Bald Eagles 101

Go to the Science Spot (http://sciencespot.net/) and click “Kid Zone” to find the link for the “Links for Eagle Days” page!

Site: Eagles to the Nest
Click “Lesson 1: Bald Eagles 101” and choose “Who Are They?”

1. How many species of eagles are found around the world? ______
2. The term raptor comes from the Latin word for ________________, which stems from the term “rapture” meaning “___ ________ ___ ________ ________.”

3. Search the page to find the answers to each question.
   1st Group - Sea and Fish Eagles
   (1) How many species belong to this group? _____
   (2) Where do they live? _________________________________________________________
   (3) What do they like to eat? __________________________________________________

2nd Group - Snake Eagles
   (1) How many species belong to this group? _____
   (2) What do they eat? _________________________________________________________
   (3) Where can you find these eagles? ___________________________________________

3rd Group - Harpy Eagles
   (1) How many species belong to this group? _____
   (2) Where do they live? _________________________________________________________
   (3) What do they eat? __________________________________________________________

4th Group - Booted Eagles
   (1) What do they eat? __________________________________________________________
   (2) What one characteristic do all booted eagles have in common? ________________
   __________________________________________________________________________

Identify each eagle by its group using SF for Sea and Fish eagles, S for Snake eagles, H for Harpy eagles, and B for Booted eagles.

_____ American Bald Eagle  _____ Harpy Eagle
_____ Golden Eagle  _____ Bateleur
_____ Crested Serpent Eagle  _____ Steller’s Sea Eagle
_____ Black Solitary Eagle  _____ Ayres’ Hawk Eagle

4. Where are bald eagles found? __________________________________________________

5. Which is larger: a female or male bald eagle? ________________________________

6. How did the bald eagle get its name? _________________________________________
Click “Back to Lesson 1” and choose “Looks”.

7. How long is the beak of an eagle? _________________________________________________

8. How is the beak helpful? _________________________________________________________

9. What is the hook used for? _______________________________________________________

10. What does an eagle’s body need to be a good flyer? _______ & _______ _______

11. When an eagle flaps its wings, most of the ______ that powers the eagle into the air comes from the ______________ stroke. The _______ responsible for this motion are huge! The flight muscles of an eagle can account for ______ of its total body weight.

12. True or False? Eagles have hollow bones. ____________

13. What is the weight of an eagle’s skeleton? _______ pound

14. What is the most important sense for a bald eagle? ______________

15. The bald eagle has a greater concentration of ______ as compared to _______. The greater the amount of cones, the finer the ___________ and the higher the _______________ power. This is the ability of the eyes to __________ on objects at a ____________.

16. True or False? An eagle can see as well at night as in the daytime. ______________

17. How many more times greater is the resolving power of an eagle than a human? ___

18. How do eagles catch and kill their prey? ___________________________________________

19. What term is used for the razor-sharp claws on an eagle’s foot? ______________
How long can they be? __________

20. How many feathers does an adult bald eagle have? ________________ How much would they weigh all together? _______________

21. All feathers are made up of a substance called ______________, which is the same substance that makes up our _________________.

22. What are the three types of feathers found on an eagle’s wing? How are they used?
__________________ - _______________________________________________________
__________________ - _______________________________________________________
__________________ - _______________________________________________________

23. Pound for pound, an eagle’s wings are stronger than the wing of a ______ _______.
Click "Back to Lesson 1" and choose "Habitat".

24. What is a habitat? ______________________________________________________________

25. What four things does a good habitat need? _______ _______ _______ _______

26. How old are eagles when they begin reproducing? _____ to _____ years old

27. How long is the incubation period for eagle eggs? ____ to ____ days

28. True or False? Eggs usually hatch in the order they were laid. _____________

29. What does the term "fledge" mean? _________________ How old are eagles when they first try this? ___ and ____ weeks old

30. What types of trees are used by eagles for nests? __________________________________

_________________________________________________________________________________

31. Complete this paragraph describing the nest building process:

Bald eagles build their nests by placing sticks in __________. The first layer is placed in the shape of a _____________. The following layers follow the triangular ___________ but are rotated. Each stick has others __________ in-between. Eventually, after many, many layers, the nest begins to take shape. A nest built of sticks would not be comfortable for sitting or for an ___________ to grow up in, so the completed nest is lined with __________, ____________ needles, or _____________. The finished nest might look messy, but is actually very _____________. In fact, a ________ ________ can be supported in a bald eagle's nest.

Click "Back to Lesson 1" and choose "Foods".

32. What food makes up 90% of a bald eagle's diet? ________________

33. What else will bald eagles eat? __________________________________________________

34. What is a "crop"? _________________________________ How does this help an eagle? ________________________________________________________________________

35. Eagles, like all ____________, cough up or _____________ the indigestible parts of their prey. The ___________ contains anything that is not digestible, such as _______. ____________, fur, ____________, feathers, and ____________. These pellets can help ________________ identify what an eagle is eating.
Go to the Science Spot (http://sciencespot.net/) and click “Kid Zone” to find the link for the “Links for Eagle Days” page!

**Site: Eagles to the Nest**  
**Click “Lesson 1: Bald Eagles 101” and choose “Who Are They?”**

1. How many species of eagles are found around the world? 59
2. The term raptor comes from the Latin word for plunderer, which stems from the term “rapture” meaning to seize and carry away.
3. Search the page to find the answers to each question.
   
   1st Group - Sea and Fish Eagles
   (1) How many species belong to this group? 11
   (2) Where do they live? Near water
   (3) What do they like to eat? Fish and other animals that live in or near water

   2nd Group - Snake Eagles
   (1) How many species belong to this group? 12
   (2) What do they eat? Snakes, frogs, lizards, and other reptiles & amphibians
   (3) Where can you find these eagles? Forests, deserts, and plains

   3rd Group - Harpy Eagles
   (1) How many species belong to this group? 6
   (2) Where do they live? Rain forests of South America and the Philippines
   (3) What do they eat? Mammals, such as large monkeys and tree sloths

   4th Group - Booted Eagles
   (1) What do they eat? Termites, small birds, large mammals, and carrion
   (2) What one characteristic do all booted eagles have in common? They have feathers that extend down to their feet like boots.

Identify each eagle by its group using SF for sea and fish eagles, S for snake eagles, H for harpy eagles, and B for booted eagles.

- **SF** American Bald Eagle
- **B** Golden Eagle
- **S** Crested Serpent Eagle
- **H** Black Solitary Eagle
- **H** Harpy Eagle
- **S** Bateleur
- **SF** Steller’s Sea Eagle
- **B** Ayres’ Hawk Eagle

4. Where are bald eagles found? Only found in North America
5. Which is larger: a female or male bald eagle? Female
6. How did the bald eagle get its name? It’s name comes from the old English word “balde” which means white.
Click “Back to Lesson 1” and choose “Looks”.

7. How long is the beak of an eagle? **Almost as long as its head**

8. How is the beak helpful? **The beak is designed to help it eat fish.**

9. What is the hook used for? **The hook is used to pull and rip animal flesh.**

10. What does an eagle’s body need to be a good flyer? **Strong and light weight**

11. When an eagle flaps its wings, most of the **lift** that powers the eagle into the air comes from the **downward** stroke. The **muscles** responsible for this motion are huge! The flight muscles of an eagle can account for **half** of its total body weight.

12. True or False? Eagles have hollow bones. **True**

13. What is the weight of an eagle’s skeleton? **Half a pound**

14. What is the most important sense for a bald eagle? **Sight**

15. The bald eagle has a greater concentration of **cones** as compared to **rods**. The greater the amount of cones, the finer the **vision** and the higher the **resolving** power. This is the ability of the eyes to focus on objects at a distance.

16. True or False? An eagle can see as well at night as in the daytime. **False**

17. How many more times greater is the resolving power of an eagle than a human? **8**

18. How do eagles catch and kill their prey? **They use their feet.**

19. What term is used for the razor-sharp claws on an eagle’s foot? **Talon** How long can they be? **Up to one inch long**

20. How many feathers does an adult bald eagle have? **Over 7000** How much would they weigh all together? **21 ounces**

21. All feathers are made up of a substance called **keratin**, which is the same substance that makes up our **fingernails**.

22. What are the three types of feathers found on an eagle’s wing? How are they used?

   - **Covert feathers** - Adds thickness to the front of the wing allowing air to move faster over the top of the wing.
   - **Primary feathers** - Can be spread out like fingers on a hand to reduce drag.
   - **Secondary feathers** - Move up or down to control the amount of drag.

23. Pound for pound, an eagle’s wings are stronger than the wing of a **jet plane**.
24. What is a habitat?  **It is the place where an animal lives.**

25. What four things does a good habitat need?  **Food Water Shelter Space**

26. How old are eagles when they begin reproducing?  **4 to 5 years old**

27. How long is the incubation period for eagle eggs?  **31 to 45 days**

28. True or False?  Eggs usually hatch in the order they were laid.  **True**

29. What does the term “fledge” mean?  **Fly**  How old are eagles when they first try this?  **9 and 14 weeks old**

30. What types of trees are used by eagles for nests?  **Oak, hemlock, poplar, elm, sycamore, and lodgepole pine trees**

31. Complete this paragraph describing the nest building process:

Bald eagles build their nests by placing sticks in **layers**. The first layer is placed in the shape of a **triangle**. The following layers follow the triangular **pattern** but are rotated. Each stick has others **woven** in-between. Eventually, after many, many layers, the nest begins to take shape. A nest built of sticks would not be comfortable for sitting or for an **eaglet** to grow up in, so the completed nest is lined with **moss, pine needles, or grasses**. The finished nest might look messy, but is actually very **sturdy**. In fact, a **human adult** can be supported in a bald eagle’s nest.

**Click “Back to Lesson 1” and choose “Foods”**.

32. What food makes up 90% of a bald eagle’s diet?  **Fish**

33. What else will bald eagles eat?  **Ducks, wading birds, turtles, rodents, snakes, and carrion**

34. What is a “crop”?  **It is an enlarged area in the esophagus used to store food.**  How does this help an eagle?  **A full crop can help an eagle can survive at least 5 to 7 days without eating.**

35. Eagles, like all **raptors**, cough up or **regurgitate** the indigestible parts of their prey. The **pellet** contains anything that is not digestible, such as **fins, scales, fur, bones, feathers, and teeth**. These pellets can help **biologists** identify what an eagle is eating.