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January 30, 2007

Reward Me!!! (Title is tentative)

Purpose: To demonstrate the concept of the *reward system* and its relation to why people and animals display specific behaviors in response to “pleasurable” stimuli.

Furthermore, to convey the pathway and function of the *reward system*.

Materials: Cardboard boxes, Christmas lights, Markers, Board of wood, Poster board, Sucrose based nutrient, Rat food (or other appropriate non-rewarding stimulus), Operant chamber, Clipboards Mechanosensitive light or sound source, mouse-ear headband, lab coats, lab goggles

Procedure: Craft a human operant chamber using cardboard refrigerator boxes.

Construct reward-dispensing structures from poster board. Using boards of wood and lights we will assemble a diagram of the reward pathway. At any given time, one student will serve as the “rat,” another as the “operant chamber,” and the rest as data collectors. The children acting as the rat will try to figure out a pattern of light flicks by responding with the lever, either receiving reward or no reward (candy or rat food). The data collectors will score the rat on the number of light flicks responded to in order for the “rat” to be rewarded and coalesce to determine the pattern. One child will be given the pattern and serves as the operant chamber operator, rewarding the “rat” when appropriate.

Issues: Simplified diagrams and descriptions of reward pathway and learning and behavior. No direct explanation (chemically or electrically) of how the rewarding stimulus activates the reward pathway.

Lesson Plan: Children will develop a basic understanding of operant behavior and the neurology of reward and learning. The children observing the operant chamber will collect data like scientists and to increase understanding of the scientific method and to engage them when they are not immediately involved in the operant chamber task. Following the human operant chamber task, a brief mini-lecture will follow that explains the diagrams. Children will be asked to explain what is happening in their brain when they experience something that they enjoy.