

IAP - ISSE International School of Science Education

A Strategy for Science Education in a Changing World

Ettore Majorana Foundation and Centre for Scientific Culture - EMFCSC

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Science education stands at a decisive moment. Profound transformations in how knowledge is generated, accessed, and validated are reshaping education systems worldwide. Artificial intelligence, digital environments, and the proliferation of information sources are redefining what it means to learn, to know, and to trust knowledge. At the same time, societies face growing challenges related to misinformation, polarization, and uncertainty—challenges that place unprecedented demands on science education.

IAP-ISSE 2026 is conceived as a high-level, invitation-only meeting that brings together leading scientists, academicians, and educators to reflect on these challenges and, crucially, to act upon them. Building on the long-standing legacy of the academies of the **InterAcademy Partnership (IAP)** in advancing science, providing policy advice, and supporting science education worldwide, this meeting seeks to strengthen science education as a *shared, global responsibility*.

Rather than focusing on a single discipline or educational level, ISSE–IAP 2026 addresses science education as a **systemic and societal enterprise**—one that requires alignment between research, educational practice, institutional leadership, and international cooperation.

Why This Meeting, Now

The acceleration of scientific and technological change has outpaced the capacity of many education systems to respond coherently. Learners are increasingly exposed to fragmented, algorithmically mediated information, while educators are asked to foster understanding, critical judgment, and trust in science under conditions of uncertainty. In this context, science education must go beyond the transmission of content to cultivate:

- An understanding of *how scientific knowledge is produced, evaluated, and revised*;
- The ability to navigate *uncertainty, evidence, and competing claims*;
- *Critical and epistemic thinking*, particularly in AI-mediated environments;
- Professional learning models that enable educators to adapt research-informed practices sustainably;
- Collaborative structures capable of supporting quality, scale, and long-term impact.

These challenges cannot be addressed by isolated initiatives. They call for *collective leadership*, informed by research, grounded in educational practice, and sustained through strong institutional and international alliances.

A Shared Vision

IAP-ISSE 2026 is guided by the conviction that *science education is a cornerstone of democratic, knowledge-based societies*. It is also guided by the belief that academies of science, working in partnership with educational networks, have a unique responsibility to provide leadership at this moment.

The meeting is structured around a set of interconnected thematic priorities that reflect this vision:

- **Inquiry-Based Science Education (IBSE)** as a foundation for understanding, agency, and critical thinking;
- **Teaching how science works**, including the roles of evidence, uncertainty, and scientific consensus;
- **Education in the age of artificial intelligence**, understood as an epistemic transformation rather than a technological add-on;
- **Research-informed professional learning for educators**, bridging the persistent gap between evidence and practice;
- **Networks and alliances** as essential mechanisms for collective impact and sustainability.

Together, these priorities articulate a comprehensive framework for rethinking science education in a rapidly changing world.

From Dialogue to Collective Action

A defining feature of IAP-ISSE 2026 is its commitment to moving beyond dialogue toward *shared responsibility and concrete outcomes*. Across four days, participants engage in a carefully designed progression—from establishing common ground, to examining evidence and values, to building trust and institutional alignment, and finally to forming **thematic alliances between academies and educational networks**.

These alliances are not symbolic. They are explicitly oriented toward:

- Identifying shared priorities and actions;
- Co-developing and curating *validated, research-informed resources* for teachers and teacher educators;
- Producing shared documents that can inform policy, professional learning, and international collaboration;
- Laying the foundations for sustained cooperation beyond the meeting itself.

In this sense, IAP-ISSE 2026 is deliberately conceived as a **catalytic moment**—a point of convergence from which long-term collaborations can emerge and evolve.

An Invitation

Participation in IAP-ISSE 2026 is by invitation and reflects the meeting's ambition. Invitees are recognized for their scientific, educational, or institutional leadership and for their capacity to contribute thoughtfully to a collective enterprise.

Participants are invited not only to share expertise and perspectives, but also to engage in **co-construction**, to listen across disciplines and contexts, and to help shape alliances capable of addressing some of the most pressing challenges facing science education today.

We warmly invite you to join this endeavor—to contribute your insight, experience, and vision to a process aimed at strengthening science education worldwide, for the benefit of learners, educators, and societies at large.

About

IAP

Under the umbrella of the InterAcademy Partnership (IAP), more than 150 national, regional and global member academies work together to support the vital role of science in seeking evidence-based solutions to the world's most challenging problems. In particular, IAP harnesses the expertise of the world's scientific, medical and engineering leaders to advance sound policies, improve public health, promote excellence in science education, and achieve other critical development goals. IAP's four regional networks - AASSA, EASAC, IANAS and NASAC - are responsible for managing and implementing many IAP-funded projects and help make IAP's work relevant around the world.

Vision

World's academies to play a vital role in ensuring that science serves society inclusively and equitably and underpins global sustainable development.

Mission

Convene and empower the world's academies of science, medicine and engineering to work collaboratively to address issues of global, regional and national importance including in a timely manner during crises.

Website: <https://www.interacademies.org/>

Ettore Majorana Foundation and Centre for Scientific Culture (EMFCSC)

Under the auspices of the Ettore Majorana Foundation and Centre for Scientific Culture (EMFCSC), located in the historic town of Erice, Sicily, and established in 1963, more than 120 International Schools operate across a wide range of scientific disciplines. Over the decades, the Foundation has become a globally respected hub for advanced study, interdisciplinary dialogue, and the exchange of knowledge between science and society.

The Foundation brings together leading scientists, including numerous Nobel Laureates, policy leaders, and educators, to foster high-level scientific debate and to promote the responsible advancement of knowledge. Through its Schools, seminars, and strategic initiatives, EMFCSC supports international cooperation, intellectual rigor, and the transmission of scientific culture across generations.

Among its Schools, the **International School of Science Education (EMFCSC-ISSE)**, established in 1976, delivers high-level thematic courses addressing pressing issues in science education and fostering international dialogue among researchers, educators, and policy leaders.

Vision

To serve as a global meeting point where scientific excellence, interdisciplinary dialogue, and ethical reflection converge in support of long-term societal development.

Mission

To convene leading scientists, educators, and institutions from around the world in an environment dedicated to advanced learning, open exchange, and the responsible integration of science within society.

Website: <https://ettoremajoranafoundation.com/>