

## Language and Research Activities – Answers

### Black Ratsnake Summary

- Black ratsnakes are the longest snakes in Canada
- They are arboreal and use trees for food, protection and habitat
- Snakes are ectothermic. Black ratsnakes can use trees for basking
- Black ratsnakes can find food in trees
- Black ratsnakes are endangered because of loss of habitat, pollution and people hurting them
- By learning about Black ratsnakes people will want to save them

### Article Questions

- a. They can help move some turtles to other places or help ensure that construction doesn't interfere too much with the turtle habitat. Also continuing to educate people can help the turtles as well.
- b. They can use construction methods that do not pollute the pond and also design houses that leave lots of natural habitat around the pond.
- c. Hopefully all of us.
- d. The reporter seems to be slightly on the side of the scientists. Reporters should be neutral.
- e. Help turtles cross the road. Conserve habitat. Help to rebuild natural areas around local streams and ponds.

### Sentence Summary

Blanding's turtles have a high domed shell and bright yellow chin and enjoy basking on logs. They are at risk because of habitat loss and road mortality.

Map turtles eat molluscs, crayfish and insects which they find in lakes and large rivers. They are timid and often dive into deep water when approached.

### Sequencing

Mouse, Milk Snake, Robin, Garter Snake, Blue Jay, Skink, Squirrel

### Turtle Logic Puzzle

	Wood								
	Map								
	Blanding's								
	Spiny Softshell								
	Stinkpot								
	Spotted								
	Georgian Bay								
	Rondeau								
	Long Point								
	Fitzroy								
	Algonquin								
	Point Pelee								
Geoff				√		√			
Adam					√	√			
Justin			√					√	
Robin		√							√
Lenny				√				√	
Heather	√								√
Spotted							√		
Stinkpot					√				
Spiny Softshell				√					
Blanding's			√						
Map	√								
Wood		√							

### Vocabulary

- Ectotherms
  - a. a cold blooded animal
- Carnivore
  - a. animal that eats only meat
- Endangered
  - b. worse then threatened and better then extinct
- Wetland
  - c. a semi aquatic area between land and water
- Reptile
  - c. scaly animals which don't produce milk
- Plastron
  - b. the bottom of the turtles shell
- Shedding
  - b. when reptiles replace their skin
- Arboreal
  - c. a snake that lives in trees

## Black Ratsnake Summary

To find Black Ratsnakes within Canada, one must travel to the province of Ontario. These majestic black snakes are the longest native snakes found in Canada. Their adult size typically ranges from 1.5 to 2.0 metres, but they have been recorded as long as 2.5 metres. Unfortunately, this snake is now an endangered species in South-western Ontario! In parts of Eastern Ontario there are more of them left and they are designated as Threatened.

Despite not having any arms or legs, Black Ratsnakes are great tree climbers. Instead of having a tubular body shape like some other snakes, their body is shaped much like a loaf of bread. This shape gives them two edges which run along the sides of their bodies and strong muscles also run along those edges. They can use these strong muscles and edges to wedge into cracks in tree bark, enabling them to climb straight up trees. Black Ratsnakes, like other arboreal snakes, rely heavily on the forest for food, protection, and habitat. The limbs of the trees provide a safe place for the snakes to bask. Basking is an important process for ectothermic animals. Snakes regulate their body temperature by absorbing the heat from the sun's rays or other warm objects and physically moving themselves to warmer or cooler environments to change their body heat. Certain bodily processes only work at a higher temperature, so warming their bodies in the sun allows snakes to digest food and ensure that eggs mature in time to be laid, as well as encouraging other metabolic processes to take place.

Arboreal snakes, such as the Black Ratsnake, also use the branches of trees to find prey items such as small birds and rodents. Black Ratsnakes have a direct influence on rodent populations and should, therefore, be encouraged to live in areas where rodents may be a problem – for example near where people live. Black Ratsnakes also use the tree branches for shelter and a place to hide from predators such as raccoons and hawks.

The loss of forest habitat has directly affected the Black Ratsnake population. With less suitable habitat available for the population, the number of individuals decreased. Another problem is that adult snakes are sometimes run over on roads. People themselves are also a problem for Black Ratsnakes as they will sometimes harm or kill them. Education is one way to prevent this and to help the species from becoming extirpated (eliminated from Ontario but still found in the US). It is through education that we learn the value of this species and the many benefits it provides for us and our ecosystem.

Using the space below, summarize the main points of the article above.

## Article Questions

Winter 2008

Volume 6, Issue 3

# Reptiles at Risk!

## Special Interest Articles:

### •HAPPY HOMES:

Happy Homes, a local real estate company has bought the land surrounding Fairy Tale Pond to be developed for residential use. Construction is expected to begin next week.

## Inside this issue:

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When Frogs Jump	4
Water Snake Special	5

## Turtles in Trouble!

The future of the turtles inhabiting Fairy Tale Pond has been decided. Local government has decided to sell the land to "Happy Homes", a local construction company that is planning on building and selling waterfront properties. Scientist John Smith, active in the attempt to stop the development, said "we tried to protect this pristine pond and the important flora and fauna which reside here". The scientist was involved in debates where he argued for the many free benefits of wetlands such as "purifying our

water, protecting us during the flood season, and providing habitat for many economically important organisms". Prior to the town's decision there were also petitions and awareness campaigns. Scientists are worried about the loss of such important turtle habitat and are suggesting methods to provide extra protection in areas where they can still reside. Many turtles are expected to leave the pond area on a dangerous journey for better habitat once development begins. One civilian involved in the protest remarked "turtles are my

favourite animals and very important to the wetland system." Turtles are important in their ecosystem. Many of them are scavengers. They like to eat dead, decaying and rotting organisms from the waterways in Ever After. This food choice helps to ensure that the water and marsh remain clean and continue to provide many benefits to Ever After.

## Development on Fairy Tale Pond

The city of Ever After is pleased to announce that development along the waterfront of Fairy Tale Pond will start Monday. The local real estate company "Happy Homes" bought the land surrounding the pond to create a new subdivision. They discussed benefits of the subdivision with the town citing continual economic growth as the primary reason for the purchase of land. Ever After is excited about the new subdivision and its contribution to the economy. When asked about turtle woes, Happy Homes replied "no comment" and cited other ponds where the species of turtles can be found.

Use a separate sheet to answer the following questions about the articles above:

- How might the naturalists help the turtles who will now be in danger due to the construction?
- How might the construction company help the turtles?
- Who is socially responsible for turtle protection?
- What is the point of view of the reporter? Can you tell? Should you be able to tell?
- What can you as students do to help protect turtle species in your area?

## Sentence Summary

Summarize the following facts about turtles into four sentences or less. Be sure to use proper punctuation and spelling

- Map turtles eat molluscs, crayfish and insects.
- Blanding's turtles have a yellow chin
- Map turtles live in lakes
- Road mortality is a large problem for turtles
- Habitat destruction for new roads and houses contribute to low population numbers
- Map turtles are identifiable by yellow lines which look like lines on a map found on their body
- Blanding's turtles have a high domed shell
- Blanding's turtles enjoy basking on logs
- Map turtles are timid and often dive into deep water when approached

## Sequencing

Anna likes to walk through the forest looking for wildlife. Each time she sees an animal she records it in her journal. Unfortunately the pages in her journal got mixed up after her last trip and she needs help sorting out what order she saw the animals in. On that particular sunny afternoon she found the following animals: a garter snake, a milksnake, a mouse, a robin, a blue jay, a five-lined skink and a squirrel. The first place she visited when she left her house was the field where she found her mouse. Just before she went into the forest which was the second place she visited, she saw a robin singing in a tree. Anna found the milksnake before she went to the forest, but it was not the first animal she found. She was excited about the milksnake because she knew it was rare to see them during the day, as they are mostly nocturnal. She recognized it by the "Y" shaped pattern on the top of its head. The blue jay was spotted after the garter snake but before the skink. The garter snake, a common species, was a great find while it was out sunning on a rock in the forest. Anna was excited to see this as she remembered that garter snakes, like all reptiles, are ectothermic and therefore are the same temperature as their environment; she knew the snake was basking to warm its body up. Once she was in the forest, Anna rolled a log and found a skink. The skink she found was a young five lined skink, the only native Ontario species of lizard. She recognized it due to its bright blue tail, but she was only able to see it for a minute before it scurried out of sight. On her way home, Anna saw a squirrel as she was leaving the forest.

List the animals in the order that Anna found them:

### Turtle Logic Puzzle

There are 8 species of turtles in Ontario, 6 of which are species at risk. Animals which are ‘Species at Risk’ are animals for whom we are concerned about population numbers due to small numbers of breeding pairs, pollution or habitat destruction or other threats. Many scientists study these animals to help ensure their continued survival.

At Laurentian University some of the researchers’ papers have gotten mixed up. There are 6 researchers, 3 males: Geoff, Adam, Justin, and 3 females: Lenny, Robin and Heather. Each researcher is studying only one of the turtles who are ‘at risk’: Spotted Turtles, Stinkpot Turtles, Spiny Softshell Turtles, Blanding’s Turtles, Map Turtles and Wood Turtles. Each of the researchers is staying at one of the following parks: Georgian Bay Islands National Park, Rondeau Provincial Park, Long Point Provincial Park, Fitzroy Provincial Park, Algonquin Provincial Park and Point Pelee National Park. Use the clues below to figure out which researcher is working on what species of turtle and which Ontario Park they are researching in. There is no overlap between researchers, turtle species or the park they are staying in for the summer, although some researchers may visit other parks on their time off.

1. None of the females study the Stinkpot or the Spotted turtles nor do any of them live in Fitzroy Provincial Park or Georgian Bay Islands National Park
2. One female researcher lives in Point Pelee National Park and another studies Wood turtles
3. None of the male researchers are working with map or Spiny Softshell turtles. There is no male researcher living at Algonquin Provincial Park
4. Geoff is staying at Rondeau; a second male researcher is working on Blandings turtles but not at Georgian Bay Islands National Park
5. Spiny Softshell and stinkpot turtles are not being studied at Georgian Bay Islands National Park; Heather is not working with the Spiny Softshell turtles
6. Heather visited Algonquin park on her time off to see a Wood turtle; Justin went to Long Point Provincial Park to visit Lenny who does not study the Wood turtle.
7. Robin visited Lenny and then Adam; during this time she got to stay in Georgian Bay National

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Justin	Long Point									
Robin	Fitzroy									
Lenny	Algonquin									
Heather	Point Pelee									
Spotted										
Stinkpot										
Spiny Softshell										
Blanding’s										
Map										
Wood										

## Vocabulary

Circle the correct definition for each word:

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>- Ectotherms               <ul style="list-style-type: none"> <li>a. a cold blooded animal</li> <li>b. a warm blooded animal</li> <li>c. a hot blooded animal</li> </ul> </li> <li>- Carnivore               <ul style="list-style-type: none"> <li>a. animal that eats only meat</li> <li>b. animals that only eat plants</li> <li>c. animals that eat plants &amp; meat</li> </ul> </li> <li>- Endangered               <ul style="list-style-type: none"> <li>a. better then threatened but worse than extinct</li> <li>b. worse then threatened and better then extinct</li> <li>c. the same thing as extinct</li> </ul> </li> <li>- Wetland               <ul style="list-style-type: none"> <li>a. a place with trees on dry land</li> <li>b. the bottom of a river</li> <li>c. a semi aquatic area between land and water</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>- Reptile               <ul style="list-style-type: none"> <li>a. an animal that produces milk and have scales</li> <li>b. animals who are vegetarians and have scales</li> <li>c. scaly animals which don't produce milk</li> </ul> </li> <li>- Plastron               <ul style="list-style-type: none"> <li>a. the top of the turtles shell</li> <li>b. the bottom of the turtles shell</li> <li>c. the side of the turtles shell</li> </ul> </li> <li>- Shedding               <ul style="list-style-type: none"> <li>a. is when reptiles lose their tails</li> <li>b. is when reptiles replace their skin</li> <li>c. is when reptiles lay eggs</li> </ul> </li> <li>- Arboreal               <ul style="list-style-type: none"> <li>a. a snake that spends its life on the ground</li> <li>b. a snake that only wakes up at night</li> <li>c. a snake that lives in trees</li> </ul> </li> </ul> |
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## Species at Risk Research Activity

Endangered animals and plants are found on every continent of the planet. In Canada, we protect these species and others we are worried about with the Species at Risk Act (SARA). Ontario also has a new Endangered Speciea Cat (ESA). There are several categories within these systems: special concern (some interaction the organism has may put it at risk), threatened (an interaction the organism has is putting it at risk), endangered (at risk of becoming extirpated or extinct), extirpated (completely gone from one area/province) and extinct (gone forever). Many of Ontario's reptiles are currently on this list; some are threatened such as the Eastern Hognose Snake while others are endangered such as the Black Rat Snake. As Ontario citizens, it is our responsibility to help protect the plants and animals on this list to ensure they do not become extinct or extirpated. One way to do this is through education and research. Choose one reptile species at risk to research. Answer and discuss the following questions in your presentation or report.

- What is the name of the species and does the name have any story behind it?
- What factors are contributing to the demise of this species?
- What habitat requirements does this species have?
- Where do you find this species?
- What can we do to help the species and prevent it from becoming extinct?
- What are three facts about this species that you discovered while researching it?