



The Amazing Shapes of Animal Feet Adaptations

By Carol Whittaker
3rd grade
Science/Visual Arts

Science Standard 3.2.4 Construct an explanation showing how variations in traits and behaviors can affect the ability of an individual to survive and reproduce.

Visual Art Standard 3.V.CR.2: Create a personally satisfying artwork using a variety of artistic processes and materials.

Objective: In a 45 minute class 3rd grade students will demonstrate their understanding of animal feet adaptations that allow them to survive in a particular environment. They will also be able to create a visually pleasing art piece using the elements of contour line and form.

Materials:

1 piece of cardstock per student – copied with attached foot patterns.

1 pair of scissors per student

1 piece of art paper per student

1 pencil per student

Markers, crayons, colored pencils, or other medium of choice

Lesson plan with prompts

Optional: background music with rainforest sounds etc.

LESSON

Pass out a copy of the cardstock printed foot patterns and have each student guess which animal has each footprint. (1st attachment)

Give them *1 minute* and offer to help them, by reading the attached descriptions of the animals (read attachment two without giving students the animal names or # of the description – *5 minutes*)

After reading have students take turns naming the animals. Correct with specific names if needed. Spend *10 minutes* allowing students to discuss why the particular adaptations would give the various animals a survival advantage.

Pass out art paper and have students get out scissors and other supplies. Explain that they are going to use the feet prints to form an interesting art composition by outlining the prints and overlapping them to form interesting shapes. They are allowed to use only 5 or 6 colors. They must choose colors that they feel look nice together. Point out that as the contour lines overlap, they form unique shapes.

Each shape needs to be filled in with a color that is different from the surrounding colors. Encourage them to use only three or four feet prints. They should not overly repeat shapes to the point that they form so many small shapes that the project becomes arduous. Remind them of any previously taught composition skills and allow them *30 minutes* to complete.

Compositions stand out best when all contour lines are outlined using black sharpies or flair tips. For fun, I usually put on a background CD I have of animal sounds in forests and other habitats.

Attachment 2 Animal Descriptions

#1. My back feet are webbed but are also human like so I can not only swim but my thumb helps me to hold on to the logs and sticks that I use to build my home. I love building dams and cutting down trees. [Beaver]

#2. My wide round feet have a spongy elastic 'shock absorber' that allows me to walk silently. The sole of my foot is ridged and pitted to help my sure footedness. My five toes are buried inside the flesh of my foot. And often I have only three or four toenails. My feet help my solid legs keep my large frame upright [Elephant]

#3 My stick-like feet are light but still sturdy. They tuck up neatly next to me when I am flying. [Finch]

#4 My feet turn bright orange in late fall and winter during courtship and pairing. Then in summer they turn drab again which helps camouflage me when I'm nesting. My webbed feet help me to paddle in water, as well as walk on land. They also act as a radiator against the cold. [Mallard Duck]

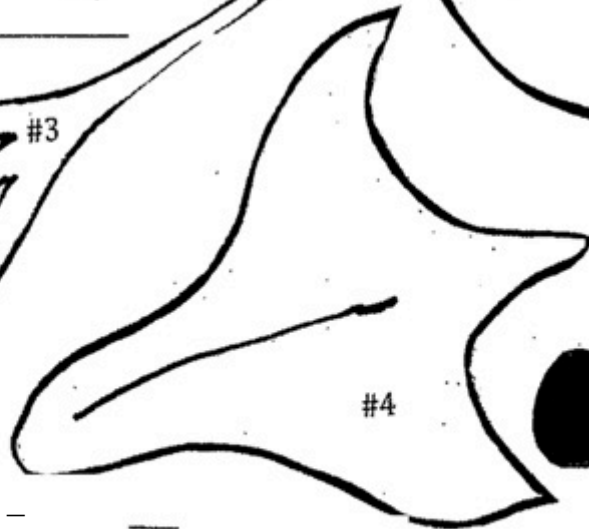
#5. The sticky pads on the ends of my feet provide a wet adhesive. This helps me produce suction to cling to vertical surfaces like trees and vines I have no trouble even walking up a pane of glass. [Tree Frog]

#6. My feet, also known as paws, are black or brownish with wrinkled skin on my pad. I have long curved claws that range in color from yellowish to brown. They help me dig up roots and berries and even dig out my den. They also can help me rip apart food and climb trees My claws can be twice as long as my toe pads. My feet help stabilize my weight and allow me to move quickly on four legs. [Brown Bear]

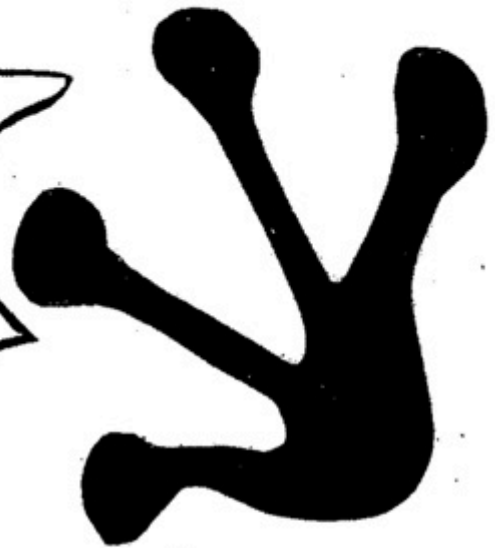
#7 I live in Canada and the northern United States. My hind feet are long and wide. I often communicate by thumping these large feet against the ground. With these large feet I can run up to 27 miles an hour. I can jump vertically high into the air and I can quickly change directions. All of these strategies help me avoid capture by my predators. [Snowshoe hare]



#3



#4



#5



#7