

# Your Living Curriculum©

General Guide Lines and Instructions for Submission (GGL&I)

## Submission No:

Below are your general guidelines for the genre you have chosen. This outline has some ideas on what good instructional material should contain. It's our hope that you will have the best chance of getting your work accepted. Keep writing!

<b>Genre</b>	<b>Science 3rd-5th: Earth/Space, Life, and Physical</b> , Non-fiction, Informational, Expository	
<b>Page Format</b>	<b>Length:</b> 200 to 300 words <b>Font:</b> Ariel, size: 12 <b>Paragraph:</b> spacing exactly 17pt-----> <b>Margins:</b> 1.25 left and right <b>Doc Name Type:</b> Use a .DOCX file extension for your attachment. In all emails, have your alpha-numerical ID prominently placed <u>at the beginning</u> of the subject bar.	Blank header & footer Indent Paragraphs Right Click>paragraph, spacing> <i>drop down menu select</i> > exactly, input: 17 pt Indent paragraphs Send passage as an attachment in your email.
<b>Composition</b>	<b>Literary Elements</b> Introduction: Use an opening statement that grabs the reader by revealing a fantastic detail associated with the topic while simultaneously putting it into context in our everyday lives. Adjectives are encouraged. Body: Paragraphs have to be supported by details, include facts, and an opinion (optional). Each paragraph has to stand on its own as a separate topic supported by the details. Conclusion: Summarize the information and its importance. You can add adjectives and be somewhat subjective. References: Bibliography (a must)  A) Cause & Effect B) Problem/Solution C) Compare & Contrast D) Main Idea w/Supporting Details (a must) E) Opinion/Persuasive F) Technical (Instructions, How To Project) G) Perspective (Second/Third Person) H) Model or Image (a plus)	<b>Paragraphs 3+</b> Elementary and Secondary science topics are wide and varied. Standards have been established nationally and in each state to determine appropriate topics for education. Resources in your state can be accessed by typing in a search engine: <i>your state's</i> educational standards. Standards for the sciences have been grouped into three main categories: ➤ Earth and Space Science ➤ Life Science ➤ Physical Science Chose one topic within these categories to write your passage.  In the body, use anyone or a combination of elements (A-F).  Site sources in a simple bibliography (title, name, date, page numbers, website's URL).
<b>Complexity</b>	Use domain specific (academic) <b>vocabulary</b> throughout. Complexity is topic specific dependent on grade level and developmental capacity. Be sure the topic is accessible to the age group you are writing for.	The Lexile® can be very broad. Anywhere from 450L to L125L+ would be acceptable. Content needs to contain both Complexity Elements I and II.
<b>Suggestions</b>	Science topics and complexity have to coincide to match a reader's developmental level. See Attachment A for help matching your topic to a particular grade level. There is some overlap.	Complexity levels for Science, 3 <sup>rd</sup> through 5 <sup>th</sup> Grades is 450-980L.
<b>Comments</b>		

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## Attachment A

### Suggested Science Topics for 3<sup>rd</sup> through 5<sup>th</sup> Grade Passages

#### Third Grade Earth/Space Science

##### Background & Concept Information

*All Earth processes are the result of energy flowing and matter cycling (and recycling) within and among Earth's systems. This energy originates from the sun and from Earth's interior. Earth's major systems are the geosphere (solid and molten rock, soil, and sediments), the hydrosphere (water and ice), the atmosphere (air), and the biosphere (living things, including humans). These systems interact in multiple ways to affect Earth's surface materials and processes.*

##### Suggested Topics

Human interaction & effects on Earth's systems · Classifying & categorizing · Describing and defining · Sun's effect on each system · Plate tectonics · Sun's energy vs. Earth's interior energy · Earth's core · Sun (the star) & Earth (the planet) · Landmark discoveries

#### Life Science

*Life Science is organized around understanding the macro side of organisms, their varied structures, processes, and interdependences which increase their chances of survival. This includes basic anatomy of both plants and animals and how they've adapted to available resources. It also touches on how energy (from the sun) and matter (nutrients) are cycled through food webs/chains. The health of an ecosystem is based on the diversity of species where each of their needs are met in a relatively stable environment.*

##### Suggested Topics

Interdependence between animals and plants · Food chains & food webs · The recycling of nutrients back into the soil · Consumers vs. decomposers · Plant/animal dependencies-bees pollinate flowers, animals disperse seeds · Animal/plant anatomy · Energy cycle from plants to animals · Ecological systems · Herbivores vs. carnivores · Sun's energy cycle from plant to animal · Biodiversity · Unstable vs. stable ecosystems. Introduced species · O<sub>2</sub> to CO<sub>2</sub> Cycle · Individual plant or animal life cycle · Collective/Independent behavior (herds, families, loaners) · Classifications of plants, vertebrates, invertebrates · Animal/plant adaptations · Landmark discoveries

#### Physical Science

*(Passages only need qualitative based facts without the underlining physics.) Energy is present whenever there are moving objects, sound, light, or heat. We can interpret energy through our senses and with the use of technology (instruments). Energy moves from place to place as well as being transferred from one object to another object in the form of motion, sound, light and heat (light from the sun warms the earth). Waves of the same type can differ in amplitude and wavelength. They can add or cancel one another. The faster an object is moving, the more energy it possesses.*

##### Suggested Topics

Senses/sound/light · Waves explained · Magnification (refraction) explained · Sun light/heat · Color · Energy: light, heat, sound · Kinetic energy/mass · Heat transfer · Energy & Matter Explained · Landmark discoveries.

#### Fourth Grade Earth/Space Science

##### Background & Concept Information

*The processes within and between the Earth's four major systems (atmosphere, hydrosphere, geosphere, and biosphere) are both stable and dynamic. The geosphere's land forms have taken shape over time. Some occurred quickly ("natural disasters:"volcanoes, earthquakes, tsunamis, coastal erosion, floods ) while others have taken eons (mountain ranges, canyons, glaciers). Along with gravity, the atmosphere as well as some organisms assist in the weathering these forms. The oceans as well support life and influence climate. The recording of the atmosphere using instruments (data) is now common place and has led to an understanding of how air pressure, temperature, moisture, along with land forms effect local weather. Gasses in the atmosphere also determine changes in climate world wide. Fresh water is only a tiny fraction of the available water needed for the survival of*

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Suggested Topics	<p><i>many species. Human interaction has altered these natural processes over time because, they provide materials and elements we commonly expect to consume.</i></p> <p>Weathering and erosion · Land forms · Weather maps and instrumentation · Earthquakes and instrumentation · Volcanoes and instrumentation · Global warming · Fossil dating · Dendrochronology · Interrelated processes between the four major systems · Landform processes · Landmark discoveries</p>
Life Science	<p><i>When the environment changes a place's physical characteristics, temperature, or availability of resources, some organisms survive and reproduce, others move to new locations, yet others move into the transformed environment, and some die. Fossils provide evidence about the types of organisms (both visible and microscopic) that lived long ago and also about the nature of their environments. Fossils can be compared with one another and to living organisms according to their similarities and differences. Changes in an organism's habitat are sometimes beneficial to it and sometimes harmful. For any particular environment, some kinds of organisms survive well, some survive less well, and some cannot survive at all.</i></p>
Suggested Topics	<p>Endangered Species · Natural vs. man made environmental change · Chicxulub impact crater · Dinosaur/plant/microbe extinction · Continental drift · Animal/Plant habitat adaptation · Global warming · Landmark discoveries</p>
Physical Science	<p><i>Most people recognize "produced energy" in the form of electricity from burning coal, gas, nuclear, hydroelectrics, wind or solar. We use fossil fuels for our machinery. Electricity is moved through insulated conductors (wires) to be converted into light, motion, sound, and heat. Produced energy has to be distributed. Concentrated energy is stored for our consumption in batteries as well as water behind dams. All the energy we use (with exception of nuclear or geothermal) had at one time or another come from the sun. Light energy transferred from the Sun warms the Earth's lands and oceans. This facilitates life, determines the weather, and effects many other process on the surface. When machines or animals "burn" energy (fuel or food) they release heat. Moving matter (mass) also releases energy when it collides with another object, transferring some of that energy into light, sound and heat (asteroids produce craters) This "kinetic energy" did not originate from our Sun.</i></p>
Suggested Topics	<p>Simple Parallel/Series DC Circuitry (with a battery) · Hydroelectric power and its distribution · Energy conversion · Kinetic energy between two bodies · Solar &amp; Wind energy · Sun's energy into fossil fuels · Respiration-Animal/Machine · Global warming · Landmark discoveries</p>
Fifth Grade Earth/Space Science	<p><b>Background &amp; Concept Information</b></p> <p><i>Our relationship to the Earth, Sun and Moon is both astronomical (physics based) as well as spiritual (cultural beliefs). What we can see with the naked eye effects how we've organized ourselves and our survival (the seasonal planting of crops). The visible planets and constellations have also influenced different beliefs, theologies, how we've organize ourselves, to circumventing the seas and discovering other peoples and resources. What we see in the sky can be explained both scientifically and culturally.</i></p>
Suggested Topics	<p>Sun, Earth, and Moon's circumference, distances and orbits to scale · Influences of Gravity · Technologies for observing and measuring distant planets · Satellite technology · Our general Solar System · Seasonal change · Tidal change · Folk/Creation Tales · Theology &amp; Beliefs from the observable sky · Landmark discoveries</p>
Life Science	<p><i>Organism inherit a mix of characteristics from their biological parents as well as new interactions between genes. These new traits along with the environment can improve or diminish their chances for survival, finding mates and reproducing. Distinguishing characteristics involve both inheritance and environment. Differences in food and habitat may also cause organism who are related to end up looking and behaving differently. In</i></p>

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*each kind of organism there is variation in the traits themselves, and different kinds of organisms may have different versions of the trait. Changes in an organism's habitat are sometimes beneficial to it and sometimes harmful. Populations of organisms live in a variety of habitats and, changes in those habitats affect the organisms living there. In an attempt to understand similarities and differences, scientist have continuously classified and categorized both animal and plant species.*

Suggested Topics

Healthy/Unhealthy animal populations · Specie variations and traits · Changing sea life · Adaptation · Wildlife sanctuaries · Department of the Interior policy · Gene variation in plant/animals · Chromosomes and inheritance · Fossil species · The science of anthropology · The science of genetics · Geneology · Landmark discoveries

Physical Science

*Matter is the “noun ” of objects around us, things we see, and can touch. We see many duplicated things at different scales. Two trees of the same species can be tall or small. Dividing matter into smaller and smaller particles eventually makes them too small for the naked eye to observe. However, it still exists as matter and can be detected in other ways. Matter can be a single element but most often is a combination (or mixture) of elements. Molecules (a chemical combinations of elements) form an endless variety of new substances whose properties can be determined by observations and experimentation. The amount (weight) of matter does not change even thought it has taken on new properties. The water molecule is solid, liquid, or gas. It did not change from being water, H<sub>2</sub>O. However, it changed its properties because of heat and pressure. In scientific terms this is called “the conservation of matter, ” i.e. the total weight of the substance does not change even if its properties have. The amount of matter does not change when a solid melts or a liquid evaporates. This applies to all matter. Measurements (the use of instruments) of a variety of properties and observation can be used to identify particular materials as well.*

*Gravity is the universal attraction between all matter. It keeps the planets revolving around the Sun and the Moon orbiting our Earth. We feel gravity as a pulling force, an attraction towards the center of the Earth (in this instance we call it weight). To scale, this is the same force however that keeps the planets attracted to each other. Forces act on objects and has both a strength and a direction. An object at reset has equal forces in all directions keeping it still (or zero net forces canceling each other). Forces that do not sum to zero cause motion in the object's speed and direction. The patterns of an object's motion in various situations can be observed and measured; when past motion exhibits a regular pattern, future motion can be predicted from it. How quickly an object's motion has changed depends on the force acting upon it and the object's mass. The greater the mass of an object, the longer it takes to speed it up or slow it down. This property of mass is described as inertia. Electric, magnetic, and gravitational forces between a pair of objects do not require that the objects be in contact with the force acting on it-for example, magnets push/pull at a distance. Energy is present whenever there are moving objects, sound, light, or heat. When objects collide (their kinetic forces acting upon each other), energy can be transferred from one object to another, thereby changing their motion and direction as well.*

Suggested Topics

Examples of: Conservation of matter and energy · Simple chemical reactions · Simple mixtures · Hydrogen/Oxygen as a rocket propellant · Steam power · Newton's cradle · Newton's discoveries · Orbiting bodies · Gravity (basic acceleration) · Magnetism · Electricity · Acting forces and reactions · Intertia · Kenetic energy · Mass (generalized) · Properties of different substances · Manufactured goods · Instrumentation · Units of measurements · Landmark discoveries.