

The background of the slide features several horizontal, overlapping brushstrokes in various shades of blue and teal, creating a textured, artistic effect. The strokes are centered and cover most of the page's width.

ORIGINAL, INNOVATIVE, AND CREATIVE

Real Goals for Creatively Gifted
Students

ABOUT ME



Paula McGuire
GERC,
Northeast Colorado

Take care of yourself

Be fully present

Take risks

Be mindful of other learners

Group Norms

Pick 2 of the following 3 Questions to Answer:

What activity makes you feel most productive?

When was the last time you felt restless, bored, or not engaged?

What were you doing the last time you looked up at a clock and realized that time had totally escaped you?

Name

School/District

One of these answers



OUR SUPPORTING CAST OF CHARACTERS



Mihaly Csikszentmihalyi

- ★ Flow (both idea and book)
- ★ Characteristics of creative people



E. Paul Torrance

- ★ Study of Creativity = Intelligence
- ★ Torrance Test of Figural/Verbal Reasoning



Robert & Michelle
Root-Bernstein

- ★ Tied Creativity to Education
- ★ Produced concrete suggestions for increasing creativity

- Research indicates that creativity can be “systematically developed.”

BENEFITS OF FOSTERING CREATIVITY

PERSONAL BENEFITS

- **Creativity benefits over lifespan:**
 - A key component of “**healthy social and emotional well-being**” (Plucker, Beghetto, & Dow, 2004)
 - Associated with better overall mental health
 - Associated with better physical health
 - Has healing benefits
 - Increases resiliency
 - Reduces stress
 - Relieves work-related exhaustion

BENEFITS IN SCHOOL

- A key component of “ **scholastic success**” (Plucker, Beghetto, & Dow, 2004)
 - Higher creativity associated with higher achievement
- Potential for benefits of creativity for the:
 - Teacher
 - *Planning & Presenting*
 - Learner
 - *Integrating & Expressing*

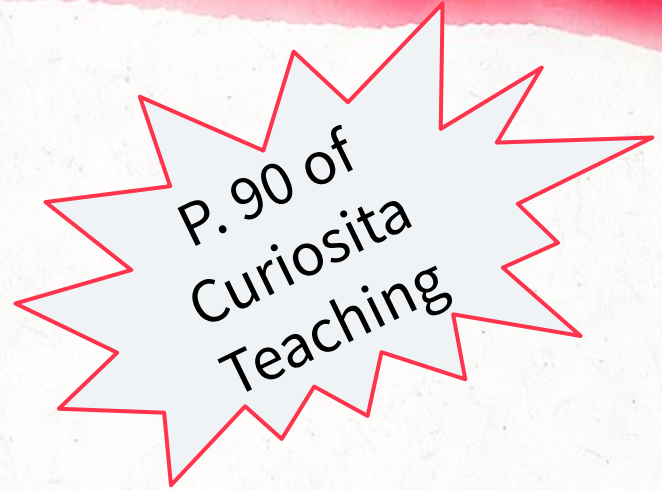
BENEFITS FOR SOCIETY

- A key component of “**adult success**” (Plucker, Beghetto, & Dow, 2004)
- Increases social harmony
- Adult creative achievement (also a personal benefit) **more closely linked to results on childhood tests of divergent thinking** than childhood IQ scores (Kim, 2008; Said-Metwaly et al., 2022)

*How should this inform
what we do in education?*

Creative People are:

- Intelligent
- Original
- Independent
- Open to experience
- Intuitive
- Holders of theoretical and aesthetic interests
- Possessed of a sense of destiny and purpose



WHY DO WE WANT TO MAKE SURE WE'RE "SEEING" CREATIVE STUDENTS?

THINK
OUTSIDE
THE BOX

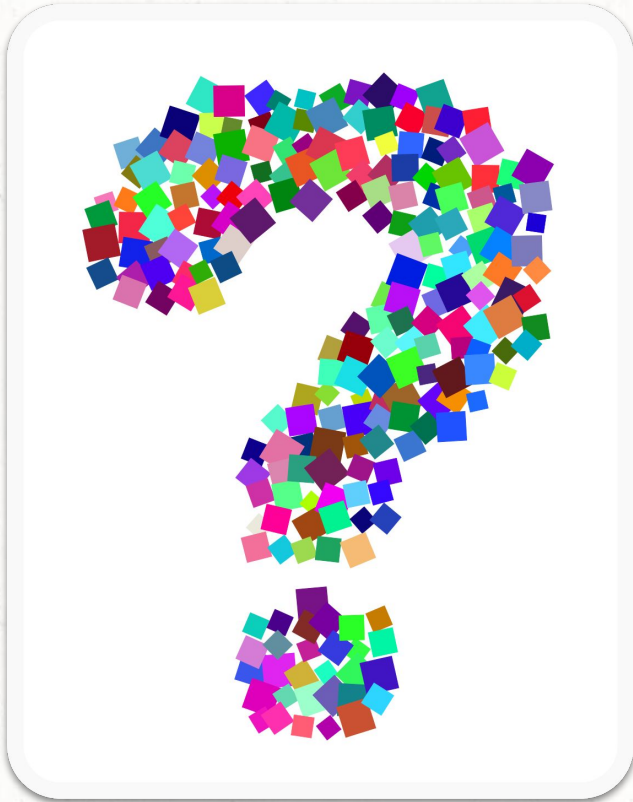


www.tinyurl.com/6TypesLearners

A large, textured red circle with a watercolor-like gradient, centered on the page. The text is overlaid on this circle.

**DEFINING AND
MEASURING
CREATIVITY**

IS THIS CREATIVE BEHAVIOR?



Read the descriptions and then mark your chosen space for “Creative” or “Not Creative”

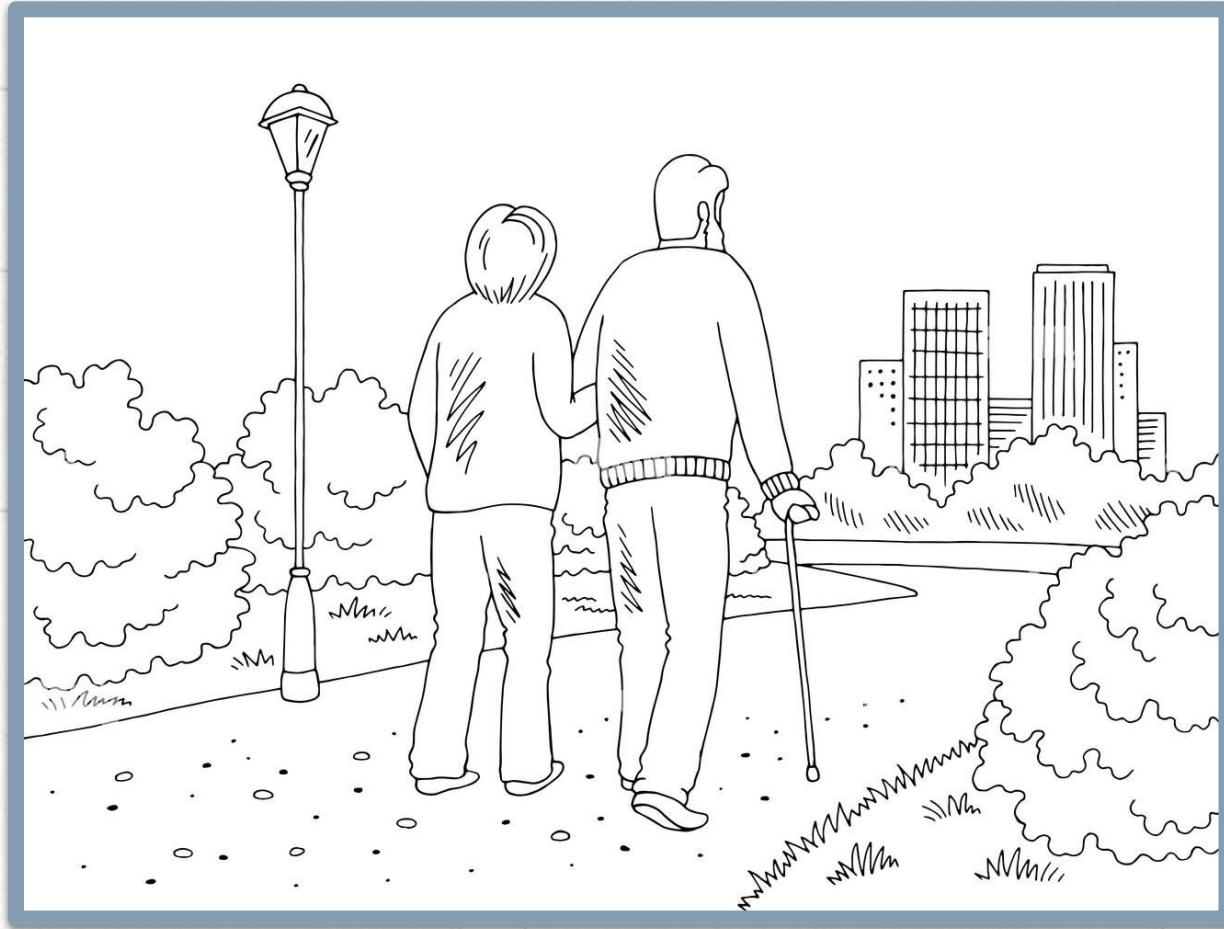
TWO FUNDAMENTAL ELEMENTS

NOVELTY/ORIGINALITY

- ▶ Is this new?
- ▶ To what audience?

APPROPRIATENESS

- ▶ Does it meet a goal or criteria?
- ▶ Is it purposeful?



Question 1: Write out all the questions you can think of about this picture

**Question 2:
What happened right before this picture?**

**Question 3:
What happened right after this picture?**

DIVERGENT THINKING CONSIDERS:

Fluency

Generation of numerous ideas

Count number of unique statements/questions?

Flexibility

Different types of ideas or ideas from different perspectives

How many different types of questions did you ask about?
Think about it as “categories”

Originality

Unusual or new ideas

How many of these are questions that 95% of population hasn't asked?

Elaboration

Adding to ideas to improve them

What extra detail did you incorporate?

HOW DO WE TARGET AREAS OF CREATIVE THINKING?

CREATIVE THINKING SKILL	PROFILE OF CREATIVE ABILITIES	TORRANCE TEST FIGURAL	TORRANCE TEST VERBAL
Fluency	Categories	Fluency	Fluency
Originality	Originality	Originality	Originality
Flexibility	Categories Perspective	Flexibility	Flexibility
Elaboration	New Elements Orientation	Elaboration	
Abstractness		Abstractness of Titles	

“

*Creativity is seeing what others see and
thinking what no one else ever thought.*

Albert Einstein

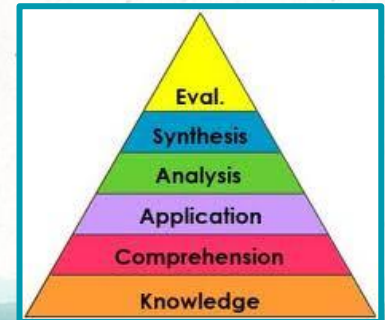
**COMBINING ALP GOALS
WITH CREATIVE THINKING**

**AND TALENT
ACTIVITIES**



BEFORE WE START

- ▶ All ALP goals/talent activities are “mix” and “match” in their elements.
- ▶ Anything in [brackets] is an invitation to change frequency or personnel.
- ▶ There is overlap between creative thinking skills.
- ▶ Assumed age of 6th grade and up
- ▶ Remember Bloom’s Taxonomy





PROCESS



Product





FLUENCY

Creation of Ideas



FLUENCY: GENERATING IDEAS



"Think left and think right
and think low and think high.
Oh, the thinks you can think up
if only you try!"

- Dr. Seuss

How many ways can you
think of to keep ice cream
on the cone?

01:30

FLUENCY ALP GOAL

Student will improve fluency (idea generation) by practicing observation and questioning skills once per [week, month] through structured assignment alternatives. Growth in fluency will be measured once per [month, quarter, semester] using fluency assessments.

Thinking skill	Practicing through	Measurement by
Fluency	Observation Questioning skills	Simple fluency assessment and recording number of ideas



FLUENCY STRATEGIES

Before engaging with the lesson content, bring out an object from a story, experiment, or text and ask students to:

1) list possible uses for the object or possible ways it could play into the storyline;

OR

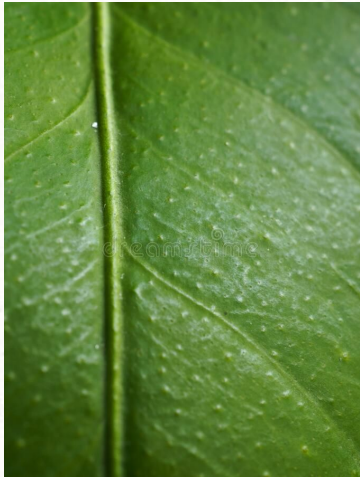
2) create a list of wonderings about how that object will be used in upcoming experiment or lesson.



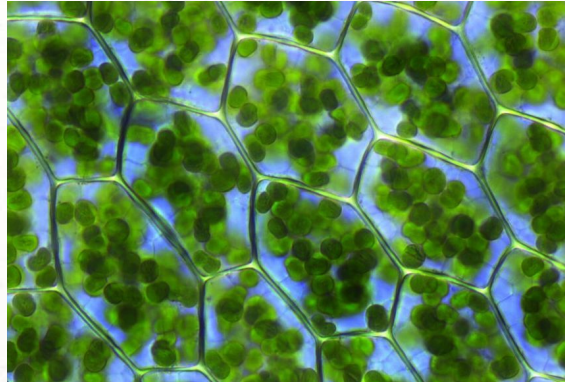
MORE FLUENCY STRATEGIES

Instead of vocabulary definitions, student will create a pictorial representation of each vocabulary word (drawn, using magazines, or found online).

PHOTOSYNTHESIS



Stoma



Chlorophyll



**Solar
Energy**

ONE LAST FLUENCY STRATEGY

319

How many ways can you find to reach this number?

$$12 + \underline{\quad} = 36$$

Solve this problem?

Turn it into [one, three] questions where another person will arrive at this answer.

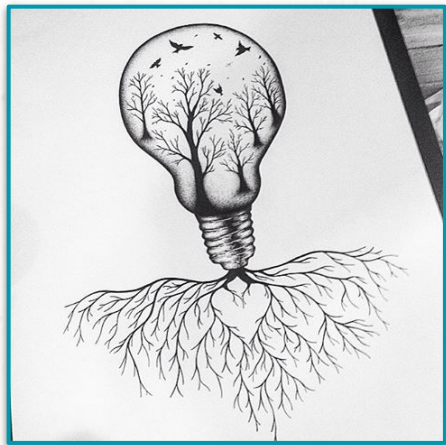
PORTFOLIO ARTIFACT POSSIBILITIES



Student work over time

- ▶ Does the student produce vocabulary lists in pictures regularly? More often than peers his/her own age?
- ▶ Does the student show math work differently from others? Can several examples be photocopied to show this over time?
- ▶ Young students: “blurred answers” that show unusual answers can be jotted down by teacher and taken together
 - Teacher Reflection Sheet





ORIGINALITY
New, appropriate, &
useful



ORIGINALITY ALP GOAL

Student will practice developing original ideas through application and use of analogies, classifications, comparison, and metaphoric analysis once per [week] on structured assignment alternatives. Growth will be measured using a [creativity rubric](#) that addresses sources, variety, uniqueness, and number of ideas generated once per quarter.

Thinking skill	Practicing through	Measurement by
Originality	Analogies Classifications Comparison Metaphoric Analysis	Use of creativity rubric that addresses elements of originality



ORIGINALITY STRATEGIES

Choose the main element from the summary of a fiction reading, experiment, or text passage and then make an analogy. This is most useful when the analogy is done with a completely random idea or word (synectics).

Helpful tool:

<http://ideagenerator.creativitygames.net/>

Example:

Chlorophyll makes plant cells very unique.

Plant cells are like _____ because . . .

ORIGINALITY STRATEGIES

Use an analogy table to guide various types of analogies in place of vocabulary definitions, themes, or characters in a story.



Word, Character, etc.	Feels Like	Opposite From	Similar To	Representative Visual or Mnemonic

ONE MORE ORIGINALITY STRATEGY

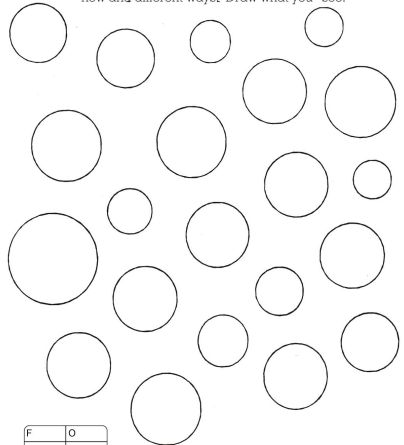
Implement one or more of the
Isabel the Inventor and/or
Yolanda the Yarnspinner Activities
(P.E.T.S.)



Name _____

 **Bubble Bonanza!** 

Using your Brainfocals™, look at Isabel's bubbles in new and different ways. Draw what you "see."



F	O
F	E

PORTFOLIO IDEAS

Primary Education
Thinking Skills
(P.E.T.S.)

Divergent thinking: Isabel the Inventor

Creative thinking: Yolanda the Yarnspinner

PETS–1st Grade
Book:
pp. 19 and 65



PORTFOLIO ARTIFACT POSSIBILITIES



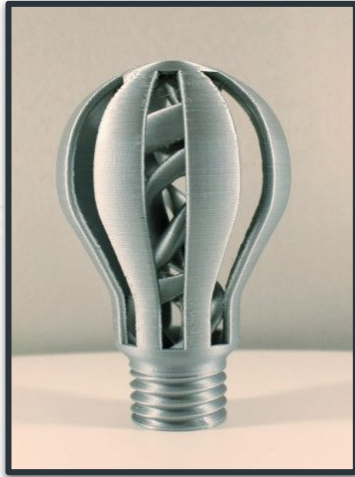
Remember it's over time

- ▶ Teacher observation lists or checklists (KOI or PETS)
- ▶ Student product work that shows a unique perspective or different take on an assignment
 - Student Reflection
- ▶ Samples of in class work like analogies or warm ups

“

*Creativity is a wild mind and a
disciplined eye.*

Dorothy Parker



ELABORATION

Building on ideas



ELABORATION ALP GOAL

Student will improve ability to elaborate in a specific content area by focusing on details and unanswered questions. Growth will be measured by collecting three to seven assignments in a portfolio over a [quarter, semester] that demonstrate an increase in number of elaborations. Elaboration will be assessed through student reflection and rationale for selection of portfolio pieces.

Thinking skill	Practicing through	Measurement by
Elaboration	Details Unanswered Questions	Student-led portfolio with reflection and rationale



ELABORATION REQUIRES THINKING FROM "BOTH" SIDES



Identifying what is
"there" in more
detail

"CAN YOU SEE IT?"



Extending past the
real boundary

"CAN YOU SEE
BEYOND IT?"



ELABORATION STRATEGIES

As an introduction or extension to a lesson, provide a minimum number of details or unanswered questions students must use and/or ask to describe a scene, character, or object.

[Visual Thinking Strategies](#)
[New York Times What's Going On in This Picture?](#)



ELABORATION STRATEGIES

Conjectures are a great tool to play with. These are unsolvable math concepts which (mostly) remain unproven but seem to work.

Collatz Conjecture:

No matter what number you start with, if you follow two simple rules, you will always end up at 1.

- ▶ If odd, change n to $3n + 1$
- ▶ If even, change n to $n/2$

Allow time for student to generate solutions to unsolvable math problems (conjectures).

Multiple trials result in further elaboration!

What questions remain unanswered after multiple attempts?

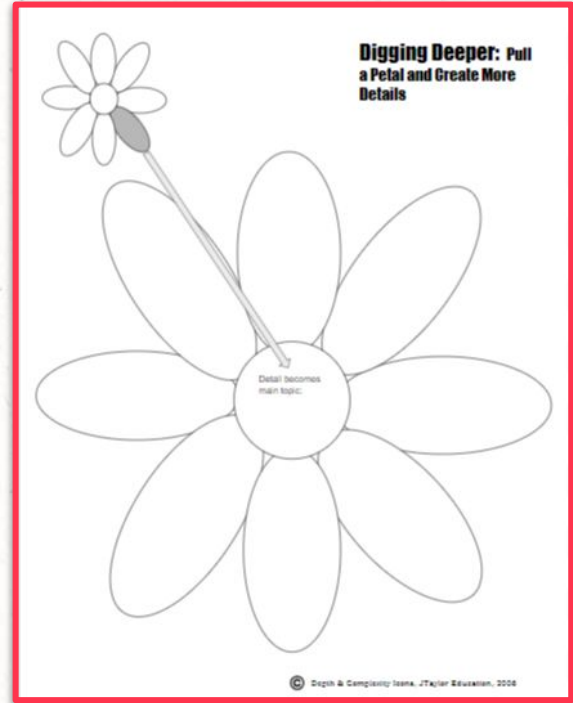
www.Byrdseed.com

www.mathworld.wolfram.com

ONE MORE ELABORATION STRATEGY

Define the details of a [scientific concept, story, character, history lesson] on a graphic organizer.

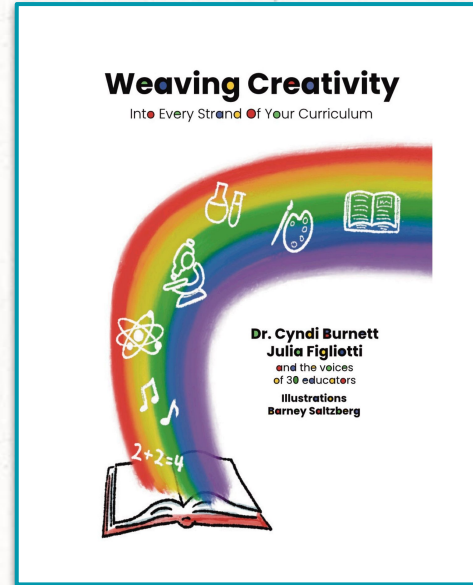
Pull out one detail and then define the micro-details of this detail.



PORTFOLIO IDEAS

Weaving Creativity into Every Strand of Your Curriculum

pp. 70 to 76



PICK **TWO** THAT YOU BELIEVE WOULD WORK WELL IN CLASSROOMS

PORTFOLIO ARTIFACT POSSIBILITIES



Tools we have talked about:

1. Creativity Rubric
2. Teacher Reflection Form
3. Student Reflection Form
4. Student-led portfolio
5. PETS Observation Forms
6. Weaving Creativity Elaboration (but there's more!)

IN REAL LIFE: BIBIANA

2nd Grade NWEA: Not finishing, wandering, or spending very little time (clicking through)

Reading: 28%-ile

Math: 21%-ile

2nd Grade CogAT:

V- 43%-ile

Q- 12%-ile

NV- 33%-ile

Teacher verbally reports that she believes the student is bored, but she cannot keep her attention.

A **KBIT** is asked for to see if an untimed, one-on-one scenario may help.

V - 50%-ile

NV - 94%-ile



DIGGING A LITTLE DEEPER

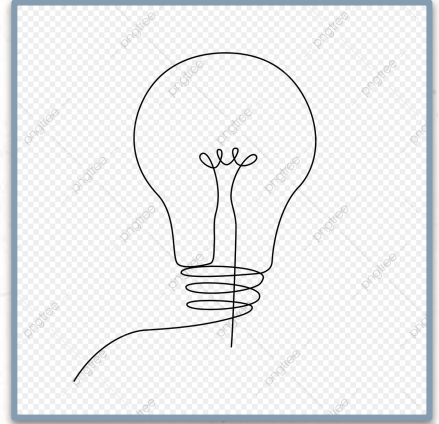
*Test administrator notices the drawing, sees student sculpting during KBIT and suggests a **PCA**.*

Drawing: 99%-ile (fluency, originality, elaboration)

Categories: 84%-ile (fluency, flexibility)

Parents ask for a meeting. During that live conversation, they mention that Bibiana spends all of her time trying new artistic “things.” Mom mentions that her sister (child’s aunt) takes Bibiana’s artifacts and enters them in shows and competitions as the Auntie is also an artist.

WHAT RECOMMENDATIONS COULD BE
MADE TO THE CLASSROOM TEACHER
TO HELP BIBIANA ENGAGE AND SHOW
HER CREATIVITY?



ABSTRACTING
Summarizing and
Scaling Down



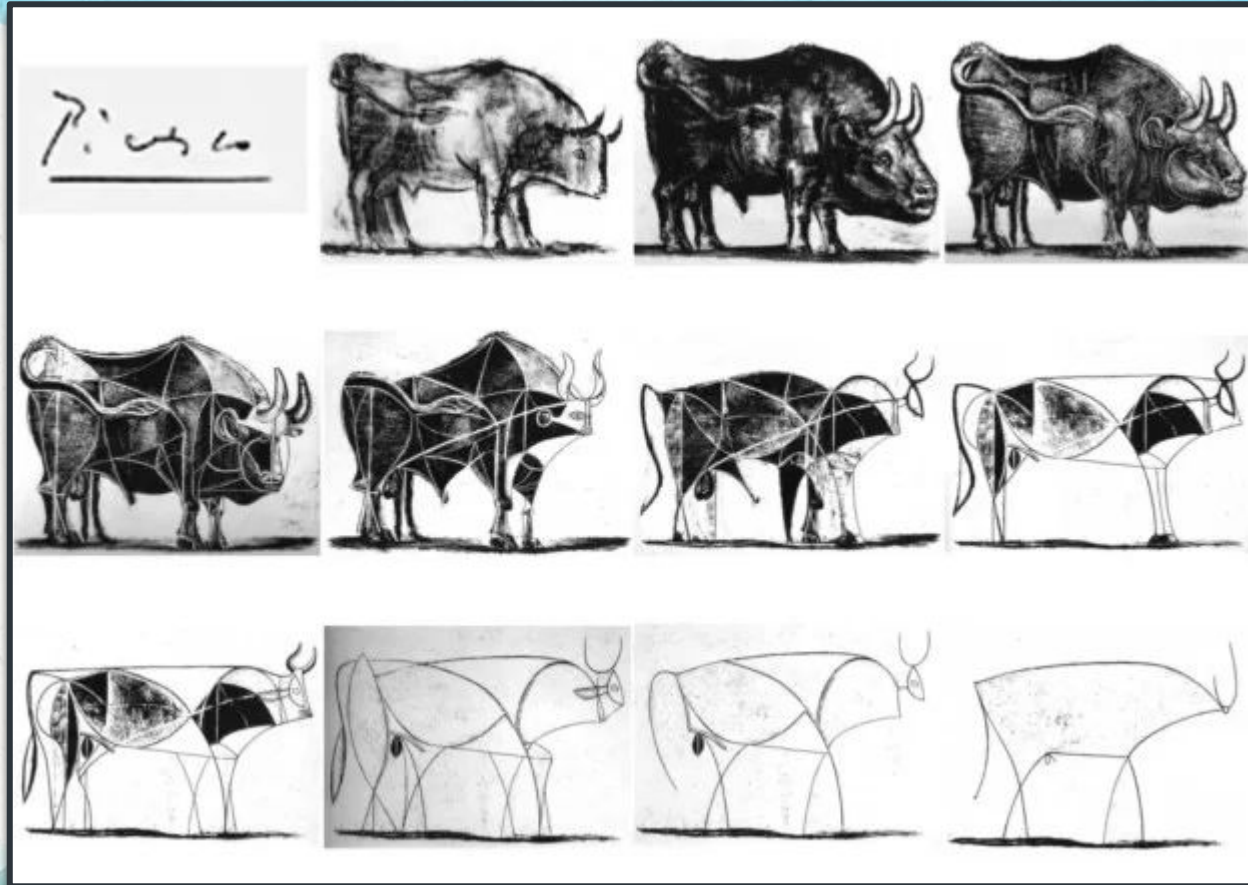
ABSTRACTING ALP GOAL

Student will demonstrate knowledge and/or mastery of unit concepts in at least [two content areas] through abstracting on assignment alternatives and/or alternative assessments [once per quarter.]

Thinking skill	Practicing through	Measurement by
Abstracting	TWO content areas Applying abstraction	Alternative assignments or assessments



WHAT IT ABSTRACTING?



ABSTRACTING STRATEGIES

**DESCRIBE AN OBJECT OR
SUMMARIZE A TEXT IN A
SHORT PARAGRAPH.**

**REWRITE WITH $\frac{1}{2}$ THE
NUMBER OF SENTENCES.**

**REWRITE AGAIN WITH $\frac{1}{2}$
THE NUMBER OF WORDS.**



ONE MORE ABSTRACTING STRATEGY

1

Pick a great children's book—any children's book

2

Print several emojis or icons and laminate them for regular use

Words can also mix in:

Joy, Frustration,
Happiness, Systematic

3

After reading through the story, ask students to pick one or two emojis and/or a word to summarize the story

ONE MORE ABSTRACTING STRATEGY

Student will practice alternate notetaking strategy, **SQ3R** to actively use abstracting as part of daily learning.

Survey—quick scan to see titles, headings, pictures; read intro and conclusion

Question—turn subheadings into a question

Read—highlight or note main ideas

Recite—rewrite in three to four words per section (*abstracting*)

Review—text questions, partner quizzing, flashcards, etc.

PORTFOLIO IDEAS

Cowardice
Bravery
Good
Evil
Hero
Shameful

Chaotic
Power(ful)
Justice
Education
Simple
Complex



What tools have we talked about already that could capture student use and understanding of abstract concepts?





FLEXIBILITY

Shift and Play with
Ideas



FLEXIBILITY ALP GOAL

Student will build flexible thinking by using an alternative perspective in place of traditional assignments or assessments (e.g., text questions, essay prompts) [once per month].

Student will build flexible thinking by identifying, classifying, and forming patterns, combinations, and relationships based on classroom content and documented through alternative assignments [once per month.]

Progress will be measured through student self-assessment using rubric and teacher-student evaluation meetings [once per semester.]

Thinking skill	Practicing through	Measurement by
Flexibility	Alternate perspectives Classifying Recognizing and forming patterns, combinations, and relationships	Student self assessment and debrief with teacher [once per quarter]



FLEXIBILITY STRATEGIES

Student will use
SCAMPER as a tool to
rewrite endings,
chapters, or essays

SCAMPER as a shareable
slide deck

Substitute

Combine

Adapt

Modify (Maximize, Minimize)

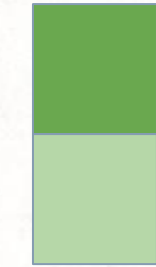
Put to Other Uses

Eliminate

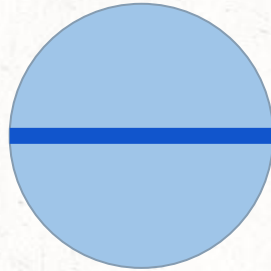
Reverse or Rearrange

FLEXIBILITY STRATEGIES

Represent [a fraction] in as many different ways as possible.



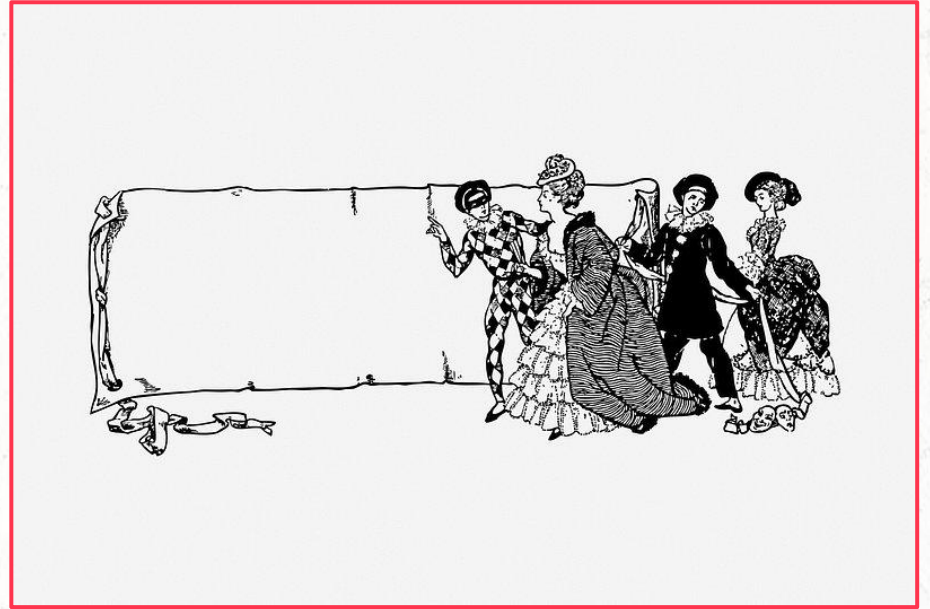
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ONE MORE FLEXIBILITY STRATEGY

CREATIVE DRAMATICS:

The Invisible Ball



PORTFOLIO IDEAS

Creativity
Calendar



Find 3 activities that you feel would be appealing to teachers to use that practice and increase flexibility

PORTFOLIO ARTIFACT POSSIBILITIES



How do we gather these artifacts and portfolio pieces with intentionality?

IN REAL LIFE: DILLON

- ▶ Identified gifted in Reading in 4th Grade
- ▶ Active in school, sports, 4H, and any leadership or extra opportunity available



Added a Visual Arts Identification in 9th Grade:

Performance: 2 Colorado Grand Champion Digital Photography Ribbons

Portfolio: Digital portfolio with student reflection, adjudicated by two professionals who both recommended gifted identification

SIGS: Scale from teacher showed 97% percentile in Creativity (and other areas)

CREATIVITY TESTING

Torrance Test of Figural Thinking - 9/21

Percentile Scores

Fluency: 54

Originality: 38

Elaboration: 77

Abstractness of Titles: 82

Resistance to Premature Closure: 69

Creative Behaviors: 98

Torrance Test of Verbal Thinking - 9/21

Percentile Scores

Fluency: 9

Flexibility: 19

Originality: 22

Brandon spent a lot of time thinking about his responses on both sets of tests, and therefore produced fewer ideas.

HOW COULD WE HELP BRANDON
IMPROVE HIS CREATIVE THINKING VIA
INTENTIONAL TALENT ACTIVITIES
AND/OR AN ALP GOAL?



There is no doubt that creativity is the most important human resource of all. Without creativity, there would be no progress, and we would be forever repeating the same patterns.

Edward de Bono

IDENTIFYING CREATIVITY IN YOUR CLASSROOM

Putting it all
together



**Talent
Identification:
Creativity**

Let's Get Started

CONTACT INFORMATION AND RESOURCE LINKS

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Workshop Materials:

- PDF of slide deck
- Strategies Document
- Single page handouts