



Preyer Maché Animals An Enrichment Adventure

Bruce Campbell

Chaffee Zoological Gardens, Fresno, CA

Preyer Mache Animals as Enrichment

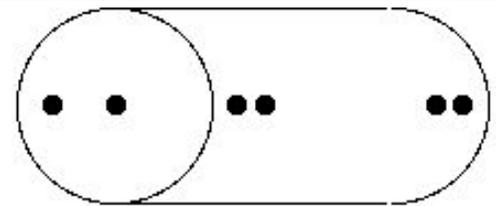
Making and using papier maché animals, as enrichment is a wonderful project for kids of all ages. Humans can learn about why we use enrichment in our zoo and creative ways to enrich our charges. We can also use the papier maché animals as a teaching tool to learn about stalking, hunting and social interaction. Animal's benefit by getting enrichment that is as close to real prey as we can place in exhibits.

Note: Be sure to receive approval from senior keeper and veterinary staff for any new enrichment project.

For large carnivores, a large prey animal is required. The following will allow the fabrication of a papier maché animal that is 12" wide, 24" long and 48" tall. 24" horns give an overall height of about 66". Smaller carnivores can receive a version scaled down to fit their needs. Other modifications to the basic animal will allow a lot of flexibility.

Three or four sizes of cardboard tubes are required to fabricate each size of animal. The main body tube is made from a 12" Quick Tube® concrete form. These come in 48" lengths. Quick Tubes® are plastic lined. Be sure to remove this lining before using the tubes. Dividing these in thirds provides a 16" long 12" diameter body. Legs and neck are 3" – 4" in diameter and approximately 18" and 8" respectfully. The length of cardboard tube determines the exact length of legs and neck on hand. I try to cut tubes in equal pieces to minimize waste. The legs need to be made from thin wall tubing as the thicker wall tubes add nothing but weight, making the finished product much heavier and more susceptible to damage during assembly and any transport required. Legs and necks have been made from carpet rolls and tubes from print shops. The local carpet outlet is more than happy to let me go through their dumpster and haul off anything I please. The head is a piece of tube approximately 6" diameter and 8" long. Heads have been fashioned from 6" and 8" diameter Quick Tube® concrete forms, oatmeal containers, and an assortment of other imaginative tubes.

Cut all tubes in advance. A saber saw with a medium blade will easily cut the cardboard tube. There is no need to be exactly precise with the cuts as this is to be fun not a chore.



Six holes in the body. Four on the bottom for the legs. Two on the top for the neck. Bottom holes for legs ~ 1" from each end and ~ 1" apart.

Neck holes Exactly opposite leg holes. ~ 1" from end and just a bit wider than the neck between the two holes.



One hole through each leg ~ 1" from end.



Drill two holes in bottom of head with the same spacing as the neck holes in body.



Four holes in neck. Two holes opposite each other in each end ~1/2 inch from end of tube. If top and bottom holes are exactly lined up animal will look straight ahead. Twist one set of holes slightly and animal will look off to the side.

Illustration #1

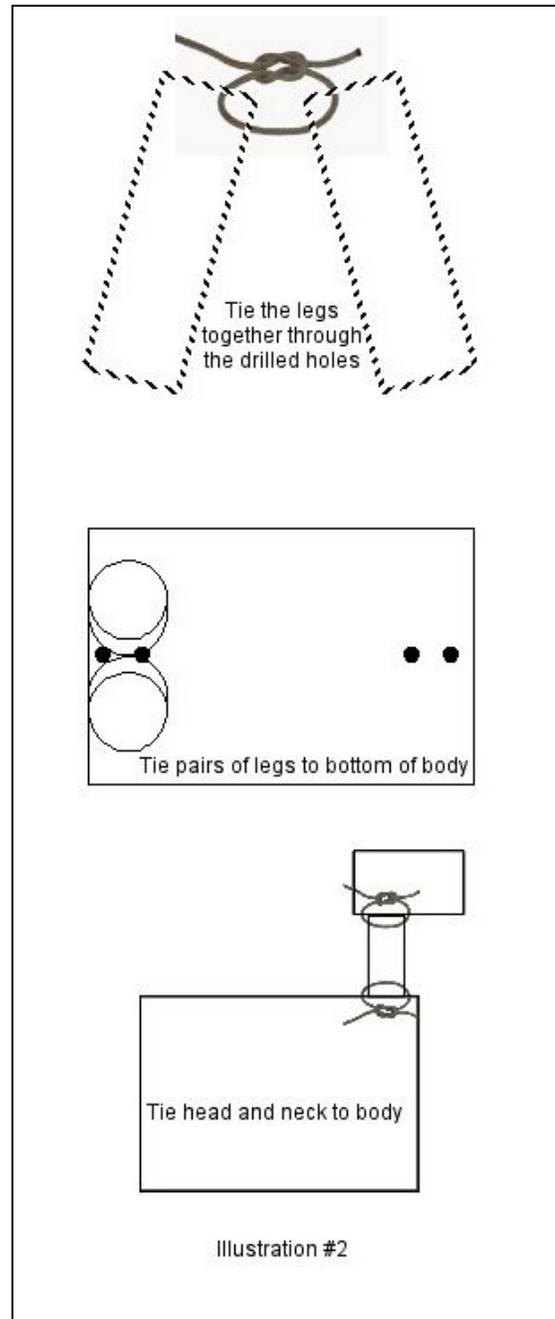
Drill holes in all the body parts. Use a $\frac{1}{4}$ " to $\frac{3}{8}$ " drill bit. This size allows for easy threading of the tendons that will hold everything together. See Illustration #1 for approximate hole locations.

All of the body parts will be tied together with sisal twine. These "tendons" are in small enough pieces that they do not pose a problem for the carnivore. The twine allows the bodies to stand by them selves as soon as they are tied together and make the application of papier maché easy as all parts are immobilized. The tighter the pieces are tied together, the sturdier your animal will be during the application of the papier maché. See Illustration #2 for tying suggestions.

When animal is completely tied, start the application of papier maché. Mix flour and water to the consistency of pancake batter or just slightly thinner. (During the application process, the batter will get thicker as moisture is absorbed into the paper.) Using strips of newspaper about two inches wide, dip the paper into the batter and cover all seams. Apply several thin layers over a few days. This will allow plenty of drying time. The papier maché has little strength until it is fully dry. Fill in all holes and wrinkles with the subsequent layer of paper. The application does not have to be perfect, as it will not show when the animal is complete. The important point is to be sure to have the papier maché thick enough to give the animal good strength for any transporting that is required. While applying the coats of paper, leave a trapdoor hole into the body tube. A perfect place for this hole is in the posterior end of your animal, under the tail. If you seal the body tube and have neglected to leave a hole, one can be cut through the papier maché very easily. This will be used to place goodies inside for the predator. Apply an extra layer of papier maché around the hole for added strength.

When these coats are dry it is time to accessorize your animal with ears, tail and horns or antlers. Ears can be fashioned from cardboard cutouts and machéd to the head. A flattened paper towel roll makes a perfect tail. Antlers can be cut from cardboard and inserted into slots cut in the head. Long spiral horns can be formed from a sheet of newspaper. With your hands as goopy as possible with the batter, roll a sheet of newspaper into a tight cylinder that is just slightly cone shaped. Twist to a point at one end and flatten the other end for an anchor point to the head. Coat with a couple of additional layers of batter and allow to completely harden before attaching to the head. Supporting the horns from the tip may be necessary if they are long. I have found that the longer the horns (within reason) the more dramatic the effect when these animals are placed in a display with predators. See Illustration #3

Use non-toxic child grade paint for your animals. You can let your imagination run wild with the color scheme. Basic hoof stock colors will always work well. Other suggestions can include: bright colors to see what difference coloration makes to a carnivore, pop art, the colors of a rival school (for a high school after-hours event), etc.



Now the fun begins!

Load the animals with goodies for the predators. Put the carnivore's favorite treat in the trapdoor under the tail. For tigers, we have used knucklebones, fish and rats. Fruit and peanut butter work well for the grizzly bears and

use muscle meat or a rat for the serval. Your keepers will know what treat is best and will fit into the dietary plan for the animal. Smear a small amount of ground carnivore diet inside the bottoms of the legs and on parts of the body. Blood can also be poured into the body for added scent.

Coordinate with the carnivore keeper moving the predators off exhibit. Place the animals in strategic locations inside the enclosure. Be sure to place them for good public viewing. Let your predators loose and watch the action. Docents can be at the ready in your viewing areas to explain the action. At special events our preyer maché animals have drawn huge crowds. The approximate feeding time is listed in the brochure or flyer so everyone at the event knows where to be and when. These animals have been used at Earth day, Members Night, Keepers 'n Kritters; a docent fundraiser, and Breakfast with the Animals with equal success. Earth day and Breakfast with the Animals were daytime events. The others were evening events. Our tiger exhibit is well lit and there is very good viewing space for the public.

Let the adventure begin.

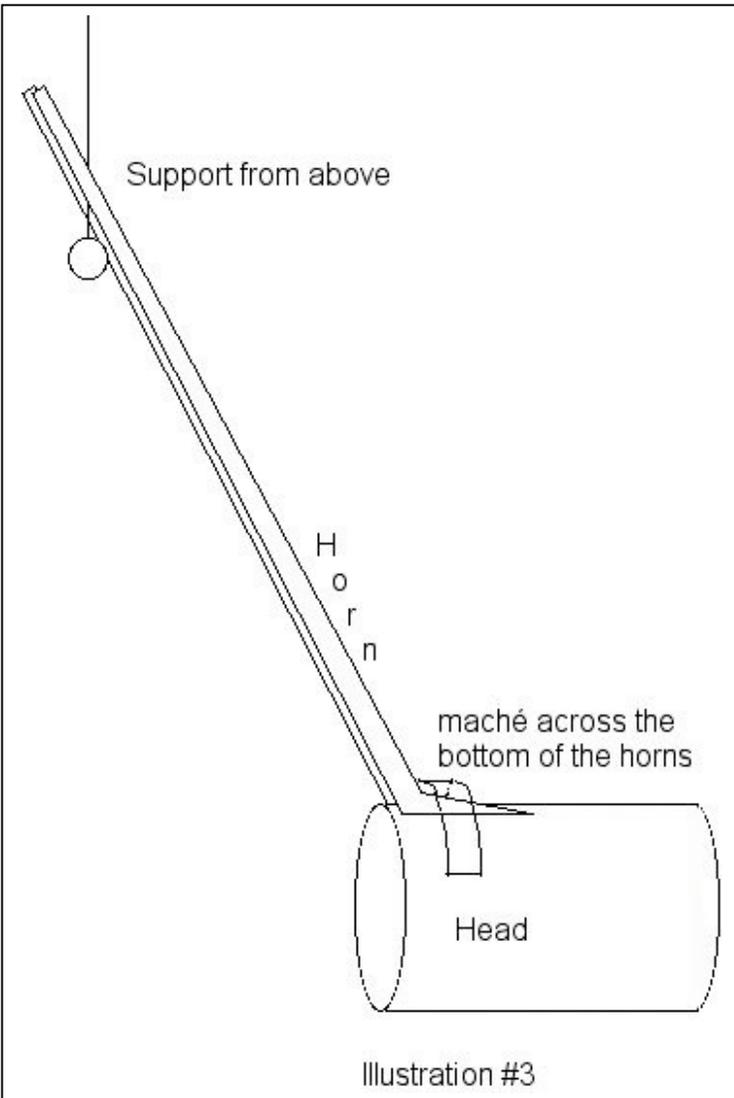


Illustration #3