ild animals lead busy lives. They spend hours every day just finding food. But in the zoo, animals don't have much to do. Keepers fix their meals, schedule their time, and even choose their roommates." This inability to

perform natural behaviors causes stress," says David Shepherdson, research coordinator at the Oregon Zoo. So how can zookeepers help?

ANIMAL

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The trick is to provide variety. Keepers give animals new experiences and let them make choices. This environmental enrichment can range from redesigning a chimp enclosure to giving pandas a toy to play with. It takes time, effort, and imagination. But it's worth it."The animals are more content," says Shepherdson. To see why, keep reading.

Chaos sometimes reigned at the chimpanzee exhibit at the Los Angeles Zoo in California. The chimps felt trapped in their enclosure when poorly behaved human visitors occasionally teased the chimps. These people taunted them from a viewing point above the exhibit, sometimes even throwing trash down on the apes. The stressed chimps reacted by throwing trash back and tearing around their enclosure banging on things. Something needed to change.

"I wanted to encourage fun behavior between chimps and people," says zoo planner Jon Coe. He designed a new habitat that includes high perches like artificial tree stumps and rocky ledges so that chimps meet visitors eye-to-eye. And he gave chimps choices. An ape can hide from view or crawl through an artificial log to greet a curious child approaching from the other end. A glass barrier separates the two. Now, instead of pitching projectiles over the walls, chimps and visitors enjoy calm, friendly encounters.

**BY ALINE ALEXANDER NEWMAN** 

AT THE ZOO



## PASSTHE POPCORN

Kevin Hodge, carnivore supervisor at the Houston Zoo in Texas, had a 290-pound problem. What should he do with Krishna the Amur tiger when the lawn in her exhibit needed mowing or the trees needed pruning? For safety's sake, he had to lock the powerful 19-year-old feline (inset) inside her night quarters, but he worried that she would be bored. So he moved a television into the hallway outside her enclosure and started a video. "We thought she'd watch awhile and be done," says Hodge, "but she plopped herself right in front of the TV and watched the whole thing." When a keeper absentmindedly blocked her view, Krishna stared at him and growled. When he moved, the tiger's eyes returned to the screen. Watching videos became part of

Watching videos became part of Krishna's routine. But the big cat was fussy. She wouldn't watch just any movie. It had to be *The Lion King*.

## SHARE BEAR

Di Di, a teenage giant panda, never had a toy. He lived in a small enclosure in China, where his keepers didn't yet understand the importance of enrichment. Ron Swaisgood, codirector of the panda team at California's San Diego Zoo, visited there and took pity on the bored bear. "He needed something to do," says Swaisgood, who brought Di Di a big burlap sack stuffed with straw. The panda was suspicious at first. He sniffed. He jumped back. He poked it with his paw. Then suddenly, he pounced. Clenching the bag in his teeth, Di Di somersaulted around his pen.

His neighbor Fei Fei watched through the fence. Seeing her, Di Di stopped and dragged his sack over. He shoved it toward Fei Fei (right). The wire mesh between them bulged and flexed as the two bears played together like pandas in the wild.



## DIFFERENT STROKES

The 11 squirrel monkeys at Alma Park Zoo in Brisbane, Australia, spent half their time sitting around. To get them up and moving, animal scientist Julia Hoy asked their keepers to hide cut-up fruits and vegetables around their enclosure. This increased the monkeys' activity.

"But every one of them behaved differently," says Hoy. "Some thrived on the extra work and others turned aggressive, biting zookeepers or stealing." So Hoy set up surveillance cameras to monitor their behavior.

One freethinker, Pugsy, focused on those cameras. They were mounted inside glass boxes, and Pugsy hung upside down in front of them (below). She danced back and forth and studied her face. Once she smeared dirt on the lens with her thumb. Who did Pugsy think the monkey in the reflection was? Nobody knows. But one thing's for sure: If she could talk, she'd probably say, "Forget hiding my food. I'm just happy hanging out with my new playmate."



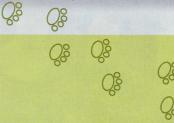


16 OCTOBER 2009

# OFHOME

The rare Indian pangolin-a small, scale-covered mammal (below)rarely reproduces in captivity. But wildlife biologist Brij Kishor Ğupta may have solved that problem. When the Nandankanan Zoo in Orissa, India, could not get any of its six pangolins to breed, he advised the zoo's staff to visit where pangolins still survive in the wild. The staff dug up red soil mixed with small stones found there and brought it back to the zoo. They piled it three feet deep in the pangolins' cage, building a mound on top so the animals could make a burrow. Meanwhile, Gupta gathered colonies of the red ants pangolins prefer, along with dead leaves, and placed them in the enclosure. Finally the pangolins seemed to feel at home. "In no time, they started mating and reproducing," says Gupta. Soon the first Indian pangolin ever born at the zoo arrived.





## POLAR BALL

I WONDER IF THE NBA SCOUTS ARE VATCHING MY DUNKING

SKILLS.

Even Boris the polar bear celebrates Halloween at Point Defiance Zoo and Aquarium in Tacoma, Washington. But he doesn't dress up. He plays pumpkin basketball in his pool. Lead polar bear keeper Derek Woodie supplies the pumpkins, and the game begins. The 1,000-pound point guard dribbles underwater, slapping the buoyant veggies down with his huge paw (above). When the pumpkins pop back up, he tosses them into the air. During timeouts, he floats on his back, hugging a pumpkin to his chest.

Two hours later, it's game over. Boris wraps his giant mouth around a partly squashed pumpkin and carries it out of the pool. Lying down, he tucks it under his head and closes his eyes. "He's just like a kid," says Woodie. "The newest toys are always more fun."

Pumpkins are so much fun that Boris can't "bear" parting with his.



## FOOD FORFUN

Life seldom goes as planned, and neither do enrichment activities. "You have to try a lot of things," says consultant Valerie Hare. Even then, you get surprised. Take the bamboo sharks at Moody

Take the bamboo sharks at Moody Gardens in Galveston, Texas. Hardly maneaters, these slender swimmers are so gentle that divers hand-feed them. To get the sharks and rays that share their tank eating more naturally, Hare devised a feeding tube. Divers stuffed the tube with fish bits and placed it on the gravel in the bottom of the tank.

The shark that found the tube spent 40 minutes pushing, flipping, and rolling it with his nose. But when the food floated out, sharp-eyed rays swooped down and sucked up every bite. As for the shark, he kept playing with the pipe. Why? Apparently he was hungry for fun instead of fish.

### SHOWER POWER

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Rub-a-dub-dub. Who needs a tub? Certainly not the African elephants at Ohio's Columbus Zoo. After keepers had a shower mounted inside the elephants' barn, the pachyderms no longer had to wait for someone to drag out a hose. Elephant manager Harry Peachy dabbed peanut butter on the motion-activated switch only once. The elephants quickly learned that they could trip the switch (above, left), hurry to the shower (above, right), and bask in a two-minute spray of warm water whenever they wanted.

Belinda used the shower a lot—but not for bathing. She used it to soften her hay by soaking it before eating. And this elephant "queen" didn't bother operating the switch herself. She'd place a bundle of hay under the showerhead, look over her shoulder, and give a low rumble. One of her "ladies-in-waiting" would rush across the paddock and turn on the shower. "If Belinda wanted more water," says Peachy, "one of them would come back and do it again."



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