

About REWHC

We are employees of Raytheon Company in Portsmouth, Rhode Island, making a difference in improving the environment around our workplace.

As a member of the Wildlife Habitat Council (WHC), Raytheon encourages its employees to participate in "Wildlife at Work". This program brings employees together with local organizations to:

- Increase Biodiversity,
- Increase Environmental Awareness,
- Protect our Environment for Future Generations.

Acknowledgements

- Thanks to Amy Wright whose "Create a Bird" flipbook provided the concept for this activity.
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- Thanks to Heather McKenna for her editorial and layout assistance.
- Thanks to Lauren Parmelee for creating the questionnaire.



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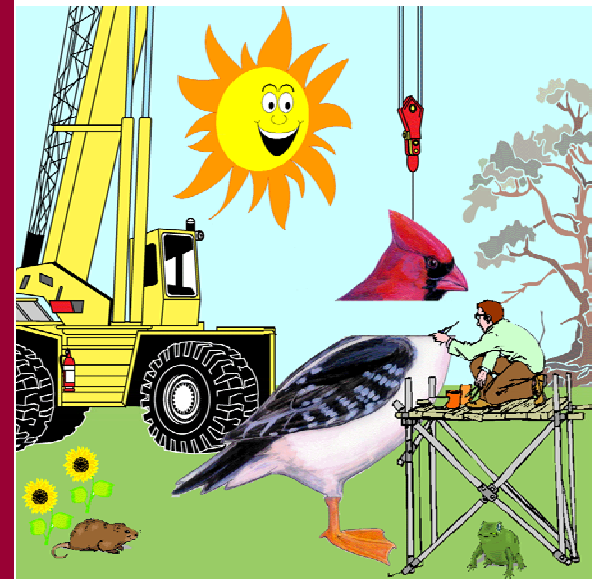
REWHC



Raytheon Employees
Wildlife Habitat Committee

Create-a-Bird

A cut-n-paste activity



Build a bird of your own and place it in its home.

- Choose its head, body, and feet,
- Choose its habitat,
- Choose its food,
- Score its chance for survival,
- Tell its story.

Creating a Bird of Your Own

Birds have specialized beaks and feet to help them find food and eat in the places they live. Birds tend to be found in areas where their food is plentiful. Getting the right combination of beak, feet, food, and habitat is important for a bird's survival, usually taking many thousands of years to get right.

As a REWHC Scientist, you have the awesome responsibility to get the right combination in minutes!

1. Read about beaks, feet, and food,
2. Choose a habitat where your bird will live (pond, forest, meadow, or marsh),
3. Determine what food would be found in the habitat you selected. Cut-n-paste it appropriately into your bird's environment,
4. Select a beak, body, and feet which help your bird find and eat the food you selected. Cut-n-paste them appropriately into the habitat you selected,
5. Name your bird and discuss how your selections affect your bird's chance of survival.

In This Booklet:

- Descriptions of beaks, feet, and food,
- Four habitats to paste into,
- Eleven foods you can cut-n-paste for birds to eat,
- Six birds whose parts you can cut-n-paste,
- "The Story of the Bird I Created" (fill-in-the-blanks)
- A "Survival Scorecard" for advanced scientists.

You'll Also Need:

- Scissors,
- Glue or a glue stick,
- Pen or pencil.

Have fun!

Create-a-Bird Activity Questionnaire

We are very pleased to be able to share this activity with students, teachers, and parents. If you try this activity, we would like to know what you think! If you are interested in helping, please answer the following questions and return this form to the address on the rear cover. Thank you!

How old are you? _____

What is the name of the bird you created? _____

What habitat did you put your bird into? _____

What food did you choose for your bird? _____

Did you read the information about birds and their beaks, feet and food before you created your bird? (please circle one)
(All of the info) (Some of the info) (None of the info)

Did you fill in the story of the bird you created on page 17? (Y) (N)

Did you score your bird's survival on page 18? (Y) (N)

On a scale of 1 to 5, how well were the activity directions explained on page 2? (please circle one; 1=Very Easy, 5=Very Hard)
(1) (2) (3) (4) (5)

How many new things did you learn about birds from this activity? (please circle one)
(A lot of new information) (3 or more new ideas)
(1 or 2 new ideas) (Nothing new)

How much did you enjoy doing this activity? (please circle one)
(Liked it a lot!) (Liked it) (It was okay) (Didn't like it)

What did you like or not like about the activity?

Would you like to tell us anything else about the *Create-a-Bird* activity booklet?

Advanced: Scoring Your Bird's Survival

The survival of your bird depends on your choices of beak, feet, food and habitat. Use the table below to score your bird. Success is based on:

1. Ability of Habitat to Support Food,
2. Ability of Bird to Reach the Food,
3. Ability of Bird to Catch or Eat the Food

HABITAT	FOOD	PTS	SCORE
Pond	Fish, Duckweed, Frog	5	
Forest	Sow Bug, Spider, Ant, Beetle, Mouse, Snake	5	
Meadow	Mouse, Thistle, Sunflower, Snake	5	
Marsh	Fish, Snake	5	
HABITAT SUPPORTING FOOD SUBTOTAL:			









FEET	HABITAT	PTS	SCORE
Swimming	Pond, Marsh	5	
Climbing	Forest	5	
Grasping	Forest, Meadow, Marsh, Pond	5	
Perching	Forest, Meadow	5	
Scratching	Forest, Meadow	5	
Wading	Pond, Marsh	5	
BIRD REACHING FOOD SUBTOTAL:			

BEAK	FOOD	PTS	SCORE
Spear	Fish, Frog	5	
Strainer	Duckweed	5	
Cracker	Thistle, Sunflower Seed	5	
Shredder	Snake, Fish, Mouse, Frog	5	
Chisel	Ant, Beetle, Spider, Sow Bug	5	
Probe	Ant, Beetle, Spider, Sow Bug	5	
BIRD CATCHING AND EATING FOOD SUBTOTAL:			

TOTAL (0=Extinct, 5=Endangered, 10=Threatened, 15=Thriving) :







Birds and Their Beaks

Did you ever wonder why there are so many types of bird beaks (bills)? The most important function of a bird bill is feeding, and it is shaped according to what a bird eats. If you want to learn more about birds, you may want to pay attention to bill shapes! You can learn more about a bird's behavior by looking at the bill and thinking about what it eats. Here are some common bill shapes and the food that they are especially adapted to eat:

SHAPE	TYPE	ADAPTATION
	Cracker	Seed eaters like sparrows and cardinals have short, thick conical bills for cracking seed.
	Shredder	Birds of prey like hawks and owls have sharp, curved bills for tearing meat.
	Chisel	Woodpeckers have bills that are long and chisel-like for boring into wood to eat insects.
	Probe	Long and slender bills for probing flowers for nectar or, in larger birds, ground for insects.
	Strainer	Some ducks have long, flat bills that strain small plants and animals from the water.
	Spear	Birds like herons and kingfishers have spear-like bills adapted for fishing.
	Tweezer	Insect eaters like warblers have thin, pointed bills.
	Swiss Army Knife	Crows have a multi-purpose bill that allows them to eat fruit, seeds, insects, fish, and other animals.

Birds and Their Feet

If you want to learn more about birds, you may want to pay attentions to their feet! You can use them as one of the characteristics to identify birds. If you have already identified a bird, you can learn more about its behavior by looking at its feet and thinking about where it lives. To help you get started, here are some common feet shapes and the habitat they are especially adapted to live in:

SHAPE	TYPE	ADAPTATION
	Grasping	Raptors, like osprey, use their large curved claws to snatch fish from the water.
	Scratching	Pheasants and other birds that scratch the soil for food have nail-like toes.
	Swimming	Ducks and other webbed lined swimming birds use their feet like paddles.
	Perching	Robins have a long back toe, which lets them grab a perch tightly.
	Wading	Wading birds have long legs and long toes to keep them from sinking in the mud
	Climbing	A woodpecker's hind toes enable it to climb without falling backward.

The Story of the Bird I Created

Hello, my name is _____ and I would like to tell you about my bird.

When my _____ bird is hungry, it uses its bill to _____.

Its feet are _____ which help it _____.

Its favorite food is _____, which can be found _____.

My bird's chance for survival is _____.









because _____.

Other interesting information about my bird is _____.

Notes

Birds and Their Food

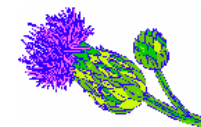
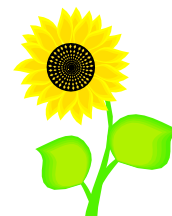
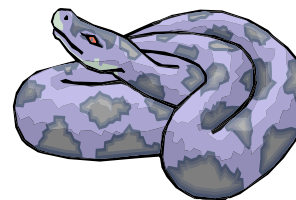
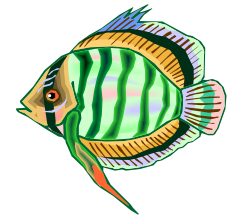
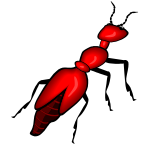
Food for birds is found in many places. Insects such as ants, beetles, and spiders, and non-insect invertebrates such as worms, and sow bugs, and are found under the bark of trees, on the ground and under the soil. Fish are found in ponds and streams. Frogs are usually found near ponds, but some frogs live in the forest too. Snakes are found in trees, under rocks, and on the ground. Some snakes swim as well. Mice are usually found on the forest floor or in meadows. Sunflower and thistle are found in meadows, but may be found on the shores of ponds. Duckweed is found in ponds.

FOOD	TYPE	FOUND
	Non-Insect (Invertebrates)	Under tree bark, under leaf litter, in the soil.
	Insect (ants)	Under tree bark, under leaf litter, in the soil.
	Insect (beetles and spiders)	Under tree bark, under leaf litter, in the soil.
	Mammal (mouse)	Forest and meadows along the ground and in burrows.
	Fish	Ponds, streams, and marshes, in the water.
	Reptile (Snake)	Meadows, rocky outcroppings, trees.
	Amphibian (Frog)	Ponds, marshes, and forests.
	Plants (Seeds)	Thistle & sunflower found in meadows. Duckweed found in ponds.

Does your bird live on this pond?



What food does it eat?



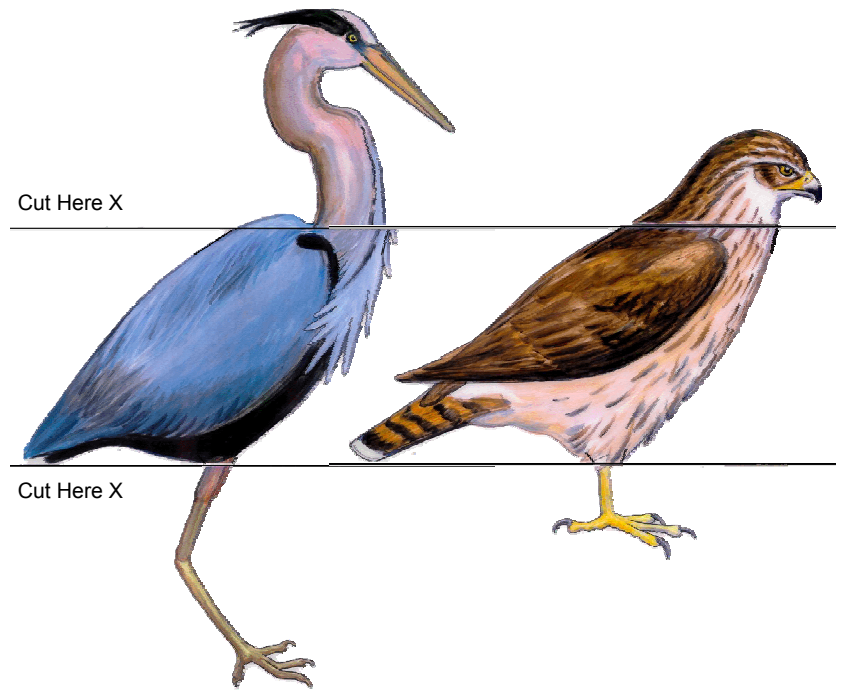
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A detailed painting of a large, gnarled tree trunk in the foreground, with a smaller tree and a landscape in the background. The tree trunk is thick and textured, with visible knots and a dark, almost black, bark. It stands on a grassy field. In the background, there is a smaller tree with yellow leaves, a blue sky with white clouds, and a distant landscape with hills and trees. The overall style is realistic and detailed.

Does your bird live in this meadow?



What beak, body, and feet?




[illegible]

Choosing Bird Parts and Food

The following pages have birds, whose parts you can use to create your bird. After choosing where you want your bird to live, determine the best food, beak, and feet for your bird.

Cut out the bird parts you want to use, making sure to cut where shown so that the new bird parts line up. Use your scissors to cut out the food you want your bird to eat and glue your bird parts and food into the habitat you've chosen and tell the story of your bird!

Does your bird live in this marsh?	The Story of the Bird I Created
	Hello, my name is <u>Billy</u> and I would like to tell you about my bird.
	When my <u>Marshpecker</u> bird is hungry it uses its bill to <u>crack open seeds it finds along the shore</u> .
	Its feet are <u>long with big toes</u> which help it <u>walk in the water without drowning</u> .
	Its favorite food is <u>Sunflower Seeds</u> which can be found <u>on the shoreline in the mud</u> .
	My bird's chance for survival is <u>not very good</u> because <u>Sunflowers usually grow in meadows, not along the shore!</u>
	Other interesting information about my bird is <u>It likes the feel of mud between its toes!</u>

This is an example of what you can do!

Using the scorecard on page 18, the score for this bird's survival would be 10, "Threatened", because while the bird is able to get to its food and eat it with its beak, sunflowers are not usually found in marshes.

What beak, body, and feet?

