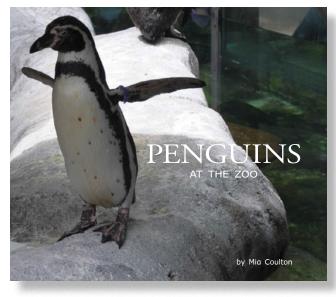
There are 17 different types of penguins ranging in size from only 16 inches to over  $3 \, \frac{1}{2}$  feet tall. Although they have different body markings and don't all live in very cold places, all penguins share some characteristics. All penguins are flightless birds, great swimmers, and excellent parents.

Penguins form a bond with one partner during mating season. As a pair, they take turns caring for their young and traveling out to the ocean to feed. This is the most unique feature of a penguin's life cycle. No other animal father dedicates as much time and effort to caring for their young as penguin fathers do.



The penguin in the MRB nonfiction/informational book, **Penguins At The Zoo**, is a Humboldt penguin.



Photo by Robyn Mundy, Department of the Environment and Energy, Australian Antarctic Division

The largest of all penguins, the emperor penguin in Antarctica, is an extremely attentive father. After laying an egg, the mother emperor penguin carefully transfers it to her male partner. They use only their feet to move the egg. The transfer from the mother to the father emperor penguin is very risky. If the egg breaks, or touches the cold ground, it will immediately freeze and die. The transfer is unsuccessful about 20% of the time. That means there are two failures out of every ten attempted transfers.

After the egg is successfully transferred, the father balances it on top of his feet, covering it with the brood pouch under his belly. A brood pouch is a very warm layer of feathered skin that will keep the egg warm. The egg will incubate here at about 100 degrees Fahrenheit for two months until the chick hatches.

While the male is caring for the egg, the mother emperor penguin travels to the sea to feed. The male penguins do not eat while they stand guard over the egg, keeping it warm. By the time the mother returns from the sea, the waiting father will have lost 45% of his body mass. Starving, he heads directly for the sea to feed. It's now the mother's turn to watch over the young chick that has hatched. She feeds it and keeps it warm under her own brood pouch.

## Practice Gross Motor Skills with our Over-Easy Activity

You will need I tennis ball for each team.



In teams of 2 people, select one team member to be the female penguin with the egg and the other to be the male penguin.



In socks, the female penguin should position her feet together to best cradle the tennis ball egg without dropping it to the floor.



The penguin pair will waddle toward each other and work together to transfer the egg from the top of the female's feet to the top of the male's feet.

Remember: the egg must not be bumped hard or allowed to touch the frozen ground!

Try the transfer 10 times, writing down the results as you go.

What is your percentage rate?

