

# Evaluating for Success

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Evaluation of enrichment is an essential component of all enrichment programs. In 2014, a welfare-based enrichment evaluation program was created and implemented at the Saint Louis Zoo. This program has enhanced animal welfare since its inception and is applied to a variety of species in the zoo's River's Edge area, including black rhinos, Asian elephants, dwarf mongoose, Egyptian geese, and more. Utilizing Microsoft Excel, the program combines an Enrichment approval form, Enrichment Catalog database, Enrichment Evaluation database, Enrichment Calendars, and Enrichment Quarterly reports. This system can be adapted for use for all species and institutions. Enrichment evaluation ratings are recorded and then computed into pivot charts, which are used to create quarterly Enrichment Reports. These keeper-produced reports are shared with zoo management and fellow keepers. Species-specific goals are generated for increasing enrichment effectiveness and welfare by combining behavioral goals with the data generated in the Enrichment Reports.

## Enrichment Approval Form

For every new enrichment item an enrichment approval form must be filled out. Each form contains boxes for keepers to insert photos of the item, behavioral goal for the species, and a written description. The forms are also password protected. Only the zoological managers, curators, and veterinarians have the password for ease of simply checking a box to signify if the item is approved or not.

## Enrichment Catalog Database

Once an item has been approved it is entered into the Enrichment Catalog database. If the item was not approved it is entered into this same database, but under the "Disapproved items" tab.

Each disapproved item listing also includes the reason that it was not approved.

The Enrichment Catalog database is easily searchable with the use of built-in filters. Each enrichment item listed is hyperlinked back to the approval form for ease of access for keepers and managers.

## Enrichment Calendar

Calendars are made one month at a time for each species. At this time, the keeper making the calendar will change the fill colors in the excel file in order to track the usage of the items in the calendar.

It is important to track the usage of items so each enrichment item is evaluated frequently.



## Enrichment Evaluation

All enrichment items are evaluated via direct observation the first time the item is given to a species. Each enrichment item will then be evaluated a minimum of every third use, either directly or indirectly. After an item has re-adjustments made to it, it will be evaluated via a direct observation at its first use.

During the evaluation process, each enrichment item's behavioral goals (found on that item's enrichment approval form) will be taken into account. Re-adjustments may be suggested in order to achieve these behavioral goals.



## River's Edge Enrichment Evaluation Rating System

### Direct Evidence Scale (D)

*This occurs when the keeper directly observes the interaction between animal and enrichment item*

### Rating

**D0** = Undesired Response (i.e. ingestion, device hazard, avoids item, interacts dangerously or aggressively with item, etc.)

**D1** = No Observed Interaction with Enrichment

**D2** = Animal Orients Toward Enrichment, but has NO Physical Contact with Item

**D3** = Between 1 to 5 Visits or Minutes of Interaction with Enrichment Item

**D4** = Between 5 and 10 Visits or Minutes of Interaction with Enrichment Item

**D5** = Greater than 10 Visits or Minutes of Interaction with Enrichment Item



## Indirect Evidence Scale (I)

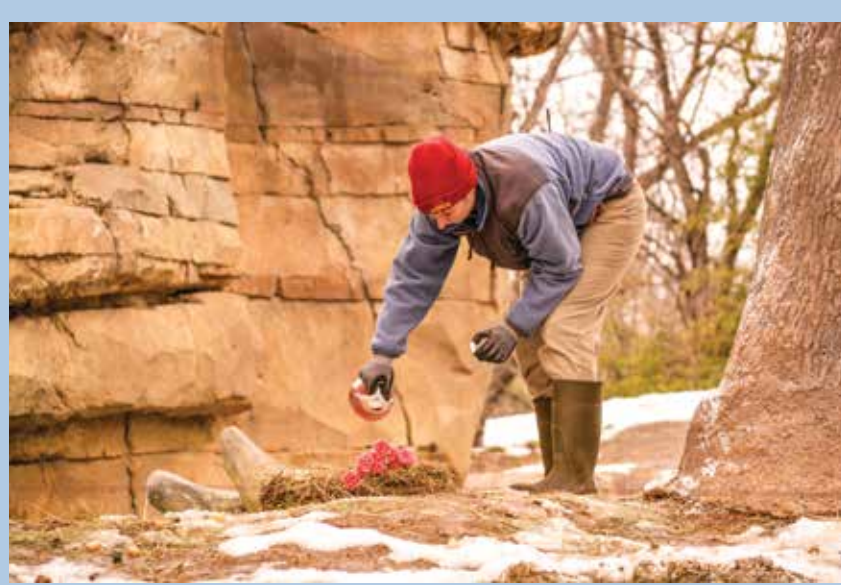
*This occurs when the keeper indirectly observes how the enrichment item may have been interacted with by the animal. This would be a delayed observation of the enrichment item ONLY.*

## Rating

**I1** = No Evidence of Interaction of Enrichment Item (i.e. Untouched Box, Nothing Moved etc.)

**I2** = Moderate Evidence of Interaction of Enrichment Item (i.e. Box moved, Scent marked etc.)

**I3** = Significant Evidence of Interaction (i.e. Box completely destroyed and scattered etc.)



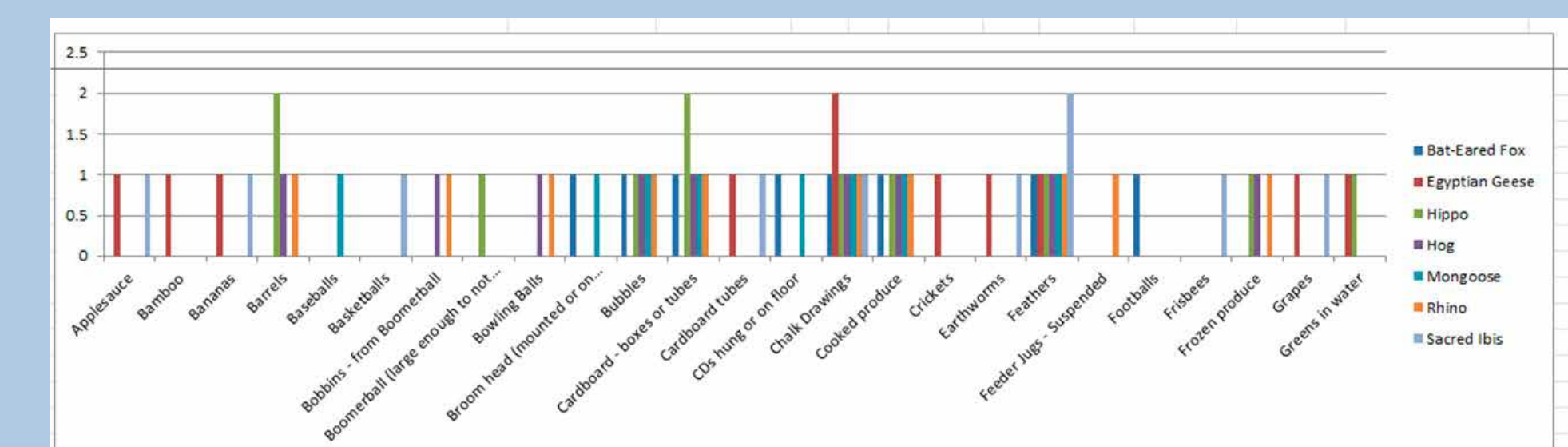
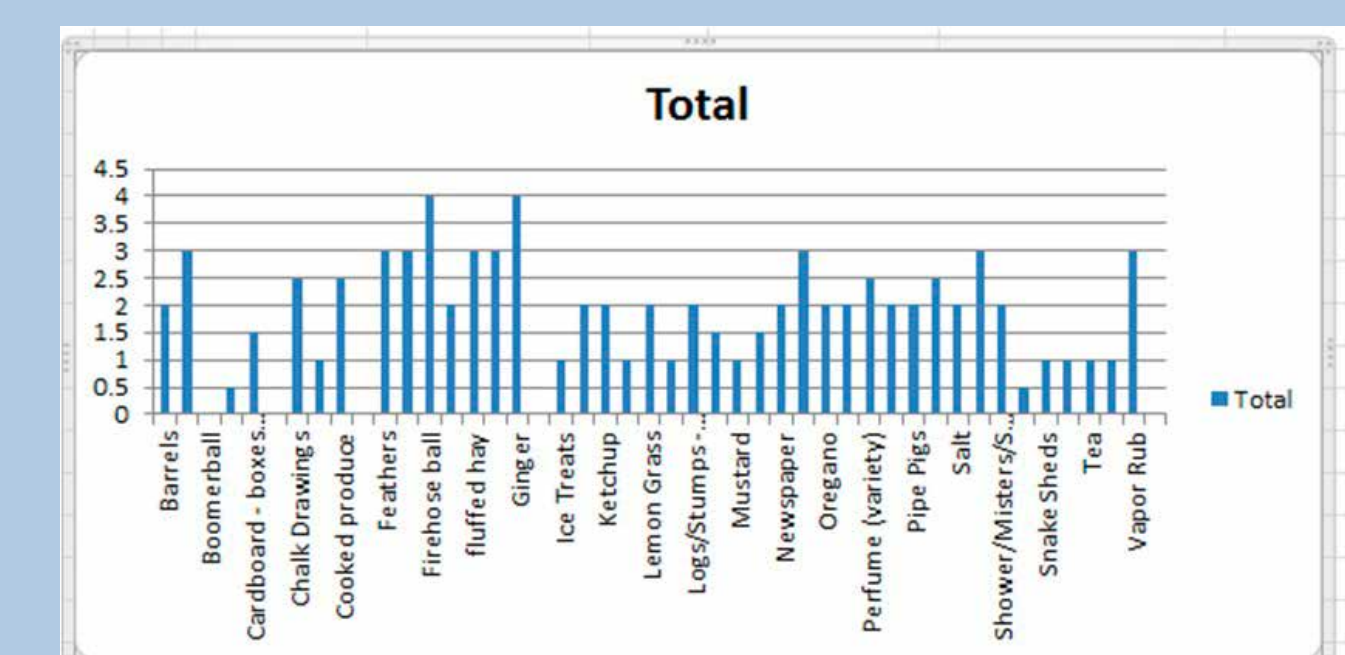
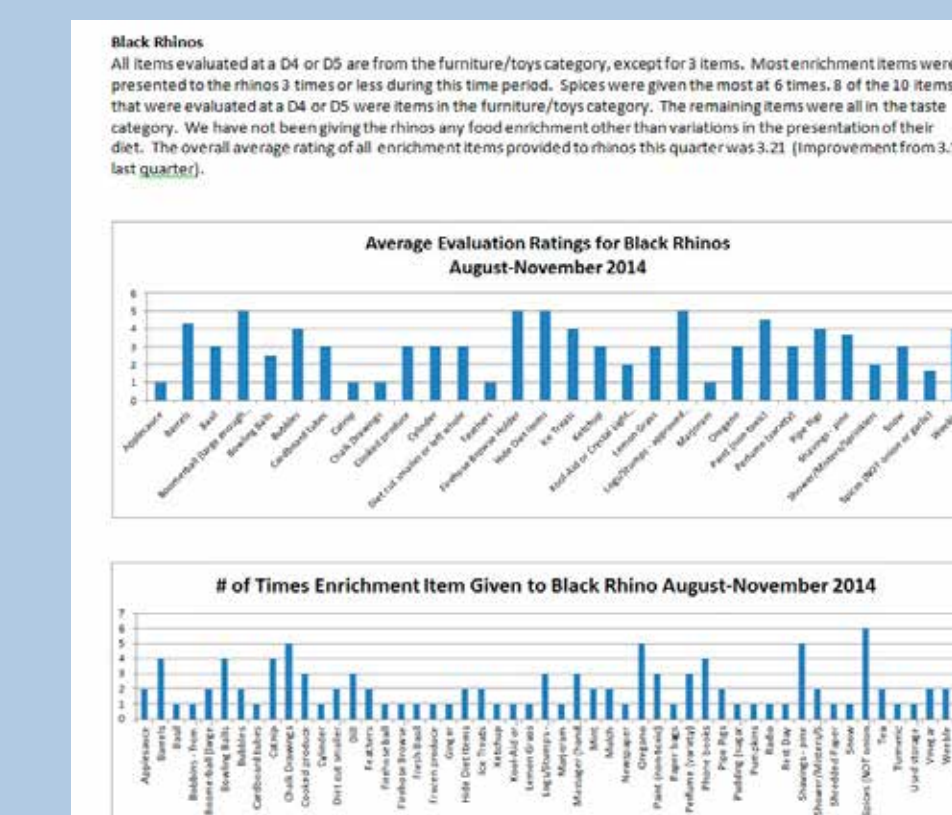
Evaluation ratings are recorded in the River's Edge Enrichment Calendar and Evaluation Database.

- If an item is evaluated at a 0, a re-adjustment will be suggested before its next use.
- If an item is evaluated at a 1, three times in a row, a re-adjustment will be suggested.
- If an item is evaluated at a D5 more than 10 times, the item will be considered a "high-ranking enrichment item" and will no longer need to be evaluated every third use.

## Quarterly Reports and Goal Setting

Quarterly (March, June, September and December), the River's Edge Enrichment Committee representative will examine the evaluation results and produce a report to River's Edge management and staff. At this time, a meeting with the River's Edge unit may be suggested and re-adjustments to our enrichment program may be recommended. During these meetings behavioral goals will be discussed for each species and a list will be developed for furthering the overall goals of animal enrichment in the River's Edge.

Pivot tables are used to illustrate the average evaluation rating each species in the River's Edge receives for all items given and the number of times each species received all items. This allows the River's Edge staff to set goals such as: suggest a re-adjustment for Sacred ibis paper bag enrichment or brainstorm new ideas or re-adjustments to heighten rhino scent enrichment.



## Thank You!

Thank you to the Saint Louis Zoo River's Edge management and keeper staff for their continued support in undertaking this new enrichment evaluation program.