The Schoolwide Enrichment Model
The What, Why, Who, and How

Joseph S. Renzulli
The University of Connecticut

The National Research Center on the Gifted and Talented
Outline

1. The Big Ideas Underlying The SEM
2. The Why and The Who Questions
3. What is Creative/Productiveness?
4. Curriculum Modification for High Achieving Students
5. A Multiple Criteria Strength Based Identification System
6. Underlying Theories Of Knowledge and Differentiation
7. The Enrichment Triad In Action
8. Enrichment Clusters [The “Growth Stock” of The SEM]
9. Infusion of Enrichment Into the Regular Curriculum
10. Best Resources For Creative/Productive Giftedness
11. The Renzulli Learning System
The Big Ideas Underlying the SEM

• Focus On Creative Productivity, An Investigative Mindset and Co-Cognitive Characteristics

• General Enrichment For All Students and Targeted Enrichment and Acceleration For Students Who Demonstrate Advanced Potential

• Maintenance of Specially trained Personnel Existing Programs and Services

• Practice Driven, Theory Based, Research Supported

• Common Goals/Unique Means

• Abundant Resources And Teacher Training

• Making Schools A Happy Place For All Students

"Example is the best school of mankind and they will learn at no other."
Philosopher, Edmund Burks
The Goals of The SEM

Enjoyment

Engagement

Enthusiasm For Learning
**Continuum of Learning Theories***

<table>
<thead>
<tr>
<th>Deductive Didactic &amp; Prescriptive</th>
<th>Pedagogy</th>
<th>Inductive, Investigative &amp; Inquiry Oriented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge Acquisition, Storage, and Retrieval. Prescribed &amp; Predetermined Content</td>
<td>Knowledge Application, High Engagement, Motivation And Enjoyment. J-I-T Content</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Basic Skill Acquisition Text Consumption</th>
<th>Outcomes</th>
<th>21st Century Thinking Skills Creative Productivity</th>
</tr>
</thead>
</table>

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<tr>
<th>Behaviorists</th>
<th>Major Theorists</th>
<th>Constructivists</th>
</tr>
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<tbody>
<tr>
<td>• Pavlov</td>
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<tr>
<th>National Goals</th>
<th>Inventors Creative Designers in Sciences, Arts, &amp; Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased Academic Achievement</td>
<td>Innovative Leaders</td>
</tr>
<tr>
<td>Higher Test Scores</td>
<td>Entrepreneurs</td>
</tr>
<tr>
<td>Technically Proficient Professional and Skilled Workers</td>
<td>Writers</td>
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<td>People Who Make a Difference</td>
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*Both ends of this continuum are important, and schools should integrate them whenever possible to produce the best balance between the two models of learning.
The Big Ideas Underlying The SEM

- Focus On Creative Productivity, An Investigative Mindset, And Co-Cognitive Characteristics

- General Enrichment For All Students and Targeted Enrichment and Acceleration For Students Who Demonstrate Advanced Potential
A Focus On Creative Productivity and Total School Improvement

How we differ from other gifted education and talent development models...

The Enrichment Triad Model

<table>
<thead>
<tr>
<th>All Students</th>
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<tr>
<td>Candidates For Follow-Up</td>
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<td>Enrichment Clusters For All Students</td>
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Curriculum Compacting For High Achieving Students

"The young person thinking, feeling and doing like the practicing professional, even if at a more junior level than adult scientists, writers, etc."
What do we mean by Co-Cognitive Characteristics?

The Traditional Basics
- Creative Thinking
- Critical Thinking
- Problem Solving
- Decision Making
- Productive Thinking
- Planning
- Forecasting
- Writing
- Literacy
- Numeracy

Opportunities For Creative Productivity

Intelligences Outside The Normal Curve
- Optimism
- Courage
- Romance With a Topic or Discipline
- Mental and Physical Energy
- Vision & A Sense of Destiny
- Sensitivity To Human Concerns

The Soft Intelligences “Executive Functions”
- Optimism
- Courage
- Romance With a Topic or Discipline
- Mental and Physical Energy
- Vision & A Sense of Destiny
- Sensitivity To Human Concerns

Leadership Based on Wisdom & Responsibility
- Personal
- Emotional
- Spiritual
- Social
- Motivational
- Responsible
- Organizational
- “Getting your act together”
- Self-Regulation

Meta-cognitive Skills in Technology
- The ability to identify trustworthy and useful information
- The ability to selectively manage overabundant information
- The ability to organize, classify, and evaluate information
- The ability to conduct self-assessments of web-based information
- The ability to use relevant information to advance the quality of one’s work
- The ability to communicate information effectively

Contributing To Social Capital & Making A Better World

Focus on
- The ability to communicate information effectively

Get your act together

http://edudemic.com/2012/07/10-interactive-lessons-by-google-on-digital-citizenship/
What do we mean by creative productivity?
In first grade Kylie Copenhagen invented a board game about ladybugs for a school science project. Today, “The Ladybug Game” is consistently one of the top-selling games at Target.com, where it competes with thousands of other games and puzzles. “The Ladybug Game” has also been a bestseller at some of the nation's largest retailers including Target and Toys R Us.

Kylie fell in love with ladybugs during a school science project. “In Mrs. Ditto’s class I learned that ladybugs are the coolest thing around,” says Kylie. “Since my friends liked them too, I invented a game about them. It’s fun for me to know that other kids love my game too. I receive an annual royalty payment for each game sold, and is well on her way to covering her college tuition.

The Ladybug Game is designed for interactive play between parents and children ages three and up. Parents are encouraged to read a lively introductory story about the adventures of Ella Yellow, Rickie Red, Tommy Teal and Olivia Orange. The object of the game is to help them find their way back home (a rosebush) after a windstorm launches them airborne and they land on a faraway dirt pile. The first ladybug to find her way “home” is the winner. Along the way, the ladybugs encounter various hazards such as tall grass, praying mantis’, aphids and ants. In addition to Target and K-Mart, The Ladybug Game is also available at Meijer, Go! The Game Store, Barnes and Noble, Borders Books & Music, Fred Meyer, Toys R Us and more.
Type II: How-To Books
THE YOUNG ENTREPRENEUR’S GUIDE TO STARTING & RUNNING A BUSINESS
TURN YOUR IDEAS INTO MONEY!

COMPLETELY REVISED AND UPDATED

STEVE MARIOTTI, FOUNDER OF THE NETWORK FOR TEACHING ENTREPRENEURSHIP, WITH DEbra DESALVO
CONTENTS
Gameboard · 4 Ladybug pawns and stands · 61 Aphid chips · 38 Ladybug cards (33 Moving cards, 5 Aphid cards) · 8 Praying Mantis passes

Download the rules (PDF)

Ages 3 & Up For 2-4 players
In Support of Deeper Learning for All Students

Gifted and Talented? Deeper Learning Is for All Students
By Melissa Daniels, Director of High Tech Middle Chula Vista in California | March 12, 2015 | Education Week

When I was in fifth grade, I was in a gifted and talented program in a small town in south Georgia. Each Friday, we were pulled from our regular classroom and bused to another school where we explored subjects like botany, engaged in interesting art projects, and went on special field trips. At least one of those experiences had an impact on my future; a fascinating field trip to a museum exhibit on Ramses the Great sparked my life-long interest in history and laid the groundwork for two years of teaching in Cairo, Egypt.

As a ten-year-old enjoying these engaging learning experiences, I remember wondering why all my classmates didn't get to have these opportunities. Read more.
The Big Ideas Underlying the SEM

- Focus On Creative Productivity, An Investigative Mindset, And Co-Cognitive Characteristics

- General Enrichment For All Students and Targeted Enrichment and Acceleration For Students Who Demonstrate Advanced Potential

- Maintenance of Specially trained Personnel And Existing Programs and Services
Relationship Between the SEM and Existing Gifted Program

Teacher Trained In G/T Pedagogy (Acceleration, Enrichment, Etc.)

Identified Gifted Students

G/T Teacher

Enrichment Infusion Into The Regular Curriculum

The Schoolwide Enrichment Team

Total School Faculty

Total School Population
The Big Ideas Underlying the SEM

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• Practice Driven, Theory Based, Research Supported
Reasons why SEM programs have been successful?

A Orientation That Starts With The Practitioner.

Theory

Research

Practice

Theory Based

Practice Driven

Research Supported

TEACHERS KNOW THE MOST ABOUT WHAT WILL WORK IN THE CLASSROOM.
Research And Development On The Schoolwide Enrichment Model

See Article by Reis at: http://gifted.uconn.edu/schoolwide-enrichment-model/semresearch/
A Meta-Analysis of the Effects of Enrichment Programs on Gifted Students

Mihyeon Kim

Abstract
Although descriptions of enrichment programs are valuable for practitioners, practices, and services for gifted students, they must be backed by evidence, derived through a synthesis of research. This study examined research on enrichment programs serving gifted students and synthesized the current studies between 1985 and 2014 on the effects of enrichment programs. A total of 26 studies were included in this meta-analysis, and the findings show that enrichment programs had a positive impact on both gifted students' academic achievement ($g = 0.96$, 95% CI [0.64, 1.30], under a random-effects model) and socioemotional development ($g = 0.55$, 95% CI [0.32, 0.79], under a random-effects model). Regarding moderators of the effects, types of programs, and grade levels influenced both effect sizes of academic achievement and socioemotional development. The largest effect size was observed for summer residential programs in terms of academic achievement and for a combination of summer and academic year program in terms of socioemotional development.

Keywords
meta-analysis, enrichment programs, gifted students, evaluation
Weems Elementary School (K – 4)
Schoolwide Enrichment Model School In Manassas, Virginia
Highest ELL school in the District
Over 70% economically disadvantaged (free and reduced lunch)

Middle School Follow-Up Records

Pass Rate Data Comparing Weems
Graduates With Graduates From Four Other Feeder School-

Reading:
Weems graduates: 80%
Other 4 feeder schools: 68.2%

Math:
Weems graduates: 85.33%
Other 4 feeder schools: 74.82%

Science:
Weems graduates: 81.330%
Other 4 feeder schools: 70.28%

Also, if you look at the run of the past few years we have been building up as well.

Reading
Weems graduates performed in the negative (-) in the 3 years prior to adopting SEM and flipped to +12 point gain in 2014-15. The other elementary graduates made a 2014-15 +6 jump whereas Weems made a +19 point jump.

Math
Weems Outperformed in the negative before SEM years and flipped to +2 in 2013-14 and then +11 in 2014-15. The other feeder schools made a +6 jump 2014-15 whereas Weems graduates made a +15 jump.

At Weems, more than 70 percent of students are categorized as economically disadvantaged and nearly 60 percent are identified as English learners.
Graph 1: Reading Subgroup Achievement

Weems Compared to State Averages
Graph 2: Math Subgroup Achievement

Weems Compared to State Averages
Governor McAuliffe Announces Recipients of the Inaugural Governor’s Awards for Excellence and Innovation in Education

Virginia recognizes outstanding individuals, schools and programs

RICHMOND – Governor McAuliffe today announced the first recipients of the Governor’s Award for Excellence and Innovation in Education. This new initiative recognizes outstanding educators and leaders, schools, divisions, and community partners across five categories: closing the achievement gap, community partnerships and collaboration, innovation in education, preparing students for the new Virginia economy; and supporting school readiness. Out of more than 120 nominations, 13 were selected for recognition and honored at the Executive Mansion last night. The award categories and recipients are as follows:

Closing the Achievement Gap

Weems Elementary School

*Under the leadership of Principal Dave Rupert, Weems Elementary staff has improved student achievement through the school's unique Talents and Gifts program.*
Dominic Cipollone, Principal
Middle School 219
Bronx, New York

Test results since the implementation of the Renzulli Learning System in 2006

<table>
<thead>
<tr>
<th>Level</th>
<th>2006</th>
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<th>2008</th>
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<tr>
<td>Level 3</td>
<td>18.5</td>
<td>27.3</td>
<td>23.3</td>
<td>45</td>
</tr>
<tr>
<td>Level 2</td>
<td>58</td>
<td>63.1</td>
<td>64.7</td>
<td>51</td>
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<tr>
<td>Level 1</td>
<td>23</td>
<td>9</td>
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Test results since the implementation of the Renzulli Learning system in 2006

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<thead>
<tr>
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<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
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<tbody>
<tr>
<td>Level 4</td>
<td>41.8</td>
<td>30.1</td>
<td>18.82</td>
<td>8</td>
</tr>
<tr>
<td>Level 3</td>
<td>40.5</td>
<td>39.6</td>
<td>36.96</td>
<td>35</td>
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<tr>
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<td>26.8</td>
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<tr>
<td>Level 1</td>
<td>1.2</td>
<td>3.5</td>
<td>5.44</td>
<td>4</td>
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Dominic Cipollone, Principal
Middle School 219
Bronx, New York

MS 219 MATH RESULTS COMPARED ALL STUDENTS 2001 THROUGH 2009
Recent research from the perspective of economic growth...


Adam Booij

Ferry Haan

Eric Plug

Three Economists From Holland
We find that students obtain higher grades, follow a more science intensive curriculum (most notably for girls), and report stronger beliefs about their academic abilities. We also find that these positive effects persist in university, where students choose more challenging fields of study with, on average, higher returns. Together, these findings are consistent with a human capital interpretation of GT education. GT education increased the average starting salary ... Our most conservative calculations suggest that the labor market benefits of GT education are far greater than its costs.
Why Are The 3 Es Important?

Research shows that the 3 Es produce higher achievement scores than test-prep.

(Renzulli, 2004)
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• Practice Driven, Theory Based, Research Supported

• Common Goals/Unique Means
Common Goals – Unique Means

All roads lead to Rome...

But there are many ways to get to Rome...

Most innovations fail because we know more about what we’re against than what we stand for.

“If one does not know to which port one is sailing, no wind is favorable.” — Seneca
The Big Ideas Underlying the SEM

- Focus On Creative Productivity And An Investigative Mindset

- General Enrichment For All Students and Targeted Enrichment and Acceleration For Students Who Demonstrate Advanced Potential

- Maintenance of Specially trained Personnel Existing Programs and Services

- Practice Driven, Theory Based, Research Supported

- Common Goals/Unique Means

- Abundant Resources And Teacher Training
Practical Resources For The Two Main Theories
University of Connecticut

CONFRATUTE
CONFERENCE and institute with FRATernity in between.
www.confratute.uconn.edu

July 8-13, 2018

Join us for our 41st year of professional development in enrichment, talent development, & differentiation!

The Schoolwide Enrichment Model (SEM) is the foundation of Confratute, where teachers and administrators learn how to make schools places for talent development using innovative ideas, creative applications, and networking with others who have implemented the model.

Confratute offers:

**IN-DEPTH TRAINING** in The Schoolwide Enrichment Model
- Differentiation & Curriculum Compacting
- Underachievement
- Enrichment Infusion into the Regular Curriculum
- Cluster Grouping
- Enrichment Clusters
- Innovative Technology Applications

**A VARIETY OF STRANDS** that are intensive, week-long mini courses.

**MINI-KEYNOTES** about relevant research and trends in regular and gifted education.

**INVITED SPEAKERS** who are authors and researchers such as Joseph Renzulli, Sally Reis, Susan Baum, Marcia Gentry, Sandra Kaplan, Jaan Leppien, Rachel McAnallien, and Del Siegle.

**SPECIAL TOPIC SESSIONS** on a variety of topics such as creativity, thinking skills, underachievement, and more.

**EVENING FORUM SESSIONS** to help you develop individual action plans for talent development and differentiation.

**SEM LEADERS FORUM** strands on curriculum development and more, designed for principals and administrators.

Renzulli Center for Creativity, Gifted Education, and Talent Development
Renzulli Learning
is now available in multiple languages

Renzulli® Learning
Proven Differentiation™

Renzulli® Aprendizaje
Diferenciación comprobada™

Renzulli® 学习法
个性化学习™

Renzulli® للتعليم
تعليم شخصي™

English - Spanish - Chinese - Arabic
More languages coming soon!
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- Making Schools A Happy Place For All Students

“Example is the best school of mankind and they will learn at no other.”

Philosopher, Edmund Burks
Hi Sally,

My pleasure! We are always happy to assist. BELL Academy has become increasingly diverse over the years. Ensuring all levels of students are experiencing quality SEM learning experiences has become a critical focus for us. Our admissions policy (lottery) is designed to include all levels of learners, including those with special needs. We are up to 25% of students with IEPs. The fact that we have demonstrated a positive trajectory in ELA and Math proficiency over the years is one way hard data supports the impact of SEM on diverse learning communities. **Soft data would include how happy our kids are, via their smiles! 😊**

We look forward to hosting the visit for Nancy and her team on December 14th!

Wishing you and Joe all the best during the holiday season, and we hope to see you soon.

Sincerely,

David

_David M. Abbott_
_Principal_
_BELL Academy_
Theme of The Schoolwide Enrichment Model:

A Rising Tide Lifts All Ships

Not every child has an equal talent or an equal ability or equal motivation; but all children have the equal right to develop their talent, ability, and motivation to the fullest.

John F. Kennedy
In the modern global economy, industrial, educational, and political leaders are increasingly looking for personnel with skills in imagination, creativity, and innovation. Educational leaders in all nations are beginning to realize an emphasis on creativity is the key to maximizing economic and cultural growth and social progress for all their citizens.
Rationale For Teaching Thinking Skills, Creativity And Innovation To All Students

There is an economic imperative behind teaching creativity thinking skills, and innovation as much as there is a philosophical and humanitarian one. Nations are as reliant on the ability of their citizens to create new forms of value as businesses are on the creative skills of their employees. This is something the Chinese government and governments around the world have realized...


Why do we need to reexamine the mission of gifted education?

They’re Stealing our Thunder! It’s Time for Us To Strike Back

Traditional Goals of gifted Education:
• Creative Thinking   • Critical Thinking   • Problem Solving   • Decision Making
• Higher Level Thinking Skills   • Analysis   • Synthesis   • Evaluation
• Problem Based Learning

From The report: “21st Century Skills, Education & Competitiveness”

Public education has traditionally thought of higher level thinking as the purview of talented and gifted programs, while the teaching of basic skills was geared toward those on a trade track in high schools. Now, the focus must be on making sure all students have a broad array of these skills in addition to strong grounding in core subjects.

Our understanding that everyone needs to critically think and problem-solve has been heightened when you look at what success will require in the global economy.
The latest round of international standardized test results showed American students are lagging behind the rest of the developed world not just in math, science, and reading, but in problem solving as well. The 2016 Program for International Student Assessment (PISA) test examined 44 countries’ students’ problem-solving abilities.

American students landed just above the average, but they still scored below many other developed countries, including Britain, Singapore, Korea, Japan, China, and Canada.

Target Populations

- Top 5% Identified by State Criteria
  Group I
  15-20% Identified by Achievement Levels and Non-Test Criteria
  Group II
  75-80% General Population
  Group III
  Group IV Twice Exceptional Students

Another reason why we need to examine the ways in which we look at identification and programming practices...
Sir John Gurdon
Winner of the Nobel Prize In Medicine for his pioneering work in cloning and stem cells
As a 15-year-old schoolboy John Gurdon was told that a career in science was “ridiculous.” The following is a report by one of his teachers that he keeps over his desk to this day.

SCIENCE REPORT

NAME GURDON

Division D12 Subject Biology.

Place  K  17  18  Marks  281
       15  15   550

It has been a disastrous half. His work has been far from satisfactory. His prepared stuff has been badly learnt, and several of his test pieces have been torn over; one of such pieces of prepared work scored 2 marks out of a possible 50. His other work has been equally bad, and several times he has been in trouble, because he will not listen, but will insist on doing his work in his own way. I believe he has ideas about becoming a Scientist; on his present showing this is quite ridiculous, if he can’t learn simple Biological facts he would have no chance of doing the work of a Specialist, and it would be sheer waste of time, both on his part, and of those who have to teach him.

C. Ford.
His work has been far from satisfactory. His prepared study has been badly learnt and several of his test pieces have been torn over. One such piece of prepared work scored 2 marks out of a possible 50. His other work has been equally bad, and several times he has been in trouble, because he will not listen, but will insist on doing his work in his own way. On his present showing this is quite ridiculous. If he can’t learn simple Biological facts he would have no chance of doing the work of a scientist, and it would be sheer waste of time, both on his part, and those who would have to teach him. I believe he has ideas about becoming a scientist: on his present showing this is quite ridiculous.
Other Persons Who Were Considered School Failures

Percey Bysshe Shelley

Salvador Dali

Robert Frost

Humphrey Bogart

Ted Turner

Wm. Randolph Hearst

Albert Einstein
Walt Disney was fired by a newspaper editor because “he had no good ideas.” He went on to create Mickey Mouse, Donald Duck, the Disney Studios, Disneyland; his greatest dream, EPCOT Center opened in 1982.

Thomas Edison’s teachers called him “too stupid to learn.” He made 3,000 mistakes on his way to inventing the light bulb. Eventually he held 1,093 patents.
Louisa May Alcott was told by an editor that she would never write anything popular. More than a century later, her novels are still being read, and the Children’s Literature Association (an international group of librarians, teachers, authors, and publishers) considers *Little Women* on the the best American children’s books of the past 200 years.

"CHRISTMAS won't be Christmas without any presents," grumbled Jo, lying on the rug.

"It's so dreadful to be poor!" sighed Meg, looking down at her old dress.

"I don't think it's fair for some girls to have plenty of pretty things, and other girls nothing at all," added little Amy, with an injured sniff.

"We've got father and mother and each other," said Beth contentedly, from her corner.

The four young faces on which the firelight shone brightened at the cheerful words, but darkened again as Jo said sadly,—

"We haven't got father, and shall not have him for a long time." She didn't say "perhaps never," but each silently added it, thinking of father far away, where the fighting was.

Nobody spoke for a minute; then Meg said in an altered tone,—

"You know the reason mother proposed not having any presents this Christmas was because it is going to be a hard winter for every one; and she thinks we ought not to spend money for pleasure, when our men are suffering so in the army. We can't do much, but we can make our little sacrifices, and ought to do it gladly. But I am afraid I don't." And Meg shook her head, as she thought regretfully of all the pretty things she wanted.

"But I don't think the little we should spend would do any good. We've each got a dollar, and the army wouldn't be much helped by our giving that. I agree not to expect anything from mother or you, but I do want to buy Undine and Sintram for myself; I've wanted it so long," said Jo, who was a bookworm.
Practically every day someone at the restaurant asks its 66-year-old owner if she always knew her son was a genius. “when he was growing up,” Leah replies, I didn’t know what the hell he was. I’m really ashamed, but I didn’t recognize the symptoms of his talent. For one thing – and he’ll probably take away my charge account for saying this – he was never a good student. Once, his teacher told me I should put him in a special education class and he was turned down every time he applied to USC’s cinema school.

“He wasn’t exactly cuddly,” Leah adds. “He was scary. When he woke up from a nap I shook all over.” He was a master at creating terror. He practiced on his three sisters. “He used to stand outside their windows at night, howling, “I am the moon! I am the moon!” says Leah. ”They’re still scared of the moon to this day. And he cut off the head of his sister Nancy’s doll and served it to her on a bed of lettuce.”

“His room was such a mess, you could grow mushrooms on the floor.” “Once his lizard got out of it’s cage, and we found it – living – three years later. He had a parakeet he refused to keep in a cage. It was disgusting. Once a week, I would stick my head in his room, grab his dirty laundry and slam the door.”

If I had known better, I would have listened to his teachers and taken him to a psychiatrist, and there probably never would have been an E.T.”
Target Populations

Group I
Top 5% Identified by State Criteria

Group II
15-20% Identified by Achievement Levels and Non-Test Criteria

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75-80% General Population

Group IV
Twice Exceptional Students
What is Creative/Productive Giftedness and Why Is It Important?

A Few Examples...
Two Types of Giftedness

High Achieving Giftedness

Creative/Productive Giftedness
My name is Brooks McConnell. I am in the fifth grade at Norfeldt Elementary School in West Hartford, CT. Last fall I was watching The Katie Couric Show with my mom and noticed you and your son, Sam. I recall that Sam wanted to ride roller coasters but he couldn’t because of his disease, progeria. I wondered if there would ever be a way for kids like him to ride roller coasters? Well, I think I’ve figured a way out.
For a year long school project, my topic was roller coasters. When I saw Sam, I thought that a roller coaster simulator would be a nice addition to theme parks around the world. So, I constructed a simulator using objects from around the house. My simulator is a chair that has a back massager that vibrates your back. The rider would then put on a vest with weights in the pockets. The weights in the pockets would then simulate the weight transfers throughout a ride, meaning that the weights would come in and out during the ride. This is a way people like Sam can experience the ride because the regulated force is on the outside of the body, not the inside. The physical experiences would all go on in front of a visual roller coaster video. The sounds of the ride would be pre-recorded and played into headphones. The simulator would be located next to an amusement park’s most popular roller coaster.
Type II Enrichment
TYPE III
INDIVIDUAL & SMALL GROUP INVESTIGATIONS OF REAL PROBLEMS
I have already sent the idea to three major roller coaster companies hoping they can expand on the idea. When I was searching the internet for your address so I could write to you, I heard about Sam’s passing. My mom and I were so sorry to read that. I would like to thank you, and him, for being such an inspiration to me and the world. Even though my simulator can’t be ridden by Sam, I am hopeful that other kids around the world with progeria or any other diseases that might prevent them from enjoying the thrill of the ride will get a chance to in the future.

Dear Bolliger & Mabillard,

The simulator that I created includes a video that is filmed the front seat of a roller coaster. The rider’s seat vibrates in order to simulate a rough chain lift. With my simulator, the rider wears a vest with weights in each pocket. Throughout the experience an operator adds and removes the weights in order to create the experience of different G-forces on the rider’s body. This concept of adding and subtracting weights on the outside of the body instead of the inside is meant to recreate the G-force experience.

Enclosed are photos of the roller coaster simulator that I created along with a model that I built. I hope you like this idea as much as I do. Thank you for your consideration.

Sincerely,

Brooks McConnell
Eric Fossum

Two Major Interests as a teenager:

Photography
Computer Electronics

Student in a Connecticut SEM Program
Interested in computers and photography
Attended Trinity College in Hartford
Yale for graduate school
Worked at NASA’s jet propulsion lab where he used computer chips for photography
Started work on an invention just approved by the FDA (and that will make you very happy!)
Changing the way the world fights cancer.
February, 2015
Pill Camera to Check Colon
Approved by FDA
Eric Fossum today

Another enrichment program graduate from Connecticut Interested in computers and photography
Attended Trinity College in Hartford and Yale for graduate school
Worked at NASA’s jet propulsion lab where he used computer chips for photography.
Fossum is one of four engineers awarded the £1 million Queen Elizabeth Prize for his invention.
Curriculum Compacting

Curriculum Modification Procedure For High Achieving Students
A “Bell Curve” Seating Chart.

From *Get Off My Brain*, by Randy McCutcheon, illustrated by Pete Wagner
Susan, please put away *Moby Dick*. It's time for your silent "e" review sheet.
Curriculum Modification For High Achieving Students

<table>
<thead>
<tr>
<th>Curriculum Areas to Be Considered for Compacting</th>
<th>Procedures for Compacting Basic Material</th>
<th>Acceleration and/or Enrichment Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide a brief description of basic material to be covered during this marking period and the assessment information or evidence that suggests the need for compacting.</td>
<td>Describe activities that will be used to guarantee proficiency in basic curricular areas.</td>
<td>Describe activities that will be used to provide advanced-level learning experiences in each area of the regular curriculum.</td>
</tr>
</tbody>
</table>

Name It

Prove It

Change It
## INDIVIDUAL EDUCATIONAL PROGRAMMING GUIDE
### The Compactor

<table>
<thead>
<tr>
<th>NAME</th>
<th>Alison</th>
<th>AGE</th>
<th>6</th>
<th>TEACHER(S)</th>
<th>Individual Conference Dates And Persons Participating in Planning Of IEP</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCHOOL</td>
<td></td>
<td>GRADE</td>
<td>1</td>
<td>PARENT(S)</td>
<td></td>
</tr>
</tbody>
</table>

### CURRICULUM AREAS TO BE CONSIDERED FOR COMPACTING
Provide a brief description of basic material to be covered during this marking period and the assessment information or evidence that suggests the need for compacting.

- **Holt Basic Reading Series** - Levels 3-6, as determined by Holt level tests. Alison has mastered most of the comprehension and phonetic objectives introduced in these levels.

- **Capital letters and periods** - Teacher made worksheets Continental Press. Alison will participate in classroom activities dealing with these skills. Check proficiency by Holt level 6 test. Capital letters and periods - pg 27.

- **Contractions** - Level 7 Teacher's Manual pages 81

- **Individualized Spelling Program by Economy** - Alison has mastered Levels 1-4. She will be placed in Level 5.

- **119, 175, 216, 217, and 255-256. Check proficiency by Holt Level 7 test (Contractions).**

- **Change y to i and add es/and other plural forms** - Level 7

- **Math** - As determined by the first grade Math placement test, Alison has mastered most of this curriculum. She will begin her Math program in the 2nd grade classroom.

- **Teacher's Manual pages 202 and 293-294. Level 8 Teacher's Manual pages 222-223, 246, 311. Check proficiency by Holt Level 9 test and reading consultant-made test for these plural forms not covered in the Level 9 test.***


- **Pronouns** - Level 9 Teacher's Manual page 325.

### PROCEDURES FOR COMPACTING BASIC MATERIAL
Describe activities that will be used to guarantee proficiency in basic curricular areas.

- **Check for proficiency - Level 9 test (language skills) page 9.**

### ACCELERATION AND/OR ENRICHMENT ACTIVITIES
Describe activities that will be used to provide advanced level learning experiences in each area of the regular curriculum.

- **Classroom**
  - Alison's classroom teacher will use the language experience approach. Various reading and writing programs on the Apple computer will be used with Alison. Scholastic Individual Reading Kit will provide Alison with the opportunity to read independently and use instructional games and records. Alison will be provided time to work in her classroom on a Type III activity (independent study).

- **Talcott Mt. Science Center**
  - Alison will participate in Science programs presented in school—Crystals, weather, forest life, aerial photos and mountains, snow, planets and constellations.

- **TAC Resource Room**
  - Critical thinking skills, creative thinking skills, creative problem solving, critical problem solving, Type III independent study.

---

☐ Check here if additional information is recorded on the reverse side.

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A Multiple Criteria Strength Based Identification System

High Achieving Giftedness

Creative/ Productive Giftedness
The Three Ring Conception of Giftedness

Comprehensive Strength Assessment

- Academic Strength Assessment (Achievement Tests + SRBCSS)
- Interest Assessment (I-A-L)
- Learning Styles Assessment (LSI)
- Expression Styles Assessment (My Way)
- Assessment of Co-cognitive Functions (Leadership & Executive Functions)
Two Types of Identification Information

1. **Status Information** -- Anything you can measure and put down on paper beforehand that tells you something about the student.

2. **Action Information** -- Student performance that you can only document when an activity is taking place or after it has happened.
2A. Underlying Theory of Human Potential – Comprehensive Student Strength Assessment

Imagination is more important than knowledge.  
*Albert Einstein*

The artist is nothing without the gift, but the gift is nothing without the work.  
*Emile Zola*

In Certain People At Certain Times Within Certain Circumstances
Sample Identification Instruments and Identification System Based On The Three Ring Conception

Interest-A-Lyzer(s)

Sample Items

1. Image you have the opportunity to travel to a new and exciting city. You can select three places to visit. Mark your first, second, and third choice by placing a 1, 2, and 3 in the spaces below.

- Art Gallery
- Professional Sport Training Camp
- History Sites
- Stock Market
- Television Studio
- Planetarium
- Telecommunications Center
- Symphony Orchestra
- 3-Dimensional Multi-Media Film
- Science Center
- Ballet or Modern Dance
- Musical Concert
- State Senate Meeting
- Computer Center
- Court Room
- Stage Play
- Newspaper Office

Learning Styles Inventory: Sample Items

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal Oriented</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decision Maker</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Able to Plan Ahead</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Possesses Good Etiquette</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Able to Follow Through with Tasks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Copes Well with Set-Backs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persistent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Generates Ideas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Defers Gratification</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Expression Styles

My Way... An Expression Style Inventory

Co-Cognitive Factors

Executive Functions
Total Talent Pool Consists of Approximately 15% of the General Population

Renzulli Identification System

Step 1
- Test Score Nominations
  - 99th %ile
  - [Automatic, and Based on Local Norms]
  - 92nd %ile

Step 2
- Teacher Nominations
  - [Automatic Except in Cases of Teachers Who Are Over or Under Nominators]

Step 3
- Alternative Pathways

Step 4
- Special Nominations

Step 5
- Notification of Parents

Step 6
- Action Information Nominations

Renzulli Identification System
By Areas, Across Grade Level Bands, Using Multiple Criteria That Include Interests and Learning Styles as well as Abilities
The Sciences

- Biology
- Ecology
- Astronomy
- Chemistry - Etc.
The Impacted Urban Issue...
Underlying Theories of Knowledge and Differentiation
Short Quiz

1. What are the “raw materials” for baking bread?

2. What are the “raw materials” for learning?

Knowledge
Experience
Doing things!
Certificate of Completion

Presented to Joe Renzulli for successfully completing a course in Artisan Baking at Home held July 18 through July 21, 2011.
Two Sources of Knowledge:
• To-Be-Presented Knowledge
• Just-In-Time Knowledge

Three Types of Knowledge
- Received Knowledge (Content)
  (Lectures, Textbooks, Worksheets, Internet, TV, & Other Media)
- Analyzed Knowledge (Process)
  (Labs, Debates & Discussions, Open-ended Problems, Creativity Training & Critical Thinking Exercises)
- Applied & Created Knowledge (Application)
  (Research Projects, Investigative Learning Activities, Product & Performance Creations)

Three Uses of Knowledge
- Standard Comprehension & Achievement Test Scores
- Thinking & Creative Problem Solving, and Digital Literacy Skills
- Visual, Oral, Written, & Constructed Projects, Performances and Presentations
The Big Mistake When Using Bloom’s Taxonomy

That’s not the way the Brain works!

1. **Knowledge**: remembering or recalling appropriate, previously learned information to draw out factual (usually right or wrong) answers. Use words and phrases such as: how many, when, where, if, define, tell, describe, identify, etc., to draw out factual answers, testing students’ recall and recognition.

2. **Comprehension**: grasping or understanding the meaning of informational materials. Use words such as: describe, explain, estimate, predict, identify, differentiate, etc., to encourage students to translate, interpret, and extrapolate.

3. **Application**: applying previously learned information (or knowledge) to new and unfamiliar situations. Use words such as: demonstrate, apply, illustrate, show, solve, examine, classify, experiment, etc., to encourage students to apply knowledge to situations that are new and unfamiliar.

4. **Analysis**: breaking down information into parts, or examining (and trying to understand the organizational structure) of information. Use words and phrases such as: what are the differences, analyze, explain, compare, separate, classify, arrange, etc., to encourage students to break information down into parts.

5. **Synthesis**: applying prior knowledge and skills to combine elements into a pattern not clearly there before. Use words and phrases such as: combine, rearrange, substitute, create, design, invent, what if, etc., to encourage students to combine elements into a pattern that’s new.

6. **Evaluation**: judging or deciding according to some set of criteria, without real right or wrong answers. Use words such as: assess, decide, measure, select, explain, conclude, compare, summarize, etc., to encourage students to make judgements according to a set of criteria.
Creativity isn’t about freedom from concrete facts.
Rather, fact-finding and critical thinking are vital at each stage in the creative process.

P. Bronson & A. Merryman

Applied to:
- Increased Academic Performance & Graduate School Applications
- Thinking & Creative Problem Solving Skills
- Digital Literacy
- Visual, Oral, Written & Constructed Projects, Performances and Presentations
**Knowledge**

- Curriculum Content

**Pedagogy**

- Instructional Strategies

**Classroom Organization**


**Grouping by:**

- Interests, Skill Levels, Ability, Within & Across-Grade Cluster Grouping, Common Tasks/Projects, Complimentary Talents, Cooperative Learning

**Expression Styles:**

- Oral, Visual, Graphic, Manipulative, Artistic, Written, Multi-Media, Service, Combinations of the Above

**Technology**

- On-line Courses
  - Blogs, Wikis, Podcasts
  - RSS Feeders, Screencasts
- Flickr, Twitter
- Social Networking Sites
- Renzulli Learning System

**Learning/Teaching Styles:**

- Lecture, Discussion, Peer Tutoring, Simulations
- Socratic Inquiry, CAI, Dramatization, Problem Based Learning, Guided & Unguided Independent Study

**Content Modifications**

- More Material
- More Drill & Practice
- Easier Material
- Greater Depth & Complexity
- Student or Teacher Selected Enrichment Opportunities Related To A Topic or Unit of Study

**Theory of Personalized Learning**

Five Dimensions of Differentiation

(JSR: 1996)
Blending Levels of Knowledge

Two Kinds of Knowledge:
- To-Be-Presented Knowledge
- Just-In-Time Knowledge

Inputs

- Received Knowledge (Content)
  (Lectures, Textbooks, Worksheets, Internet, TV, & Other Media)
- Analyzed Knowledge (Process)
  (Labs, Debates & Discussions, Open-ended Problems, Creativity Training & Critical Thinking Exercises)

Applied & Created Knowledge (Application)
(Research Projects, Investigative Learning Activities, Product & Performance Creations)

Outputs

- Applied To:
  - Standard Comprehension & Achievement Test Scores
  - Thinking & Creative Problem Solving Skills
  - Digital Literacy
  - Visual, Oral, Written, & Constructed Projects, Performances and Presentations

Outputs

- Blended Knowledge
  Take Away

- Procedural Skills
  Take Away

- Factual Information
  Take Away

[JSR: 11-12]
“In words you’ll understand, you’re not downloading enough content to play at the next level.”
## Typical Verbs Used for Raising Questions About Three Kinds of Knowledge

<table>
<thead>
<tr>
<th>Words Uses to Prompt Received Knowledge Learning</th>
<th>Words Uses to Prompt Analyzed Knowledge Learning</th>
<th>Words Uses to Prompt Created Knowledge Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>State, Describe, Identify, Label, List, Match, Outline, Memorize, Point to, Recall, Select, Name, Label, Arrange, Report, Give examples, Calculate, Repeat, Tell, Recite, Recognize</td>
<td>Explain, Interpret, Demonstrate, Conclude, Compare, Contrast, Categorize, Design, Speculate, Interpret, Relate, Predict, Estimate, Extrapolate, Reconstruct, Hypothesize, Design, Critique, Distinguish between</td>
<td>Point out, Defend, Differentiate, Reconstruct, Reorganize, Construct, Devise, Illustrate, Infer, Compose, Construct, Infer, Paraphrase, Translate, Evaluate, Defend, Justify, Organize, Formulate</td>
</tr>
<tr>
<td><a href="#">Learn</a></td>
<td><a href="#">Think</a></td>
<td><a href="#">Apply</a></td>
</tr>
<tr>
<td>Set Goals, Plan Project (e.g., time lines, needed resources, action steps, intended outcomes, products, audiences), Write (e.g., story, essay, proposal, musical score), Interview, Investigate, Design, Formulate, Construct, Gather Data, Organize, Produce, Schedule, Prioritize, Supervise, Organize, Negotiate, Monitor, Publicize, Communicate, Budget</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
General Questions That Promote *Applied* Investigative And Creative Thinking

What can you build?
What can you design?
What can you develop?
What can you plan?
What can you produce?
How could you modify?
What could you invent?
What kind of study could conduct to influence others?
What kind of original text, video, graphic, display could you produce?
How could you get people to buy, use, promote or sell this?
How can you change people’s minds?
How can you present, teach, display?
Theory Into Practice

7

The Enrichment Triad In Action
TYPE I ENRICHMENT
General Exploratory Activities
Learn about new topics and interest through:
- Guest Speakers
- Internet, Facebook, Twitter
- Visitations & Virtual Field Trips
- DVDs & Videos
- Computer Programs
- Interviews
- Casual Conversations
- Books, Magazines, Television
- Dynamic Curriculum Experiences
- Letter Writing
- Observation of The World Around Us

TYPE II ENRICHMENT
How-To Training Activities

TYPE III ENRICHMENT
Individual & Small Group Investigations of Real Problems
Students become “experts” through hands-on activities that use creativity and research skills to solve real-world problems.
Creative products are shared with appropriate audiences.

“...(`/thinking, feeling, and doing like the practicing professional, even if at a more junior level."

Theory Into Practice
Type I Enrichment
Type I: Debriefing

What did you find interesting about the presentation?

Did this presentation raise any questions in your mind?

What else would you like to know?

Where could we find more information about this topic?

Are there any careers that this presentation makes you think of?

What good ideas can you share about projects, research studies, creative writing, etc. that might be used to learn more about this topic?

Would anyone like to meet with me individually to explore possible follow ups to this Type I?
Type I Enrichment Follow-up Interested Students
TAXONOMY OF COGNITIVE & AFFECTIVE PROCESSES
(The "Type II Matrix" JSR: 2001)

I. Cognitive Thinking Skills
   A. Creative Thinking Skills
   B. Analytic, Problem-Solving & Decision-Making Skills
   C. Critical and Logical Thinking Skills

II. Character Development and Affective Process Skills
   A. Character Development
   B. Interpersonal Skills
   C. Intrapersonal Skills

III. Learning How-To Learn Skills
    A. Listening, Observing, & Perceiving
    B. Reading, Notetaking, & Outlining
    C. Interviewing & Surveying
    D. Analyzing & Organizing Data

IV. Using Advanced Research Skills & Reference Materials
    A. Preparing for Research & Investigative Projects
    B. Library & Electronic Reference
    C. Finding & Using Community Resources

V. Written, Oral, and Visual Communication Skills
   A. Written Communication Skills
   B. Oral Communication Skills
   C. Visual Communication Skills

VI. Meta-Cognitive Technology Skills
   • The ability to identify trustworthy and useful information
   • The ability to selectively manage overabundant information
   • The ability to organize, classify, and evaluate information
   • The ability to conduct self-assessments of web-based information
   • The ability to use relevant information to advance the quality of one’s work
   • The ability to communicate information effectively
### Planning Matrix for Organizing and Teaching Type II Skills With Commercial Enrichment Materials

#### I. Cognitive Training

<table>
<thead>
<tr>
<th></th>
<th>K-3</th>
<th>4-8</th>
<th>9-12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Creative Thinking Skills</strong></td>
<td><strong>Be An Inventor</strong>&lt;br&gt;Brainstorming: The Book of Topics&lt;br&gt;Creativity 1, 2, 3&lt;br&gt;New Directions in Creativity: A&lt;br&gt;New Directions in Creativity: B&lt;br&gt;On The Nose&lt;br&gt;Steven Caney's Kids' America&lt;br&gt;Steven Caney's Play Book&lt;br&gt;Steven Caney's Toy Book&lt;br&gt;Think About It!&lt;br&gt;Wondering</td>
<td><strong>Be An Inventor</strong>&lt;br&gt;Brainstorming: The Book of Topics&lt;br&gt;Challenge Boxes&lt;br&gt;Creativity 1, 2, 3&lt;br&gt;Imagining&lt;br&gt;New Directions in Creativity: Mark 1&lt;br&gt;New Directions in Creativity: Mark 2&lt;br&gt;New Directions in Creativity: Mark 3&lt;br&gt;On The Nose&lt;br&gt;Steve Caney's Invention Book&lt;br&gt;Steven Caney's Kids' America&lt;br&gt;Steven Caney's Play Book&lt;br&gt;Steven Caney's Toy Book&lt;br&gt;Think About It!&lt;br&gt;Untrapping Your Inventiveness</td>
<td><strong>Brainstorming: The Book of Topics</strong>&lt;br&gt;Challenge Boxes&lt;br&gt;On The Nose&lt;br&gt;Steve Caney's Invention Book&lt;br&gt;Steven Caney's Kids' America&lt;br&gt;Steven Caney's Play Book&lt;br&gt;Untrapping Your Inventiveness</td>
</tr>
<tr>
<td><strong>B. Creative Problem Solving and Decision Making</strong></td>
<td><strong>Be An Inventor</strong>&lt;br&gt;Creativity 1, 2, 3&lt;br&gt;On The Nose&lt;br&gt;Think About It!&lt;br&gt;Wondering</td>
<td><strong>Be An Inventor</strong>&lt;br&gt;Challenge Boxes&lt;br&gt;Creativity 1, 2, 3&lt;br&gt;Gee, Whiz!&lt;br&gt;Imagining&lt;br&gt;On the Nose&lt;br&gt;Steven Caney's Invention Book&lt;br&gt;Think About It!&lt;br&gt;Untrapping Your Inventiveness</td>
<td><strong>Challenge Boxes</strong>&lt;br&gt;Gee, Whiz!&lt;br&gt;Steve Caney's Invention Book&lt;br&gt;Untrapping Your Inventiveness</td>
</tr>
</tbody>
</table>

*All the books listed in Figure 60 are available from Creative Learning Press, Inc., P.O. Box 320, Mansfield Center, CT 06250.*

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Planning matrix for organizing and teaching type II skills with commercial enrichment materials.
17 Recycling (b)

What could you make out of these items?

- cans
- bags
- old spoons
Study the figures below and see if you can group them together according to characteristics they have in common. You can use each figure as many times as you wish. An example is given below.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>G</td>
<td>H</td>
<td>I</td>
<td>J</td>
</tr>
<tr>
<td>K</td>
<td>L</td>
<td>M</td>
<td>N</td>
<td>O</td>
</tr>
</tbody>
</table>

Common characteristics

- furry things

Figures

- G, N, O
Another Point of View (a)

Do you remember the story about the three little pigs? In that story, the wolf is depicted as a mean and evil character, but few people have ever told the story from the wolf's point of view. Imagine that you are the wolf in this story. Retell your story in a way that will let the reader to understand how it feels to be the big bad wolf. A few lines are written to help you get started. Use the back of this page if you need more space.

The Three Little Pigs
by
I. M. A. Wolf

It's not easy being a big bad wolf. I don't have very many friends, and everybody runs away when they see me coming.
Imagine that you are walking through a tropical jungle. All around you are things you can see, hear, and smell. In the spaces below, list the things your senses tell you about the jungle. After you have listed the sights, sounds, and smells, write a paragraph describing your walk through the jungle. Use the back of this page if you need more space.
TAXONOMY OF COGNITIVE & AFFECTIVE PROCESSES
(The "Type II Matrix" JSR: 2001)

I. Cognitive Thinking Skills
   A. Creative Thinking Skills
   B. Analytic, Problem-Solving & Decision-Making Skills

II. Character Development and Affective Process Skills
   A. Character Development
   B. Interpersonal Skills
   C. Intrapersonal Skills

III. Learning How-To Learn Skills
   A. Listening, Observing, & Perceiving
   B. Reading, Notetaking, & Outlining
   C. Interviewing & Surveying
   D. Analyzing & Organizing Data

IV. Using Advanced Research Skills & Reference Materials
   A. Preparing for Research & Investigative Projects
   B. Library & Electronic Reference
   C. Finding & Using Community Resources

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   C. Visual Communication Skills

VI. Meta-Cognitive Technology Skills
   - The ability to identify trustworthy and useful information
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   - The ability to organize, classify, and evaluate information
   - The ability to conduct self-assessments of web-based information
   - The ability to use relevant information to advance the quality of one’s work
   - The ability to communicate information effectively
Now That's a Good Question!

How to Promote Cognitive Rigor Through Classroom Questioning

ERIK M. FRANCIS

Its All About Asking The Right Questions
### Good Analytical Questions: The Declaration of Independence

<table>
<thead>
<tr>
<th>Analytical</th>
</tr>
</thead>
</table>
| **How does the Declaration of Independence express the grievances of the colonists?** * 
  - What is the intent of the Declaration of Independence?  
  - What are the meaning and message of the Declaration of Independence?  
  - What does the Declaration of Independence represent?  
  - How does the Declaration of Independence address the following themes: freedom, independence, tyranny, democracy, unalienable rights?  
  - How is the style and tone of the Declaration of Independence idealistic, legalistic, and practical?  
  - How does the crafting and structure of the Declaration of Independence strengthen its message and purpose?  
  - How does the Declaration of Independence incorporate different conventions of craft, structure, writing, and language to convey its intent and purpose?  
  - How did the colonists emphasize their concerns in the Declaration of Independence?  
  - How and why is the Declaration of Independence written like a formal legal document?  
  - What can be inferred from the opening “The Unanimous Declaration of the thirteen United States of America”?  
  - What does this statement mean or infer? *We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable rights, that among these are life, liberty and the pursuit of happiness.*  
  - What does the Declaration of Independence infer by calling rights “unalienable”?  
  - Why does the Declaration of Independence refer directly to the “present King of Great Britain” and begin every one of their complaints by referring to what “he” has done instead of referring to the nation of Great Britain and its people?  
  - Why has this document continued to remain relevant and timeless historically and presently? |

*May also be used as a topical essential question.*
Type III Enrichment: Individual and Small Group Investigations of Real Problems

What Makes A Problem Real
What Makes a Problem Real?

1. Personalization of Interest
2. Use of Authentic Methodology
3. No Existing Solution or "Right" Answer
4. Designed to Have an Impact on an Audience Other Than or in Addition to the Teacher

“...the young person thinking, feeling, and doing like the practicing professional, even if at a more junior level than adult professionals.”
TYPE III ENRICHMENT:
Building the Curriculum Around the Student

Interview

Begin Development of Management Plan

Student(s) With An Idea, Or Interest & A Commitment to Pursue An Individual Or Group Project

Finding Appropriate Outlets For Students' Work

Finding Appropriate Audiences for Students' Work

Focus on the Methodology or How-To-Do-It in a Particular Field

Manicure, Revise, Rewrite, Polish Product

Feedback, Encouragement, Editorial Assistance, Shoulder to Cry on

Human and Material Resources--Teacher as a Managerial Assistant

Problem Finding and Focusing
## MANAGEMENT PLAN FOR INDIVIDUAL AND SMALL GROUP INVESTIGATIONS

<table>
<thead>
<tr>
<th>NAME</th>
<th>GRADE</th>
<th>BEGINNING DATE</th>
<th>ESTIMATED ENDING DATE</th>
<th>TEACHER</th>
<th>SCHOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>small group</td>
<td>4-6</td>
<td></td>
<td></td>
<td>Judith M. Johnson</td>
<td>Ellenville Central School</td>
</tr>
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### GENERAL AREA(S) OF STUDY

- Language Arts/Humanities
- Science
- Social Development
- Social Studies
- Music
- Other (Specify) History
- Mathematics
- Art
- Other (Specify) Architecture
- Geography

### SPECIFIC AREA OF STUDY

Write a brief description of the problem that you plan to investigate. What are the objectives of your investigation?

#### What do you hope to find out?
1. What was Ellenville like in Victorian times and what happened to it?
2. What effects of Victorian times are evident in the town and local architecture?
3. What can be done to preserve Victorian structures still in existence?

### METHODOLOGICAL RESOURCES AND ACTIVITIES

List the names and addresses of persons who might provide assistance in attacking this problem. List the how-to-do-it books that are available in this area of study. List other resources (film, collections, exhibits, etc.) and special equipment (microfilm, tape recorder, questionnaires, etc.). Keep a continuous record of all activities that are a part of this investigation.

#### Getting Started

What are the first steps you should take to begin this investigation? What types of information or data will be needed to solve the problem? If you do not already have a categorized listing of the types of materials you need, you might consider:

1. Letters to Preservation Information Sources, Preservation and Funding Sources, each of the intended audiences (Outline our objectives, ask for assistance)
2. Obtain maps from Village Clerk’s Office, Town Clerk’s Office, U.S. Geological Survey (get recent maps, any available old maps dating from 1850 to present)
3. Locate existing Victorian structures—photograph or on a recent map, key map to a chart listing current addresses, present owners, condition, location, and map Victorian structures existing 100 years ago. Indicate on map those structures still in existence.
4. Visit town historian with a tape recorder, ask about previous surveys which may have been done and location of material, ask about persons to interview.

This form is based on a model for individual and small group investigations developed by Joseph S. Renzulli. A complete description of the model can be found in: The Enrichment Triad Model: A Guide for Developing Self-Managed Programs for the Gifted and Talented. - Creative Learning Press
Enrichment Clusters
The “Growth Stock” Of The SEM

1. Specially Designated Time Blocks Each Week

2. Trained General Faculty Teachers

3. Student Selection of Creative and Investigative Projects

4. Using the Methodology of the Practicing Professional
Enrichment Clusters

*Are nongraded groups of students who share common interests and come together during specially designated time blocks to pursue these interests.*

Note:

*Best way to start an enrichment program...*
Super Hint Number 5 for getting more authentic Type IIIs in your Enrichment Clusters...

Write an action-oriented description that will emphasize hands-on activity... AND avoid the use of the word, “learn!”

A very creative activity for you!
Sample Cluster Descriptions

-The Poets’ Workshop-
What is it like to be a poet? Explore the poetry of some of America’s greatest poets, including Robert Frost, Langston Hughes, Emily Dickinson and others. Write, illustrate, and perform original poems or interpret others’ work. Identify outlets for our work.

-Invention Convention-
Are you an inventive thinker? Would you like to be? Come to this cluster to brainstorm a problem, try to identify many solutions, and design an invention to solve the problem. Create your invention individually or with a partner under the guidance of Bob Erickson and his colleagues. You may share your final product and the Young Inventor’s Fair, a statewide, day-long celebration of creativity.
Would you like to become a “Dumpsite Detective” and uncover ways to reuse our trash?

Would you like to see worms at work reducing our lunchroom garbage?

Join The Recyclers and become an expert in converting trash into treasures!

Be a Mother Nature Super Hero and Save the World!
Would you like to be a detective? Investigate crimes?

Have you ever wondered what it takes to solve a crime?

If investigating a crime, gathering evidence, and solving mysteries strike your curiosity then this is the cluster for you! Join The Crime Scene Detectives.
3. Decide on a topic or two that has special interest to you and answer the six key questions by:

- Obtaining one or more how-To Books on the topic by checking the How-To Data Base in Renzulli Learning.

- Talking to an expert who works in this area (A.S.P.I. R.S.).

- Going on line and do a little background reading about the topic.

- Finding a few examples of creative products, especially if they were done by young people and plan to talk about them with your students. Use the key questions as a guide for an opening discussion.

- Checking the Contests and Competitions Data Base in Renzulli Learning to get some ideas about possible audiences [Great for motivation].
Super Hint for getting more authentic Type IIIs in your Enrichment Clusters...

Look for contests and competitions where students can submit their work.

Very motivating!
Strength-based Differentiation Engine™

Matching Resources to Individual Learning Profiles

MY ENRICHMENT ACTIVITIES:

- virtual field trips: 48 Activities
- real field trips: 759 Activities
- creativity training: 73 Activities
- critical thinking: 47 Activities
- projects & independent study: 188 Activities
- contests & competitions: 243 Activities
- websites: 243 Activities
- fiction: 4 Activities
- non-fiction: 200 Activities
- how-to: 26 Activities
- summer programs: 32 Activities
- on-line activities & classes: 245 Activities
- research sites: 54 Activities
- videos & DVDs: 96 Activities
Super Hint for getting more authentic Type IIIs in your Enrichment Clusters...

Plan a Type III Fair where students can display their products, make presentations, and share their work with students from other schools.

An evening session should be planned for parents, school, and city officials. Invite print and media journalists.

“Audience” creates motivation to improve one’s work, pride in accomplishment, and serves as a vehicle for motivating for other students to get involved.