Fantastic Animals

Inspire students to design new inventions—part tool and part animal—that are both playful and functional.

Do your students know that prickly weed burrs inspired the invention of Velcro? That the telephone receiver is based on the structure of the human eardrum, or that studying bats in flight could one day lead to better airplane navigation? Designers and scientists are always observing the natural world for ideas and inspiration. In a process called *biomimicry,* they apply what they learn from nature to design a better and more sustainable world.

Classroom Activity: Natural Inventions

Share the "Design" poster in the center of this issue, and ask students to imagine a world where characteristics from living creatures are combined with useful tools. Designer Rafael Esquer was inspired by Picasso's bird vase to populate the poster with just such bizarre, imaginary creatures!

DESIGN CHALLENGE:
Design combines the functional (how something works) with the playful (what makes us laugh or surprises our senses). Have children imagine and design a new invention: part tool and part animal. What kinds of marvelous things could it help them do?

THE DESIGN PROCESS:
•Study the many special characteristics that help animals leap, run, swing, swim, grab, or fly. (Just to name a few!)
•Identify, sketch, and describe a special characteristic that inspires you, such as the ability of a snake to slither.

- Combine this characteristic with a machine or tool to help you get a job done. (How could octopus arms inspire a better construction crane? How would gecko feet inspire new shoes for safer rock climbing?)
- Illustrate or create a collage or model of your invention. Does it have a special name?
- Create an advertisement for your creature invention to promote how it works and what it can do.
- Write a story or myth about your creature, sharing how its special features create a better world and lead to work, play, and adventure.

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