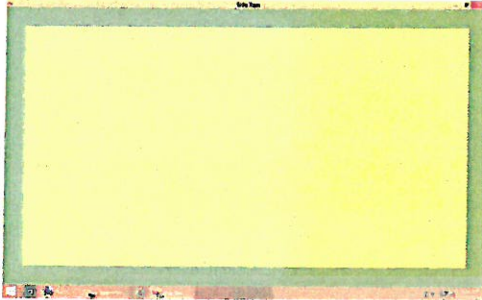


Primate Cognitive Testing Apparatus

Cognitive Tasks

SIDE Task:

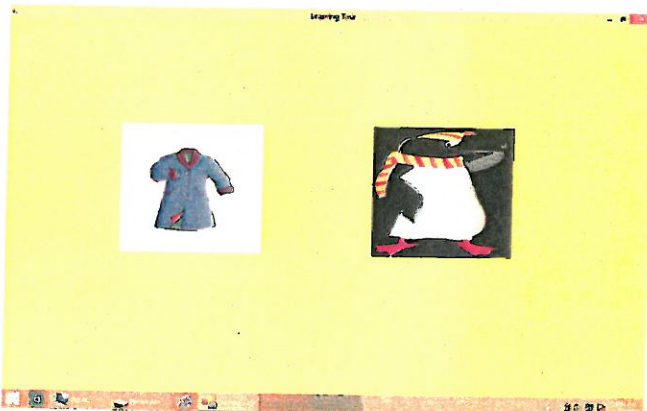


Using the joystick, the test subject is tasked with moving the cursor into contact with one of the walls displayed on the screen. Walls are presented as colored blocks along the perimeter of the screen. The number and length of walls changes as the six trial levels progress. Subjects are tested on their speed and ability to complete the task.

DELAYED MATCHING-TO-SAMPLE (DMTS) Task

This is the same test as the previous, except the initial stimulus disappears after the cursor touches it, and then there is a researcher specified delay before the two stimuli in the upper corners of the screen are presented. This requires the test subject to remember the stimulus for a longer amount of time. Researchers use this task to quantize the short-term memory and recall of users.

LEARNING SET Task



This is a more generalized test that allows researchers to decide on a success criterion, and present two choices on the screen for the user. The user makes the correct selection by a method determined by the researcher. For this system, the subject must learn which of the two images is the correct image based on whether it receives a positive reinforcement after selecting an image.

CHASE Task

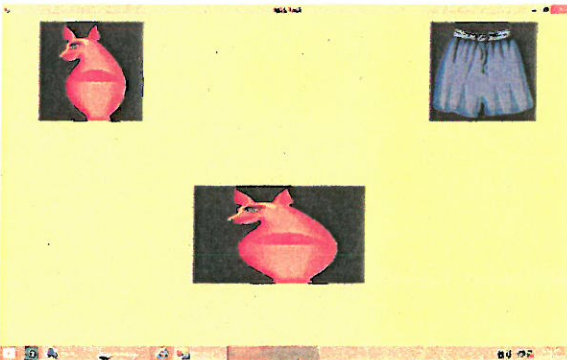


The user manipulates the joystick to move the cursor into contact with the edges of a red circle, which turns green when the cursor touches the circle. The circle may change size and position on the screen between trials. The test subject is assessed based on time and completion of the task.

PURSUIT Task

The test starts like the chase task, where the user moves the cursor in contact with the perimeter of the circle. Once the perimeter of the first circle is touched, the subject must keep the cursor inside of the circle for a researcher specified length of time, upon which the circle turns green.. If the researcher wishes, the size of the circle will get smaller as the trials continue, making the task more difficult.

MATCHING-TO-SAMPLE (MTS) Task



The test subject is presented with a stimulus in the center of the screen and two stimuli in the upper left and right corners of the screen. One of the stimuli matches the original, the other side does not. The user moves the cursor to touch the matching stimulus.