Appendix

Brain Awareness Week Summary and Description of Activities

Brain games

Rubik's Cube A $3 \times 3 \times 3$ Rubik's cube consists of six faces, each with nine colored squares called facets

for a total of 54 facets. Each of the six sides is painted a distinct color. The objective of the puzzle is to return the cube to the point where each face of the cube has a single color

(after it has been randomized by repeated rotations).

Gordian's Knot This game consists of colorful knots with six interlocking pieces. This takes a whopping 69

different moves to take the knot apart.

Sudoku The objective of this game is to fill a 9×9 grid so that each column, each row, and each of

the nine 3×3 boxes contain the digits from 1 to 9 only one time each. The puzzle setter

provides a partially completed grid.

Connect Four This is a two-player game in which the players choose a color and then take turns drop-

ping their colored discs from the top into a seven-column, six-row vertically suspended grid. The object of the game is to connect four of one's own discs of the same color next

to each other vertically.

Learning activities

Checkerboard effect This phenomenon is observed when two checkerboard square table images with differ-

ent gray-shaded squares are compared. There is an illusion that square A is lighter than square B caused by the relative contrast of surrounding darker squares and the fact that our vision compensates for the shadow of the cylinder that is also present in the images.

Distorted circles

The distorted circle effect describes how geometric images become distorted due to

particular background patterns (such as lines inside the geometric image) causing the

images to look distorted.

Face recognition In this task, one picture of Abraham Lincoln is put upside down and then vice versa. When

it is turned upside down, the observer is no longer able to recognize it as a face but rather

as an object.

Muller-Lyer illusion This phenomenon occurs when two lines of the exact length are presented with two ob-

tuse angles at each end of the line. In one line the obtuse angles are facing out and in the other they are facing in. Depending on how the angle is placed, the lines are perceived as

longer or shorter although they are of the same length.

Schematics confussion This explains how the brain creates a single image from quick glimpses of the most im-

portant parts of a picture.

Shifting gear This demonstrates the effect of afterimages of complementary colors in creating apparent

movement in our peripheral vision as our eyes shift across the page.

Stereoscopic vision This makes depth perception possible. By crossing the eyes while looking at specific

pictures, the brain perceives a combined three-dimensional image instead of the two-

dimensional image that is presented.

Stroop task This is a psychological test of mental flexibility that uses directed attention. It involves

reading a word such as green printed in a color that differs from the color semantic

meaning.

Warped squares This task demonstrates the influence of background patterns on overall image. It uses

geometric images with squares of the same size but different designs that give the illusion of curved lines in the image. The brain adjusts the perception at the boundaries of areas of high contrast, and the diagonal patterns created by the tiny squares distort the

perception of the pictures.

Academic conferences

The Role of Activin A on Recovery after Stroke (Presenter I)

Applications of fMRI to Study Brain Activity (Presenter II)

Poster session topics

Moral Codes III: Spin and regularization

Pathway to a synapse: Motor protein mediated transport of cell adhesion molecules at the onset of synaptogenesis

Mechanisms that mediate abeta-enhacement of tau toxicity in drosophila

Interracial relationship quality and sexual contact as predictors in the extinction of fear of outgroups

Gender differences in planning, attention, simultaneous, and successive (pass) cognitive processes of a hispanic sample using the cognitive assessment system—Spanish version

Functional characterization of the human transient receptor potential channel 7 (httpc7)

Anabolic steroids' effect on ethanol preference in pubertal mice

Anabolic steroids affect emotional memory in female pubertal rats

Pcreb expression in the neurochemical modulation of anxiety by neuropeptide-y in c. Elegans