leave the darkness. I too, had a special day when I was born. I am the universe. You were inside me from the very beginning, but not in human form. Like you, I started as a speck about 13 billion years ago. I was smaller than a piece of dust under your bed. I was bursting with wild and dazzling dreams of galaxies, stars, and planets in radiant colors…. Bright yellow, molten red and piercing blue…..

In a flash space EXPLODED inside me with unimaginable power like a GARGANTUAN balloon. I blew up to the size of a galaxy and it all happened faster than you can snap your fingers (reader snap your fingers). I was shaping myself into galaxies. One here, one there, there were mother stars everywhere. Gigantic groups of mother stars spiraling everywhere in space. Our mother star mixed together bunches of hydrogen and boiled them at 3 billion degrees into lots of different elements or building blocks. Our mother star BURST apart in a massive explosion called a Super Nova. Five billion years later, WHOOSH! our sun flared into life.

Event	Description	Time
Lobster claw	To start the necklace	
Crimp	Secures the wire to keep the beads from falling off the wire	
Clip or Spring	Hold the beads at the end of each session	
1. Big Bang	Black and Red Bumpy	13.7 billion years ago
2. Galaxies	Blue/White Black/Blue	12 billion years ago
3. Stars form	Red stars	11 billion years ago
4. Supernovas	Blue Bumpy	10 billion years ago
4. Sun ignites	Yellow Glass	5 billion years ago

Session two Cosmic Bead Meditation

Imagine tiny specks of carbon, oxygen, and calcium and all the building blocks blasting into space and cooling into stardust… this stardust is the same stardust that would come together someday and make you. Inside the cloud of stardust a little gravity tugged from each speck, making them stick together in little clumps. WOOSH! Born from clumps of stardust were nine young planetary pups… our Earth was the third young planetary pup in the pack. Our Earth was a burning ball of molten stardust. Our Earth was a high-energy pup. Erupting volcanoes spewed steam and gasses. The steam turned to rain. The rain formed vast oceans. The oceans bubbled and boiled. Did Universe have enough building blocks to turn into creatures? Molten red rocks pushed up through the cracks in the ocean floor. A most amazing thing happened. Teensy bubbles began to twist and turn, not only when waves crashed, but on their own. THE EARTH WAS ALIVE!! The first earthlings were bacteria. Even now, bacteria are the living nuts and bolts of all life. Right now they are inside you helping you digest your snack…. Some of the bacteria on top of the ocean waters ate rays of light and magically transformed sun energy into food. Then something incredible happened. About two million years ago some bacteria got together and merged into a new Earthling, a EUKARYOTE (you-carry-oat).

Event	Description	Time
6. Earth/Solar System	Black spiral	4.6 billion years ago
7. Moon	Shiny glass	4.5 billion years ago
8. Rain	Blue drop	4.1 billion year ago
8a. Oceans	Flat blue	
9. Life	Gold bell	3.8 billion years ago
10. Photosynthesis	Round green	3.2 billion years ago
11. Oxygen	Clear square	2.8 billion years ago
12. Protozoa/Predation	Round Glass	2 billion years ago
13. Multi-cellular life	Worm	565-543 million yrs ago

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Day 4

"Do you remember the EUKARYOTES? They were a social bunch. They lived in colonies and teams. Some of these colonies became the very first animals. WOW! The animal population began to explode, and morph into dazzling body designs. Trilobites led the way in making hard things like teeth. They also invented the very first set of eyes made out of clear crystals… some animals, with hard outer shells, came out of the sea and took to the air. They became insects. Imagine gargantuan DRAGONFLIES as big as seagulls swooping along the shore… Picture a fish that has turned its fins into stubby web like feet… The lure of the land was so great that their gills began to change into air-breathing lungs. This took millions of years, but it happened; and a new ancestor was born, amphibians. Your amphibious ancestors laid their eggs in the water, but again the lure of the land was so great that a brand new egg appeared on land… it had a leathery shell so the embryo would not dry out on land. Who laid these extra strength eggs… REPTILES! Now the reptiles could explore the continents. The continents had been apart but were moving…. Slowly moving… Sliding toward each other slowly and colliding into one GIANT land mass called PANGEA. Then something happened- a great mystery- a mass extinction. Many precious Earthlings did forever… Some reptiles did survive and turned into DINOSAURS. Some turned into fuzzy, mousy animals less than five inches long. Picture DINOSAURS and fuzzy little mousy animals running around on Earth…."

14. Animals/teeth	Ivory	540 -500 million years ago
15. Eyes	Eye	540 – 500 million years ago
16. 1st Major Extinction	Round Black	440 million years ago
17. Jawed Fish	Fish	440-410 million years ago
18. Land plants	Green glass leaves	440-410 million years ago
19. 2nd Mass Extinction	Round Black	367 million years ago
20. Trees/wood	Wood	360-290 million years ago
21. Flight-Dragonflies	Breakable! Glass	360-290 million years ago
22. Eggs from reptiles	Eggs	360-290 million years ago
23. 3rd Mass extinction	Black	245 million years ago
24. Reptiles (small reptiles survive the mass extinction)	Green glass	210 million years ago
25. 4th Mass extinction	Black	210 million years ago
26. Frogs	Green glass frogs	210-45 million years ago
27. Dinosaurs	Plastic dinosaur	210-65 million years ago

"What has it been like for the Earth with so much going on? Imagine all of the creatures of the Earth living their lives. Eating, playing, sleeping… None of these creatures had song… until now. The Earth BURSTS into song with birds, and created dinosaurs making noises. Why were they making noises? They were making noises to attract other birds and dinosaurs. They plants however were working hard to attract the dinosaurs, birds and insects. They were trying to strike a deal with the animals. The plants would make yummy nectar, fruit, and seeds, and the animals would carry the pollen and seeds far and wide. Plants and animals began to depend on each other. The plants began to grow fragrant fancy flowers as way of saying "Come and get it!"

But in the midst of all the singing, attracting, and eating, high above a huge meteor six miles wide was hurtling through space. Imagine this meteor plunging towards Earth at 40,000 miles an hour… This meteor SLAMMED into Earth near what is now Mexico. When it landed the hole it created was so deep that the Earth's molten insides erupted all over the planet, through volcanoes and cracks in the ocean floor. There were tidal waves and forest fires. Over time every single dinosaur sank into extinction.

When the fires finally cooled the Earth cooled too and went into a deep freeze. But not everything was dead. There were still some birds flying about, some scrubby mini animals huddling together for warmth and gnawing on bits of frozen dinosaur flesh. These creatures would survive, and more and more would come into existence. Stunningly, fast (as fast as 3-5 million years ago) mini animals began to evolve. They were still no bigger than a large dog, but there were so many of them. Things started to happen faster and faster. It seemed as if the Earth could not wait to have horses, camels, elephants, and rhinoceroses. The Earth continues to sustain life in the new and different ways: imagine the first cats… rabbits…. Foxes… monkeys… and then…..HUMANS!

Yes, humans were evolving in this time too. Humans were learning how to make tools…. Learning how to harness fire….. learning how to communicate with language.. It was not long (if you think hundreds of thousands of years is not long) before YOU were born. Now that you are here it is up to you to help the Earth keep going strong… Can you do it? YES YOU CAN!"

28. Song birds	Doves	145-65 million years ago
29. Flowers	Glass flower	70 million years ago
30. 5th Mass Extinction	Round Black	65 million years ago
31. Horse, dog, camel	Dog bead	57-34 million years ago
32. Elephants, rhinoceros	Elephant Bead	57-34 million years

		ago
33. Primates	Monkey	57-34 million years ago
34. (some) bears become seals	Bear	23-5 million years ago
35. Cats	Multiple cat breads- choose by feeling your bead. Each youth chooses 3.	23-5 million years ago
36. Animal beads- Rabbits, snakes, gazelles, giraffes, foxes, deer, mastodon, marsupials, armadillos, sloths	Glass Rabbit head, Giraffe, Zebra	3 million years ago
37. Handy Human (homo habilis)	Button hand	2.5 million years ago
37. Ice age	Glass ice	2 million -13,000 yr ago
38. Fire- Homo erectus	Red bead	1.4 million years ago
39. Language	Words- each youth gets 2	500K -50K years ago
40. Your Birth	Photo	5-50 years ago
42. Events in your life**	Misc. beads. Youth choose a few beads to represent important events in their lives.	6-50 yrs ago.

** Events in your life:

Family transitions: Births, adoptions, marriages, divorces, deaths, pets, moving to a new city.

Your growth: Overcoming a difficulty, growing physically, rites of passage, changes in body, faith development (discovering your beliefs)

Your accomplishments: academics, sports, art.