MAKE A BIRD WING WITH BUDDY BISON

Birds of all kinds migrate, breed, and live in Great Smoky Mountains National Park. All of these birds have adapted to live different lifestyles in the mountains – some need to soar high and fast to catch smaller prey, while others need wings that can allow them to take off quickly from the brush if attacked. Join Buddy Bison and learn about the three most common bird wing shapes found in the Great Smokies.

Elliptical Wings

Better suited to confined spaces such as bushes and low trees, these wings are good for landing and taking off very quickly. However, they generally fly more slowly and cannot maintain high speeds for long.

The Northern Cardinal, commonly found living and breeding in the Great Smoky Mountains year-round, has elliptical wings.

Northern Cardinal

Broad-winged Hawk

Soaring Wings

Good for catching wind due to their wide shape and greatly spaced feathers, this wing shape is excellent for gliding. However, they are slower to take-off, which is why birds with this wing shape often nest in very high places.

The Broad-winged Hawk, found breeding in th·e park each summer, has soaring wings.

High-Speed Wings

These thin, rounded wings with long bones make for a very fast flyer. It's easy for these birds to take sharp turns and maneuver through the air. However, this means they are unable to glide slowly and must flap their wings rapidly to land.

Th·e Chimney Swift, a very common summer re·s ident of the park, has high-speed wings.

Chimney Swift

On the following pages, you will find 3 models of the different wing shapes commonly found in Great Smoky Mountains National Park.

Construct your own bird wing models and discover how the differences in wing shapes affect how your models glide.

1.Print or draw the bird wing model of your choice from the following pages and color it to match the bird in the picture. You will need 2 of each model, so be sure to double the “Soaring” model since there is only one on that page.

2. Carefully cut out each of the pieces. If you’re working on multiple birds at once, make sure not to mix up the pieces of the different wings. Pay close attention to the shape of the wing and the spacing on the end of each wing.

3. Fold the tabs at a 90 degree angle so they look like corners and set them aside for now.

4. Glue the two bird bodies and sets of wings together. Having double layers will provide extra stability. Try to use only a little bit of glue or tape so it doesn’t weigh the bird down when it tries to glide.

MATERIALS

- Contruction paper (regular paper will work (fine)
- Scissors
- Glue/tape (glue stick recommended)
- Coloring materials (markers, crayons, pencils)

5.Slide the bird body and the wing together using the gray line/slot in the middle. It should start looking more like a bird now.

6.Glue the support tabs along the wing and body of the bird to hold them together and provide more stability for the wings (see picture above).

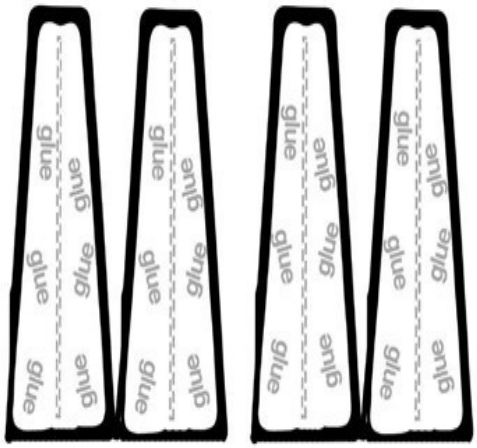
7.You’re ready to glide! Try making multiple models and compare how the different shapes of wings fly. Which wing shape glides best? What do you think a bird can do to stay in the air that your models can’t replicate? Share your findings with a friend or family member.

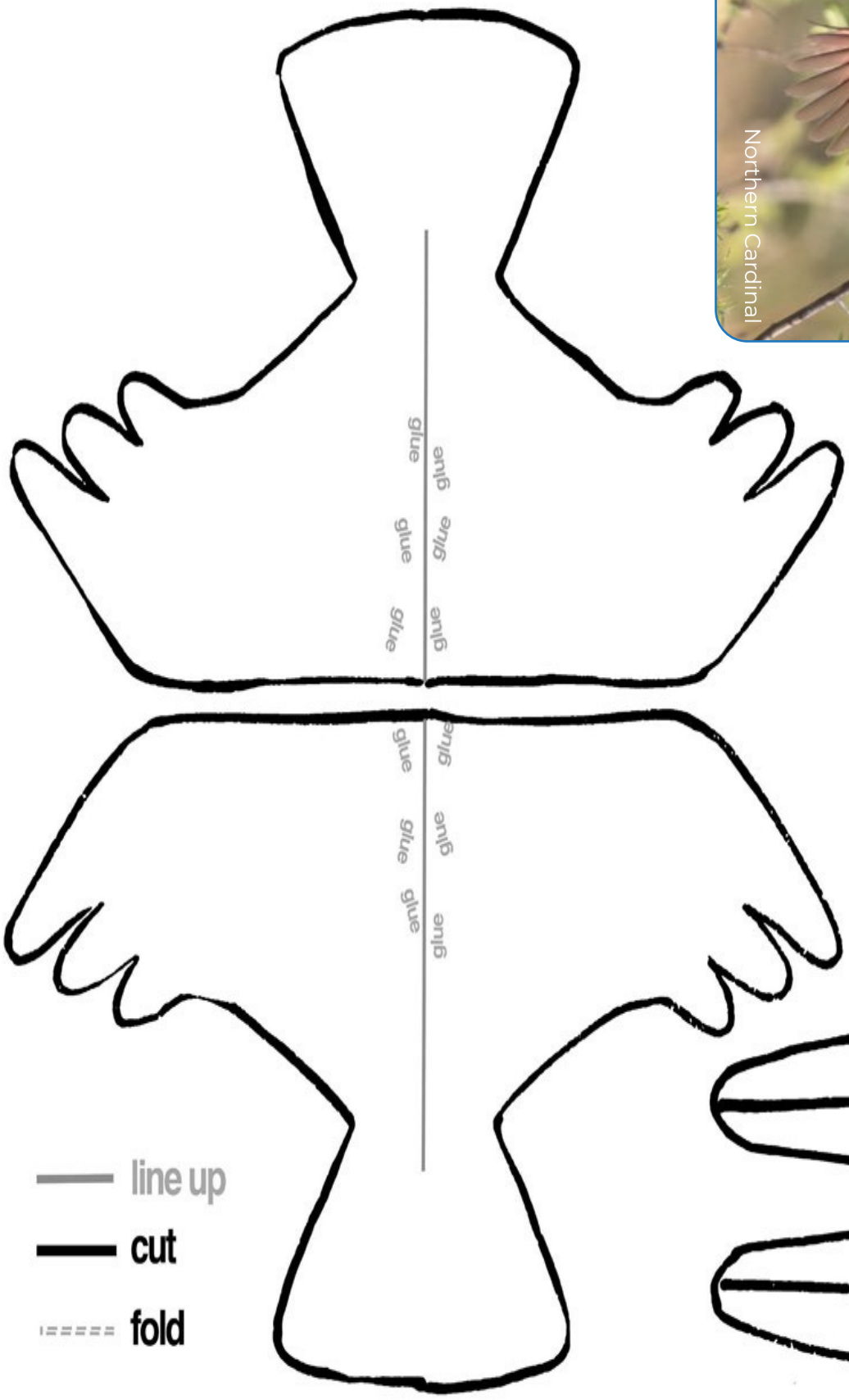
Adapted from Gateway National Recreation Area Project Birdwing

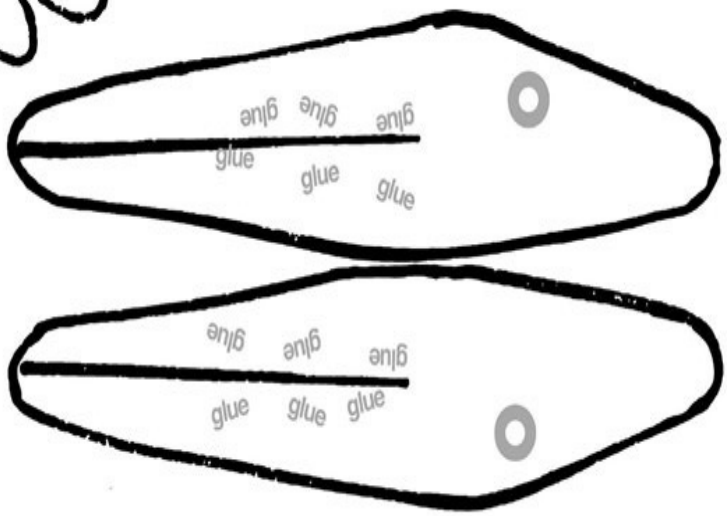
Elliptical Wings

Northern Cardinal

Support Tabs







Soaring Wings


Broad-winged Hawk

SUPPORT TABS

LINE UP

CUT

FOLD

tail

Note: One complete model of “Soaring Wings” requires two copies of this page.

High-Speed Wings

Adapted from Gateway National Recreation Area Project Birdwing

Support Tabs

glue

line up

cut

fold