

Global Issues Problem Solving (GIPS)



Coach Information
2021-22



FPSPi
FUTURE PROBLEM SOLVING PROGRAM
INTERNATIONAL

Global Issues Problem Solving Overview



What is Global Issues Problem Solving?

The purpose of Global Issues Problem Solving (GIPS) is to facilitate students' ability to design and achieve positive futures using an authentic creative problem solving model. GIPS is a competitive component of Future Problem Solving Program International (FPSPI). It is a team or individual activity in which participants research a series of global topics and learn the six-step Creative Problem Solving Process (see below). In competition, participants apply their knowledge and the problem solving process to address an imagined situation set in the future, called a "Future Scene." From there, they complete a "booklet" (paper or virtual) that asks them to use the process to solve a major issue in the Future Scene.



Why Global Issues Problem Solving?

FPSPI's Global Issues Problem Solving component provides the tools and strategies students need to face the challenges of today and the future. Students complete in-depth research about topics of global importance, then learn to systematically address topic-related complex situations. Through GIPS, students gain the skills to not only create solutions to difficult problems, but how to evaluate those solutions and then turn them into a workable plan of action.

Students involved in GIPS practice powerful problem-solving skills that engage their critical and creative thinking. Participants improve their communication skills through collaboration with teammates, and learn to write clearly and concisely with a specific focus. The 4Cs – collaboration, communication, critical thinking, and creative thinking are infused into GIPS.

What are the Annual Topics?

Topics for the Future Scenes include global issues in the areas of business & economics, science & technology, and social & political. Each year five topics are addressed: two Practice Problems, a Qualifying Problem, an Affiliate Bowl/Final problem, and the problem at the International Conference. Current topics are listed in the *Global Issues Problem Solving 2021-22 Competition Season* document, and full descriptions of these topics can be found on our [website](#).

Recent Science & Technology Topics

- Agriculture
- Alternative Energy
- Artificial Intelligence
- Biosecurity
- Cyber Conflict
- Nanotechnology

Recent Business & Economics Topics

- The Global Workplace
- Environmental Law
- Philanthrocapitalism
- Freedom of Speech
- International Travel
- Intellectual Property

Recent Social & Political Topics

- Coping with Stress
- The Impact of Social Media
- Criminal Justice Systems
- Rage and Bullying



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Does FPS have to be done in the classroom?

While many coaches utilize classroom time for FPS, others use it in an after-school enrichment setting, or coach wholly online. Some groups participate as non-school affiliated clubs in their community. Parents, teachers, administrators, retirees – if you are interested in helping students to achieve their goals, and become better prepared for the future, then you can be a coach.

Who can participate in Global Issues Problem Solving?

Competitors may participate in Global Issues Problem Solving in four divisions (equivalent to grade levels of the USA):

- Junior (grades 4-6; team or individual)
- Middle (grades 7-9; team or individual)
- Senior (grades 10-12; team or individual)
- Adult (post-secondary; team only)



Many Affiliates also offer options for non-competitive participation as young as kindergarten, including Action-based Problem Solving, curricular and/or novice problem solving, and other Affiliate-created options. Check with your Affiliate Program for more information.

How can I get started with my students?

Training in the problem solving process is essential for Global Issues Problem Solving coaches. Affiliate Programs often schedule workshops in the problem solving process – check your Affiliate Program’s website for specifics. If you are not able to attend a workshop, you can find many valuable resources at fspimart.org. The *Coaching Tips* document highlights specific methods for working with students.

Global Issues Problem Solving Registration

Each Affiliate Program of FPSP International determines its processes and fees for registration and entries. Your Affiliate Director can provide you with registration and submission materials and may be able to put you in touch with experienced GIPS coaches. In any region where the Global Issues Problem Solving component is not offered by an Affiliate Program, please contact FPSP International’s Program Director, Elizabeth Coyle (elizabeth@fspspi.org).

Affiliate Competition

Affiliate Directors will determine the timing and competition process for each of the first four annual topics. Please contact your Affiliate Director for specific information regarding registration and submission. To find an Affiliate, [visit our website](#).

International Competition

Champion GIPS teams and individuals in each division at the Affiliate level are eligible to compete at the annual International Conference (IC) each June. Future Scenes at IC are based on the topic of the conference, which is announced on March 1 each year.



Global Issues Problem Solving 2021-22 Competition Season



For each topic, students conduct research and then complete a problem solving booklet based on the provided Future Scene. Evaluators assess the booklets and provide feedback focused on the problem solving shown in order to improve writing and thinking skills. See your Affiliate Calendar for submission due dates.

Non-Competitive Problems

The first two problems of the season may be completed in non-competitive settings. This offers students and coaches the opportunity to practice the process in a collaborative setting. No time limit is enforced, and coach guidance/modeling is encouraged, especially for young or beginning students. Students may reference notes to promote understanding of the process. Even incomplete booklets should be submitted for feedback and strategies for improvement.

Practice Problem 1

Water Supply

For newer students, it is recommended to focus on only the first 3 steps of the process. Working conditions, time limits, and submission requirements are flexible, as they are based on the educational needs and prior experience of the students.

Practice Problem 2

Building Green

Based on the educational needs of the students, coach guidance should be more limited, and all 6 steps should be attempted. Efforts to prepare students for the 2-hour competition requirements are encouraged.

Competitive Problems

The remaining problems of the season must be completed in competitive settings. This includes a 2-hour time limit from when the Future Scene is provided to competitors, no access to notes and references, and no coach involvement. Only registered students may submit work for evaluation. Performance in these rounds of competition determines advancement.

Qualifying Problem

Insects

Top booklets advance to Affiliate Bowl competition.

Affiliate Bowl

Mining

Top booklets advance to the International Conference.

International Conference

Topic announced March 1st

Conference held June 8-12, 2022 at UMass Amherst in Amherst, MA, USA



Global Issues Problem Solving 2021-22 Competition Season



How are GIPS booklets evaluated?

GIPS booklets are scored by trained evaluators who carefully read and assess the completed booklets. Scoring is completed using a rubric-based score sheet, and authentic feedback is provided with suggestions for improvement.

Quality teams from the Qualifying Competition move on to the Affiliate Bowl/Final, where champion teams and individuals in each division earn invitations to the International Conference competition.

Rules for GIPS Teams

- Teams must have four (or fewer) members.
- The composition of a team can change during the practice problems.
 - Two team members **must** remain the same from the Qualifying Problem through the International Conference.
- Students may compete in a division higher than their grade level, but not a lower one.
- Coaches may work with multiple teams and individuals.

Presentation of Action Plan

The Presentation of Action Plan is a required performance at the International Conference (and many Affiliate Bowl/Final) for GIPS teams. This demonstration allows students to synthesize their problem solving into a creative performance based on their Action Plan. Though this is usually an in-person event with an audience, there are virtual and multi-media options as well. Check out one of the 2021 International Conference Presentation of Action Plan winners [here](#)!



The Creative Problem Solving Process



Global Issues Problem Solving (GIPS) is based on the Creative Problem Solving (CPS) Process, a powerful process that can be applied to many complex situations in education, business, community, and personal settings. In GIPS, students apply the process to a Future Scene to complete a virtual or paper booklet.

Step 1. Identify Challenges (16/team; 8/individual)

- Generate issues, concerns, and problems, applying background knowledge to the Future Scene.
- Consider major issues and categories of problems in order to flexibly identify Challenges (*see: FPS Category List*).
- Select the best Challenges.
- Write the Challenges clearly and concisely, showing cause and effect and tying logically to the Future Scene.

Step 2. Select an Underlying Problem (UP)

- Consider the major issues in the Challenges.
- Select an issue that will have a major impact on the Future Scene as the emphasis of the Underlying Problem (UP).
- Be forward-looking and proactive, not regressive and reactive, in developing the UP.
- Write the UP in correct format, starting with the Future Scene conditions that are the basis or rationale for the idea.
- Indicate a desired action to be taken (Key Verb Phrase), purpose for the action (Purpose), and parameters (topic/place/time) tying the problem to the Future Scene.

Step 3. Produce Solution Ideas (16/team; 8/individual)

- Generate multiple Solutions to the Underlying Problem using flexible thinking (*see: FPS Category List*).
- Think futuristically and consider the impact of technological advances.
- Focus in on the best Solution ideas, checking that each idea addresses the UP.
- Write the Solutions clearly.
- Elaborate by telling who will implement the Solution, what action will be taken, and how or why the action will be taken.

Step 4. Generate & Select Criteria

- Considering the UP and the Future Scene, generate Criteria to evaluate the Solutions.
- Select five important Criteria to be written in question format.
- Write Criteria using the superlative form, one dimension, and the desired direction.

Step 5. Apply Criteria (8/team; 5/individual)

- Select the most promising Solutions and enter in the grid.
- Rank the Solutions based on each of the Criteria separately.
- Identify the best Solution (highest number of total points).

Step 6. Develop an Action Plan

- Plan how the best Solution can be implemented.
- Describe the actions and steps of the plan.
- Explain why the plan fulfills the Criteria.
- Clearly state how the plan will address the Underlying Problem and impact the Future Scene.



Explore Global Issues Problem Solving



Your students' problem solving skills can be developed in a variety of ways through FPS, whether or not they compete. Consider the following non-competitive opportunities for introducing the skills to young students, an entire classroom, or for those not yet ready to engage in competition.

Youth in Competitive Sports English Language Arts Unit	Megacities STEAM (Science, Technology, Engineering, Arts, Math) Unit
<p><i>FPSPI's components all require that competitors have highly developed English Language Arts (ELA) skills. This dedicated ELA curriculum builds the basic skills necessary for FPS success, containing lessons to build ELA proficiency while using excerpts that are of high-interest to students. Students will receive lessons about tone and mood, figurative language, narrative writing, comparing and contrasting types of media, poetry writing, and more!</i></p>	<p>FPSPI offers a STEAM unit of study that serve as a stand-alone curriculum. The cross-curricular integration of themes and concepts allows students to excel in contextual learning, meaningful engagement, and the synthesis of knowledge. It also provides for diversification of teaching methods and empowers the educator to serve as a facilitator to adaptable learners.</p>

Action-based Problem Solving (AbPS)/Novice

Action-based Problem Solving is designed to introduce students to the skills of creative problem solving in a hands-on, scaffolded manner while delivering the same rich content and methodologies as the competitive components.

- The [Action-based Problem Solving Manual](#) is available as for working with primary or novice learners. The manual provides instructional materials and lesson plans for initial learning of the problem solving process using easy children's stories or nursery rhymes, as well as issues related to the FPSPI Annual Topics. This year's AbPS topics are: Water Supply, Building Green, and Insects.
- AbPS teaches a simplified version of the problem solving process, providing guidance in the writing of ideas. The materials may be used with a few students or with an entire class; either the teacher or the students may record the ideas that are generated; the work may be completed with teacher guidance or independently in small groups.
- Some Affiliates offer AbPS as a non-competitive component and provide additional problem solving situations based on the annual topics, allowing for real-world based discussion and decision-making. This registration entitles students' work to be submitted for feedback.

Problem Solving Curriculum

[The Problem Solving Experience: Classroom Curriculum](#) is a complete curriculum targeted at grades 3-8, designed to promote 21st-century problem solving.

The nine units include:

- The Lorax
- Eeey Weensey Spider
- Harrison Bergeron
- Digital Music Rights

- Included activities provide direct instruction for the Creative Problem Solving process, applying it in a variety of contexts for student enrichment and engagement. The curriculum can be implemented as a full semester course or separated into sections.
- Complete lesson plans and resource materials are provided for implementing the curriculum, either as a standalone curriculum or enrichment for an existing one.



Global Issues Problem Solving Skills Aligned with Education Standards



The purpose of Global Issues Problem Solving is to facilitate students’ ability to design and achieve positive futures using an authentic creative problem solving model. In learning about futuristic topics and using the Creative Problem Solving Process, students are able to develop their thinking skills and enhance their creativity, and fulfil many educational standards as well. Please see the following chart for details.

Please note that these standard strands are meant to be approximate and not correspond to any one region. Please use this for reference and to align with the standards used by your school system or educational governing body.

<p>SPEAKING and LISTENING</p> <p>Comprehension and Collaboration</p> <ol style="list-style-type: none"> 1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others’ ideas and expressing their own clearly and persuasively. 2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally. 3. Evaluate a speaker’s point of view, reasoning, and use of evidence and rhetoric. <p>Presentation of Knowledge and Ideas</p> <ol style="list-style-type: none"> 4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience. 5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations. 6. Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.
<p>LANGUAGE and VOCABULARY</p> <p>Vocabulary Acquisition and Use</p> <ol style="list-style-type: none"> 1. Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate. 2. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings. 3. Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college- and career-readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.
<p>READING and LITERACY</p> <p>Key Ideas and Details</p> <ol style="list-style-type: none"> 1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text. 2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas. 3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text. <p>Craft and Structure</p> <ol style="list-style-type: none"> 4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone. 5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole. 6. Assess how point of view or purpose shapes the content and style of a text.



Global Issues Problem Solving Skills Aligned with Education Standards



READING and LITERACY (continued)

Integration of Knowledge and Ideas

7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.
8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

Range of Reading and Level of Text Complexity

10. Read and comprehend complex literary and informational texts independently and proficiently.

WRITING

Text Types and Purposes

1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
9. Draw evidence from literary and/or informational texts to support analysis, reflection, and research.

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.



FPS Category List

The FPS Category List is a brainstorming tool for Step 1: Identify Challenges, and Step 3: Generate Solution Ideas. It assists students in divergent and flexible thinking by suggesting 18 perspectives from which they can view a problem. Using the Category List gives students practice in thinking flexibly, a skill that is vital in creative problem solving!



Arts & Aesthetics



Basic Needs



Business & Commerce



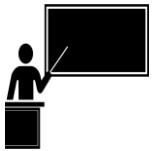
Communication



Defense



Economics



Education



Environment



Ethics & Religion



Government & Politics



Law & Justice



Miscellaneous



Physical Health



Psychological Health



Recreation



Social Relationships



Technology



Transportation

WARNING – Do Not Post

Future Scenes: Every Future Scene contains the following warning: ***Do not post on any website until 2026.*** This means that Future Scenes should not be posted on any unsecured site, anywhere at any time, until that date.

Additionally, Presentations of Action Plan recordings and/or press releases/social media posts with specifics from the Future Scene **MUST** not be circulated.

The main reason for this policy is to make sure the confidentiality of Future Scenes is maintained for all Affiliate Programs.

- Different Affiliates have different calendars and may be using a Future Scene at a different date.
- Affiliate Programs are free to change the order of topics. For example, the Future Scene identified for Practice Problem 2 could conceivably be used as the Qualifying Problem by another Affiliate; therefore, Practice Problems must also be kept confidential.

Videos/Images: “Do Not Post” also applies to any videos, such as Presentation of Action Plan or images that might include details from Future Scenes.

Evaluation Notes: Evaluation Notes from any topic may not be posted on any publicly accessible site as they provide specific details of the Future Scene.

FPSPI Publications: A purchase of any publication entitles that person to use the content only with his/her students. Such publications should be posted only on secure sites to which only his/her students have access.

Those found to have violated this policy will be charged \$500 per incident, plus additional costs incurred by the International Office and other Affiliate Programs and Mentored Regions.

Thank you for complying with this policy!



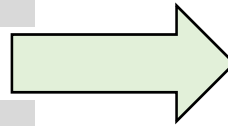
2021-22 GIPS Resources

Check out all the resources at www.fpspimart.org.

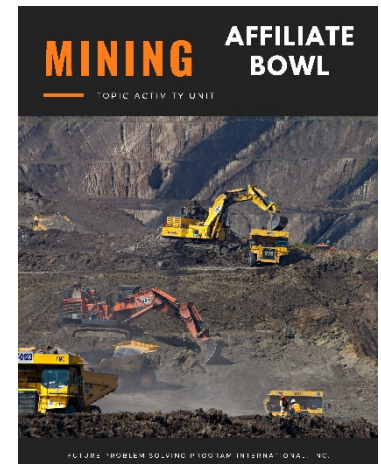
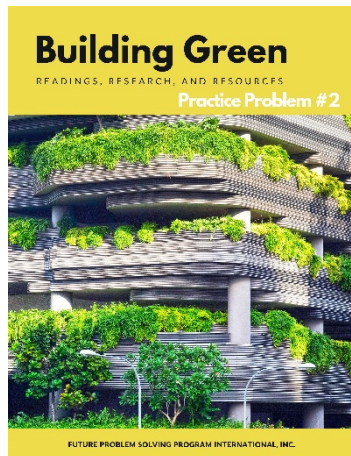
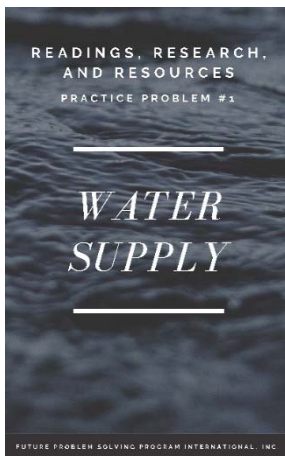
Water Supply ★ Building Green ★ Insects ★ Mining

Readings, Research, and Resources
Research articles, terms, themes, and discussion questions for each topic.
(digital download)

Topic Activity Units
Activities designed to teach the topic and the FPS problem solving process.
(digital download)

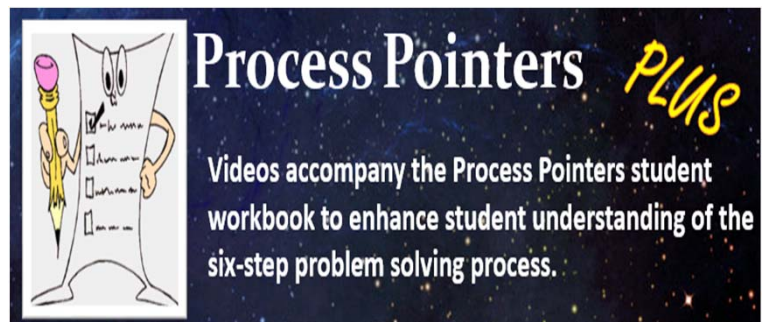


Topic Resource Bundle
Includes the Readings, Research, & Resources (with Q&A) and Topic Activity Units



GIPS Coach's Handbook

Comprehensive look at FPS Global Issues Problem Solving (GIPS), FPS six-step model, tips on coaching, and exercises for improving team performance.



Check back throughout the year for the latest resources!
www.fpspimart.org



FPS ELA UNIT

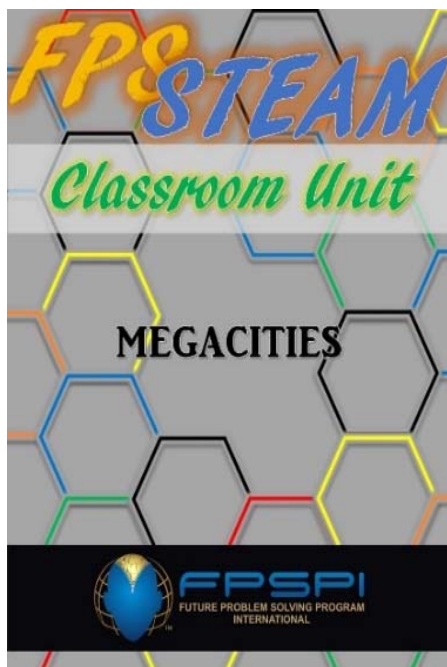
This ELA Unit uses high-interest, topic-specific literature and poetry to teach vital English Language Arts skills. These include:

- Tone and Mood
- Figurative Language
- Narrative and Poetry Writing
- And More!

Renzulli[®] Learning

Practice lessons for current topics with samples from RR&R and TAU. Students can virtually collaborate on Future Scenes and booklets, and teachers can review their work.

Provided **FREE** with any purchase of *Readings, Research, and Resources, Topic Activity Unit*, or combo.



FPS STEAM UNIT

FPS STEAM curricula allows for a diversification of teaching methods and individual learning styles that encourages the educator to serve as a facilitator to learners. FPS STEAM units empower educators to meet guidelines in a variety of unique and engaging ways. Cross-curricular activities allow students to engage a subject and meaningfully employ concepts and vocabulary on topics exploring science, technology, engineering, art and mathematics.

FPS ACADEMY

This unit will use the topic of Water Supply to teach the Six-Step Problem Solving Process! All lessons are asynchronous, and students can do them at their own pace.

Throughout these lessons, students will learn:

- Creative thinking guidelines
- Critical thinking guidelines
- Analytical skills
- Futuristic thinking

At the end of this course, students will receive a certification in problem solving! Sign up here!

If you have any questions, please reach out to elizabeth@fspci.org

