

Watch the Birdie

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Grades: 2-5

Subject: science

Skills: observation, data entry

Duration: 45 minutes plus field time

Vocabulary: hypothesis, research, behavior, wildlife

Objectives:

Students will be able to: 1) record bird behavior.
2) differentiate bird songs.

Method:

Students visit a local park to observe and record bird sightings.

Background:

Wildlife researchers and biologists ask a lot of questions about how plants and animals interact with their environment and try to find significant patterns to help answer these questions. Students need to understand that science and research is not a magical process, but one in which systematic steps are taken to answer questions.

There are certain steps which wildlife researchers use to find answers to their own questions. The scientific method is the 'tool' that researchers use to find answers to questions. It is the process of thinking through the possible solutions to a problem and testing each possibility to find the best solution. The following basic steps outline the scientific method that researchers use in answering their own questions:

1. Question
2. Hypothesis
3. Methods
4. Results
5. Conclusions



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The Science Behind Algonquin's Animals

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Materials:

✓	Items Required	Quantity
	Bird Observation Sheet	one per student
	pencil	one per student
	bird identification book	class set
	binoculars (optional)	one per student

Procedure:

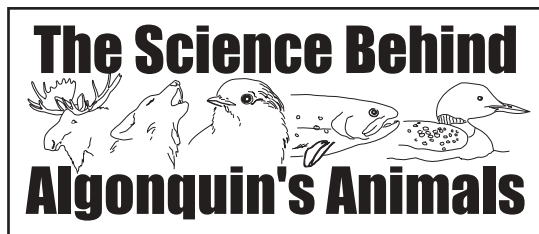
- 1) Begin by asking the class how many of them would like to be a wildlife researcher in Algonquin Park, where they could work with many different types of animals.
- 2) Ask the students if they were a wildlife researcher what animal they would want to study. Write these down on the board as students give them to you.
- 3) Once a list of animals has been compiled ask the students what they would want to know or study about their animal. Write the questions that students pose on the board.
- 4) When all questions have been written down explain to the students that by asking a question about their animal that they do not know the answer, they have just taken the first step to becoming a wildlife researcher.
- 5) Explain to students that there are five steps wildlife researchers use to find the answer to the question about their research animal. Record these on the board from the list below:
 - **Question** (What do I want to know?)
 - **Hypothesis** (What do I think I already know?)
 - **Methods** (What do I do to answer my question?)
 - **Results** (What do I find out?)
 - **Conclusions** (What do I know now that I did not know before?)
- 6) From the list of animals on the board have the students determine which animals they could study locally. Underline or circle all locally found animals. From this local list have the students determine which ones would be the easiest to observe and study. If birds have not



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- been added to list present this as a possibility. If students have listed specific birds suggest creating a broad category of just birds.
- 7) Explain to students that since birds are abundant, relatively easy to see and hear they would make an excellent research subject.
 - 8) As you are using birds as your research subject ask the students what time of day would be the best to see or hear birds. Write the answers on the board. As you will get different answers inform the students that they have just discovered their first research question about their subject, 'Is there a time of day when it is best to hear and watch birds?' This question needs to be answered before any other questions on birds can be tackled.
 - 9) Hand out the Bird Observation Sheet to each student and go through it with the class.
 - 10) Number one has already been established and is what they are trying to answer.
 - 11) Number two is what each student already knows. Instruct them that they need to circle one of the three possibilities. Tell them there is no wrong answer, this is what they already know. The experiment will either confirm or refute this knowledge.
 - 12) Number three is the method they will use to answer the question. Select an area where there will be an adequate number of birds to observe, such as a local park or nature trail. The times of day will be determined by you or can be determined by the class as a whole, e.g. morning, afternoon, evening (the evening time period could be assigned for homework). The time spent observing is up to you. Generally 10-20 minutes per time period is adequate. You may want to make trips at the different times so students can obtain enough data to adequately answer the question.
 - 13) Number four is where the students will record their individual observations.
 - 14) Number five is the conclusion. Have students answer the questions and list anything else they may have noticed or observed.

Variations:

Have students create their own questions about birds and as a class create an experiment to answer the question.

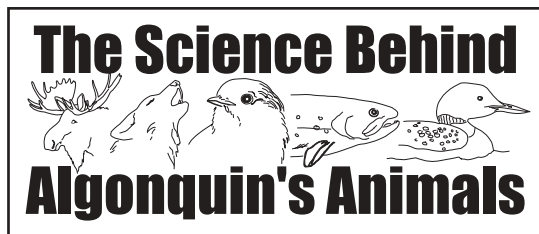
Select a different animal from the list and have students formulate a research question about that animal and then create an experiment to answer the question.



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Extensions:

- 1) Have students identify the different birds seen.
- 2) Have students graph the number of different species seen for each observation period.
- 3) If any new questions have arisen from their initial observations have the students create a new experiment to answer the question(s).

Evaluation:

Ask students to:

- 1) Complete the observation table.
- 2) Complete the conclusion questions.



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