Programming Concepts Taught by GameSalad®

Programming Concept	How the Concept is Used in GameSalad
Object oriented development	GameSalad Actors have the concept of inheritance, prototypes, and instances.
Event Driven Programming	Using Rules and Behaviors, GameSalad teaches the fundamentals of Event Driven Programming, which is the dominant programming paradigm used in games, graphical user interface (GUI) applications, and many otvher applications, such as Javascript web applications. Many other programming tools focus only on functional programming.
Variables	GameSalad Actors and Scenes have Attributes, which are essentially variables. Attributes in GameSalad have different types, including boolean, integer, real, image, and text. Access to attributes is controlled by scoping rules and encapsulation.
Functions	GameSalad's Behaviors are effectively functions that can be called again and again, passing different arguments into the call as needed.
Trigonometric math, angles, rotation	Actors can interact with each other based on distances, angles, velocities, and forces. The Expression Editor features mathematical functions such as sin, tan, cos, abs to allow complex computations.
Comparison Operators	GameSalad's Rules allow the use of comparison operators like equals, less than, greater than, less than or equal, greater than or equal and, not equal to evaluate expressions.

Conditional execution (if/then/else)	Using Rule Groups, GameSalad teaches users how code can be executed selectively based on conditions.
Data structures & data-driven design	GameSalad Tables are effectively multidimensional arrays, which teaches users how to store data more efficiently and the importance of developing a program independently of data (i.e., not hardcoding).
Looping	Teaches the concept of looping over a set of instructions until a given condition is reached.
Physics & Simulation	GameSalad includes a fully integrated 2D physics engine and all Actors have physical Attributes that can be modified as needed.
String Manipulation	GameSalad has expression functions that help teach how to concatenate and manipulate strings, a key element of programming in any language.