

# Future Problem Solving

## Meeting Standards of Today and The Future...

Educators require an effective model to teach critical and creative thinking, problem solving, and decision-making through state and national standards. Future Problem Solving Program International (FPSPI) is a research-based academic program teaching problem solving strategies, collaboration, critical/creative thinking, and effective communication across the curriculum. While promoting the development of students' ethical leadership abilities through structured problem-solving situations, FPSPI's interdisciplinary approach provides a unique opportunity for students to learn and apply essential life skills.

Future Problem Solving Program International, a non-profit educational corporation administering problem solving activities for students in grades K-12, was developed in 1974 by Dr. E. Paul Torrance in response to a critical need for curriculum reform. Dr. Torrance developed the Future Problem Solving Program to address multiple educational priorities, an accomplishment that no single curriculum model had yet achieved.

FPSPI today addresses essential requirements for the successful implementation of any major educational reform:

- comprehensively meets standards for curriculum and instruction;
  - stimulates critical and creative thinking skills and encourages students to develop a vision for the future;
    - features several curricular as well as co-curricular opportunities to engage students in problem solving: Global Issues Problem Solving (GIPS), Community Problem Solving (CmPS), Scenario Writing (SW), Scenario Performance (ScP) and Action-based Problem Solving (AbPS);
  - allows individual students or teams to participate in competitive components: Junior Division - grades 4-6, Middle Division - grades 7-9, and Senior Division - grades 10-12; and
  - provides opportunities for students to develop and exercise the skills necessary to meet and exceed standards through analysis of research, investigation, and application of student-generated solutions relevant to their world.

Critical and creative thinking skills are embedded in the Creative Problem Solving process and serve as the basis of the Future Problem Solving components. Generating and Focusing skills are developed at each step.

Learning and using the Creative Problem Solving process enriches students by providing open-ended support to align with a multitude of standards through the addition of complex thinking, application, and real-world problem solving platforms. As groundwork to all FPSPI components, students use primary and secondary resources, conduct research on selected topics, and then apply the problem solving model to address the problem or need area.

FPSPI MISSION

To develop the ability of young people globally to design and achieve positive futures through problem solving using critical and creative thinking.

Contact FPSPI for additional information, including the annual International FPS Conference.

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## The Creative Problem Solving model is integral in all FPS components:

1. **Identify Challenges** - Generate challenges or issues related to global research, Future Scenes, or specific need area.
2. **Select an Underlying Problem** - Analyze and maintain focus on one problem area.
3. **Produce Solutions** - Generate solution ideas to the Underlying Problem.
4. **Generate and Select Criteria** - Create criteria to evaluate the merit of the best solution ideas.
5. **Apply Criteria to Solution Ideas** - Evaluate the solution ideas using student-designed criteria to rank order the solution ideas.
6. **Develop an Action Plan** - Based on the highest scoring solution idea, develop a plan of action explaining how the solution will work and describing how the problem will be solved.

Future Problem Solving Program International aligns with virtually all state, national, and international standards (ie Common Core, Australian Curriculum, New Zealand Curriculum), 21st Century Skills (P21), STEM, and the National Association for Gifted Children (NAGC) Gifted Children Programming Standards in addressing the major educational competencies of the 21st Century.



### English/Language Arts/Literacy & FPSPI provide:

- extensive reading of non-fiction/informational text;
- the building of content area literacy in social studies, economics, technology, and science through research of the specific topics;
- the opportunity for writing to the sources when using evidence from the texts to build challenges, solutions, action plans, and scenarios;
- content materials in the Lexile stretch band level to increase exposure to complex texts; and
- development of content-rich academic vocabulary and comprehension skills through diverse FPSPI topics.

### Mathematics Standards & FPSPI include:

- real world application of content,
- the ability to solve problems beyond the math classroom,
- project development requiring demonstration of conceptual understanding, and
- strategic use of appropriate mathematical tools.

### 21st Century Skills & FPSPI address:

- learning and utilizing skills of creativity and innovation, critical thinking and problem solving, communication and collaboration (the 4Cs), and
- the need for information, media, and technology skills.

### STEM & FPSPI offer:

- exposure to research and careers in STEM fields of study through a wide array of annual topics,
- explore how the scientific method and inquiry skills are strengthened through FPS experiences, and
- encouragement for students to think about challenging, authentic, futuristic world issues while teaching students a methodology to solve these challenges.

### National Association for Gifted Children (NAGC) Standards & FPSPI emphasize:

- ethical leadership for positive change,
- gift and talent development,
- independent investigation, and
- achievement in areas across dimensions of learning.