**CREATIVITY FACT SHEET SAMPLE**

Moving what you know from one sign system (language) to another (art) and vice versa allows students to engage and understand content in multiple ways, to reconsider what you know, identify resources, practice skills, and actively engage in the construction of meaning (Albers, 2007; Carroll, 1996).

Creativity training is effective when long-term and relatively challenging with various discrete cognitive skills and heuristics being described, in turn, with respect to their effects on creative efforts (Scott, et al 2004).

Training focusing on problem identification (r = .37), idea generation (r = .21), implementation planning (r = .19), solution monitoring (r = .17), and conceptual combination (r = .16) are all positively related to developing creativity. (Scott, et al 2004).

Skills identified by researchers as central to creativity, such as problem finding and framing, idea generation, conceptual combination, constraint identification, cooperative learning, the use of analogies, implementation planning, solution monitoring, and originality, as well as needs and task analysis (Goldstein & Ford, 2001), either overlap with or are components of 21st Century Skills. Specifically, they are both

1) non-algorithmic, that is, the path of action is not fully specified in advance;

2) complex, where the total path is not "visible" from any single vantage point;

3) subject to multiple solutions, each with costs and benefits, rather than unique solutions;

4) skills requiring nuanced judgments and interpretation and often employing multiple criteria, which sometimes conflict with one another;

5) based in uncertainty, where not everything that bears on the task at hand is known; 6) skills that require self-regulation of the thinking process—we do not recognize higher order thinking in an individual when someone else calls the plays at every step;

7) effortful and involve imposing meaning or finding structure in apparent disorder.

Creative teaching involves the development of a creative environment – **the classroom** – in which the creative expression of both students and teacher is nurtured. The focus should be on the ‘**opportunities’** being created by the teacher rather than the teacher themselves. (Riverside/Disney) In a creative classroom, students are doing more **than just learning** the curricular content and teachers are doing **more than just teaching** the content. (Riverside/Disney)

In creative classrooms, you will see **teachers taking risks** and **students encouraged to think** for themselves and develop original responses to the curriculum. It is not just the physical environment but the **mental environment** that really makes the class creative. Most creative acts tend to involve both **problem finding** and **problem solving. Problem finding** often entails looking at a situation from a new perspective and **problem solving** occurs when you apply innovative procedures and methods when there is no ready solution to fall back on. (Riverside/Disney)

Rather than accepting the mandated curriculum as a complete document, teachers in creative classrooms might ask themselves, “How can I situate these skills within a meaningful context?” (Riverside/Disney)

Strategies that have been found in creative classrooms and are generally recognized as effective teaching practices : Direct the teaching toward an **important learning goal;** Situate new learning within a **relevant context** that motivates and helps students make connections; **Display enthusiasm** for student ideas- model curiosity for learning; Create **open ended situations** in which multiple responses are appropriate; **Offer controversial issues** that force students to challenge and grapple with their beliefs; **Foster student autonomy**- encourage self initiated projects (Riverside/Disney)

Creativity may be seen as a complex process of informational processing within a given framework, or, as Margaret Boden has termed it, "conceptual space." It is in the context of such frameworks that the process of managing information makes sense. The framework offers the possibilities within which information can be combined and separated, grouped and regrouped, and may be seen to define the boundaries of that which makes sense both within the space and at its parameters. Boden suggests that we can, by playing around with the variables within a "conceptual space," be creative. We can generate multiple possibilities in terms of meaningful articulations. We can also aspire to a more fundamental level of creative thought oraction by engaging in the high-risk process of challenging the very rules that support the coherence of the space itself. In other words we can think, hypothesize or "play" at the boundaries of sense. This account seems to explain both the gradual process of creative development in the arts and sciences as well as the dramatic transformations that we observe in the history of intellectual and cultural development. – Mike Radford