

# **Greater than the Sum of its Parts: Creativity-Based Integrated Learning**

*Sigrid Frandsen and Patti Tahan*

## ***Building a Creativity-based Integrated Learning Model***

Prior to determining the key elements of a creativity-based instructional model, one must provide a working definition of creativity. For the purposes of this model, we have adopted Mayer's definition of creativity: "producing a novel method of solving a new problem." (Sawyer p.401) Although this definition is not as specific as others offered, it also does not limit the definition to either an individualist or sociocultural approach.

Our approach to identifying key elements of a creativity-based instructional model is rooted in the belief that creativity is not an inherent talent, but rather a skill that can be fostered through appropriate instructional activities. As Sawyer details, "Research has proven that creativity is not hereditary. Despite decades of work to develop creativity tests, these tests still have a mixed record of predicting real-world creativity, suggesting that creativity isn't a stable personality trait, but rather is a situationally specific strategy." (Sawyer p.408) It is those "situationally specific strategies" (SSS) that we will identify and integrate into our instructional model.

### **SSS #1: Approach Creativity as both a Process and a Product**

Throughout history, the label "creative" largely has been used to describe the products of creativity: a famous painting, an innovative novel, or an orchestral masterpiece. However, research in the field of creativity over the past 50 years—and particularly in the past decade—have resulted in an understanding that creativity is not simply a "final product," but rather an ongoing, non-linear process. Sawyer defines the steps of creativity as: 1) finding and formulating a problem; 2) acquiring knowledge relevant to the problem; 3) gathering a broad range of potentially related information; 4) taking time off for incubation; 5) generating a large variety of ideas; 6) combining ideas in unexpected ways; and 7) selecting the best ideas while applying relevant criteria. (Sawyer p.88)

Kaufman and Beghetto support the concept that creativity is as much process as it is product by categorizing creative activities as one of “four Cs:” mini-c, little-c, pro-c, and big-c. While each of the “Cs” may result in a product—particularly the big-c category of those who have reached a level of creativity that would be remembered throughout history—they also include a process-driven element. Mini-c creativity is one which occurs throughout a person’s day through moments of inspiration. “Including the category of mini-c in our model of creativity helps protect against the neglect and loss of students’ creative potential by highlighting the importance of recognizing the creativity inherent in students’ unique and personally meaningful insights and interpretations as they learn new subject matter. Moreover, mini-c stresses that mental constructions that have not (yet) been expressed in a tangible way can still be considered highly creative.” (Kaufman and Beghetto p.4)

The distinction between product and process is echoed in theories related to creativity. Idealist theorists believe that the act of creativity is complete once an idea is formulated. Conversely, action theorists argue that “creative work is essential to the creative process.” (Sawyer p.87) Our position is that these views are not mutually exclusive, rather that they are simply distinct manifestations of the creative process as a whole. It seems that Sawyer would agree: “Studies of externalization show that it’s much more than a simple ‘implementation’ or ‘execution’ of an idea that’s already formed in the mind. Just the opposite: externalizing early ideas, and then manipulating and working with them, contributes directly to the still-emerging and uncertain creative process.” (Sawyer p.137)

To underscore the idea that the externalization of creativity is as much a part of the process as mini-c moments of creativity, let’s more closely examine Sawyer’s creative step #1: *finding and formulating a problem*. Instead of perceiving creativity as the act of solving a problem in new and innovative ways, one could apply the creative process much earlier into the cycle. By focusing creative activities into the defining and formulation of a problem, instead of simply solving the problem, one generates an externalized creative product as part of the process. In this case, the formulation of the

problem is the product. This externalization informs the development of creative solutions through the rest of the process resulting in a “give and take” cyclical procedure. It’s important that these “mini-products” of creativity are manifested externally to ensure that there are appropriate internal and external evaluations of creativity, providing value to the overall endeavor.

## SSS #2: Allow Ample Time for Learning

Because creativity is not merely a “moment of inspiration” but also a process resulting in a series of products, it is important that any instructional model be considered a temporal endeavor and allow for a significant period of time to foster the creative process. It is equally important that the process be considered non-linear in nature in order to accommodate new discoveries and approaches resulting from the evaluation cycle. Sawyer describes the importance of this in saying, “The mythical view of a moment of insight overly simplifies the complexity and hard work of most creativity. Instead of a single glorious moment, creators experience small insights throughout a day’s work, with each small insight followed by a period of evaluation and externalization; these mini-insights only gradually accumulate to result in a finished work, as a result of a process of hard work and intellectual labor of the creator.” (Sawyer p.139)

The concept of an evaluation loop is a valuable tool for the creative individual. By reflecting on what was attempted and how it was attempted in relation to the results realized in a self-aware manner, creative individuals can refine their own creative processes. “People are more creative when they absorb relevant categories and information, and that requires you to be critical and evaluate as you decide which information to look for” (Sawyer p.96) and “Although we generally think that the critical thinking of evaluative thought follows a more creative stage, evaluation is likely to be a constant presence in the creator’s work.” (Sawyer p.133)

Providing an evaluation loop allows for *productive failure*. Sawyer sees this as an integral component of the creative process. “Many creators say that the best way to have a good idea is to have a lot of ideas, and then just get rid of the bad ones.” (Sawyer p.131) However, there is an inherent risk in allowing students to define their own problems—and therefore have greater autonomy when defining their learning paths—so time to allow the process to result in success necessitates a willingness to “fail” in the interim. This risk, perhaps, is most troubling for the student. As Hargreaves describes, “There is risk to individual students: ...a major barrier to creativity is fear of the

unknown, ridicule and failure, so engaging creatively may be a source of anxiety. These fears are very real for students who have invested a great deal of time, effort and increasingly money in their studies.” (Hargreaves p.230) However, it is also found that “uncoupling” creative tasks with assessment reduces this anxiety and, therefore, risk.

One final consideration when recognizing the importance of ample time in a creative process is an *incubation period*. Allowing “down-time” for quiet reflection and “back-burnering” an idea often results in creative breakthroughs. “Exceptional creators throughout history have said that their best ideas emerge from an unguided, unconscious process that creativity researchers call ‘incubation.’” (Sawyer p.97) Traditional classroom models are scheduled in such a way that they do not allow for periods of disengagement, resulting, perhaps, in reduced creativity. 40 minute class periods with specific educational standards to be met—day after day—minimizes opportunities for students to reflect on and connect with the content in a personal way. The challenge is that even if prescribed “periods of incubation” were to be integrated into the schedule, it likely would not result in increased creativity. “Incubation doesn’t occur in a particular stage but operates to varying degrees throughout the creative process.” (Sawyer p.139)

### **SSS #3: Balance Collaborative and Individual Activities with an Interdisciplinary Approach**

It is accepted among creativity researchers that creativity does not happen in a vacuum. In order for creative activities to flourish, they must be considered in the environment in which they occur. For the most part, that environment consists of a broader community within which the individual is participating, either knowingly or unknowingly.

The distinction between individualist and sociocultural approaches to understanding creativity lies in the importance placed on that environment. Amabile and Csikszentmihalyi use the *Systems Model of Creativity* to untangle the relationship between the two. Specifically, the model is comprised of three separate entities: the

person, the domain, and the field. During the creative process, all three entities are at play, while still retaining their own unique qualities.

Similarly, the “two C” and “4 C” models recognize the relationship between the individual and the broader environment. “First generation or big ‘C’ creativity locates the creative enterprise as a complex set of behaviours and ideas exhibited by an individual, while second generation or small ‘c’ creativity locates the creative enterprise in the processes and products of collaborative and purposeful activity.” (McWilliam and Dawson p.633)

Our view is in line with Sawyer, Amabile, Csikszentmihalyi, McWilliam, and Dawson’s perspectives. Namely, we believe that both individual creativity and sociocultural creativity are integral components of the creative process.

Individualist creativity—largely a western perspective—is rooted in the idea that creativity is an inherent, interior process that comes from within. Sawyer defines it as “a new mental combination that is expressed in the world.” (Sawyer p.7) Hallmarks of an individualist perspective of creativity include specific personality traits, elevated IQ, significant expertise in the domain, and intrinsic motivation. “Creativity almost always results from intrinsic motivation; from people who work in an area just because they love the activity itself, not because of the eventual payoff.” (Sawyer p.423)

The individualist perspective focuses on how to encourage creativity within an individual through appropriate “solo” instructional activities including, for example, participation in the arts. Research supports the individualist view: “There’s some evidence that individualism contributes to innovation...[the]per-capita number of patents across the world [was higher] in more individualistic countries.” [Sawyer p.279]

Conversely, the sociocultural perspective of creativity is rooted in the idea that the creative process cannot be removed from its cultural environment and necessitates a certain level of group interaction. Sawyer defines the sociocultural perspective of creativity as “the generation of a product that is judged to be novel and also be appropriate, useful, or valuable by a suitably knowledgeable group.” (Sawyer p.8)

If one accepts that definition, it is important to recognize that “novelty isn’t sufficient; the creation must also be appropriate, recognized as socially valuable in some way to some community”(Sawyer p.9) and that “neither novelty nor appropriateness can be measured at the individual level” (Sawyer p.223). Csikszentmihalyi agrees with Sawyer: “If creativity is to retain a useful meaning, it must refer to a process that results in an idea or product that is recognized and adopted by others. Originality, freshness of perceptions, divergent-thinking ability are all well and good in their own right, as desirable personality traits. But without some form of public recognition they do not constitute creativity.” (Csikszentmihalyi p.314)

While recognition of the value of a creative product is key to the creative process in a sociocultural approach, it does not negate the recognition of the individual in that process. Consider the evaluation cycle previously discussed. According to research, “people are more accurate in rating their own ideas for uniqueness, and more accurate in rating others’ ideas for popularity.” (Sawyer p.133)

In fact, group process creativity relies heavily on the individual contributions of its members. Sawyer found that group creativity is centered on “distributed cognition” where individual member contribute separate, integral pieces of the solution to form one collective product. He also found that the more diverse the group is, the more creative its products are. In practice, diversity provides opportunities for divergent opinions which can result in increased creativity. “The presence of even one group member who disagrees with the majority can deepen cognitive processing and lead to more reflective and integrative outcomes.” (Sawyer p.234)

However, in discussing the “optimal” group, Sawyer provides several cautions. First, diversity in the group should be cognitive, not based on ethnicity, gender, or socio-economical factors. Having an appropriately balanced heterogeneous group will result in more ideas. Second, group members should find and promote a shared sense of purpose and commitment.

Facilitating the process in group work is also important to consider prior to implementation. Studies have show that certain group tasks—such as brainstorming—

can result in reduced creative outputs. The reasons for these vary, but include reduced individual time allotted for contribution, participant anxiety, and divergent opinions about the goal of the activity. To remedy this, Sawyer recommends the following to avoid production blocking, topic fixation, and evaluation apprehension: 1) clearly specifying the goals; 2) using a trained facilitator; 3) using electronic brainstorming; 4) using groups to select ideas (Sawyer p.240)

It is for these reasons that our model will utilize what Sawyer refers to as an interdisciplinary approach, one which taps into both individualist and sociocultural perspectives. (Sawyer p.425)

*But even if the problems are different, human nature remains the same. And most humans have two contradictory impulses: we love and need one another, yet we crave privacy and autonomy. To harness the energy that fuels both these drives, we need to move beyond the New Groupthink and embrace a more nuanced approach to creativity and learning...Our schools should teach children to work with others, but also to work on their own for sustained periods of time.* (Cain p.4 of PDF)

#### **SSS #4: Include Cross-Curricular Approaches**

As previously discussed, creativity in the classroom has largely been relegated to the arts curriculum with minimal integration into core content instruction. “Teachers associate creativity with the liberal arts and humanities, although researchers believe that creativity is manifest in all subject areas.” (Sawyer) Given our understanding of the importance of the interplay between domain knowledge and creative approaches, this is troubling.

*Creativity results when a person somehow combines [existing domain knowledge] and generates a new combination.* (Sawyer p.93)

*Creativity involves being aware of a wide variety of information in your environment, and being able to spot opportunities to link new information with existing problems and tasks.* (Sawyer p.96)

In this scenario, only those students who have expertise or inherent talent in visual arts, performing arts, and music would benefit from creativity-based strategies in the classroom. Given that “The evaluation stage is fully conscious; to be effective, the creator has to draw on an immense amount of knowledge about the domain” (Sawyer p.129), and if students are not working within a domain which complements their expertise, students would benefit less from the evaluation cycle. However, this needn’t be the case. Our view, as supported by research, embraces a cross-curricular approach to encourage creativity throughout the curriculum.

Research has shown that divergent thinking and convergent thinking are both key elements in the creative process. According to Sawyer, “Learning is more than just the continuous accumulation of new knowledge; it’s a creative reorganization of thought.” (Sawyer p.70) It’s the reorganization of thought that is central to the creative process. Cross-curricular approaches to instruction can enhance that process.

Sawyer cites many examples of the effects of cross-curricular—and cross-domain—activity. He details how combining the arts with core subject areas increases learning. “When the arts are integrated with instruction in another content area, such as math or science, that other content area is learned more effectively (Efland, 2002; Winslow, 1939)... The claim is that when the arts are integrated with instruction in other content areas, learners achieve a deeper understanding, acquire an ability to think more flexibly using content knowledge, and develop enhanced critical thinking and creativity; the arts help teachers engage students more deeply, and reach a broader range of learning styles.” (Sawyer pp.391-392)

Central to this idea is cross-pollination, or cross-fertilization. When individuals are working on multiple projects in separate domains, they are able to connect these activities in meaningful ways. It’s these connections—this reorganization of thought—which are indicative of the creative process. This is evidenced through the RAT creativity exercises. When presented with two seemingly disparate objects or words, being able to meaningfully connect them is an indicator of creativity in creativity tests.

Cross-pollination generally results in “a sum greater than its parts.” While students could learn about letter writing in an English class, learn about space exploration in a Science class, and learn about climate patterns in a Geography class, providing them with the opportunity to draw connections between the three by drawing on their own domain of expertise could result in such creative products as 1) a letter to the editor of the New York Times about reaction to a recent scrubbed rocket launch; 2) fan fiction in a “letter exchange” format between Captain Kirk and futuristic NASA; or 3) a letter request and sample map sent to National Geographic Expeditions to have their cartography team develop a “launch” climate map, identifying locations which are most favorable for a successful launch.

Ideas as diverse as these can grow out of cross-domain work. “Other combinations result when people switch fields, introducing techniques or modes of thought that are already standard in another domain...Other researchers explain these multidisciplinary insights by appeal to analogical thinking—the idea that analogies between distinct domains allow the individual to perceive patterns in a way that wouldn’t be apparent to someone working in only one domain.” (Sawyer p.115)

Or, more to the point: “A network of enterprises increases the likelihood of cross-fertilization across projects, and many of the most important insights happen when two different projects come together unexpectedly.” (Sawyer p.376)

### **Creativity-Based Integrated Learning Model**

*Compared with the extreme creativity of children’s play, schools are quite standardized and regimented; all children learn the same thing at the same time. Our image of the school is of rows of desks, all exactly the same, where teachers emphasize order and conformity (in part simply to maintain control of the classroom). In the terms used by creativity researchers, schools emphasize convergent thinking at the expense of divergent thinking. (Sawyer 389)*

The traditional model of education described by Sawyer is not an uncommon occurrence in U.S. public schools. Historically, it seems that teachers discourage the types of behaviors often associated with creativity. Sawyer describes how Torrance’s research supports this view: “Torrance (1965) interviewed teachers in five

countries...and found that teachers in all five countries disapproved of students asking questions, guessing, being independent in judgment and thinking, being intuitive, being willing to take risks, and being unwilling to accept an opinion on mere authority—and these are all behaviors associated with creativity.” (Sawyer p.390) Since that time, more progressive periods in education have resulted in attempts to change this model in any significant way. In fact, Sawyer describes how, in his experience, teachers want to foster creativity in their students, but they are limited by the school climate and curriculum guidelines. (Sawyer p.390)

With the exception of a handful of experimental schools, such attempts have not met with success. Specifically, despite attempts to insert creative approaches to education into the curricula and pedagogy, these attempts are being superimposed over a dysfunctional model where the student is the recipient of the teacher’s fountain of knowledge. Although great attention has been paid to altering the ways in which students engage in the learning process, and attempts have been made to develop inquiry and critical thinking skills, as well as provide real-world and authentic experiences, these attempts will always be limited by the framework in which they are integrated. In light of this, our proposed model will address not only the instructional content covered, the pedagogical techniques used, but the very structure in which they are delivered.

Our model begins with this simple premise: *students have agency in their learning experiences and should be active participants in determining the course and process of those experiences*. This, in fact, is a key approach sanctioned by Sawyer: “Take an inclusive approach where students and teachers collaborate to identify problems and issues, and debate and discuss, together.” (Sawyer p.400) Our view is that meaningful student input should occur from inception of the question to evaluation of the process to assessment of the product. After all, “Solving well-defined problems involves primarily convergent thinking; solving ill-defined problems involves a higher degree of divergent thinking.” (Sawyer pp.90-91)

We see this approach thriving in an open-ended, yet structured, environment. It seems that creativity is often approached through a wild abandon, utilizing a “put them in a group and see what happens” approach. Our view is that the overall structure of the program, with clear expectations and tools to ensure success, is a more appropriate and effective way of encouraging creativity. Research by McWilliam and Dawson supports this view:

*One of the myths that is exploded in engaging with this scholarship is the idea that there are no rules when it comes to creative ‘high flying’, and indeed, that there should be no rules, i.e. that the best way for a teacher to assist creative students is just to get out of their way... When applied to dynamic team environments, this principle puts paid to the romantic idea that constraints will always act negatively on creativity. However, it is noteworthy that ‘enhancing’ constraints are not imposed by the leader. Indeed, leadership changes constantly; ‘command and control’ is not the means by which constraint is enacted. Yet a sense of collective direction is always needed. (McWilliam and Dawson p.638)*

In practical terms, our model is based on these specific elements:

- The teacher is no longer the apex of the classroom. Instead, students work in a combination of small group, whole group, and individual tasks with the teacher’s primary role is that of a facilitator.
- Students are provided with student-friendly standards or objectives to be covered during the course of the month (or whatever time-period is appropriate given the extent of the objectives and the dynamics of the group).
- Students work together and with their teacher (individually, in small groups, or as a whole class) to identify ways to demonstrate their understanding of the content by the end of the month. These could be art projects, writings, computer-designed activities, skits, tutorials, etc. It is important that students develop their own plans (in consultation with each other and the teacher) in order to maximize intrinsic interest and ensure grade-level specific achievement.
- Students work in a combination of small group, whole group, and individual activities during each day of the month (the timeframe of each day will vary depending up local needs). During that time, students are allowed to shift activities at their discretion, but are also responsible for their own time management.
- During the designated project time, the teacher conducts small group instructional activities addressing any new content to be covered during the

month. For example, on day six, the teacher may have scheduled three small group tutorial sessions based on the needs of the students: 1) Pythagorean theorem; 2) elements of plot; and 3) Greek philosophers. Participation in the tutorial sessions would be mandatory for some students (based on their teacher's assessment of their needs) and optional for other students (based on their own assessment of their needs).

- At the end of the month, students conduct a final evaluation of the projects and invite family, school, and community members to see their work.

This framework is quite simple and could be easily modified for use in a variety of settings, subject areas, and grade levels (although the example above would work best in a self-contained classroom). However, given the simplicity of it, it should not be mistaken for a “free-wheeling” approach to education. Within it lie structure, accountability, and direct instruction. What is different from a traditional classroom, however, are the following:

- Project work is central, rather than peripheral, to the instruction.
- Students defining their own problems leads to an infinite number of creative solutions.
- Students will have opportunities to engage in authentic, real-world experiences.
- Flexibility in scheduling one's own time minimizes “wasted time” performing tasks that an individual student may already have mastered.

*Successful scientists have learned how to structure their workday for maximum creativity. They shift from one project to another based on what they do most effectively at a given time of the day. (Sawyer p.376)*

- Differentiated instruction (and learning experience) occurs on many levels in a natural, authentic way.
- Students are the designers of their own learning experiences, and are provided with the opportunity to engage with topics they are passionate about and in ways that are reflective of their own learning styles. Additionally, they are authentically engaged in navigating the social waters of group work, which McWilliam and Dawson highlight as an important component of group process

activities:

*In terms of student identity, such capacity is unlikely to be engendered by 'putting students into groups', or indeed, by keeping them 'unconnected'. A teacher-manufactured group does not constitute a 'local neighbourhood', and could only become so if there were the sort of synergies that occur, for example, across groups of gamers who all play a similar game, understand it and are passionate about it, regardless of where they are physically located. (McWilliam and Dawson p.641)*

- This model supports the use of both individualist and sociocultural creative activities in a more sincere way than traditional classrooms.

Finally, McWilliam and Dawson provide educators with valuable advice for adopting a non-traditional classroom model. Each of these could be readily integrated into our model.

- **Connectivity with diversity**—an environment in which it is important for students to be 'plugged into' and mindful of a 'local neighbourhood' and a larger world of potential team members with similar interests or passions—one that allows members to pursue their passions and to contribute to fast-moving flows of information on behalf of others and themselves.
- **Co-invention/co-creation with separation**—an environment in which the nature, purpose and rules of self-management are understood and internalised, so that members can be both separate from, and attentive to, those they work with and rely on for their 'high flying' outcomes. The products of learning are authentic productions of the synergies that exist between the individual member and the team, not merely what is 'required' by external others.
- **Leading and following**—an environment in which all team members share collective responsibility for timely and appropriate leadership, looking over the horizon for relevant information for sharing with others, while at the same time following the 'steering' of those close by, i.e. exercising 'three dimensional' attention about the local and global, the present and the future.
- **'Enhancing' constraints and removal of inhibitors**—an environment that minimizes 'command and control' while providing scaffolded opportunities for members to conduct themselves in ways that optimise team (and thereby their own) performance— one in which there are, in Tosey's (2006) terms, "good constraints to action" (p. 33).
- **Explaining less and welcoming error**—an environment in which 'command and control' instruction is sparingly used and it is anticipated that all members will make mistakes—the aim is to learn from the instructive

*complications of error rather than to avoid error or attempt to disguise it.*  
(McWilliam and Dawson pp.639-640)

We recognize the challenges in a full-scale implementation of this model. Although we have implemented models similar to this in our own classrooms, we recognize the need for targeted research about its efficacy. Additionally, we acknowledge that broader current policy measures (such as the emphasis on high-stakes standardized testing) would impede implementation on a larger scale, but Henry Jenkins' words related to the implementation of a DIY literature model resonate with us:

*We are, however, pushing up against the boundaries of formal education. We are pushing against the time limits of the class period which restricts the ability of students to 'geek out' around subjects of passionate interest to them. We are pushing against the hierarchical structure which places obligations of teachers to be 'in control' over what happens in their classroom and which thus generates fear and anxiety when discussions move in directions that reflect the intrinsic interests of their students. We are pushing against the requirements of standardized testing which adopt a model radically at odds with our notion of a diversified and distributed expertise, insisting that every student know and do the same things. We are pushing against administrative practices which isolate schools from the larger flow of the culture, and we are pushing against the division of learning into grade levels which rejects the notions of 'lifelong learning' that underlie Pitts-Wiley's idea of continuing to scaffold students' relations to literature after course assignments are completed. (Jenkins p.251)*

### **Sample Creativity-Based Integrated Learning Model Standards**

The following is an example of select 7<sup>th</sup> grade standards adopted by Pennsylvania in three content areas: Social Studies, Math, and Language Arts. To implement this model, students would—in consultation with their teachers—examine the standards prior to instruction and develop project-based plans that, upon completion, will demonstrate mastery of the standards and objectives. Each plan should integrate learning opportunities across the content areas and directly address the learning standards identified. A sample student-generated project idea (which would be one of, perhaps, 3 ideas for the duration of this theme) is provided for illustration.

## ***Theme: Ancient Greece***

During the course of this theme, you will need to work both individually and with other students to create projects which show that you can do the following:

### **Social Studies**

1. Describe social, political, cultural, and economic contributions from people in Ancient Greece.
2. Describe how historical documents, artifacts, and sites are important to study.
3. Describe how Ancient Greece has impacted us today in one or more of the following areas:
  - Belief systems and religions
  - Commerce and industry
  - Politics and government

### **Math**

1. Show trends and make predictions about data in a graph
2. Create and answer questions that can be shown through data.
3. Organize, show, and interpret data.
4. Use three of the following to display data
  - Histogram
  - Bar graph
  - Line graph
  - Stem-and-leaf plots
  - Circle graph
  - Scatterplots

### **Language Arts**

1. Write a multi-paragraph information piece in two of the following formats
  - Letter
  - Report
  - Instructions
  - Essay
  - Articles
  - Interview
2. Use two or more of the following graphics to support your information piece
  - Map
  - Chart
  - Graph
  - Table
  - Illustration
  - Photograph
3. Use primary and secondary sources
4. Listen critically and respond to others and respond with questions, ideas, information and opinions

5. In a presentation, show awareness of audience by using appropriate volume and clarity.
6. Develop an inquiry-based research project
7. Do research using a variety of media sources and strategies
8. Create a presentation or display which shows what you have learned from the research.

### Project Plan

Project Idea	Group	Direct Instruction	Objectives	Time and materials
<p>e.g. Research the origin of the Olympics using secondary sources. Compare and contrast to how the Olympics are conducted now using primary sources. Show the increase of country and athlete participation in graph form. Write a news article and record it as a reporter to share it with the class.</p> <p><i>(separate rows for each project; students will likely have 2-3 projects)</i></p>	e.g., work with Kristina	1) making a line graph 2) help with research skills 3) difference between news article and other types of factual writing	SS #1 SS#3 LA #1 LA #2 LA #3 LA #5 LA #6 LA #7 Math #1 Math #3 Math #4	Video camera  Internet connection  Daily, over two weeks

### My Schedule

Day	Activity	Amount of Time
1	<i>Begin Olympics origin research</i>	<i>45 minutes</i>
2	<i>Participate in line graph direct instruction</i>	<i>20 minutes</i>
	<i>Collect data about participation in the Olympics</i>	<i>25 minutes</i>
3	<i>Create participation line graph</i>	<i>40 minutes</i>
4	<i>Participate in expository writing direct instruction</i>	<i>30 minutes</i>
5	<i>Collect five articles about the Olympics in the past 20 years</i>	<i>20 minutes</i>
6	<i>Draft news article</i>	<i>45 minutes</i>
	<i>Review news article with teacher</i>	<i>10 minutes</i>
7	<i>Record news brief on video</i>	<i>20 minutes</i>

## **Addendum: Integrating DIY into the Model**

As previously mentioned, it wasn't until preparing for our in-class presentation that we recognized how the surge in charter schools relates to the integration of DIY concepts into our model. Our approach to creativity-based integrated learning can, in some ways, be considered DIY learning. Here, we provide our thoughts on this relationship as an addendum to the research portion of our paper.

*Central to the DIY Culture ethic is the empowerment of individuals and communities, encouraging the employment of alternative approaches when faced with bureaucratic or societal obstacles to achieving their objectives.*  
(Wikipedia: DIY Ethic [http://en.wikipedia.org/wiki/DIY\\_ethic](http://en.wikipedia.org/wiki/DIY_ethic) captured May 1, 2012)

There are a number of instructional approaches and programs which tap into the DIY experience. Similar to our vision for a creativity-based integrated learning model for Gestalt, we found DIY teacher resources such as Edutopia and the Buck Institute for Education. Edutopia is a resource to help educators implement "Core Strategies for Innovation and Reform in Learning...empowering students to...access and analyze information, creatively problem solve, work collaboratively, and communicate with clarity and impact." The Buck Institute is a leader in training and implementation of project-based learning models. Given the characteristics of the community and scholars at GCS, we believe that our model can integrate DIY approaches as well.

The study, *Youth, Technology, and DIY: Developing Participatory Competencies in Creative Media Production*, (Kafai & Pepler, 2011)<sup>i</sup> speaks directly to our vision of students as active, rather than passive learners by identifying the "need to ensure that every young person has access to the skills and experience needed to become a full participant in the 21st century, can articulate their understanding of how media shapes perception, and is knowledgeable of emerging ethical standards that shape their practices as media makers and participants in online communities." The study points specifically to the importance of developing the skills of "disadvantaged youth" in urban settings, where "creative designs, ethical considerations, and technical skills [are] part of youth's expressive and intellectual engagement with media as participatory

competencies.”<sup>ii</sup>

Kafai & Pepler also address the need for developing a “participatory culture” where we must expand “our initial understanding of the older sender/receiver model predominantly emphasized in media literacy to include the ‘skills needed for participation and collaboration.’”<sup>iii</sup> The need has never been greater to build up these skills in disadvantaged youths in inner cities. Knobel & Lankshear as well, point to DIY engagement to equip students with the skills to “make meaningful connections to practices...that will contribute to learning...enhance prospects of living well in the present and future.”<sup>iv</sup>

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### Addendum Endnotes

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<sup>i</sup> Kafai, Yasmin, and Pepler, Kylie A., "Youth, Technology, and DIY: Developing Participatory Competencies in Creative Media Production" To appear in S. Wortham and R. Lukose (Eds.), *Youth Cultures, Language and Literacy*. *Review of Research in Education*

<sup>ii</sup> Ibid.

<sup>iii</sup> Knobel, Michele, Lankshear, Colin, *DIY Media*, Peter Lang Publishing, New York (2010), p.2

<sup>iv</sup> Ibid. p. 4