# Researched Based Instruction Strategies Utilized in the Teaching of Kidproof Safety Education Courses

#### Thematic Instruction

Effective thematic instruction involves using a theme as "conceptual glue" for learners, strengthening bonds to knowledge. This approach relies on teachers who have a strong sense of curriculum as a learning process and can see ways to connect learning with key concepts.

The goal is to choose themes that relate to students' lives to ensure interest and engagement in the content. Concepts that work best depend on students' age and developmental level. Also, topics typically found in single content areas offer rich links to other subjects, such as communication, immigration, rhythm, speed, matter, addition, metaphor, or waves.

Framing a theme as a question ("What Makes the Difference?", "Why Are We Moving?", or "How Do We Know?") will keep students asking (and answering) questions that matter. Effective teachers employ strategies that engage learners not just in ways that are exciting or fun, but that make strong bonds between abstract ideas and understanding.

All Kidproof Safety lesson plans encourage discussion and questions through the use of theme based questions.

#### **Reinforcing Effort**

Although research on learning tends to focus on instructional strategies related to subject matter, students' beliefs and attitudes have a significant effect on their success or failure in school. Students growing up amid challenges can develop an attitude that "failure is just around the corner," no matter what. Research makes clear the connection between effort and achievement—believing you can often makes it so. This research shares recommendations and techniques that encompass student recognition, beliefs, and attitudes about learning.

Kidproof Safety lessons reinforce positive choices and develop critical independent thinking.

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### **Non-linguistic Representation**

All the senses come into play in learning. In most classrooms, however, reading and lectures dominate instruction, engaging students through the linguistic mode. Learners also acquire and retain knowledge non-linguistically, through visual imagery, kinesthetic or whole-body modes, auditory experiences, and so forth.

Teachers who wish to take advantage of all modes of learning will encourage students to make nonlinguistic representations of their thinking. These can take many forms. When students make concept maps, idea webs, dramatizations, and other types of nonlinguistic representation, they are actively creating a model of their thinking.

Computer simulations or flash cards and imagery will also encourage exploration and experimentation by allowing learners to manipulate their learning experience and visualize results. When students then explain their models, they are putting their thinking into words. This may lead to new questions and discussions, which will in turn promote deeper thinking and better understanding.

Kidproof Safety lessons are interactive, engaging and have very little lecture based learning. Students learn by "doing" and working through scenarios within a group of other learners. Frequent use of flash cards, posters and visual aids assist the learner in retaining key messages.

#### **Simulations and Games**

Much education research encourages teachers to foster the kinds of environments and tools provided by simulations and games. For example, the more students use multiple systems of representing knowledge, the better they are able to think about and recall what they have learned (Marzano, Pickering, & Pollock, 2001).

Providing students the opportunity to visualize and model improves their chances for understanding. Simulations enhance this potential by making modeling dynamic. Games and modeling activities can elicit curiosity, create a demand for knowledge, and enable students to discover knowledge through exploration (Edelson, 1998).

Experimentation, manipulation of media, and personal experience are critical allies in deepening learning. We know that student engagement and motivation are critical to sustained understanding. Simulations and games provide powerful new opportunities for learning.

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Simulations allow learners the opportunity to model, explore, and try out a variety of strategies. Role-playing is a learning experience where students collaboratively invent, experiment, and practice interpersonal skills in a relatively low-risk environment. Games and simulations differ in important ways, although contexts may overlap. In simulations, no one "wins," and participants role-play experiences that result in their character suffering or benefiting from decisions and actions. Simulations are multi-modal and non-linear, branching into scenarios based on user choice. Finally, simulations are structured by authentic rules that mirror actual results. This definition can be broken down further to describe how students can learn from simulations.

Experimental simulations provide learners the opportunity to engage in situations that would otherwise be too hazardous or cost prohibitive to conduct in the classroom. For example, a simulation of an atom smasher uses gum balls to help students envision what happens in a linear accelerator; a rollercoaster design simulator allows students to experiment with slope, angle, and speed.

Symbolic simulations dynamically represent the behavior of a population, system, or set of processes. The student is on the outside looking in, conducting operations and manipulating variables to explore reactions. Symbolic simulations allow students to discover and explain scientific relationships, predict events, and learn procedural skills. For example, biology students can use simulation software to explore the implications of vanishing habitat on various species. The use of technology offers unprecedented experimental environments in which to learn.

Serious games is a new term for games that are applied to "serious" goals instead of entertainment, bringing gaming technology to fields such as education, policy development, and leadership. Major corporations, government institutions, foundations, educators, and nonprofits are turning to games and emerging technologies as a new approach to simulations, training, education, and other practical applications.

Kidproof Safety lessons are a combination of games, play, scenarios and discussions. There is very little lecture based activities. We encourage students to develop and hone their critical thinking skills by practicing and discussing decisions and possible outcomes.