

Student Handout #1

This learning unit requires you to keenly observe neighbourhood birds and document the observed species. Using the data you have collected, you will make resources like posters and interaction maps.

Introduction to the Bird Watching Activity

The scientific study of birds is called Ornithology. By learning to observe and study birds, you can learn basic life skills in observation and inference. Birds serve as indicators of environmental change, for example, health of seabirds informs us about fish populations. Birds can also teach us many things. They inspire many human inventions and innovations. For example, the design of the Japanese Shinkansen Bullet Train was inspired by the beak of a kingfisher bird. Birds also play a very important role in our ecosystem. They help in pollination and seed dispersal, control crop pests, are predators to disease spreading animals like rats, and can also be scavengers.

A behavioral observation is an old tool of a scientist, or a curious human being. Animals and birds may reveal its secrets to those who are willing to observe patiently and keenly. By observing common birds, you may discover something interesting and learn something new. So let's do some bird watching!

Basics and Ethics of Bird Watching

- Keep your distance from the bird when you observe them.
- Never approach a bird so closely as to disturb it or make it fly away.
- Do not harm the natural surroundings just to observe the bird better. For e.g. stamping over plants, breaking twigs/branches to get an unobstructed view of the bird.
- Stay on existing paths, footpath, or trails and do not trample the field, crops, or fragile habitat.
- Do not encroach (trespass) into private property while bird watching. Always obtain permission from the land-owner before entering private lands.
- Do not be noisy.
- Do not feed the birds or play the calls of birds to bring them closer to you. Do not approach any nesting area/nest. Never handle eggs. Observe from a distance.
- Be extra careful about observing birds during the breeding season.
- If you think the bird is disturbed by your presence and it keeps flying away, then do not follow it.
- Moving around doesn't necessarily mean you will see more birds. If you stand/sit in one place quietly and patiently, staying absolutely still, you can see many birds.
- If possible, wear dull coloured clothes while bird watching. Avoid strong smelling powders, creams, perfumes, lotions, etc.
- If you intend to click photographs of birds, then ensure you do not use flash especially if you are near nesting area/sites.

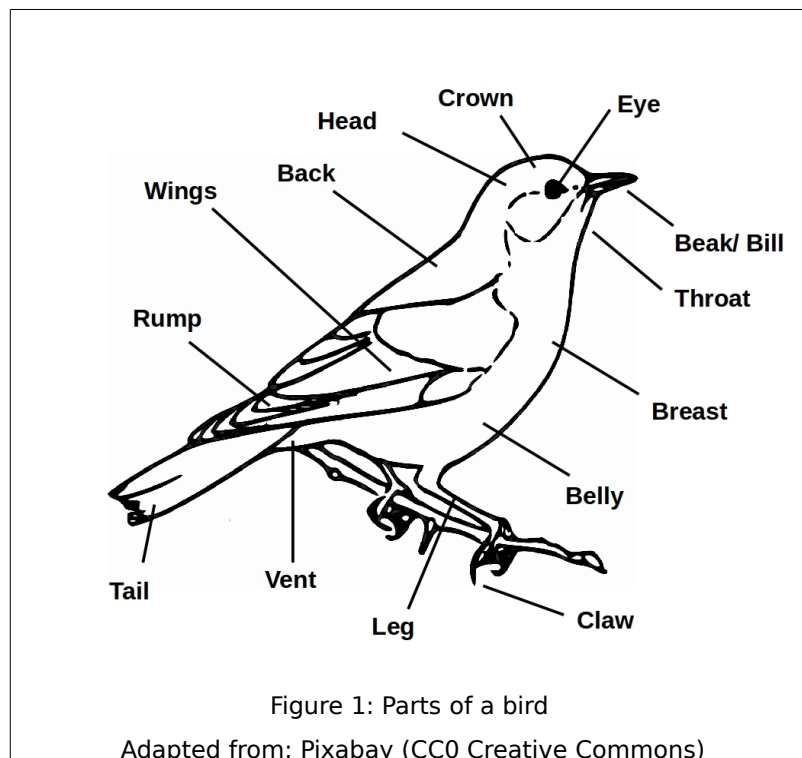
Remember, bird watchers must always act in ways that do not endanger the birds and its surroundings.

Knowing Terms Related to Bird Behaviour

Here are some of the behaviours that you may observe:

- Feeding: eating food or drinking water
- Flocking: birds grouping together, either during flying or while looking for food
- Flying: the act of staying in the air, by flapping wings or soaring
- Foraging: the act of looking around for food
- Mating: the action of birds coming together to breed
- Nesting: the act of building a nest, which is a structure to hold the eggs and chicks.
- Preening/Bathing: the act of cleaning oneself or another
- Roosting: a behaviour where birds settle in groups (or alone), at a particular area to rest/sleep.
- Singing or Calling: communication between birds
- Territorial display: the act of protecting a tree branch, nesting site or an area on the ground. This could also involve attacking/fighting another bird or animal.
- Walking/Hopping/wading/swimming: movement along the ground/water

Parts of a Bird: Learn Some New Terminology



When you want to describe the bird, use the terms mentioned above for better description. For e.g.: The *bird's throat* was black in colour. It had a yellow *belly* and red *vent*.

Student Handout #2

Task 1: What to Do?

(Time: 10 minutes each, during the morning, noon & evening, for 3 weeks, individual activity)

- Carefully go through the “Basics and ethics of bird watching” [Student Handout #1]
- Choose a safe place in school/ near your home, where you feel there is bird activity.
- For 10 minutes during the morning, 10 minutes in the noon and 10 minutes in the evening, spend your time observing one species of bird, from your “observation point”.
- Write the following header information in your book: day, date, time, weather, location and for how long did you carry out your observation.
- Observe the birds patiently and quietly. Write down everything the bird does.
- Use the “Observation guidelines” [Student Handout #3] to make your notes.
- Refer Student Handout #1 titled “Knowing terminologies related to bird behaviour” and “Parts of a bird”. Try to use the terms introduced in your descriptions and drawings.
- Draw the bird, as you see it and label it. You can colour it if you want. It is alright if your drawing is not beautiful. Focus on drawing what you see.

Tip: You are free to write the descriptions in your own words, language and can use drawings, illustrations, flowcharts etc., to enrich your descriptions. Let us say, you are observing a House crow, and after few minutes, it flies away. Make a note of it and then continue observing another crow. You are welcome to observe the birds for more than 10 minutes also. Write what you find interesting about the bird or its behaviour.

Task 2: What to Do With Your Collected Data?

(Time: 80-120 minutes, to be done 3 weeks after Task 1, group work, along with the teacher)

1. Form groups with your friends who observed the same species. Discuss your observations.
2. Use “Guiding questions for task 2” listed in this handout to compile your findings. For e.g., for each question listed in the “guiding questions”, list responses from all observers.
3. Try to identify similarities and dissimilarities in your observations, for each question.
4. Look out for places where you would need to make more precise observations. For example, is the House crow only black colour? Or is it a combination of grey and black?

Tip: If you think you have less data/notes, then continue your observations for another one or two weeks. Then repeat task 2 with your friends.

Task 3: Documentation

(Time: 80 minutes, to be done 1-2 weeks after task 2, group work, along with the teacher)

1. Document the data you have collected by making a poster or flash card. You can also make digital resources (using computer). You can create a database of birds of the surrounding area.
2. Additionally, based on your data, make an interaction map which shows the bird's interactions with its immediate surroundings.
3. If you have observed any peculiar or interesting behaviour of a bird, then write a short report on it, giving exact details.

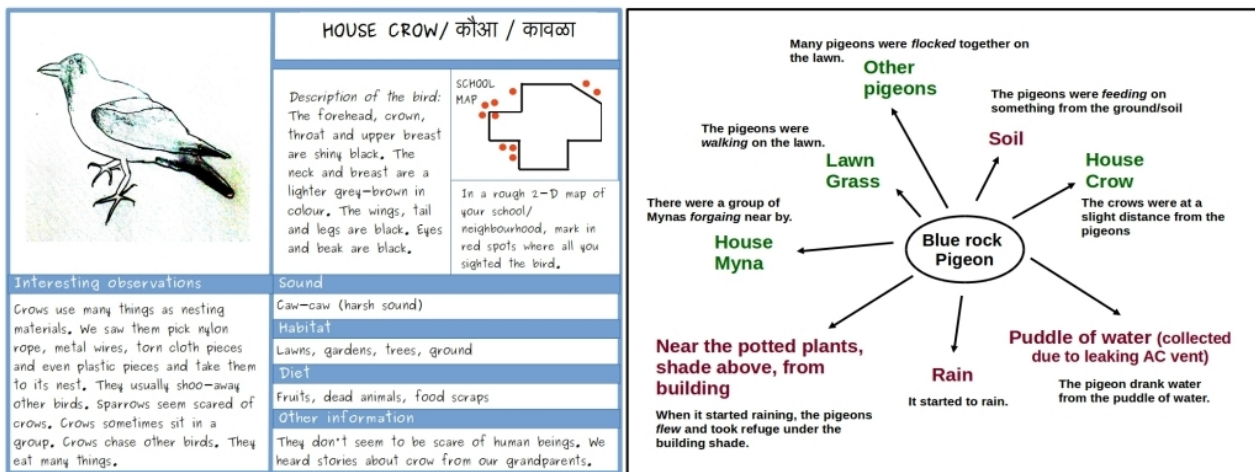


Figure 2: Templates: Example of a possible flash card (left) and an interaction map of a blue rock pigeon (right)

Important

- The data in the resource should be a reflection of what you observed over 3 weeks or more. It should not be copied from books or the internet.
- Try to use the new terms that have been introduced in Student handout #1 (For e.g.: See italicized words in the above interaction map)
- If you think that data is not enough, continue the observation for a few more weeks.

Guiding questions for Task 2

1. Where did you usually sight the bird (grass, shrub, ground, trees)?
2. Which time of the day did you most often sight the bird? When is it most active?
3. What kind of perch (higher branch, lower branch, ground) does the bird prefer?
4. Did the bird stay in the same spot for long or did it keep changing its location?
5. What was the diet of the bird?
6. Is the bird social (moves in a group), or usually seen alone?
7. Were the birds always sighted in pairs (male/female or male/male or female/female)?
8. Does the bird prefer to be near birds of its own kind (same species)?
9. Does the bird prefer to be near birds of different species ?
10. Is the bird very vocal (makes a lot of calls/noise) or quiet?
11. What are the biotic components (other members of the same species, other species of birds, other animals) that the bird interacted with.
12. What are the abiotic components (water body, soil) that the bird interacted with?
13. Did you see any nesting sites? How many of the birds were nesting?
14. Does the silhouette of the bird always appear the same?
15. What are the life forms (birds/animals/reptiles) that the bird seems to fear?
16. What are the life forms (birds/animals/reptiles) that the bird does not seem to fear?
17. Do the birds fly away if human beings are close by?
18. What was the most interesting observation you noted?
19. What behaviour (foraging, preening) was most often seen, when observing the bird?
20. Did you see any roosting sites? How many of the birds were roosting?

Student Handout #3**Observation Guidelines**

Write down “who, what, when and where” about the bird you observed.

What were the birds doing?	
Was the bird looking for food (foraging)? If so, where?	Was the bird perched, flying or sitting? Was the bird swimming?
Did you observe birds nesting? <i>Caution: Never approach a nesting site. Observe from a distance.</i>	Did the bird walk or hop? Do you think the bird could walk/hop backwards? Did the bird sit?
Were there any chicks (did you hear them) present?	Was the bird staring at one place for a long time? If so, where?
How was the behaviour of the bird around the nest? Were the male and female both present?	Was the bird cleaning itself (preening) or bathing?
Did the bird seem restless, nervous, calling loudly? If yes, why?	Did the bird take a dip or dive in water? How long did it stay under water?
Did you see the bird picking up things (twigs, cloth, plastic, wires, grains, worms, stones)?	Did the bird feed on anything? If so, what was it feeding on?
Do you think the bird was collecting nesting material? If so, what materials?	Did the birds show any signs of “territorial displays”?
Did the bird drink water? If yes, from where?	Was the bird resting in one place?
Did the bird ruffle its feathers?	Did the bird stand on one leg?
Any peculiar behaviour of the bird observed?	Was the bird continuously in one place?
Did you see the birds mating? (breeding)	Was the bird sleeping?
Did you see the bird urinate/ excrete waste? Do they do this often?	Did you see the bird fighting? If yes, with whom?
How do the birds look?	
Describe how the bird looks. Try and draw how the bird looks.	How many toes did the feet of the bird have? Draw the arrangement of the bird's toes.
What is the size of the bird?	What's the most prominent feature of the bird?
Do you think it is bigger/smaller than your palm?	What is the colour of the bird? Which parts were which colour?
Can you guess the height/weight of the bird?	What colour was the eye of the bird?
Did the bird try to camouflage itself with its surroundings? If yes, how?	Do all the members of the same species look same? If no, how are they different?
Describe and draw the shape of the bird's beak. What do you think might be its food?	Could you tell apart the male and female of the same species? How?
Draw the feet of the bird. What is the shape and colour of the feet?	Did either member (male or female) of the species look more colourful than the other?
Who was the bird with?	How did the birds sound?
Was the bird alone or was it seen in group? Give group numbers/sizes.	Was the bird singing or calling? If yes, describe how it sounded.
Did the bird tend to move in groups (flocking)?	Was the bird continuously making calls?
Was the bird always seen in pairs (male and female)?	Assign a mnemonic to the bird's call. (What would it sound like if you wrote it out in English?). (<i>Che-che-che, caw-caw, houp-houp</i>)
Did the group comprise of the same species or different species?	How was the tone of the bird- melodious, sweet, harsh, loud, screechy?
Did the bird interact with or get chased by any other animals (e.g. insect, dog, reptile)?	Did the bird sing when perching or when flying, or both?
Were there other animals or birds near the bird's nest (if observed)?	Did you find instances where you thought two birds were communicating with each other?

Where are the birds seen?	When did you see the birds?
Describe or draw the immediate surroundings of the bird.	Mention day, date, time, location, and duration of observation.
Was the bird easy to see or did it stay hidden?	Are they commonly seen during the day/night?
How long did it take you to find the bird again?	Are they commonly seen throughout the day?
How long did you watch the bird for? Also mention if you observed the same specimen for the entire duration of the observation.	Describe the weather. Was it cloudy/ sunny/ warm/ hot/ dry/ humid/ shade/ cold/ windy? Any idea about the temperature?
Where was the bird sighted: tree, ground, grass, shrub, water body, etc.?	Are they more easily seen during morning, afternoon, or evening?
What other signs (evidence) of birds did you see?	
Did you find any discarded feather? Draw and colour the feather you found.	Did you see bird droppings? (body waste)? Describe it.
Can you guess which body part the feather came from?	If so, what was the colour and texture of the bird's droppings?
Did you see any bird footprints? If yes, can you guess if this was a land or water bird?	Did you see a nest? If yes, what was the location of the nest?
Can you spot any other signs that indicated that a bird was there?	Did you see any dead specimen of a bird? If so, how do you think it died?
At the end of the day, what does the bird do?	
Did you find your bird roosting?	Does it roost alone or in a group?
Does it always roost in the same place/tree? If yes, which one?	If in a group, are other birds the same species or a different ones?
Describe their roosting behaviour.	Do they make a lot of noise or are they quiet?
Is the roosting site and nesting site same for the bird?	Does the bird come to the roosting spot at the same time every day or at different times of the day?

Note: Feel free to address any other aspects of birds as well. Direct your attention *not only* to the bird *but also* its immediate environment. The above questions are just meant to serve as pointers to initiate your bird observations.

Field Guides

- Ali, S. (2002). *The book of Indian birds*. Mumbai: BNHS; Grimmett, R., Inskipp, C., & Inskipp, T. (2011). *Birds of the Indian subcontinent*. London: OUP & Christopher Helm.
- Kazmierczak, K., & Ber van Perlo (2000). *A field guide to the birds of the Indian subcontinent*. UK: Pica Press/Christopher Helm.
- Grimmett, R., Inskipp, C., & Inskipp, T. (2011). *Birds of the Indian subcontinent* (2nd Edition). London: Oxford University Press & Christopher Helm.
- Robson, C. (2009). *Field Guide To The Birds Of South-East Asia*. Bloomsbury.

Student Worksheet

- What did you learn from the Silhouette Game?

- What did you learn from the Picture Card Game?

Trail Task: Choose a bird that can be easily seen from your class window/school. Observe the bird for 5 minutes and write down your observations here. Try to use the new terms you have learnt in the games and those listed out in *Student Handout #1*.
