

## WHAT IS REAL ENRICHMENT?

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As an animal behavior consultant, I spend much of my time analyzing and addressing animal behavior problems. The problems are far-reaching: the elephant that tries to kill people, the gorilla that won't raise her young, the polar bear that paces, the ostrich that won't come in at night, the lion that won't go out in the morning, the dolphin that won't socialize with other dolphins, the chimp that beats up other chimps, and so on. The tools of my trade include a combination of positive reinforcement training and environmental enrichment techniques. Early in the process, I always ask if enrichment is currently being done. The good news is that the answer these days is almost always "yes". The bad news is that "yes" isn't necessarily the good news I thought it was. "Yes we do enrichment" can mean anything from throwing a plastic ball into the cage and leaving it there for the next three months, to scattering the same diet in the same places around the exhibit everyday, to simply housing animals socially, to the ideal scenario of planning and implementing multiple enrichment activities on a daily basis. There are some obvious differences in the impact of these diverse methods of "doing enrichment", and only a narrow range that I would call real enrichment.

Enrichment is only effective if it has a real purpose, and if it triggers real results. The literature now offers numerous papers that define enrichment, present enrichment studies, and provide innumerable enrichment ideas. The need for variety in enrichment objects is well-documented. Yet, this information is not always applied. Enrichment should be a positive, productive, interesting, challenging, stimulating pursuit for animals, that is rooted in "natural" behavior. From a problem-solving perspective, effective enrichment should contribute to the resolution of a problem by addressing the underlying causes, and at the same time stimulating desirable behavior. A tall order, but if systematically applied, enrichment is a powerful tool for effecting change. To be successful, I suggest three steps for doing real enrichment:

- 1) Clearly define the purpose.
- 2) Identify strategies and methods of implementation.
- 3) Schedule, implement and evaluate results.

To better understand this process, consider the example of a pacing bear.

Why does a bear pace? There are many potential causes of an abnormal behavior like pacing, including boredom, fear or discomfort, social pressures, general or specific stressors, and lack of control over external events. Through careful analysis and some educated guessing, determine which factors seem relevant. The purpose of the enrichment is to address those factors. Next, identify the best enrichment strategies for the situation. Conquering boredom, which is almost always a factor, calls for a more diverse environment. So, enrich with different substrates, bedding, and "furniture". Increasing the amount of stimuli, overall activity, and opportunity to perform purposeful behaviors is also critical. Bears engage in object manipulation, so provide toys and novel objects. They spend much of the day in feeding behaviors, so choose enrichment that increases the time and complexity of feeding such as: feeders that are triggered by specific behaviors, objects that must be opened or disassembled to reach the food, fish and insects that must be hunted and caught, and food that requires reaching, digging, swimming, or climbing.

Use environmental enrichment to address fear or discomfort by creating sheltered or screened areas, comfortable resting spots, and transition zones between holding and exhibit. Acclimate animals to scary areas by loading those areas with environmental enhancements and enrichment items. Create visual barriers and multiple resting and eating locations to reduce social pressures. And provide more complex feeding challenges to increase the bears' overall choice and control.

Finally, implement enrichment and evaluate results. This is best done by scheduling enrichment on a daily basis for the entire month. This insures variability, provides a record of what is done, allows for preparation of items ahead of time, does not make enrichment dependent on only the motivated keepers, and eliminates the chore of daily brainstorming of enrichment ideas. Marking a plus or minus records the effectiveness of each day's enrichment. This, coupled with an appropriate record-keeping system of the target behavior, provides a simple and effective means of evaluation.

Real enrichment, I believe, is not an individual event, but a process. Whether used for problem-solving, or to simply increase the behavioral opportunities of captive animals, effective enrichment requires deliberate planning, implementation, and follow-up. Only then will enrichment fulfill its potential for enhancing the care and welfare of captive animals.