

# *Future Problem Solving Program Minnesota*

**Inspire Creative Thinking**

**Apply Critical Thinking**

MREA, November 15-17, 2015

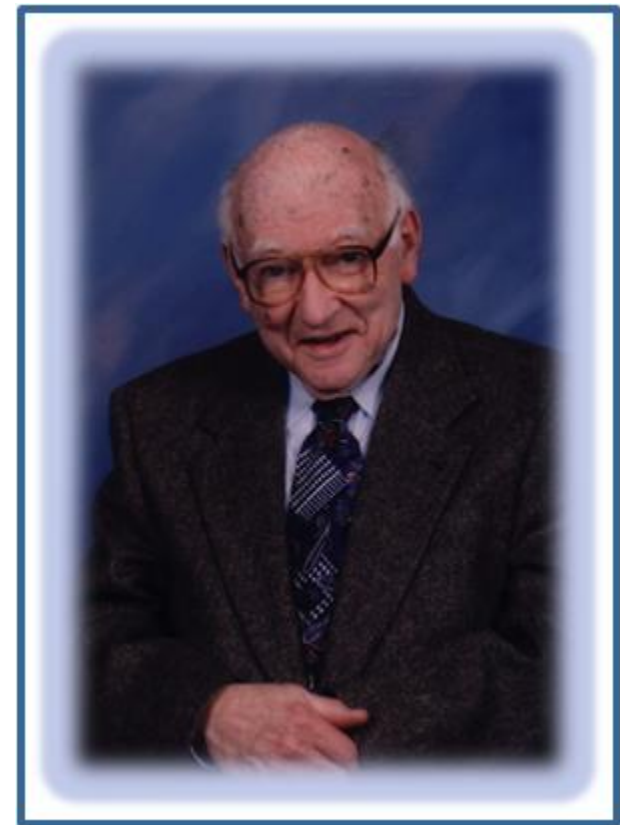
**Cheryl Whitesitt**



# Future Problem Solving Program International

**This award winning, educational program  
was founded in 1974 by  
Dr. E. Paul Torrance.**

**Internationally renowned for his work in  
creativity and gifted education, he was  
also concerned about the future.**



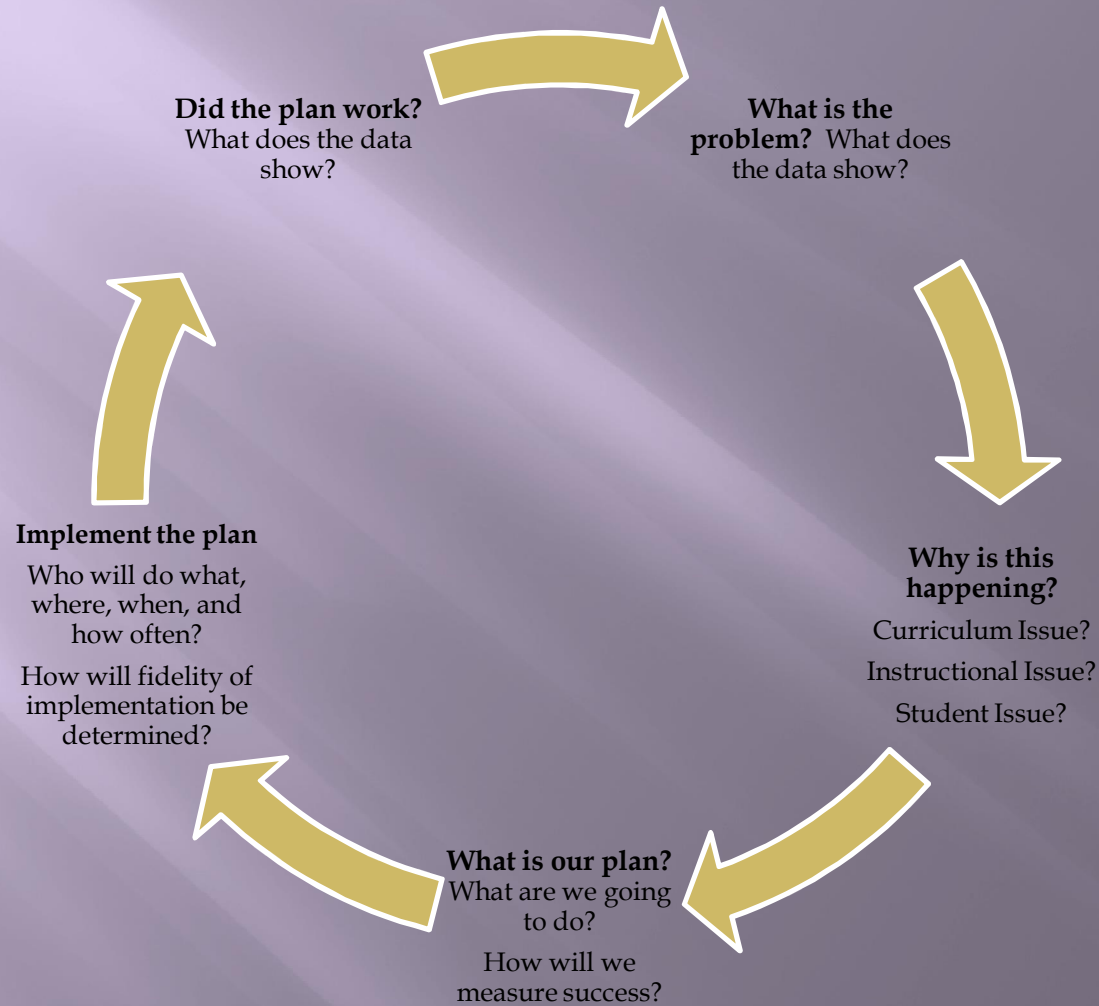


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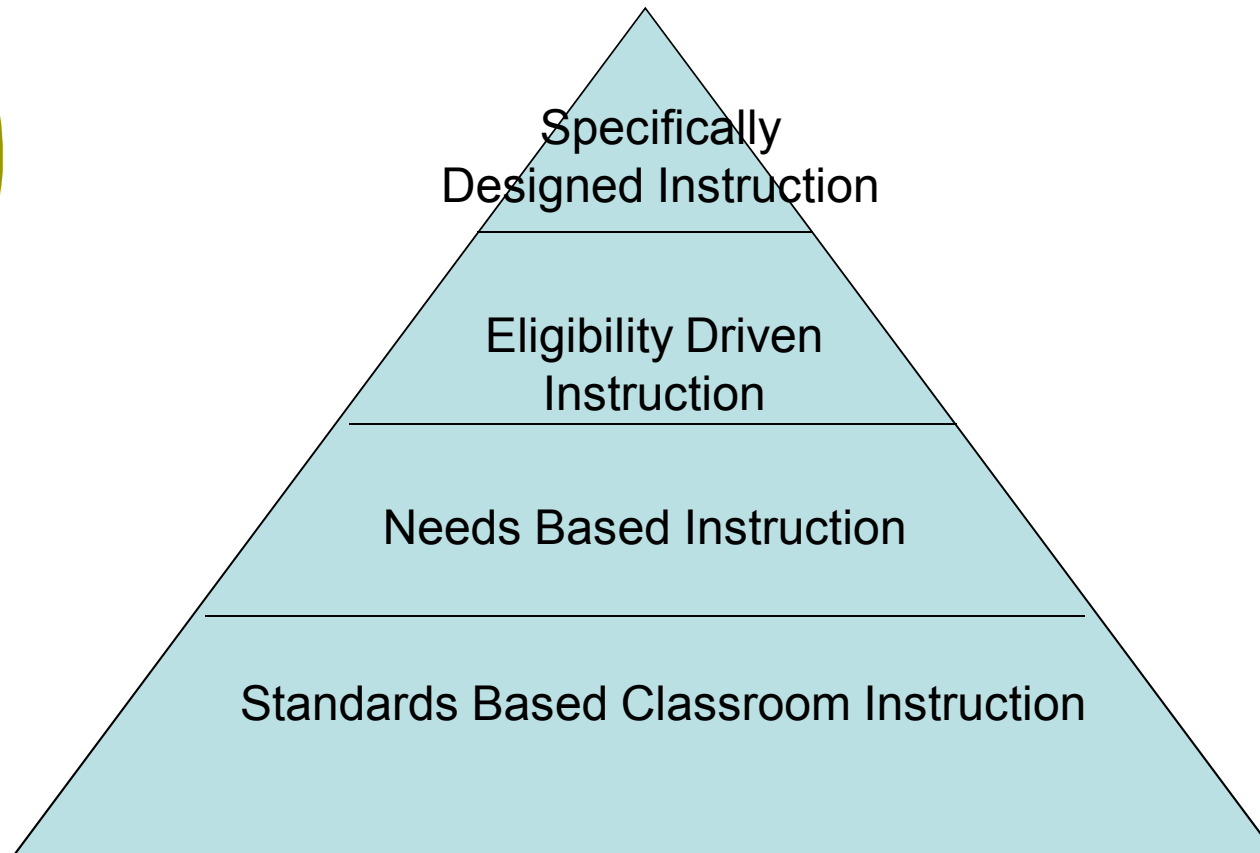
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# Where to start:



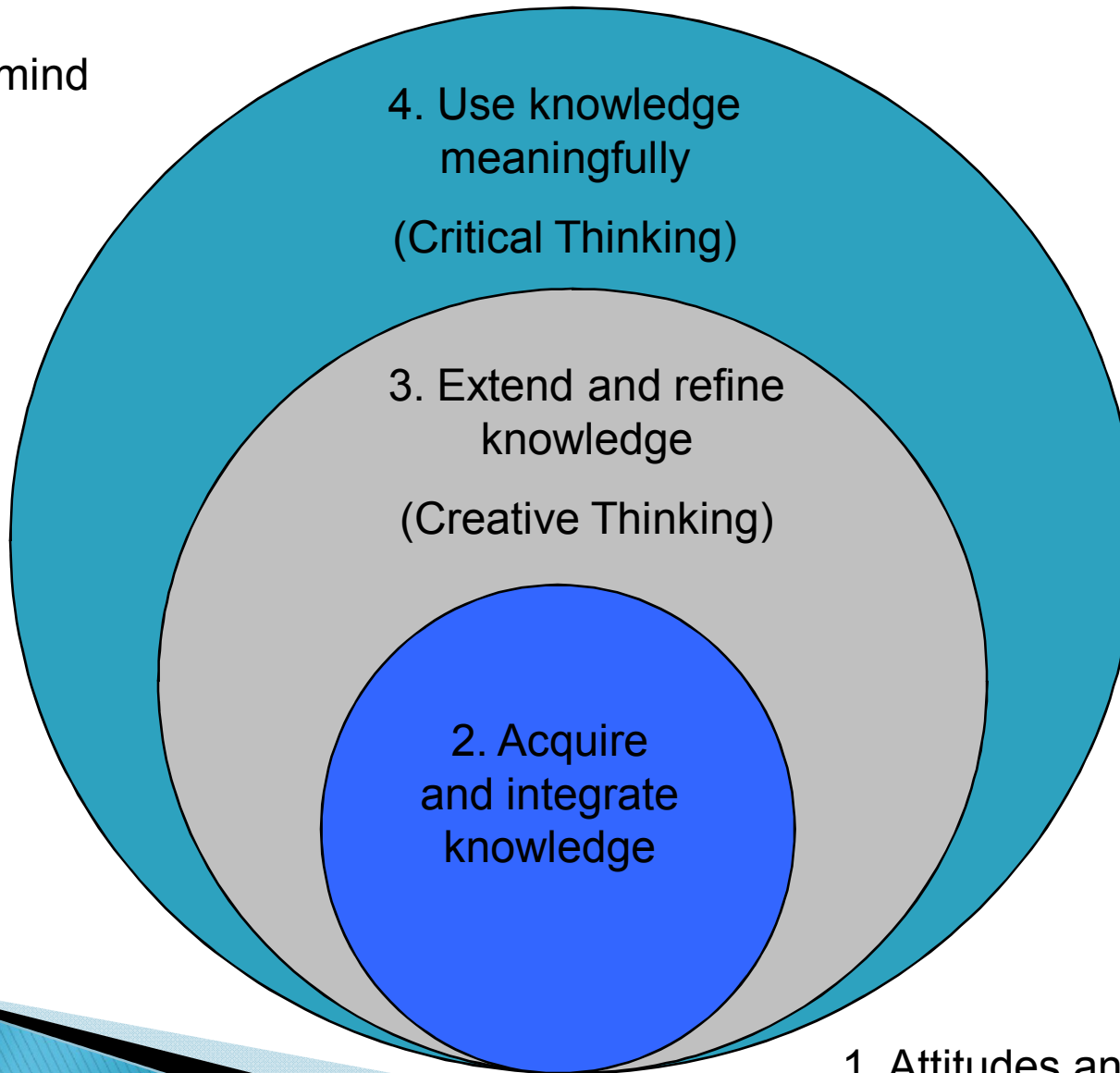
# Student Achievement Pyramid

***In what ways might we meet the needs of learners within this framework?***



# Dimensions of Learning

Habits of mind



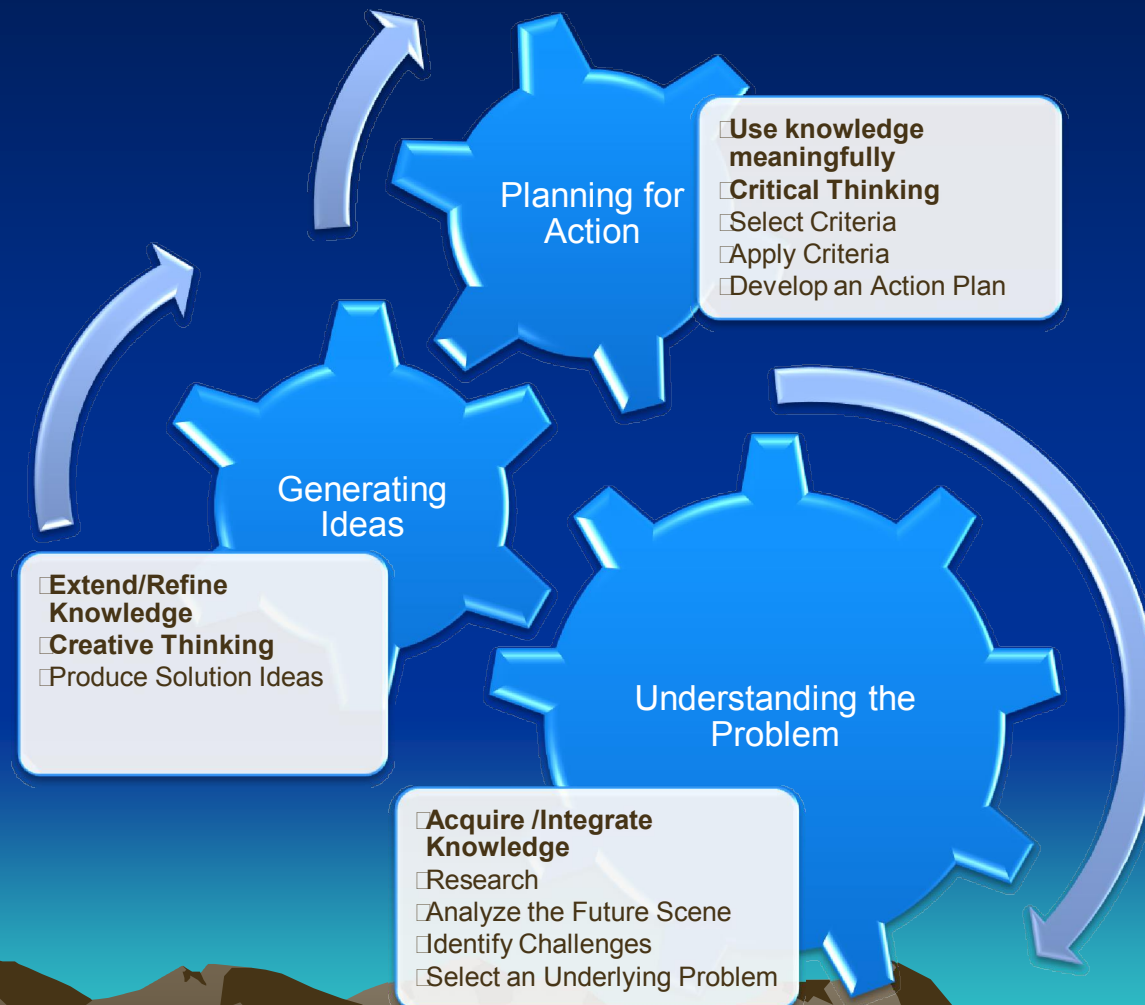


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# A Contemporary View



# Students are NOT challenged...

- Preferential seating
- Shortened assignments
- Suspension
- Doing **MORE** of the same
- Assigning students to be peer helpers

# Students are inspired...



- **When they're engaged**

## Causing:

- **Improved participation**
- **Improved behaviors**



# Engaging Students

Brainstorming activities – Make them the experts!  
(things that are...)

Projects of interest – solving an area of concern within their  
community

Using newly acquired skills – Carry out a plan of action,  
academic competition (not trivia based)

Teach critical thinking - to solve real problems

# Improving Participation

Brainstorming activities – Make them the experts!  
(things that are...)

Projects of interest – solving an area of concern within their  
community

Using newly acquired skills – Carry out a plan of action,  
academic competition (not trivia based)

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# Improving Behaviors

Engaged Students – More likely to participate

Improved Participation – Less likely to have undesirable behaviors

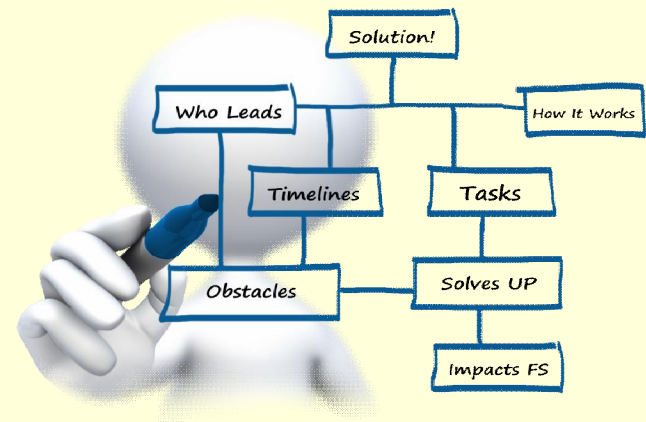
**busy about?**

**-Henry David Thoreau-**

# Strategies for teaching these skills:

## **BRAINSTORMING** – Standards Based Instruction

1. Teach the rules:
  - No criticism
  - Crazy ideas
  - Piggy backing
  - All ideas are good
2. Teams of 4-6 for these activities.
3. Allow each team to share their ideas
4. Start each day with calisthenics of the brain ☐ get them warmed up!





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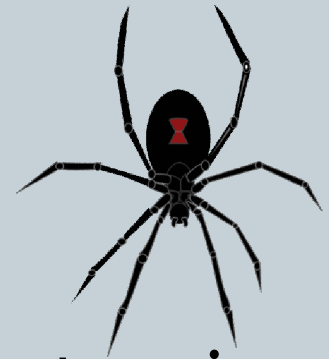
# Eensy Weensy Spider



Eensy Weensy Spider went up the water spout.

Down came the rain and washed the spider out.

Out came the sun and dried up all the rain.



So the Eensy Weensy Spider went up the spout again.

# Strategies for teaching these skills:

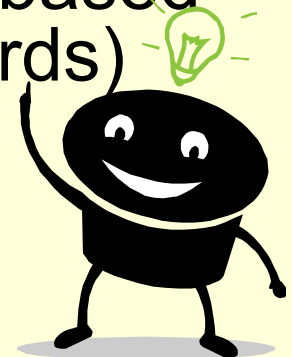
## Projects of Interest – Needs Based Instruction

### 1. Hands ☐ On Activities

- Legos, Lincoln Logs ☐
- Q-Tips, rubber bands, aluminum foil, an old newspaper, Duct Tape, yarn ☐ how many different things can you make with these items? How many are usable?

### 2. Writing in place of the regular assignment

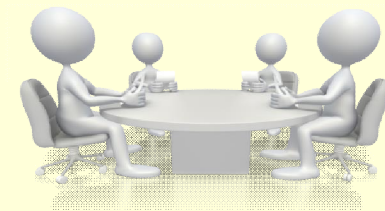
- Scenarios based on real world issues based 50 years in the future (1,000 - 1,500 words)
- Fairy Tales, the alter ego ☐



# Strategies for teaching these skills:

## Using Newly Acquired Skills – Real world problems

1. Academic Competitions
2. Avoid trivia based □ memory is the lowest level thinking skill
3. Open ended challenges that require creative thinking using newly acquired knowledge and skills
4. Timed challenges
5. Spontaneous challenges





# ng Languages



Anya listened to her 4<sup>th</sup> grade history teacher talk about Asia. Anya's parents had been born in Asia in a country called Cambodia. After getting married, her parents left their families and moved to America. Anya first met her grandmother when she came to the United States to live with them 5 months ago. She didn't speak or write English, just Khmer, the language of Cambodia. Anya wished she knew what her grandmother was saying, but her parents had not taught her Khmer. Anya thought the Khmer writing looked beautiful, and she wished she could read it. It wasn't like the English alphabet. Khmer letters were curly and had more vowels and consonants than English.

- Anya's father worked for the United Nations – an international organization made up of almost two hundred nations. He said the United Nations needed workers who could speak foreign languages, especially rare ones. Anya's school only taught French and Spanish, which were common foreign languages. Her dad wished he had taught Anya how to speak Khmer when she was younger, but Anya's mom didn't want Anya to stand out as a first-generation immigrant. She wanted her daughter to fit into American culture and speak perfect English. Now Anya's father seemed to be rethinking the decision.

- Anya's history teacher assigned the class a project about their ancestry. That night, her parents interpreted some of her grandmother's stories from Khmer to English. Her grandmother excitedly talked about the city of Angkor, slowing down often for translation. Anya learned that in 1100 A.D. the city of Angkor had been the largest city in the entire world. Her grandmother said a hundred temples were still standing and millions of tourists now came every year to see them. The temples had thousands of carvings in the various dialects of Khmer. Anya also learned her name meant "bountiful" in Khmer. Anya wondered why she didn't know all of this!

- Her parents said very few people in Cambodia spoke English. The government was very strict and did not want their citizens reading English newspapers or learning about the outside world, but the younger generation was finding ways to learn English. Anya worried that no one who knew how to speak Khmer would be left in a few generations. That night she convinced her mom to start teaching her Khmer. Maybe one day she would go translate all the carvings in Khmer for the tourists so that they would understand and learn about the great city of Angkor.

- Discuss the problems associated with disappearing languages. How can communities, schools, and organizations address the problems of disappearing languages? How can they preserve the stories, history, and cultures of these languages?



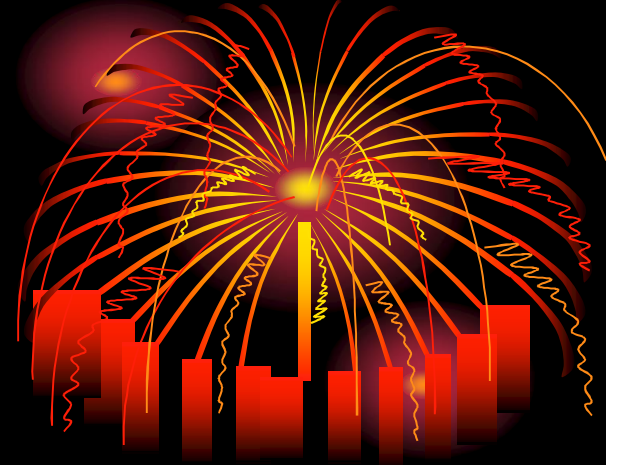
# Strategies for teaching these skills:

## Teach Critical Thinking – making the best decisions

1. These students are interested in:
  - real world issues, research
  - the future, future scenes
2. Brainstorming
3. Critical thinking - the highest level thinking skill
  - Teach how to develop focused criteria
  - Teach how to use the criteria to help determine a plan of action
4. Beyond the classroom



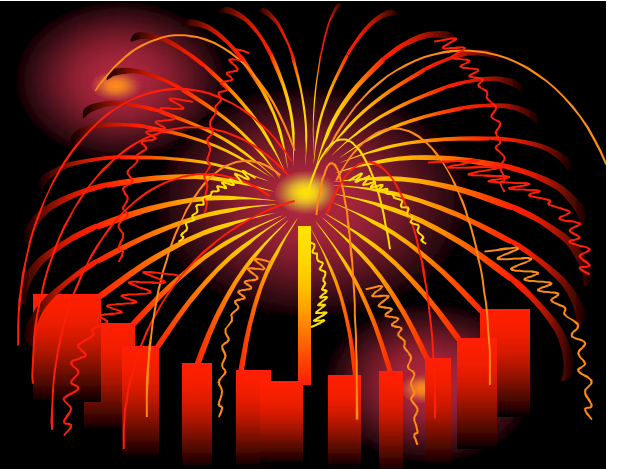
# Preparing for the future



***“The genius of the future will be  
the creative mind adapting  
itself to the shape of things to  
come.”***

**Dr. E. Paul Torrance, *Creativity*,  
(1991)**

# Agents of Change



**Action Based Problem Solving**

**Global Issues Problem Solving**

**Problem Solving:**  
**Classroom Curriculum**



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# Problem Solving Program

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*Future Problem Solving Program International is a non-profit tax-exempt  
educational organization.*