Purpose:
This Standard Operating Procedure (SOP) adequately provides for the psychological well-being of non-human primates using non-social enrichment methods.

Responsibility:
The Institutional Animal Care and Use Committee (IACUC), Attending Veterinarian, Enrichment Specialist, Principal Investigator, research technician(s), and animal care staff share the responsibility of implementing non-social enrichment strategies.

Frequency of Procedure:
A. Structural enrichment occurs at all times. Cynomolgus macaques (Macaca fascicularis) are housed in double-tiered Allentown caging that meets or exceeds the recommendations stipulated for Group 3 non-human primates in the Guide for the Care and Use of Laboratory Animals; however, animals that weigh up to 15 kg are housed in double-wide enclosures measuring 8.6 square feet. The caging (87%) has mesh dividers, which allow full visual and olfactory stimuli, while limiting tactile stimuli. Baboons (Papio anubis) are housed in Animal Care, Inc. caging, which measures 12 square feet and is capable of expanding to 24 square feet to accommodate a large male or multiple animals. The caging is also fitted with elevated resting structures, and the side panels have dual construction, allowing for tactile stimuli or a blind.

B. Substrate enrichment occurs at all times. The primary enclosures of cynomolgus macaques allow access to a pan or a trough for foraging. Additional perches are added to provide an escape from frightening stimuli and access to the vertical space within the primary enclosures.

C. Foraging enrichment occurs using a variety of materials. Non-human primates are given a foraging board, a PVC pipe, or a metal foraging feeder that is filled with food (i.e., peanuts, sunflower seeds, etc., which require long processing times). Twice a week, a frozen fruit drink with raisins or popcorn is placed on top of the cage to lengthen foraging time. Sani-chips or similar products are used as a substrate for a mixture of seeds, nuts, and raisins, which are dispensed into the bottom of the sanitized caging pan or trough. In addition to treats, whole fruits and vegetables are given three times a week. Variety is maintained through weekly rotation of seasonally available produce.

D. Manipulanda is provided at all times inside or outside the primary enclosures of all non-human primates. The items are rotated and sanitized bi-weekly in order to maintain novelty.
APPENDIX A: EASTERN VIRGINIA MEDICAL SCHOOL STANDARD OPERATING
PROCEDURE FOR NON-SOCIAL ENRICHMENT OF NON-HUMAN PRIMATES

REVISED: SEPTEMBER 4, 2002; FEBRUARY 4, 2010
EDITED: MARCH 6, 2007; NOVEMBER 1, 2007

Required Documentation:
Primate Enrichment Log

Required Materials:
Personal protective equipment (PPE), puzzle and foraging feeders, foraging boards, Plaque Attacker devices, Kong toys, stainless steel mirrors, tennis balls, PVC accessories, whole fruits and vegetables, shelled nuts and sunflower seeds, dried fruits, popcorn, etc.