



LSL WHITE PAPER

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CONTENTS

WHY LION SCIENCE & LANGUAGE?	3
OUR PRODUCT: A WELL-EDUCATED, CONFIDENT YOUNG PERSON.....	4
CORE PRINCIPLES	5
FORMAT AND DELIVERY	7
FRINGE BENEFITS	8
GOALS AND MISSION	9
CALL TO ACTION	10



WHY LION SCIENCE & LANGUAGE?

Do you want to give your child an advantage for life?

At Lion Science & Language, we've discovered a way to tap into the latent potentials of middle schoolers. Through our meticulously engineered curriculum, our middle school students are learning high school honors-level material 3-5 years in advance of grade level, consistently. But LSL isn't just for gifted kids, it *creates* gifted kids. No previous science experience necessary.

Give your child a competitive advantage for the rest of their life. Fill them with confidence and empower them to make their mark on the world.

Imagine your child walking into the first day of high school already understanding honors chemistry, biology, physics, and language. High school honors classes would feel like review, so your child would get higher grades in more difficult classes with less effort and less stress.

Think of their self-confidence: deep, natural, earned. Then think of the downstream effects of that confidence.

Furthermore, since honors-level material is already understood, ambitious students can begin AP coursework as early as freshman year. LSL has proven a worthy foundation in this regard, formally testing students as young as 11 years old into AP science classes.

LSL's curriculum produces consistent, fantastic results: higher grades, in harder classes, earlier in high school. This is because LSL's curriculum wasn't created to maximize standardized test scores or check boxes for regulatory bodies. Our curriculum was created to help students understand nature's substance, mechanisms, and potentials, the intimacies of language, and how the whole universe interconnects. When such understanding is achieved, scores and boxes take care of themselves.

It's this genuine understanding in our students that LSL aims to achieve. This is where our students' confidence is rooted. And when your child is earning A's in honors classes and taking APs as an underclassman, it will affect not only in their GPA, but their class rank, and their college applications too. Everything downstream.

Give your child the best education. A true understanding of language and the natural world. Highly-developed abilities of critical thought and self-articulation.

Self-confidence. An advantage for life.



OUR PRODUCT: A WELL-EDUCATED, CONFIDENT YOUNG PERSON

Education and self-confidence are a strong foundation for a beautiful life.

Lion Science & Language's curriculum is the engine that generates our product: a well-educated, confident young person. Your child's effort channeled through LSL's curriculum will produce in them a precocious and dynamic understanding of language and the natural world.

Our curriculum is a long string of questions, exercises, and experiences introduced in a specific order to elicit specific effects across 3 years. It reads like a continuous story, taking middle schoolers through high school honors-level material in digestible, highly-organized chunks.

Furthermore, where traditional high school honors classes are disjointed, Lion Science & Language's curriculum is thoroughly interconnected: Year 1's chemistry integrates with Year 2's biology, and both integrate with Year 3's physics to produce a coherent, functional core of knowledge. No gaps or inconsistencies, all the pieces laid out and fit together in a positive, effort-based experience.

This approach has been producing stronger, more consistent results than average high school programs. If your child puts in the work, they'll come to understand science and language at some of the deepest levels well in advance of their age.



CORE PRINCIPLES

Science is the study of the natural world through chemistry, biology, and physics, and the language unlocks the science. This is why we teach them together: If a student understands the language, they understand the ideas that language encapsulates. Then as the student fits the language together, the ideas are also fit together, and so the big picture grows clear in both gross and fine detail.

This synergy between science and language produces remarkable effects in our LSL students. Polysyllabic words that notoriously intimidate young scientists are handily picked apart by our students, and this is because they understand the elements of language. As surely as the physical world can be broken down into molecules, atoms, and particles, language too can be broken down into clauses, words, and morphemes. This helps students break through daunting linguistic barriers to gain access to sophisticated scientific ideas. And all along the way, the child's general vocabulary, linguistic comprehension, and self-articulation grow in leaps and bounds.

Lion Science & Language accelerates its students' educational timelines 3-5 years by applying 4 core principles:

1. **smallest pieces**

We break everything down into its smallest pieces in both science and language.

2. **complements (lock + key)**

We explore how the smallest pieces fit with each other, then we explore how bigger and bigger chunks fit with other bigger and bigger chunks.

3. **cause & effect**

We explore causes and effects in long chains to learn to think critically, to understand how things have come to be, and what else can still become.

4. **BALANCE**

And everything we encounter is beholden to balance, that prime law that underpins all other laws in the cosmos.



Balance is the equals sign in a math equation. It's the fulcrum upon which the scales of justice tip. It's the arrow in chemistry that transforms inputs into outputs with nothing created or destroyed. And if balance is the prime law, then time is the ultimate test, and so these are the eternal benchmarks against which Lion Science & Language's curriculum has been formed and tested. Our curriculum is replete with ideas that were useful 1,000 years ago, are still useful today, and will continue to prove useful 1,000 years into future.

Such potent information is delivered in a highly organized, maximally efficient sequence via the Socratic method. LSL's classworks and homeworks are filled with concepts to be explored and questions to be answered, rather than data to be absorbed and regurgitated. We emphasize understanding and application over rote memorization. Old knowledge is reviewed often to deepen subconscious impression, new knowledge is interconnected with old to help secure retention, then both are applied in rigorous exercises to tighten comprehension and explore.

Now, the work load may initially feel heavy, specifically the depth of analytical thought, but it quickly becomes familiar and satisfying. Like a body growing fitter faster under a superior trainer, our students' minds grow stronger rapidly because of LSL's curriculum and delivery structure.





FORMAT AND DELIVERY

A crucial component in the successful absorption and assimilation of new material is repetition. Another is consistency. When we hold an idea consistent, like a simple definition, and repeat it frequently, it sinks more deeply into the subconscious and is more easily recalled when needed. It sinks more deeply still when that well-polished idea is fit cleanly together with several other well-polished ideas, which naturally fit with others, onward and outward, all interconnecting to form a massive web of understanding.

Lion Science & Language's curriculum is designed such that fundamental structures in science and language are held consistent for our students' entire 3-year journey, and new ideas are introduced by connecting to previous ideas. Imagine a puzzle being put together beginning with the center-most piece. Next, we add all the pieces that connect with that center piece, forming a second layer. Then we add all the pieces that connect with that second layer to form a third layer, and so on, and so on, steadily revealing a map of the natural world, all interconnected by and labeled with precise language.

Consistency in methodology is critical, but equally as important is consistency in class procedures and expectations. Here's what our students have come to expect:

- 36, 75-minute, live, online classes per school year
- 4 pages of classwork each week, 2 science, 2 language, in that order
- 6 pages of homework each week, 3 language, 3 science, in that order
- each week's CW + HW published the day before class
- 1st portion of class is HW review so students can check, correct, and ask questions
- 2nd portion of class is CW, filled with new and old ideas
- screenshots and video recording are published after each class
- each week's CW + HW due before the next class begins

Meanwhile, LSL parents know they can see all their child's scores and submitted work on Canvas, empowering them to monitor student progress and observe development.

These and other little islands of consistency provide stability and frame of reference. They help parents keep students on track, and they help students meter out time and energy wisely because expectations are clear and consistent.



FRINGE BENEFITS

- ❖ Live, online classes give students flexibility to join from anywhere with internet, including grandparents' houses, hotel rooms, private jets, or other plants. If the unavoidable should occur, however, and a lesson is missed, the full video recording and screenshots are posted after each class so no one misses a beat.
- ❖ In learning at home, and using household objects that the student will see time and time again, the ideas are inculcated more deeply into the subconscious. Each time an object from some past experiment is seen around the house, the memory of that experiment is warmed and brought closer to the surface of the mind again, if only ever so slightly.
- ❖ No textbooks to purchase, just questions to be answered and ideas to be fit together. We use internet search engines to find facts or images as needed, and skillful, appropriate use of AI is also modeled for our students. This is how the modern world works, so we prepare our students accordingly.
- ❖ Some learners go completely paperless, preferring to do their work purely on a tablet. Others print every classwork and homework and keep them in a binder, preferring paper and pencil. We offer students choice to suit their style, so long as work is done thoroughly, honestly, and in one's own handwriting to develop fine motor skills.
- ❖ We manifest core scientific principles using common household materials to help students connect theory and practicum. Our experiments and activities are simple, easily set up and cleaned up, and link tightly to the concept being explored.

LSL's logistics are also maximally convenient for busy parents:

- no driving
- geographic flexibility
- consistent weekly work load
- clear, consistent expectations
- Zoom link always front and center in Canvas
- minimal support required on lab days (*gathering simple household materials*)



GOALS AND MISSION

Our goal day in and day out is to produce precocious, confident, eloquent critical-thinkers.

Truly exceptional curriculum is fundamental to this goal's achievement, and when combined with student effort, the desired outcome is consistently produced. As such, our focus is on crafting the best curriculum and the best student and parent experiences. We want our students to show up, work hard, then reap the fruits of their labor. And so, we strive to deliver value far surpassing price – worth every penny, every second, and every unit of energy invested.

Our long-term mission is to accelerate human development.

If middle schoolers can consistently learn high school honors-level material, as proven by Lion Science & Language for years, then we should strive to make such outcomes the new standard. This would in turn accelerate high school students into college material, and college students into graduate-level work. Thus, little by little, the baseline of human education rises, and what was once highly advanced becomes the new standard. Such effects are achieved through perpetual refinement of curriculum, iterative improvement year after year, and tireless innovation to produce better and better results.

As such, we collect data and feedback each school year, then work each summer to improve Lion Science & Language's curriculum and student and parent experiences. Every year better than the last, ad infinitum.

Now, given that we can consistently, successfully teach high school honors-level material to middle school students, then perhaps it's also possible to teach such material to even younger students...

The only limitations are those we place upon ourselves.



CALL TO ACTION

Give your child an advantage for life! Fill them with confidence and empower them to make their mark on the world! **Schedule an evaluation for your middle schooler today!**

lionsci.llc

We'd love to work with your kids!

