מכון ויצמן למדע
WEIZMANN INSTITUTE OF SCIENCE

Davidson Institute
The Educational Arm of the Weizmann Institute

THE MINDS THAT SHAPE TOMORROW

From Inspiration to Impact:
Building the Next 25 Years
of Science Education in Israel




DREAM.
THINK.
DISCOVER.



SCIENCE EDUCATION IS FOR EVERYONE

For over twenty-five years the Davidson Institute of Science Education has been the place where curiosity meets opportunity. As the educational arm of the Weizmann Institute, it is where the wonders of science and fostering a scientific mindset come alive for Israel's youth, educators, and lifelong learners.

Today, standing at this milestone, the Davidson Institute looks ahead with a clear and confident vision: to shape Israel's future by ensuring that every learner—wherever they live, whoever they are—can access the joy and benefits of scientific discovery.

This is not a new beginning. It is the next chapter in a story of impact built on excellence, collaboration, and imagination.

MESSAGE FROM ALON CHEN

President, Weizmann Institute of Science


Credit: Yael Ilan

Science has always been a bridge, connecting wonder with understanding, questions with insight, and imagination with discovery. At the Weizmann Institute, our mission is to **expand the boundaries of human knowledge while nurturing the next generation of thinkers** who will carry that mission forward.

The Davidson Institute stands at the heart of this vision. It embodies the belief of our founder, Chaim Weizmann, who wrote in 1946: "I feel sure that science will bring to this land both peace and a renewal of its youth—creating here the springs of a new spiritual and material life."

> *As we look to the next twenty-five years, the alignment between the Weizmann Institute and the Davidson Institute has never been more crucial. Together, we will continue to advance excellence in research and in education—each enriching the other.*

Education is the living expression of that ideal and this is why "Inspire Young Minds" is a key tenet of the Weizmann *Empower Tomorrow* campaign. The Davidson Institute brings **science from the laboratory to the classroom, from theory to experience, from the campus to every corner of Israel**—and beyond. It is where the Weizmann values of curiosity, creativity, and collaboration become tangible, and inspire not only future scientists but engaged citizens. More than a body of knowledge, **science is a way of thinking, investigating, and making sense of the world.**

Through shared purpose, we will shape Israel's scientific future and contribute to the progress of humanity.

MESSAGE FROM RUTH SHOHAM

CEO, Davidson Institute of Science Education


Credit: Ohad Hareches

For twenty-five years, the Davidson Institute has stood as a lighthouse for learning, illuminating paths of possibility for generations of students, educators, and families. Rooted in scientific excellence, we have built an extraordinary legacy of impact across Israel. **Today, we stand at a defining moment.**

Declining student achievement, persistent educational disparities, and shortages of qualified science educators present significant challenges. At the same time, the AI revolution is transforming how we learn, work, and understand the world. The need to prepare future generations to think critically, evaluate evidence, and navigate an increasingly complex world has never been more urgent.

Building on our legacy of experience and impact, we are taking a bold leap forward to strengthen the nation through science education. **Our strategy positions Davidson as Israel's central hub for science education, driving systemic change and making excellence in science education accessible to all.**

As the educational arm of the Weizmann Institute of Science, we are uniquely positioned to lead

this transformation, connecting groundbreaking research with educational innovation and working in partnership with the Ministry of Education, municipalities, and industry.

Our vision is clear: Advancing a Society That Thinks Scientifically. We will nurture scientific talent, empower educators, expand opportunities for girls and underserved communities, and harness AI and emerging technologies to transform how science is taught, learned, and experienced across Israel.

I believe deeply that science education is about far more than preparing future scientists. It is about empowering every individual with the confidence and critical judgment to question, explore, and make informed decisions. It is both an educational mission and a national responsibility—one that calls for collaboration, commitment, and visionary partners like you.

Together, we can ensure that every child's natural curiosity can shine, every educator has the tools to inspire, and every community can benefit from the power of scientific thinking. Together, we can help shape a stronger future for Israel and generations to come.

OUR CORE DAVIDSON VALUES

PROFESSIONAL EXCELLENCE

PARTNERSHIP AND COLLABORATION

CONTINUOUS LEARNING

CREATIVE THINKING

DIVERSITY AND EQUAL OPPORTUNITY

OUR MISSION

TO ADVANCE SCIENCE EDUCATION FOR ALL BY CONNECTING CUTTING-EDGE RESEARCH WITH INNOVATIVE LEARNING, EMPOWERING EDUCATORS, AND ENGAGING THE PUBLIC.

A LEGACY OF SCIENCE EDUCATION

1999

Founded through a visionary gift from the William Davidson Foundation, **the educational arm of the Weizmann Institute of Science is established.**



2008

The **Clore Garden of Science**, the world's first open-air museum, opens.



2015

Expansion to **underserved communities**, integrating Arabic-language and culturally adapted programs.



2016

Launched **science communication** unit.



2019

Established the **Young Leadership Association in Science**



2020

Digital learning and hybrid teaching adapted during the pandemic and scaled nationally through the **Davidson VOD repository.**



2023

Resilience Through Scientific Education Initiative implemented post-October 7th, 2023, reaching displaced children across Israel.



2024

The **renovated Clore Garden** is inaugurated.



2026

Building **strategic partnerships** with local municipalities, the Ministry of Education, and leading scientific institutions.

2027

Planned launch of the **Science Gems** initiative.



"Education—particularly science education—is an absolute necessity for a healthy and vibrant society."

William "Bill" Davidson, 2008
Founding patron, Davidson Institute, and champion of learning

ANNUALLY

BY THE NÜMBERS

50M

Views of Davidson STEM content on social media

10M

Views on Davidson website

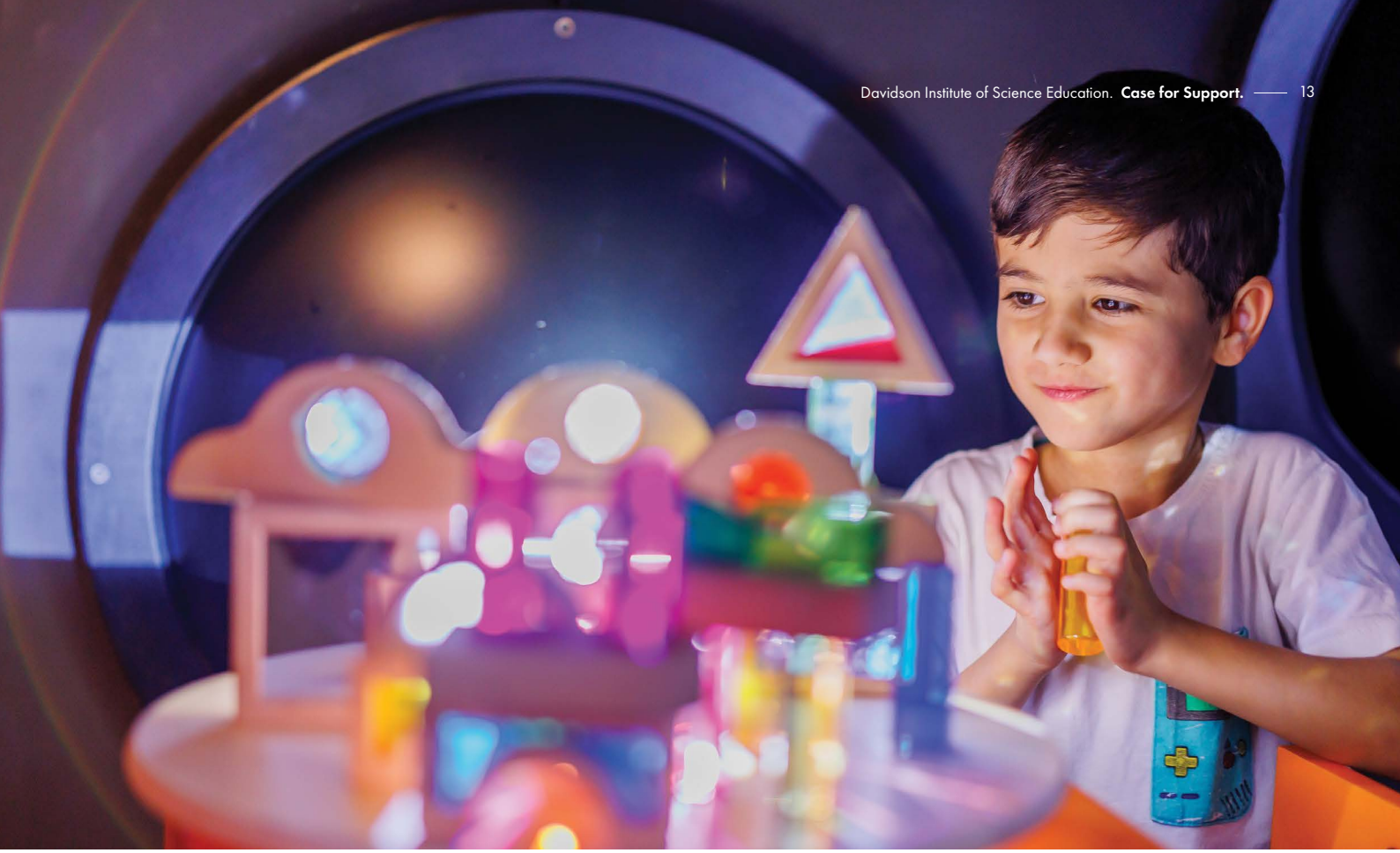


120K

Visitors to the Clore Garden of Science

45K

Children are impacted by 1,200 science educators trained by the Davidson Institute



30K

Schoolchildren engaged in Davidson programming

3.5K

Participated in scientific programs for outstanding students



WE LIVE IN A PIONEERING COUNTRY. WE ARE PIONEERING IN THE WILDERNESS, IN AGRICULTURE, AND IN INDUSTRY. BUT HERE IN REHOVOT, WE ARE ALSO ENGAGED IN A PECULIAR KIND OF PIONEER WORK— WE ARE PIONEERING IN SCIENCE.

Chaim Weizmann, first President of the State of Israel, at opening ceremony of Weizmann Institute of Science, November 2, 1949



OUR VISION | A BOLD LEAP FORWARD

ADVANCING A SOCIETY THAT THINKS SCIENTIFICALLY

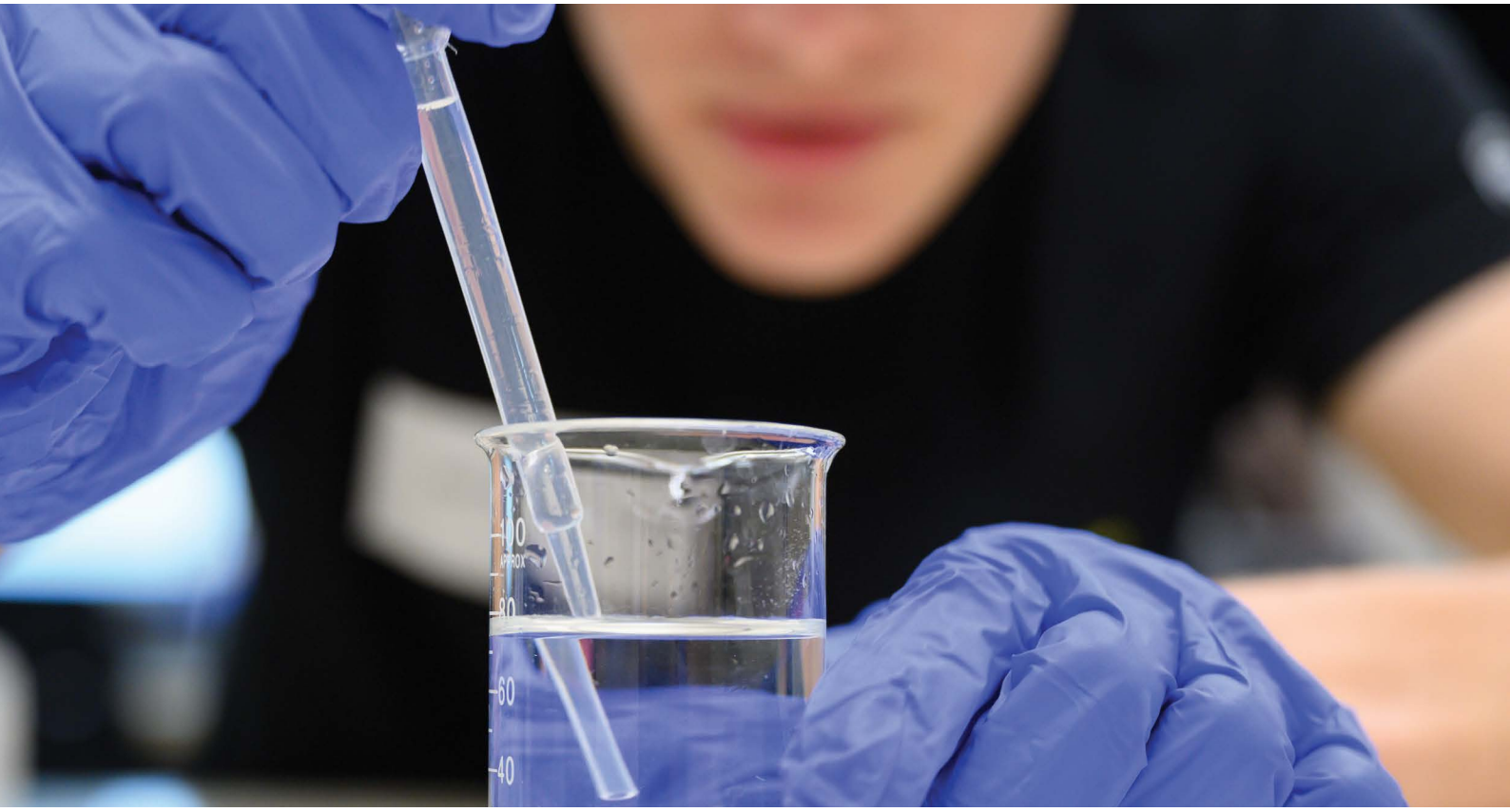
Israel's strength has always been its ingenuity—the drive to translate ideas into progress. For twenty-five years, the Davidson Institute has done just that. Today, we're taking a bold leap forward: **scaling our proven success to amplify our reach and deepen our impact.**

Over the next quarter of a century, the Davidson Institute will act as **Israel's central driver of science education**—a national engine connecting educational research with practice and policy with people. By linking the country's scientific excellence with its educational infrastructure, Davidson will help cultivate the next generation of critical thinkers and innovators who will drive Israel's economy, strengthen its citizenry and industries, and enhance its global standing—for the benefit of society.

Our vision comes to life through four strategic pillars that connect our core targets in a continuum of lifelong learning—an ecosystem that advances science education for all.

TO REALIZE THIS VISION, WE ARE:

- **Developing innovative science education programs for life-long learning,** from early curiosity to advanced study to career readiness
- **Identifying and nurturing scientific excellence** among our youth to cultivate the next generation of interdisciplinary scientists in Israel —in conjunction with the Weizmann Institute
- **Launching the Pi Center for Science Education Innovation,** a first-of-its-kind, national STEM knowledge hub for science professionals to drive systemic change in science education
- **Shaping the public discourse on science, technology, and society** through ongoing engagement, access, and communications
- **Leading formal and informal professional development,** equipping educators and municipalities to elevate entire school systems
- **Providing wraparound solutions** from strategic planning to hands-on delivery, ensuring every municipality in Israel benefits from the same world-class science education
- **Building a science education ecosystem** through national and municipal partnerships that promote social mobility and influence public policy



STRATEGIC PILLAR I

SCIENCE EDUCATION FOR STUDENTS

In a world driven more than ever before by science, technology, and innovation, a robust STEM education is no longer optional—it's essential. **Israel's high-tech economy, research leadership, and global competitiveness rests on a foundation of scientifically fluent, curious, and capable learners.** Yet, Israeli students have experienced one of the sharpest drops in STEM-related performance among OECD countries between 2019 and 2023. One in five students classified as below the threshold in math and science, and large achievement gaps can be observed along socio-economic, language, and other demographic lines.

The Davidson Institute's first strategic pillar works to **raise Israel's overall science level** by providing every student consistent access to rigorous, inspiring science learning, regardless of background or location.

WE WILL INVEST IN THE NEXT GENERATION OF STUDENTS BY:

- Expanding enrichment, acceleration, and mentorship programs for gifted and motivated science students, for example, 5-subject advanced matriculation tracks, and the Science Gems Program which integrates outstanding science students from Israel's periphery into unique matriculation tracks
- Providing opportunities for **all** students to complete advanced science matriculations
- Creating inclusive pathways that open doors for more girls in STEM
- Embedding interdisciplinary learning that mirrors how real science works—aligned with cutting-edge focus areas at Weizmann including AI, brain science, sustainability, and human health

This is how we move from isolated excellence to a national culture of scientific capacity and possibility.

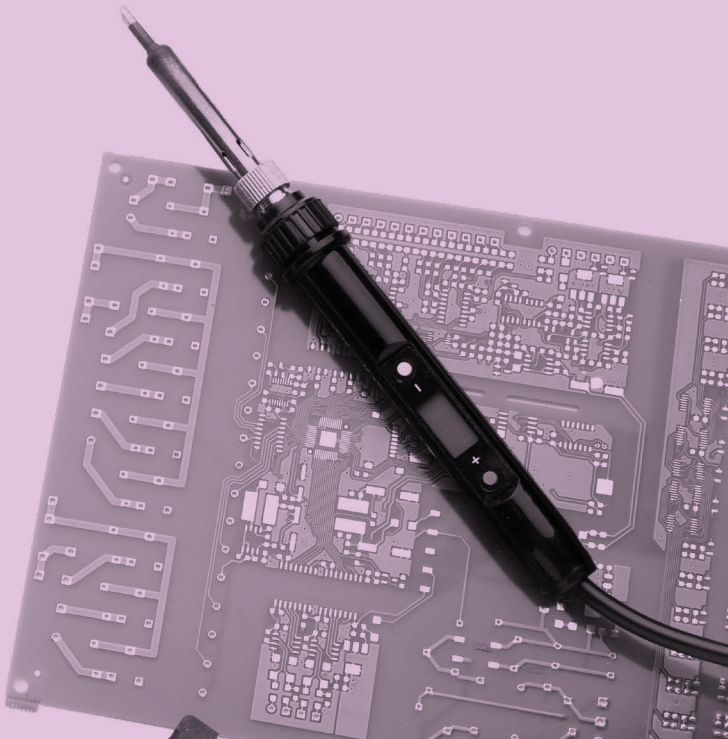
> *Participating in the neuroscience program was one of the best decisions I made during my high school years, and honestly, in my life in general. I credit it with a great deal of who I've become.*
>
> - Libi Matityahoo, a current Mechanical Engineering and Biological Engineering student at MIT

WHAT'S NEXT

EXPANDING PROGRAMS AND REACH

SCALING AI-INTEGRATED CURRICULA

TRIPLING PARTICIPATION IN ADVANCED SCIENCE MATRICULATION EXAMS





STRATEGIC PILLAR II

SCIENCE EDUCATION FOR EDUCATORS

Science educators in Israel have faced mounting pressures in recent years, with many experiencing burnout or leaving the profession altogether. In addition to teacher shortages, uneven access to professional development and limited time and resources—combined with heavy workloads—often prevent even the most dedicated teachers from engaging in deeper pedagogical planning, inquiry-based teaching, and the individualized support students need.

To sustain a strong science education system, we must invest in science educators as leaders and lifelong learners. For this pillar, we strengthen our scientific and pedagogical expertise through Davidson programs and collaborations with the Ministry of Education and municipalities—helping teachers deepen their knowledge, refine their methods, and share their confidence with their students.

WE WILL INVEST IN OUR SCIENCE EDUCATORS BY:

- Enhancing the quality of science teaching and integrating active, inquiry-based learning in the classroom
- Strengthening the professionalism, confidence, and collaboration of teaching teams
- Developing students' research skills, critical thinking, and teamwork abilities
- Expanding access to advanced science enrichment pathways and increasing opportunities to pursue higher-level studies in science and technology
- Strengthening schools as centers of excellence and fostering a local culture of educational innovation

This is how we empower those who guide our youngest generations with knowledge, strength, and community—and turn teacher excellence into sustained national impact.

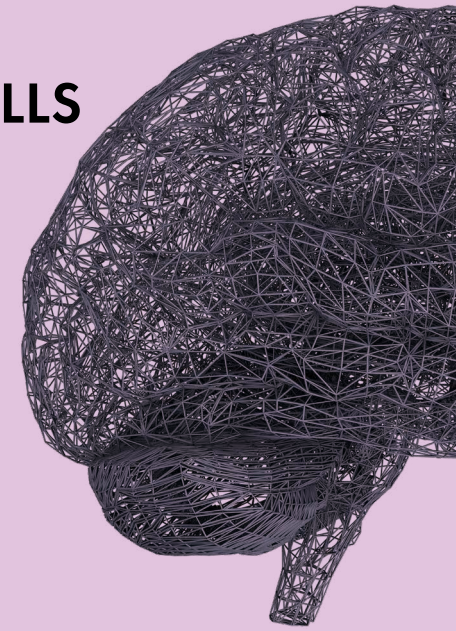
> *The program offered a powerful and enriching educational experience, seamlessly connecting advanced scientific learning and research with personal resilience and values.*
>
> - Tzidka Fares, Principal, Hurfeish High School

WHAT'S NEXT

DEVELOPING AN ECOSYSTEM OF EXCELLENCE TO TEACH CRITICAL SKILLS

INTEGRATING AI AND ADAPTIVE INSTRUCTIONAL TOOLS

ESTABLISHING A NATIONAL STEM KNOWLEDGE HUB FOR EDUCATOR INNOVATION AND SYNERGY





STRATEGIC PILLAR III

SCIENCE EDUCATION FOR THE PUBLIC

Science literacy is essential for an informed, resilient society. Yet public trust in science and access to quality science learning remain uneven. Too often science is seen as the domain of experts rather than a shared human pursuit. In an age of misinformation and global challenges, **engaging the public in science has never been more critical.**

Through this pillar, Davidson opens the world of science to everyone, creating opportunities for curiosity, discovery, and dialogue across generations. **By translating complex ideas into tangible experiences, we help foster a society that uses scientific thinking to understand the world and make informed decisions.**

WE WILL INVEST IN SCIENCE FOR THE PUBLIC BY:

- Bringing science to life through experiential learning at the Clore Garden of Science, Israel's only outdoor science museum
- Expanding science communication through exhibitions, festivals, lectures, and digital content that make discovery accessible to all
- Developing outreach programs that reach families and lifelong learners in cities, towns, and the periphery
- Creating public platforms that encourage dialogue between scientists, educators, and citizens
- Partnering with organizations and municipalities to embed science engagement within community life

This is how we build a culture of curiosity—by making science part of everyday life and a source of pride, understanding, and hope for all.

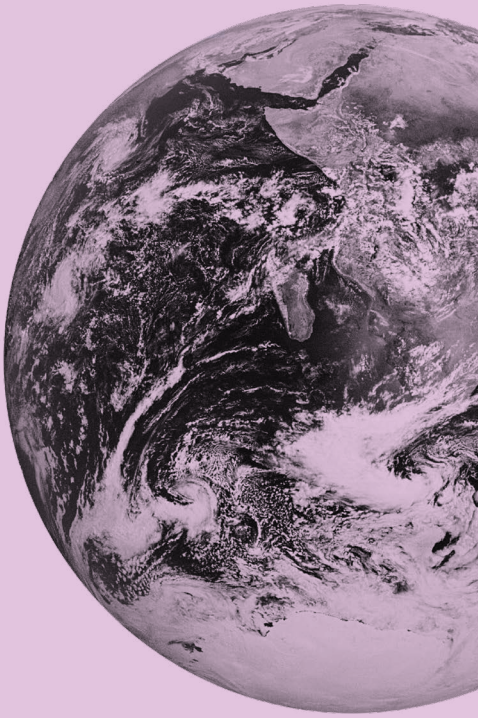
> *The children loved learning through play and getting hands-on experience with scientific tools. Stargazing was incredibly exciting for them and left a lasting impression.*
>
> - A parent

WHAT'S NEXT

UPGRADING THE CLORE GARDEN OF SCIENCE INTO AN EXPANDED EXPERIENTIAL LEARNING CENTER

GROWING OUTREACH PROGRAMS IN THE PERIPHERY

LEVERAGING DIGITAL MEDIA TO CONNECT NEW AUDIENCES TO THE WONDER OF DISCOVERY





Credit: Shlomi Mizrahi

STRATEGIC PILLAR IV

SCIENCE EDUCATION FOR MUNICIPALITIES

Strong science education comes alive locally—within schools, after-school programs, and the communities that support them. Yet municipalities face very different realities across Israel, and access to high-quality science learning remains uneven, **particularly in the periphery** where access to quality science instruction, enrichment programs, and exposure to universities or industry may be more limited.

Through this strategic pillar, the **Davidson Institute partners with municipalities in the periphery to strengthen science education on the ground.** Together, we design and help implement tailored strategies across formal and informal learning—serving all learners, not just a select few. Commitment to the long-term is optimized with municipalities investing alongside us, **raising the national standard one community at a time**.

WE WILL INVEST IN SCIENCE EDUCATION FOR PERIPHERAL MUNICIPALITIES THROUGH A COLLABORATIVE PROCESS:

1. **Understand and Strategize |** We first meet with municipal leaders to map their science education landscape, identify challenges, and set clear goals. Working with trusted third-party experts, we help develop evidence-based, actionable recommendations across formal and informal learning.

2. **Implement and Enable |** We support execution through our internal expertise and resources at Davidson, or by connecting municipalities with external partners best suited to their needs. This wraparound phase bridges planning and practice, ensuring strategies translate into meaningful learning experiences for all learners.

3. **Sustain, Measure, and Adapt |** We remain engaged through dedicated Davidson professionals who provide ongoing support, monitor progress, collect data, and refine approaches over time.

This is how we strengthen science education nationwide—by empowering communities to lead, invest, and build sustainable frameworks for science education excellence locally.

> *The Municipality of Netivot chose to partner with the Davidson Institute of Science Education for its professional expertise, scientific excellence, and proven ability to lead meaningful educational programs that connect cutting-edge research with students and teachers.*
>
> - Municipality of Netivot

WHAT'S NEXT

EXPANDING MUNICIPAL PARTNERSHIPS TO REACH ADDITIONAL COMMUNITIES

ADVANCING HIGH-QUALITY SCIENCE LEARNING AT SCALE

DEVELOPING NEW PROCESSES AND RESOURCES TO SUPPORT LOCAL IMPLEMENTATION





FLAGSHIP INITIATIVE |
CREATING A NATIONAL STEM KNOWLEDGE HUB

THE Pi CENTER

Israel's science education ecosystem is vibrant but fragmented; strong programs exist, yet they often operate in isolation, limiting national impact. In a rapidly advancing scientific world, educators and municipalities lack coordinated frameworks, and new methods can be slow to scale.

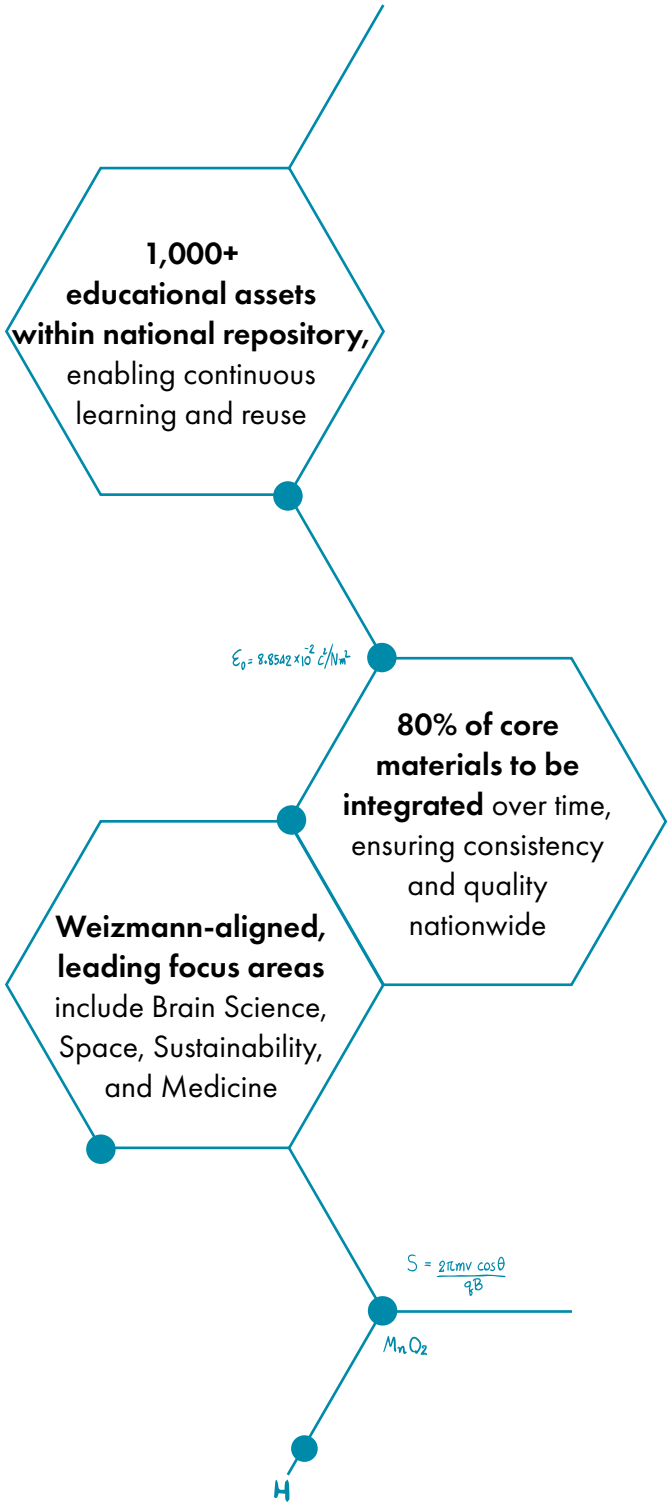
To prepare the next generation for global STEM leadership and drive meaningful, system-wide change, Davidson will establish **a new, national hub for excellence, research, and leadership in science education, harnessing decades of expertise and deep partnership with the Weizmann Institute.**

The Pi Center for Science Education Innovation will harness the pedagogical and scientific knowledge infrastructure required to transform science education across Israel.

It will guide content development, pilot breakthrough models, define national standards, and translate cutting-edge research into accessible, high-quality teaching and learning—reaching classrooms and programs throughout the country.

At its core, the Pi Center will function as **a shared knowledge system**—developing innovative teaching models, integrating emerging technologies such as artificial intelligence, and creating a dynamic **repository of educational content and best practices** in science education.

The Pi Center will act as Israel's home for innovation in science education—**uniting excellence with equity, and advancing science education to drive nationwide transformation.**



> *Like its namesake, π, a constant that links mathematics across disciplines, the Pi Center will connect educators, scientists, policymakers, and technology leaders to drive systemic change nation-wide.*

THE Pi CENTER IN ACTION

- Curating and sharing a **living body of knowledge** for educators
- **Translating cutting-edge research** into clear, usable content
- Designing **advanced science education platforms** for diverse learners
- Integrating **emerging technologies** and global best practices
- Building digital platforms for **personalized, accessible learning**
- Convening a **national professional conference** annually
- **Measuring impact** to continuously refine and strengthen outcomes

FLAGSHIP INITIATIVE |
UNLOCKING CURIOSITY FOR ALL

THE CLORE GARDEN OF SCIENCE

Across Israel, discovery begins in the Clore Garden of Science, a renowned national gateway where people of all ages experience the wonder of science firsthand. Part of the Davidson Institute, the Garden serves **as a global model for experiential learning.**

At its core, the Clore Garden redefines what a science museum can be. Here, science is not presented as a fixed body of knowledge, but as **a way of thinking—rooted in curiosity, evidence, and exploration.** Visitors are invited to question, test, and reflect, developing an early ability to engage with the world through a scientific lens.

As the gateway to the Weizmann Institute of Science, the Garden connects cutting-edge research with public engagement, making science accessible, relevant, and deeply human. Its impact is measured not only in what visitors learn, but in what they carry forward: confidence, thinking critically, and a lasting connection to science and scientific thinking.

Yet inspiring curiosity at scale requires constant renewal. As technologies evolve and expectations shift, the Clore Garden must continuously refresh its exhibits, programming, and spaces to remain dynamic, inclusive, and at the forefront of science engagement.

> *Sustained investment ensures that this model continues to expand access, deepen understanding, and strengthen scientific thinking as a shared educational and cultural asset across Israel.*



Israel's **only outdoor science museum**

120,000+ visitors welcomed annually

Focused on **children aged 5-15** while welcoming the general public

THE CLORE GARDEN IN ACTION

- **Translating complex scientific concepts** into accessible, hands-on experiences
- Designing **open-ended, inquiry-driven environments** that engage learners and educators in dialogue
- **Complementing formal education** by fostering multisensory, choice-based learning
- **Creating a living laboratory** where science, culture, and community intersect
- Continuously scaling and evolving to **reflect emerging science and technologies**

THE TIME IS NOW

WHY NOW?

SCIENCE EDUCATION FOR THE BENEFIT OF SOCIETY

Investing in science education is of paramount importance in today's society. Yes, we must prepare tomorrow's scientific innovators. And, in our increasingly complex and technologically-driven world, we also **must ensure that all learners—even those who ultimately do not pursue a career in science—develop the essential competencies that a solid science education provides:** critical thinking and questioning, logical reasoning, and decision making that is rooted in evidence.

A solid scientific foundation through education underpins the ability for active, informed, and responsible participation in society.

- **Rapid technological changes |** In an era shaped by AI, genetic engineering, and advanced technologies, our students must understand implications, make informed decisions, and engaged meaningfully in public discussions about their collective future.
- **Global and complex challenges |** Our biggest issues—sustainability, energy, public health—demand scientific understanding and an ability to approach complicated problems through systemic and critical thinking.
- **Combatting misinformation and fostering trust in science |** In the age of "fake news", quality science education will sustain a knowledge-based society through the development of analytical reasoning, and discernment between fact and interpretation.
- **Human capital and innovation |** The promotion of scientific literacy among all citizens will encourage creativity, entrepreneurship, and innovation—key drivers of 21st-century economic and social progress.
- **Ethical awareness and civic engagement |** Science education invites reflection on ethical, environmental, and social issues, fostering a sense of responsibility toward others and the planet.



LOOKING AHEAD

SCALING EXCELLENCE FOR THE NEXT GENERATION

For a quarter of a century, the Davidson Institute has been shaping the landscape of science education in Israel—connecting imagination to discovery, educators to tools, and advanced learners to limitless possibilities.

Now, we stand at a new horizon.

The next 25 years call for a bolder reach: scaling excellence in science education for all learners across Israel, and sharing its impact far beyond.

This is not simply an investment in programs—it is **an investment in people, in progress, and in the future of knowledge itself.**

This journey has always been fueled by visionary supporters who understand that curiosity can change the world. **With your partnership, Davidson will continue to inspire minds, transform classrooms and society, and strengthen Israel's role as a global leader in scientific learning.** For humanity. And for generations to come.

“STUDYING AT DAVIDSON MADE IT CLEAR TO ME THAT I HAD FOUND MY GREAT PASSION.

Shir Ziv Av, MS student in Brain Science at the Weizmann Institute of Science

IGNITE POSSIBILITY

To discuss how you can be part of shaping Israel’s future through science education, please contact:

Davidson Institute of Science Education

davidson@weizmann.ac.il

EXPRESS

YOURSELF

SCIENCE IS FOR EVERYONE

WEIZMANN INSTITUTE OF SCIENCE
Davidson Institute
The Educational Arm of the Weizmann Institute

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