International Chemistry Competition

Vision and Mission

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https://intchc.org

Vision and Mission

Chemistry is the central science that connects and advances all scientific disciplines, from understanding the molecular basis of life to developing new materials, medicines, and sustainable technologies. Its principles empower us to address the world's most pressing challenges, including climate change, disease, energy sustainability, and environmental protection. Our society urgently needs talented chemists, researchers, and innovators to discover new compounds, design cleaner processes, and unlock the potential of matter at the molecular level.

The International Chemistry Competition offers students a platform to challenge their analytical and problem-solving skills, explore diverse chemistry concepts, and delve deeper into this fascinating discipline beyond the standard school curriculum. We believe that blending education with friendly competition can inspire students to develop a lasting passion for chemistry, potentially leading to fulfilling careers in research, industry, education, and scientific innovation.

The International Chemistry Competition aims to be accessible to all students from all countries, regardless of their background, school, or institution: all you need is a pen, paper, and an internet connection to join!

What makes IChC unique?

While competition is part of IChC, our core mission is to foster genuine engagement with chemistry, sparking curiosity and encouraging further exploration in this and related scientific fields. IChC is a learning journey, enabled by diverse problem formats that enhance a student's understanding through practical application. Key aspects that distinguish IChC include:

- **Internationality**: From the very first round, IChC is a truly global event. All participants tackle the same challenges, ensuring fair assessment and fostering international connections.
- **Digital Accessibility**: We utilize the power of the internet to open participation to students everywhere, regardless of geographic location or school affiliation. While teacher guidance is beneficial, motivated individuals can participate independently from anywhere.
- **Exploration of Theory and Practice**: IChC embraces the full scope of chemistry. The competition covers a broad range of topics across the chemical sciences, including organic chemistry, inorganic chemistry, physical chemistry, analytical chemistry, biochemistry, thermodynamics, chemical kinetics, and electrochemistry. These topics are presented through diverse problem formats that combine theoretical understanding with practical application, requiring students to apply chemical principles, perform calculations, analyze experimental data, and propose mechanisms or synthetic pathways.
- **Real-World Research**: Bridging the gap between academic learning and cutting-edge research is vital, especially in a rapidly evolving field like chemistry. IChC problems typically incorporate concepts from recently published research papers. This unique feature provides

many participants with their first exposure to actual chemistry research; a field where groundbreaking work is published daily, sometimes even by students like you!

- **Scaling Difficulty Levels**: Our problems are designed to engage both experienced chemistry enthusiasts and those beginning to explore the subject beyond the classroom. The difficulty ranges from approachable exercises that reinforce foundational concepts to advanced challenges that introduce novel formats and require deeper analytical thinking. This ensures a rewarding and intellectually stimulating experience for all participants.
- **Online Tools for Educators**: We equip teachers and schools with resources and support. A dedicated teacher interface allows for streamlined management of student submissions, results tracking, certificate access, and supervision of the Final Round exam.
- **Local Communities & Ambassadors**: IChC encourages the formation of local student groups focused on chemistry. Our Ambassador Program empowers motivated students to inspire peers, organize local events, and build vibrant communities centered around shared interests in chemistry.