

Eureka!
A K-12 Cognitive Skills Matrix
for Developing and Assessing Creativity

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Precision in use of terms—unpacking the concept



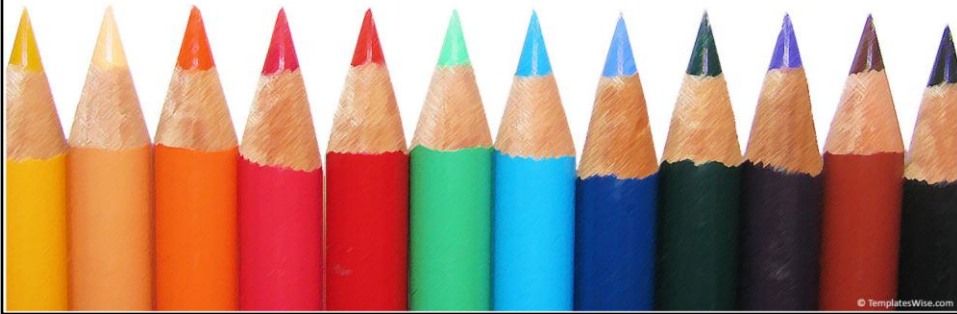
The term “creativity” is like a Rorschach—we see what we want to see.



We're going to unpack the concept.



You are expected to develop creativity
and imagination through your art
program.

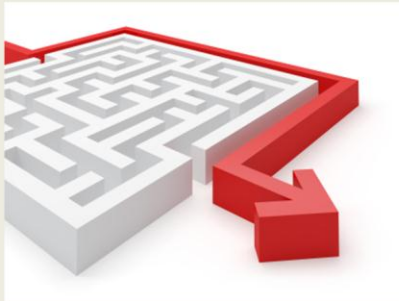




If we don't live up to expectations, we lose another justification for art in schools.

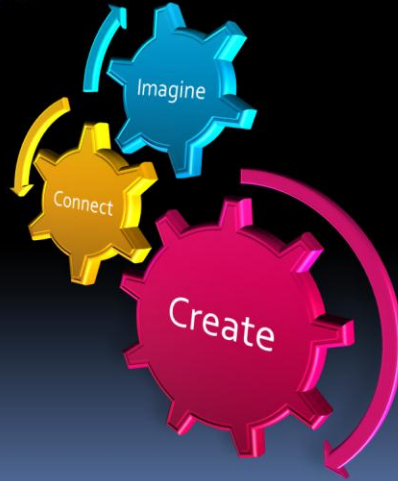


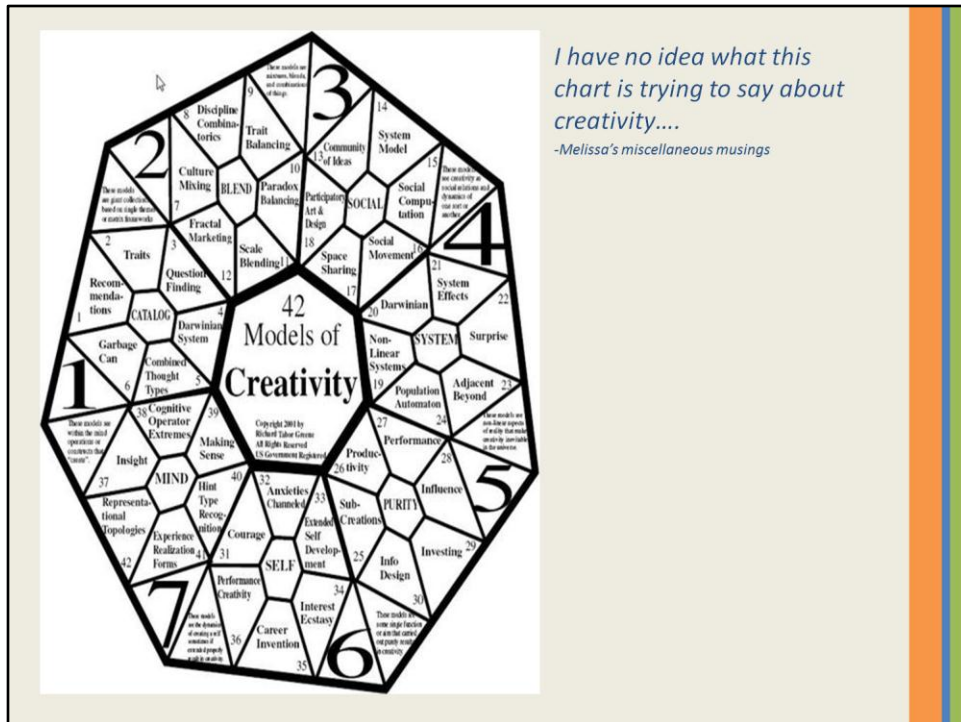
You want creative students—
and to clearly show how art
develops creativity and
imagination.



Use tate gallery video camera or john lighter sculpture; also image search creativity
how deeply embedded ideas are—the very idea of creativity could be a box....for
think tank

To get more creative students, use a creativity model to clarify objectives and transform instruction.



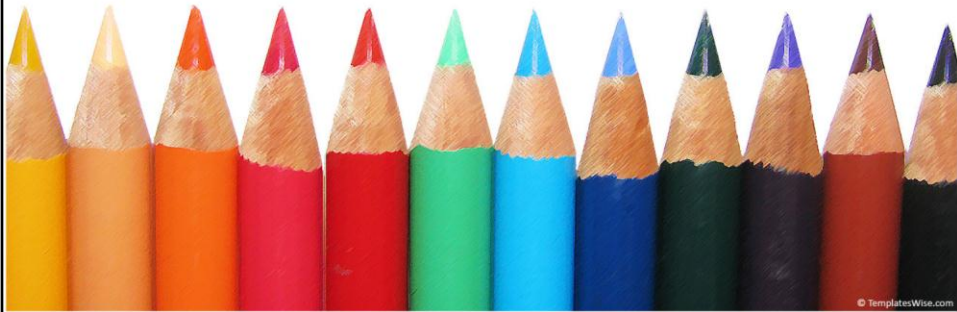


I have no idea what this chart is trying to say about creativity....

-Melissa's miscellaneous musings

Mine is nothing like this but does require some explanation

Creativity training is most successful
when guided by a creativity model.

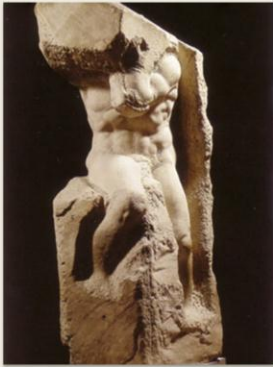




A model defines what we mean by creativity and points to a common goal.

Milbrandt's categories

Creativity used to mean anything to anyone and so means nothing. In order to avoid a repeat of the 70's and serve our students and our social ideals, we need to be clear about what we mean and what we want.



We use the term
“creativity” to refer to
a vast array of human
behavior.

Margaret Boden built her argument on Ernst Gombrich's classical analysis. why the history of art is one of discernible styles rather than unclassifiable, random quirks. **A style, he suggested, is a manifestation of a mental set which governs the perception of the artist. A set is extremely difficult to invent and generally develops over a period of time on the basis of the work of a number of artists each making their individual contributions. The intellectual and cultural grip of the set is powerful, and changing it calls upon creative intelligence of a high order.**

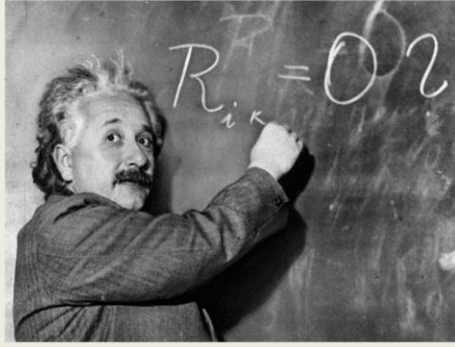
CLA

Radical changes to the set are made at the risk to intelligibility that the set provides.

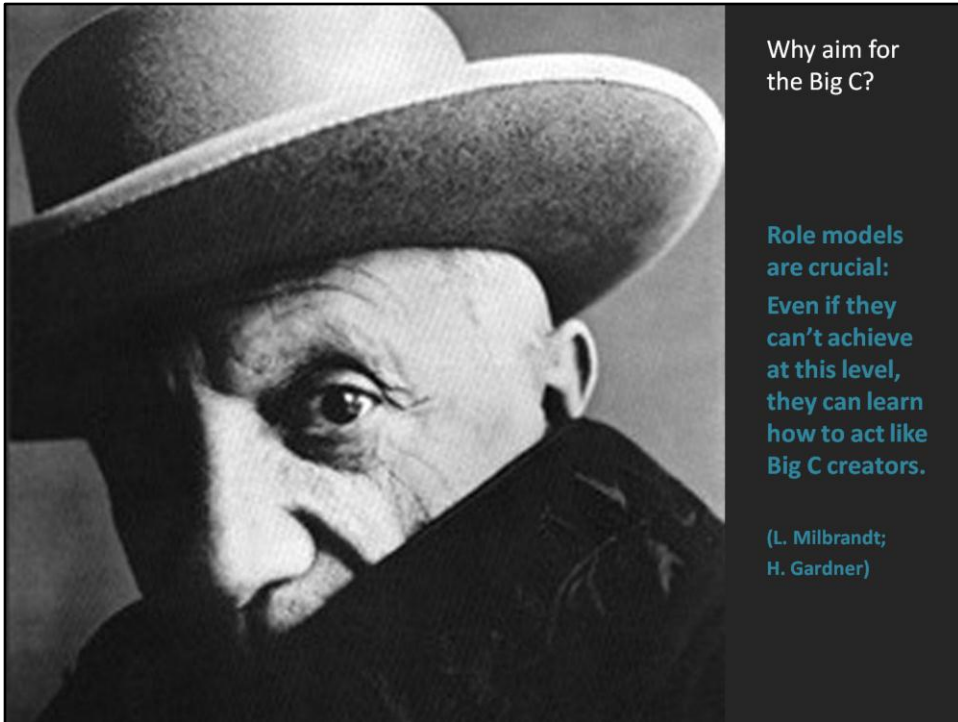
Boden reformulates this position as a logical one. **The concept of the “mental set” becomes one of a “conceptual space.”** She is interested in an explanation of creativity that embraces all arenas of expression, **including science and mathematics** as well as the arts and language. For Boden, the concepts and their interrelations are an agreed formal system within which intelligible propositions are generated.

Language is a prime example in which original and novel statements are continuously being generated by language users. Noam Chomsky describes this as representative of the “creative capacity” of human intelligence. We might be reluctant to agree with Chomsky. **The mere capacity to generate new combinations from a given set of rules within a rule-driven system is easily within the capacity of a simple computer or may be achieved indeterminately on the throw of a dice.** Furthermore, conceptual spaces might be more or less open. The conceptual space that defines the game of chess is a relatively closed system whereas that which contains the various articulations of the conceptual artists over the past century has been fairly open

(perhaps too open and thus too prone to the encouragement of non-sense).



Domain Change Creativity is beyond the scope of K-12 education, which focuses on individual and peer creativity



Why aim for
the Big C?

Role models
are crucial:
Even if they
can't achieve
at this level,
they can learn
how to act like
Big C creators.

(L. Milbrandt;
H. Gardner)

This does not mean acquisition of basic skills come before engaging students in creative endeavors—this is a fallacy. We never get to the higher level creative challenges with this approach. It needs to be a mix.



A model provides a working definition that targets the cognitive and emotional skills needed for creativity.

Emotional tenacity, perseverance, and managing one's emotional life is central to any creative endeavor.

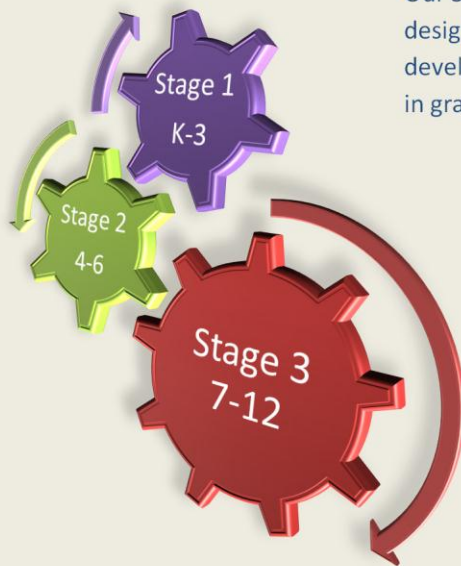


In a 2004 study, Scott et. al. conducted a quantitative meta-analysis of creativity training program evaluation efforts. The results obtained in this effort paint a coherent picture of the delivery procedures that contribute to successful creativity training. More specifically, based on 70 prior studies meeting high internal and external validity standards the Scott et. al. study found that well-designed creativity training programs typically induce gains in performance with these performance effects generalizing across criteria, settings, and target populations. The correlation and regression coefficients indicated that more successful programs were likely to focus on development of component cognitive skills ($r = .15$, $\beta = .05$) and the heuristics involved in skill application, using realistic exercises appropriate to the domain at hand; such cognitively based programs produced the only sizable positive correlation ($r = .31$) and regression weight ($\beta = .24$). Those programs that were based on an explicit model of creativity produced greater benefits ($r = .39$; $\beta = .46$) overall and in the criterion specific analysis than those which relied on a collection of theory-independent techniques. Further, this training should be lengthy and relatively challenging with various discrete cognitive skills and heuristics being described, in turn, with respect to their effects on creative efforts. The correlational analysis using the overall index indicated that training focusing on problem identification ($r = .37$), idea generation ($r = .21$), implementation planning ($r = .19$), solution monitoring ($r = .17$), and conceptual combination ($r = .16$) were all positively related to creativity training success. These results are noteworthy, in part, because it suggests that creativity training is effecting the critical manifestation of creative thought—the generation of original, or surprising, new ideas (Besemer & O’Quin, 1999). Taken as a whole, these observations lead to a relatively unambiguous conclusion: creativity training works.

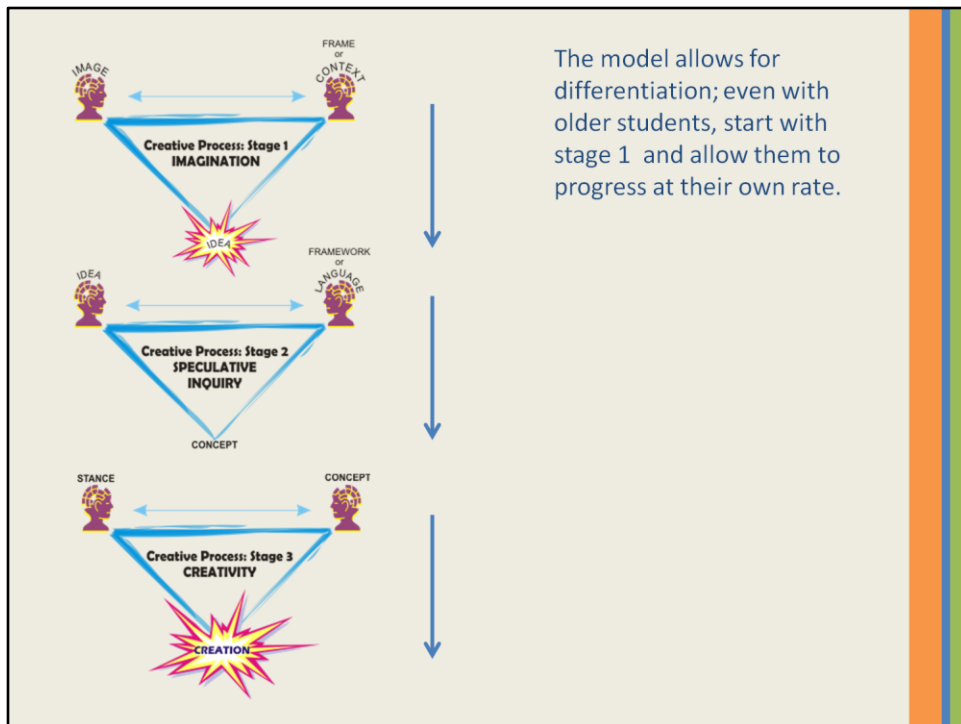
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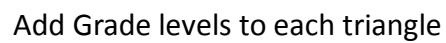
Scott et. al. 2004

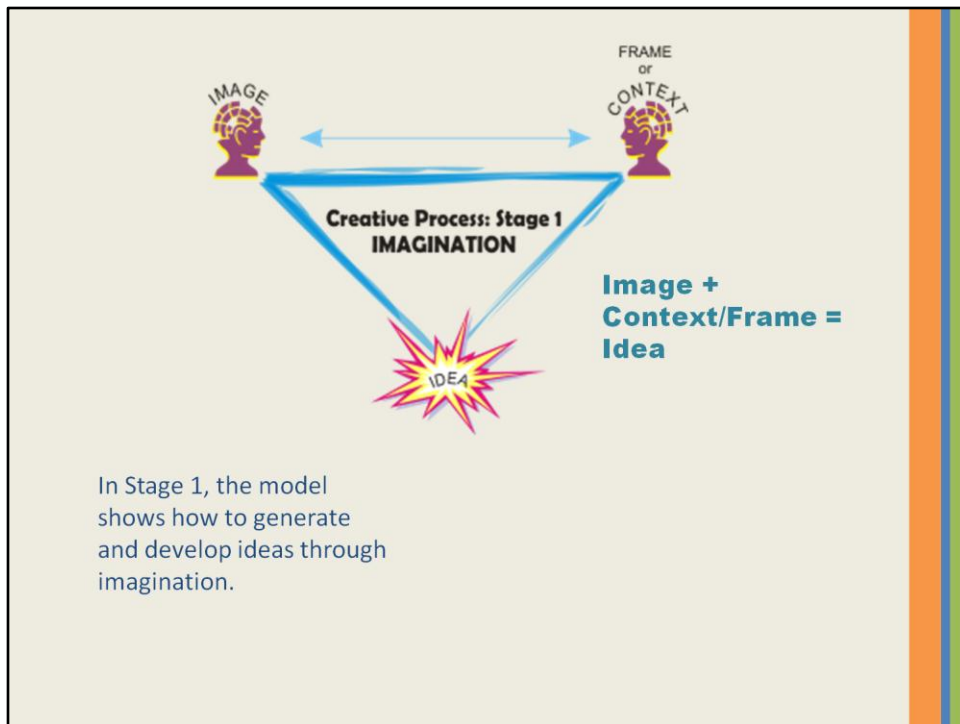
- quantitative meta-analysis
- based on 70 prior studies meeting high internal and external validity standards
- well-designed creativity training programs induce gains in performance that generalize across criteria, settings, and target populations.
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Our 3-stage model is designed to sequentially develop a creative mindset in grades K-12.







se idea of freedom; horse, shackles, escape (urban vs rural)

Stage 3: Generates extremely indeterminate situations and attempts to resolve them by stipulating constants and parameters

In Stage 1, idea-formation, the focus is on how to generate, manipulate, and transform images and contexts beyond everyday expectations, unlearning the habitual ways that we frame images to form ideas. Techniques for generating new ideas are useful in this stage, including SCAMPER (Substitute, Combine, Adapt, Modify, Put to other uses, Eliminate, Rearrange/reverse) (Eberle, 1996) for elementary students and the exercises described by Nicholas Roukes (1984) for older students.



Change the image =
change the idea

Change the frame =
change the idea



Natural way our mind
works

Ex: Freedom

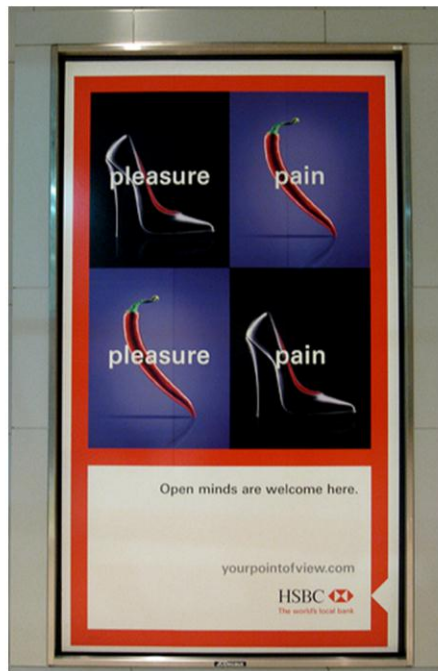


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Notice the values being transmitted:

- **“Truth” depends on your perspective; respect for multiple points of view**
- **Not all cultures or political systems tolerate such values**
- **Tacit (via witty format): Imagination as a value...for whom and why? (Medium is message)**
- **Double-edged: Pleases individual ego of consumer while promoting business goals**

Reframing Experience is critical

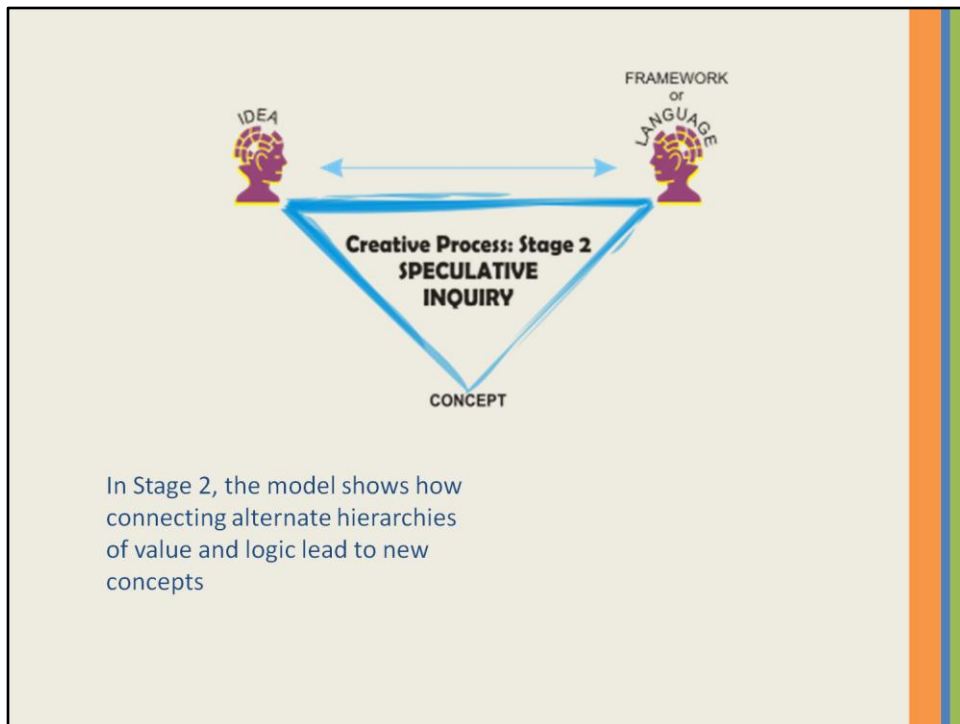
Can also be simple

These are the stories students will leave your class remembering

What is the value of life drawing for freshman? being in room with naked person and not touching them

We want to introduce flexibility of modalities

undergrads Chocolate Song “I want to know what live is...” ; Japanese tea ceremony, kimono; Mr Harry dressing as different careers



Hedonism: ice cream or football is pleasurable....but what is the best ice cream, the best football game and why? Need a system of values and network on connected ideas to think and reason about this
 Stage 3: Generates extremely indeterminate situations and attempts to resolve them by stipulating constants and parameters

Stage 2: **The overarching cognitive activity is critical interaction with a discipline wherein a creator searches for the best and most comprehensive way to articulate her own imaginative ideas. An idea becomes a concept when we have a way of reasoning about its connections to other ideas. New ideas imply new connections, some of which may be provisional or even unprecedented.**

THIS MEANS TEACHERS HAVE TO MODEL AND TEACH HOW TO BE CRITICAL, HOW TO POSE QUESTIONS THAT CHALLENGE THE PERCEIVED STATUS QUO, HOW TO SPECULATE AND FOLLOW THROUGH VISUALLY, AND HOW ART MAKING AND THE PROCESS OF THINKING BEHIND IT CAN CHALLENGE ESTABLISHED HIERACHIES OF LOGIC AND VALUE.

Problem-finding and solving in this stage revolves around articulating what an idea points to within larger thinking frameworks, including connections to other disciplines and the social milieu (James, 1997). Open-ended research, establishing parameters, and critically evaluating systems of logic and value by modifying disciplinary practices are key activities in Stage 2.

Stage 2 is essentially a speculative process of determining the end and means of expression by establishing a system of relationships in which the meaning of an idea becomes clear.

Ideas do not know what
discipline they are in.

They need a language...



**Idea + Thinking
Framework
(Language) =
Concept**



Establish new
connections.



Connect, intersect, and
explore points of
tension between ideas.

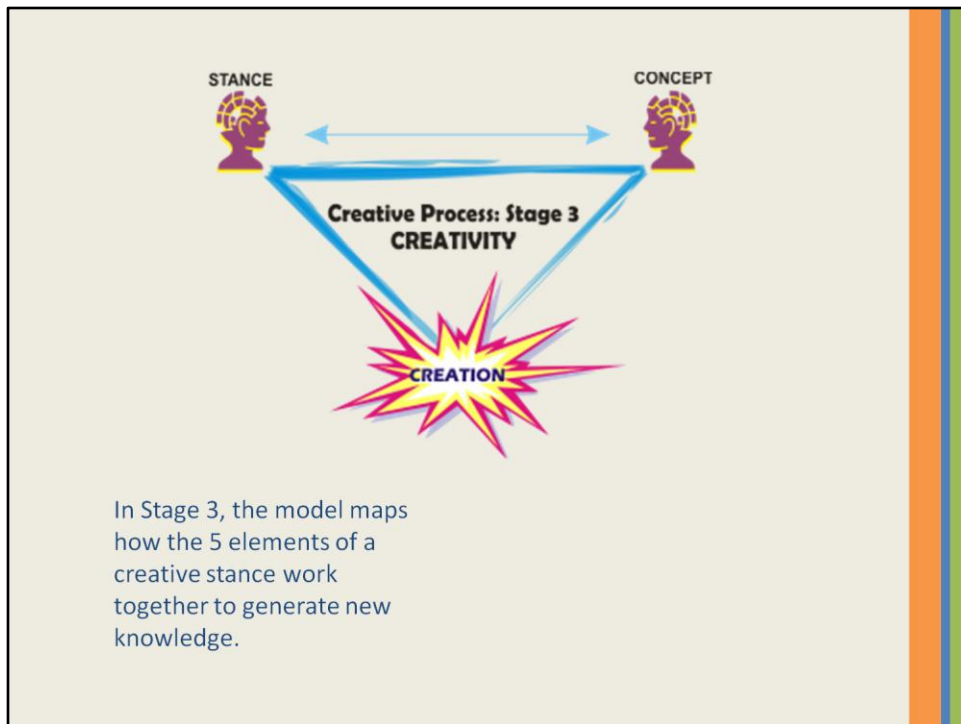
Political, religious, ethical, psychological systems connecting ideas to freedom



In Stage 2, students connect ideas by revealing points of tension or...



Intersect systems of value and logic to reveal unexpected connections.



Note the interaction between new creative stance and established values and perspectives—tension, etc. Carrie Mae Weems



“When stereotypes attempt to take control of their own bodies, they can only do what they are made of and they are made of the pathological attitudes of the Old South.



Therefore, racist stereotypes occurring in my art can only partake of psychotic activities.”

-Kara Walker



1. Personal Objectives



2. Personal Rationale,
Passion, Core Interest



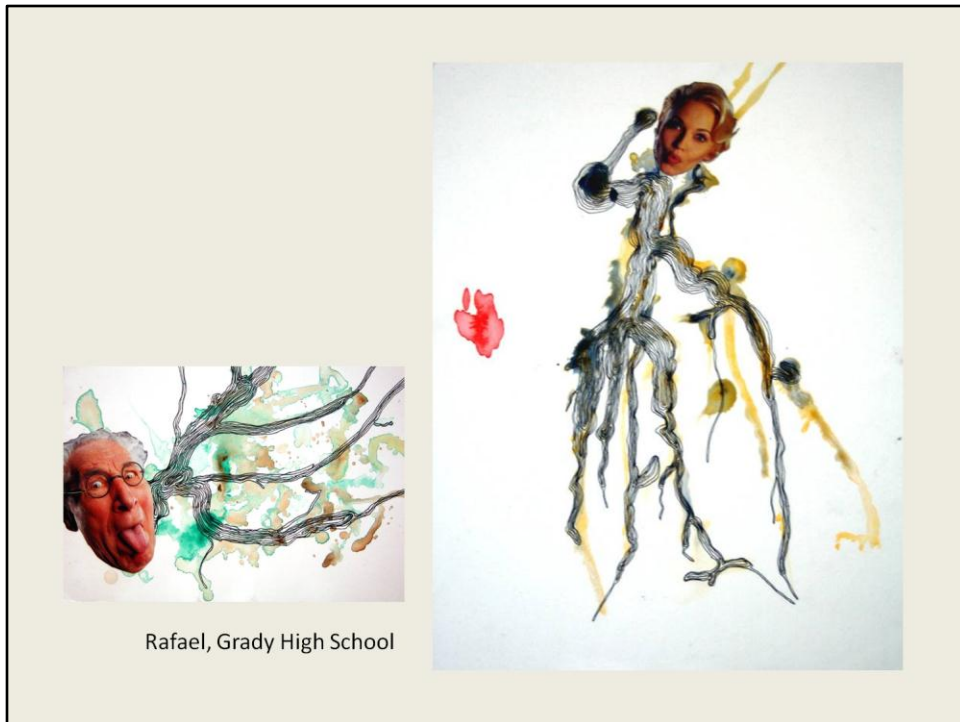
3. Personal Viewpoint



4. Preferred Working Method



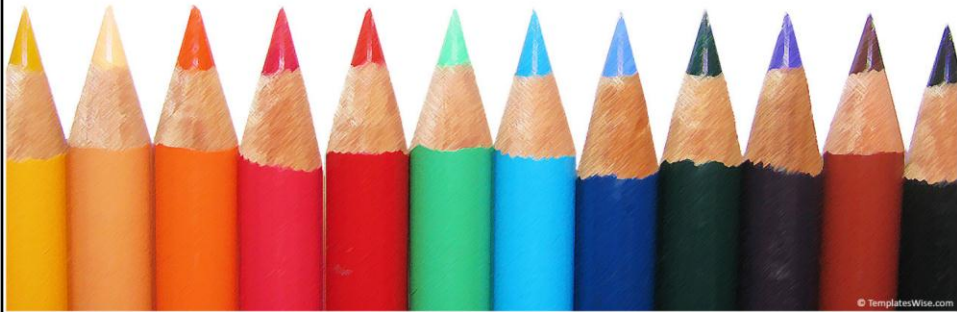
5. Personal Standards



Illustrations 3 and 4, which represent a larger body of work, show how aspects of each stage might look in a high school art class. In Illustration 3, we laugh at the absurd, unexpected juxtaposition of disparate frames of reference and visual codes. The artist makes a surprising analogy between abstract contour lines, referencing veins, neurons, or elevation marks on a map, and the movement of the human body. He then juxtaposes this with a lady's head, whose expression seems to mirror our own surprise at her strange situation. Although in Illustration 4 the analogy is weaker because the man's head is less integrated into the whole, taken together these images show signs of all 3 stages of creativity:

Idea-formation through the imaginative exploration of image and meaning;
 Speculatively aligning multiple perspectives into a coherent system of relationships;
 Hints of an emerging creative stance shown in a preferred working method (the use of contour and collage) which is integral to A) an objective defined in terms of personal interests and B) an ironic, humorous viewpoint. The similar "finish" of both pieces suggests a standard for determining when a work is satisfactorily complete.

Our model shows us where to aim so
that student creativity increases.





It provides instructional objectives for generating open-ended ideas.



Capture Queen 2007

It orients mindsets to point to the unknown, intangible, and unpredictable—and provides a rational, educationally viable means of discussing them.

First, imagine a world of pure sound. There are no objects, people, or buildings—just sound. It could be like a dream in which none of your other senses exist. What would you be like in such a world? What makes imagining such a world difficult? Next, I'd like you to picture what your house looked like when you got up this morning. Then, I'd like you to picture yourself driving into work today. Now, picture yourself riding on a beam of light. Can you do it? Can you see yourself going 299,792,458 meters per second and riding on a beam of light? Is it harder than picturing yourself driving to work? Why? If you can picture yourself travelling at the speed of light, what are some of the implications?

Let's try one more:

Picture a square. Now, take your two-dimensional square and give it three dimensions: turn it into a box, a cube. Now, take your three-dimensional cube and take it into ten-dimensions: what would a ten-dimensional cube look like? Can you do it? If not, what makes picturing a ten-dimensional cube harder than picturing a three dimensional cube? What makes imagining yourself riding on a beam of light harder than picturing yourself driving to work? Is either of these easier than imagining a world of pure sound? There are several things that these three thought experiments have in common. First, they all involve the unknown, the intangible. They all ask us to change our frame of reference from the ordinary to the extra-ordinary. Using terms that we will encounter in the next chapter, they ask us to alter the conceptual *constants*, *parameters*, and *variables* that we normally use to understand the world. And, to different degrees, they all demand that we use a different thinking framework to reason about the challenges they present. Chances are that you found the second thought experiment the easiest. This is in part because it involves movement through space, an experience that we are all familiar with. We walk, run, or dance, feeling the wind blow past us, and even simple movements such as lifting our arms or turning our heads give us a sense of moving through space. This experience gives us a starting point, an initial context that we can transfer to the new situation. This frame of reference (the experience of moving through space) suggests a possible framework for thinking about what it is like to ride on a beam of light. The idea of *moving through space* becomes a constant, something that is the same in both the real world and the thought experiment; what changes is how we move through space (the conditions or parameters) and what we experience (the variables, such as how fast we are going).

In contrast, we don't have a starting point in the first thought experiment about a world of pure sound because we immediately trip over fundamental questions, which may not be obvious at first. Our experience of sound is mediated by space, since sound is produced by modulating the air around us. Does a world of pure sound have a spatial dimension—an up and down, left and right, near and far? Sound is actually a mental phenomenon, something that occurs in the neural wiring of a brain, and brains take up space, too. So, before imagining a world of pure sound we need a new image of what space in a world of pure sound is like. But our everyday experience of space is determined by colors, shapes, and touch. We can't transfer our everyday experience in this case because we are not sure how to strip away color, shape, and touch from our concept of space. We don't know what to keep as *conceptual constants* between the real world and the sound-world. In this case, we have to answer basic questions before we can develop an adequate mental framework for thinking about a world of pure sound.

In the third thought experiment, a similar problem arises. Our everyday experience of space is three dimensional (or four dimensional, if you include time as a dimension of space). We lack a frame of reference for imagining a ten-dimensional space, in large part because we also lack a way of talking about space in terms of so many dimensions. Unless you happen to be a theoretical physicist, there is little in everyday experience that provides a foothold for thinking about ten dimensionality. In this case, we lack both a frame of reference and a framework for thinking.

These thought experiments illustrate several things. Each, while seemingly far from the world of the arts, illustrate the need for *speculative thought* when thinking about the unknown. In so doing, they suggest what speculative thought is like: it is conjectural, hypothetical, and provisional. Involving numerous variables, it is also non-rule governed and open-ended. These experiments also demonstrate the inter-connectedness between imaginative and speculative thinking. Imagination *implies* ways of reasoning about new ideas, while speculation *finds* ways of reasoning about them by elaborating and connecting them to other ideas in new ways. Our thought experiments also point to the importance of having a language, or thinking framework, in which to articulate new ideas. The parts of a disciplinary language (such as music, painting, or dance) include its core ideas, symbols, principles, skills, knowledge, materials and instruments or tools. In the creative process, the rules "governing" these parts are not immutable and inflexible, but can be used, adapted, even subverted. A language, whether visual, musical, or kinetic, provides the framework for reasoning about works of art, hence the term *thinking framework*.

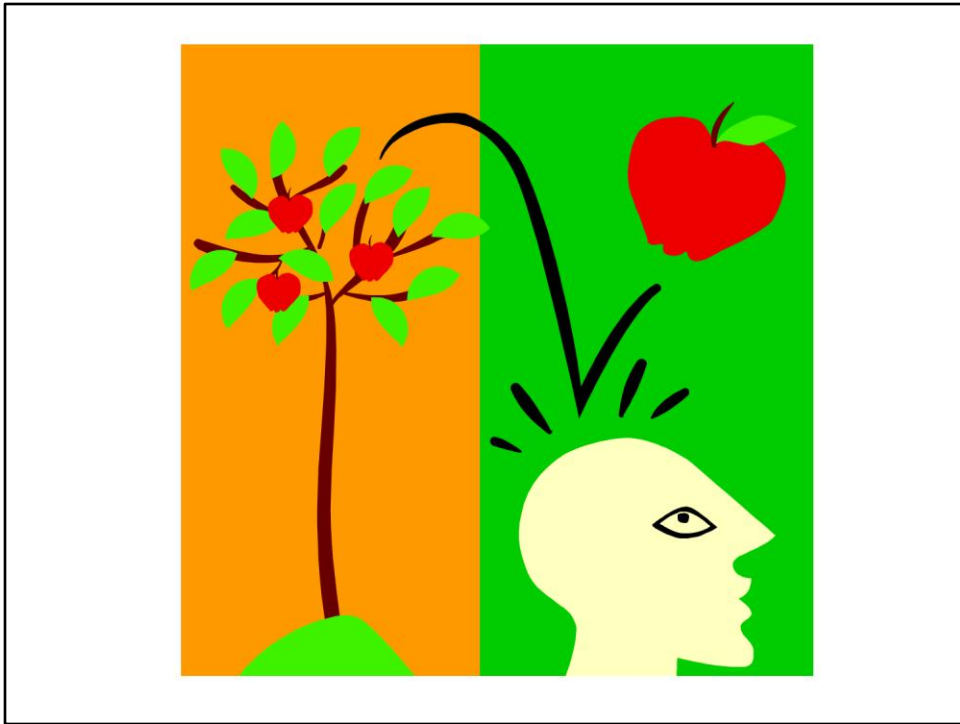
These thought experiments also points out what we have to do when confronted by the unknown; typically we deal with the unfamiliar by attempting to map a familiar pattern or set of ideas on to the indeterminate. But when confronted with a world of pure sound or ten dimensionality, our task is doubled: we have to stipulate possible scenarios that might capture what these concepts might be like, then try to map the familiar onto these stipulations, and then test them.

A central function of any language is its ability to relate numerous parts according to a set of rules.

Synthesizer vs. Creator

“The synthesizer’s goal is to place what has already been established in as useful and illuminating a form as possible. The creator’s goal, on the other hand, is to extend knowledge, to ruffle the contours of a genre, to guide a set of practices along new and hitherto unanticipated directions.”

Howard Gardner, *Five Minds for the Future*, page 98



Working definition of art/creativity vs science/reconstruction

How to talk about the unknown in terms that parents and principals can understand...



Constants
Parameters
Variables

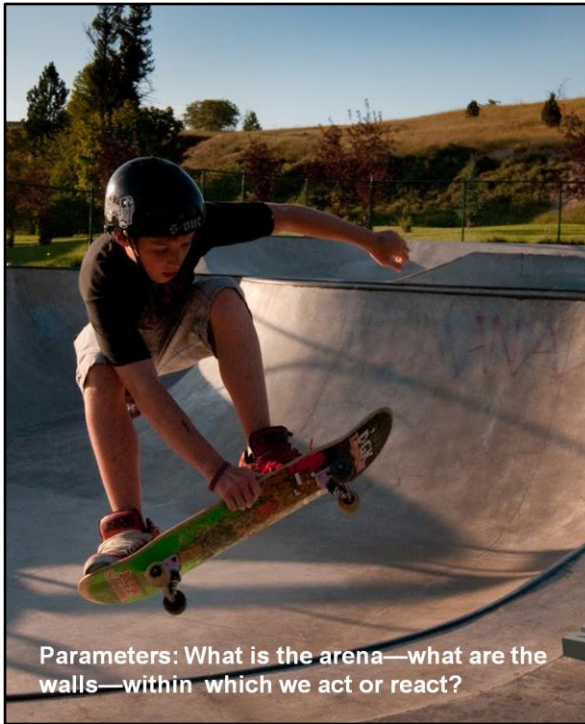
We have to argue and advocate for our terminology—the vocabulary central to the unique benefits that art education brings to students. We need to colonize the minds of our administrators and parents with this vocabulary rather than try to shoe-horn what we do into their closed-concept educational framework.

Vice president is the spare tire of government

Variable: detached eyes (normally a constant)

Parameter (chosen constraint or context): Binoculars (as opposed to glasses, microscope, telescope, camera lens)

Constant: Instruments of sight



Parameters: What is the arena—what are the walls—within which we act or react?





Creativity and Structure

- Constants and parameters determined by one or more of the following:
 - Final product/end state
 - Procedures, processes or standards
 - Initial problem statement
- To what extent are these "open" ?



Open-ended =
Constants,
Parameters,
Constraints not
pre-determined

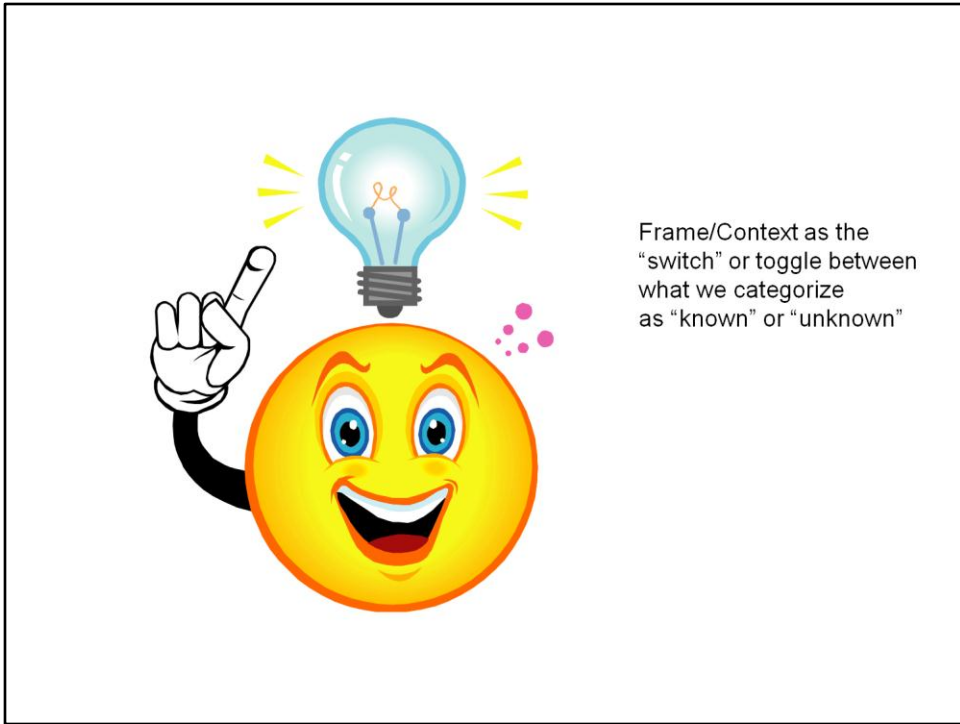
- Final product/end state predetermined
 - Problem statement or process could be "open"
- Predetermined procedures, processes or standards
 - End state or problem statement could be "open"
- Initial problem statement predetermined
 - Process or end state could be "open"



The objectives empower students to reframe experience so that they reconsider what they know and do from many angles.







Context as known vs unknown; see comedian—can I find that clip???

Idea-formation is
at the root of
Visual
Thinking
Strategies.

Take a minute to
Look at this picture.

What's going on
in this picture?*

What do you see
that makes you
say that?

What more can
we find?

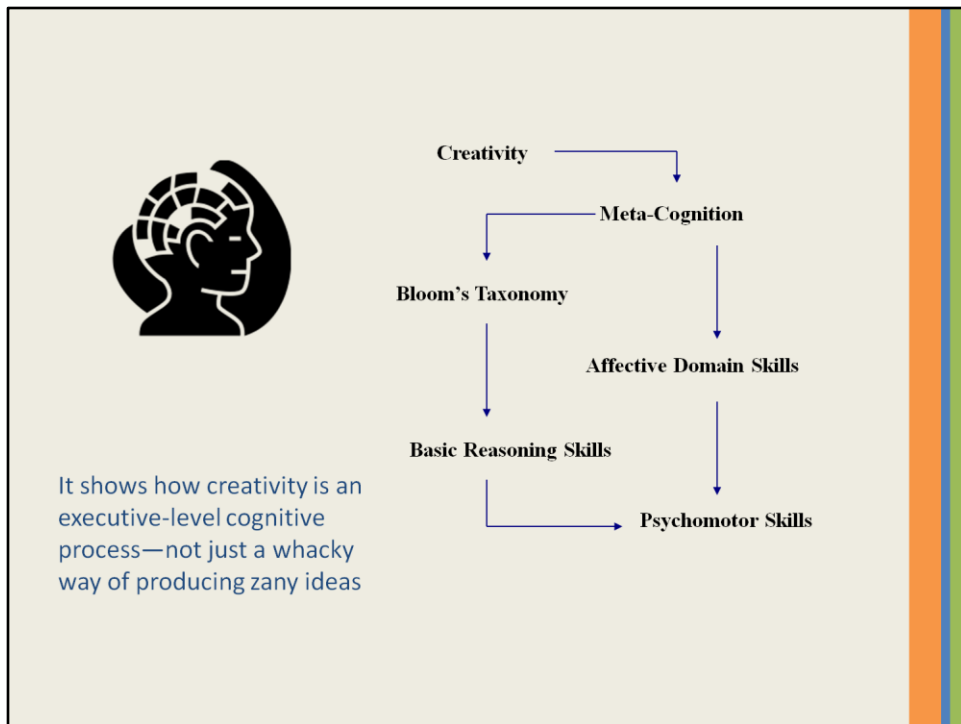
Paraphrase.
Point.
Link.



Image plus context equals idea: Context, framing and reframing is behind the success and value of VTS.

What is Cri

The model identifies instructional objectives that develop critical and conceptual thinking.



Stage 2 is all about establishing a framework of ideas—which means establishing relationships between ideas, which means reasoning about the ways in which these ideas do and do not relate. In a moment we will see what this means when considering the conceptual constants that are the root of analogical and metaphorical thinking.



It requires high-level
synthesis.

Synthesis, a stage 2 skill, goes beyond random association—which is essential to stage 1—and looks for deeper connections

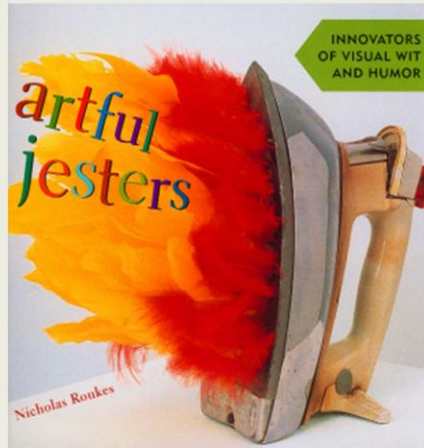
Visual Analogy

Analogy: 1. [n] *similarity* in some respect *between things* that are *otherwise dissimilar*: "the operation of a computer presents an interesting analogy to the working of the brain".

A *visual analogy* adheres perfectly to the definition above, but strictly using visual forms.

Creating effective visual analogies can be approached in three steps:

1. Identify *similar shapes/structures* or *functions* contained in unrelated objects or images
2. Create a *single shape* from objects A and B.
3. Verify that the viewer can *clearly identify both objects* in the visual analogy.



Analogy as an example of synthesis



This sculpture by African American artist Willie Cole is based on a visual analogy. Visual analogies are based on similarities between how something looks (its structure) or how something works (its function).

The visual analogy shown in this sculpture is based on the:

- A. The structural similarity between the feathers and fire
- B. The functional similarity between the feathers and fire
- C. The structural similarity between the feathers and steam
- D. The functional similarity between steam and fire



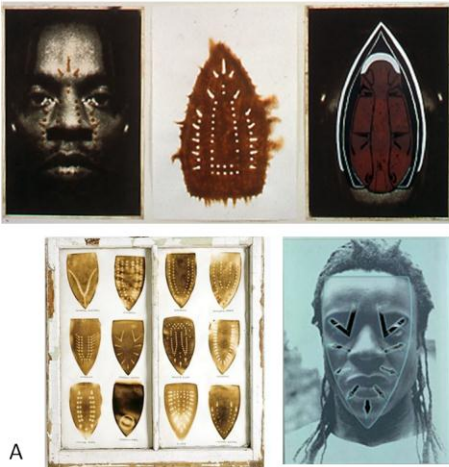
Visual analogy based on structure or function?

Visual Analogy (weak) and Metaphor (strong)

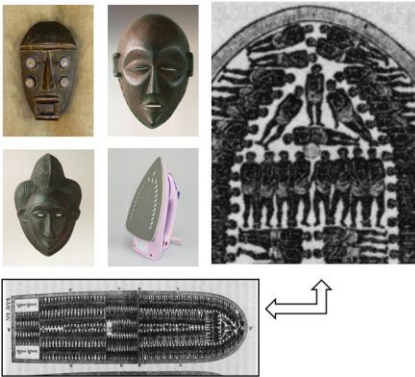
"The sense of wonder that I experienced as a young boy lying in a freshly plowed furrow still leaves me awestruck at the magnitude of the garden's endless biotic enterprise. The garden has enriched my spirit and given me the means and the meaning to express myself."

--Victor Cicansky





A



B

A: Works by African American Artist Willie Cole. **B:** Source imagery used by Cole in his work, including African masks, irons used for clothes (a symbol of labor), and diagrams showing how to load African slaves into slave ships

Compare the artwork in A to the source imagery used in B. Cole's artwork is based on both metaphors and visual analogies to his source material.

Metaphor worksheet as homework maybe



It takes the mental flexibility of Stage 1 into new, alternate ways of reasoning about systems of skill, value, and logic (Stage 2).



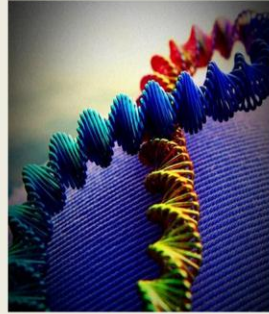
The model identifies instructional objectives for developing a creative stance.





It encourages
reflection and
perspicacity.

Adolescents are not wired for reflective thinking...but we need to model and guide them



It shows how the feeling of rigor, coherence, and consistency we get from sustained artistic effort guides us as we chart unknown territory and start to form our own creative DNA.



Stage 3: Creation within stipulated boundaries based on a creative stance.



Our model tells us how we'll know if students
are successfully developing a creative
mindset.





It takes a "can-do" instead of a "can't do" attitude towards assessment.

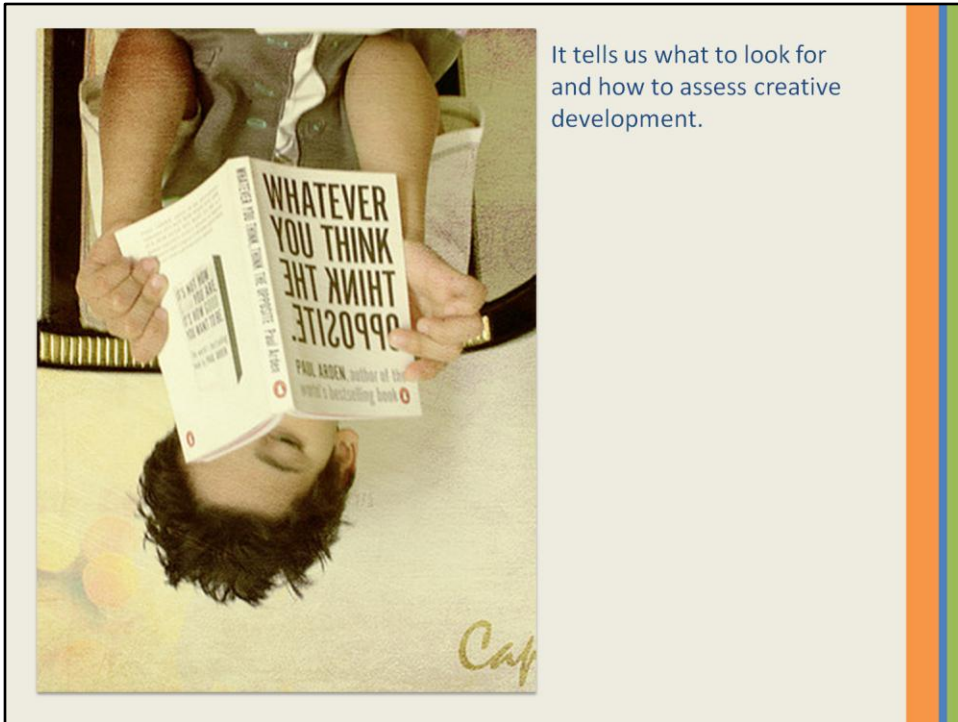


Qualitative assessment
is hard—but do-able.

We assess and make judgments in art all the time—about our own, our student's, and other professional's work. We need to explore assessment strategies and be clear about how we are proceeding—documenting, reflecting—until we build up a body of research. As a profession, we have avoided creativity for roughly three decades. It's time to start.

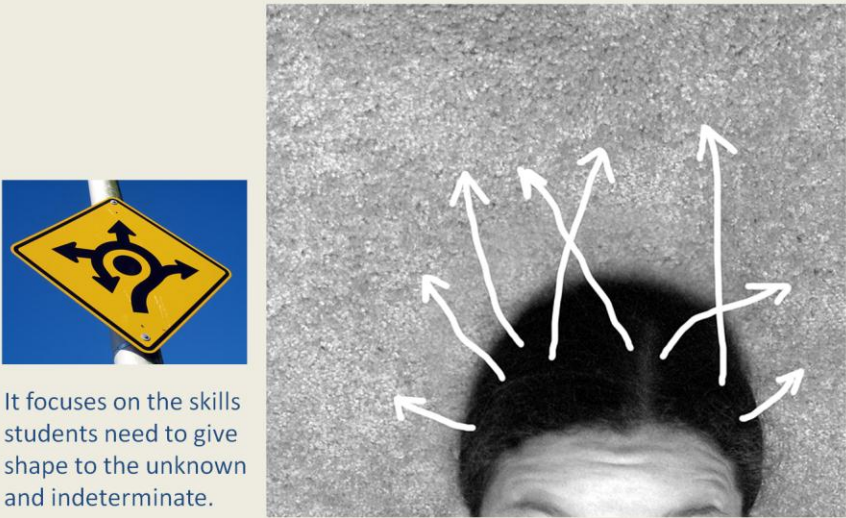


The model enables to reject the self-fulfilling prophecy that productive, authentic assessment can't be done. We start with local standards and exemplars.



It tells us what to look for
and how to assess creative
development.

Unknown
CPV
Image/context
Idea/framework
Concept/stance



It focuses on the skills students need to give shape to the unknown and indeterminate.

The slide features a yellow diamond-shaped road sign with a black symbol of a person with arms raised, set against a blue background. To the right is a black and white photograph of a person's head from the chest up, with several white arrows pointing upwards from the top of the head towards the top of the frame. The entire slide is framed by a thin black border, with a vertical orange bar and a thin green bar on the right side.

A Question of Emphasis

Art is like life—there is no dress rehearsal. Humans unique—life is full of unknowns (universals on earlier slide)

CPV as helping us understand the unknown—at levels of parameter and constants...CLA...archetypes...not even aware of....some constants obvious—water, air, breathing, carbon...counterfactuals, new perspectives....some are constants (political system) that could be changed but unlikely or takes lifetimes...others are parameters some harder some easier to change)

Double-scope metaphor

▪ **Use existing contextual frames as source material**

Historical, Emotional, Social/sociological, Psychological, Educational, Economic Cultural, Familial, Mythic, Scientific, Phenomenological/Experiential, Vices, Virtues, Isms

▪ **Use strategies to expand, alter, explore, transform or generate new contexts**

Anthropomorphizing, Psychological projection, Empathy, Narratives, Reframing familiar stories, Reframing issues and historical events, Presenting arresting juxtapositions, Binary oppositions

Formula: Using abstract qualities (*adjectives and adverbs*) to describe intangible processes (*verbs*) and abstract entities (*nouns*) in unusual ways

LESSON: Update the myth of Icarus. Is there a dangerous dream of progress in the modern era that can be used as a cautionary tale? Use elements from both the ancient myth and its modern parallel in your product.

- Source material: Myth
- Strategy: Reframing narratives and issues

Hint: Perhaps the dream of nuclear energy or some other modern panacea might be used.

LESSON:

Produce plans for a composition or sound sequence that simultaneously expresses immensity and intimacy.


Source material:
Psychological or
Phenomenological
Experience

Strategy:
Juxtaposing opposite
abstract qualities

- **Question of emphasis**
- **An automobile made of postage stamps**
- **Focus on visual transformation (image) or meaning of cars/stamps have for us (context) or both (idea)?**

- Assess process or product?
- Different standards—degree of exploration or resolution
- Preliminary plans—open issues
- Final product—unity of idea and expression

- Construct rubric that measures imagery or context on a continuum ranging from unique to cliché
- What standard?
- As compared to a cohort (class, grade level)
- How do we set criteria based on cohort?
- Action research (Model tells what to look for)
- What are the types and range of images produced by students a) in class as part of lessons, b) at home/alone, c) with peers
- Image Bank: Kids sort and arrange images on a continuum of familiar to unique to "out of this world." Time passes; repeat or have kids arrange own work on a continuum; compare and look for patterns; express in terms of image qualities



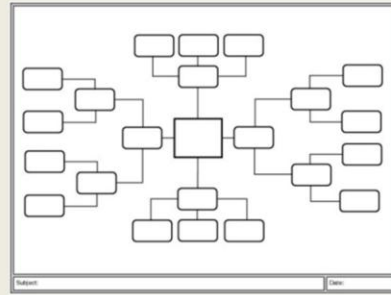
Model-based rubrics
diagnose where students
are and point to the next
step on their creative
path.

You know where you are headed while the students are with you and where they should go after they leave you—so you select criteria that pushes them up and not those that just ask them to jump through hoops to get a grade.

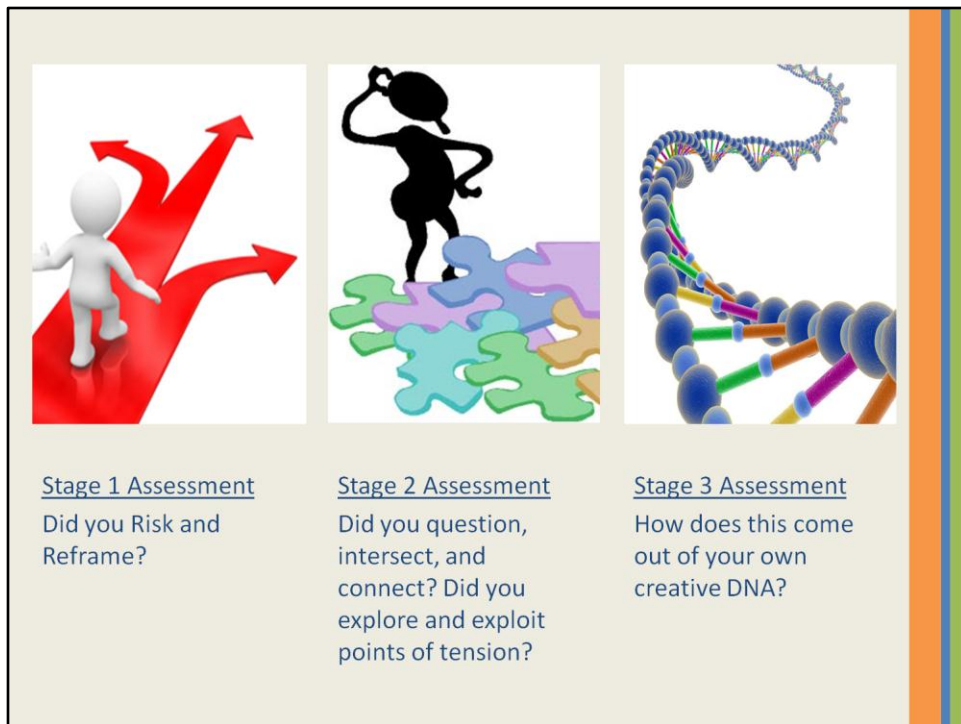
Graduate matrix that I used to diagnose students....idea generation

To often we see creativity as a quirky one off; we don't know how to advise students because we don't know the road ahead (not the road ahead as in steps in art procedures, as in printmaking—but the next creative or conceptual step ahead)...what the landmarks are. It lets us take those fun whacky ideas and channel them, connect and develop them to the next level

PASSION

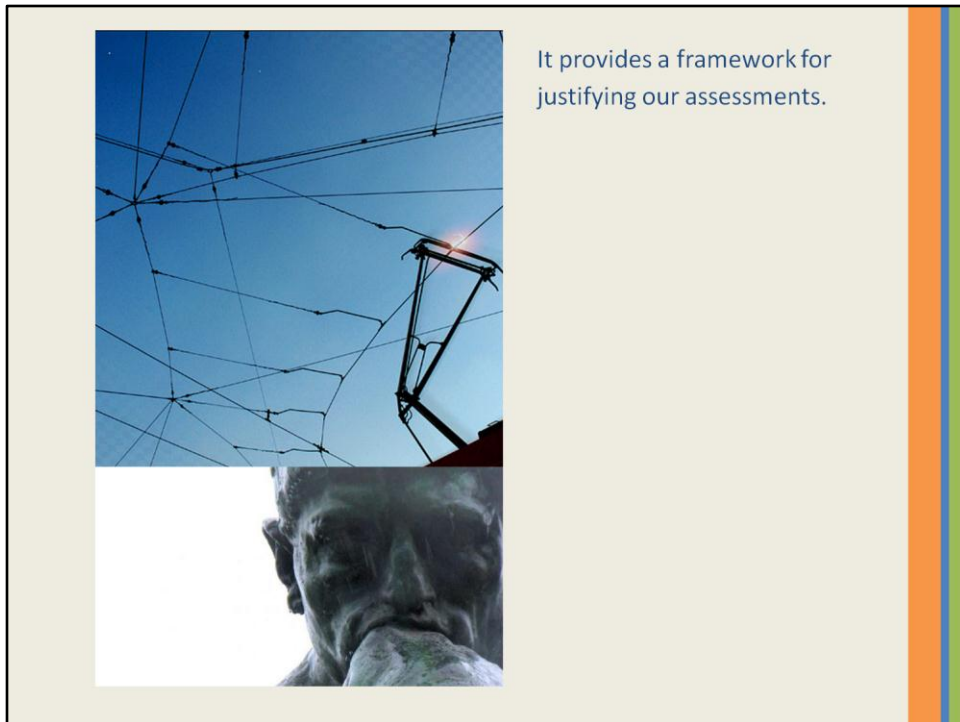


It provides the
conceptual tools for
constructing
assessments.



Stage 3 meeting yourself by biting off more than you can chew—you learn who you really are

Clear about goal: not zany ideas, not just solving a problem, but establishing a mindset that continues to generate rich insights, perspectives, problems on an ongoing basis—which is why we introduce generative themes to students. We want them to create their own creative DNA—which will connect and recombine in multiple ways to generate new problems for them. The greatest gift an artist can have is an intractable problem.



Again Ann—grad student and idea generation; she could only reproduce , copy work in HS; treatment—image manipulation...why (do I have photos??)...why? Because she hasn't learned to reframe experience and is tied to observation. By generating the unusual, she's forced to consider new connections {REMEMBER STUDIES ARTICLE sculpture student} ...to sort through why she might be drawn to this or that more than the others. If over the course of a semester she can move from reproduction to idea generation that is a huge step—above average, a B....if she can connect to multiple systems and explain these connections....an "A"



Creativity can no longer mean everything to everyone when we've identified its fundamental parts, core processes, and the way they relate.

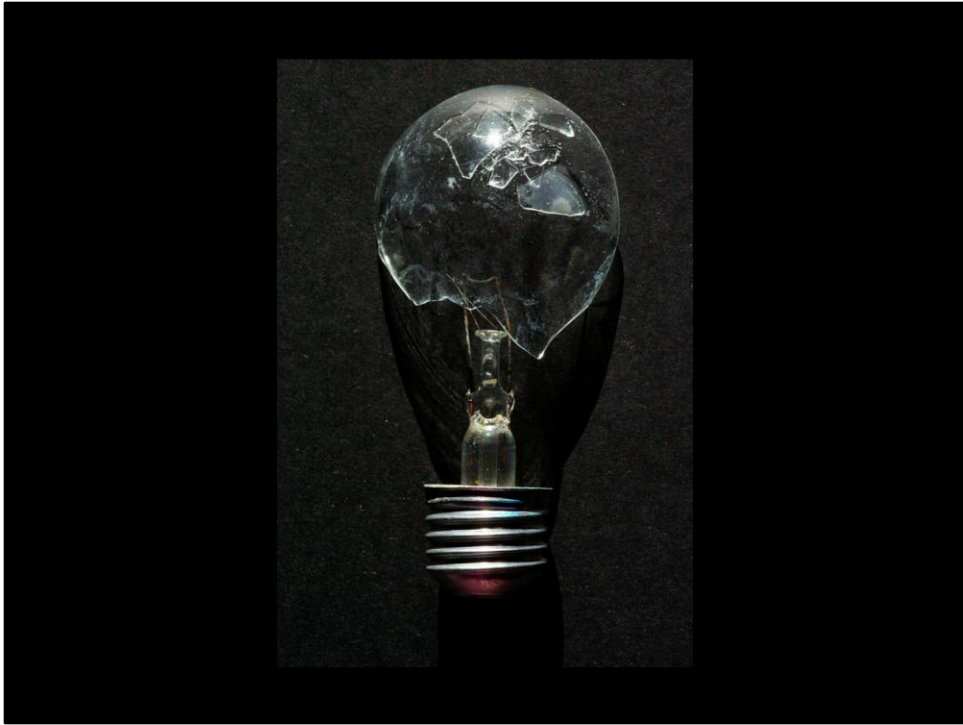


Notes for Grad student story

Again Ann—grad student and idea generation; she could only reproduce , copy work in HS; Throughout her HS career in art—copied pictures from slides....even her observational skills weren't that good—our imaginative powers infuse and inform our observational skills as we take the 3D world and translate it into two dimensions treatment—image manipulation...why (do I have photos??)...why? Because she hasn't learned to reframe experience and is tied to observation. By generating the unusual, she's forced to consider new connections {REMEMBER STUDIES ARTICLE sculpture student} ...to sort through why she might be drawn to this or that more than the others. If over the course of a semester she can move from reproduction to idea generation that is a huge step—above average, a B....if she can connect to multiple systems and explain these connections.....an "A"

Would you want your child to have a teacher who couldn't generate and investigate ideas?





This is the kind of story we must avoid at all cost and is why we must plan for creativity throughout the K-college curricular flow



Students need a long term creative agenda to see the long term benefits of creativity training.

Otherwise, they look back and see it as frivolous and impractical.

Capture Queen



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