

AVIFAUNA- UNFOLDING THE HIDDEN FACTS

Grade9- The flight interrupted- The winged visitors

Subject	Activity -1 (R No1-10)	Activity -2 (R No11 -20onwards)	Activity -3 (R No21 onwards)
ENGLISH	<p>You are familiar with the poem ‘The Brook’ by Lord Tennyson. The poet has skillfully used personification and made ‘The Brook’ talk about its own story. Imagine ‘The Brook’ talking to visitors (birds ,animal and fish) about the decline in the number of birds visiting ‘him’ as years are passing by and how ‘The Brook’s’ condition is also deteriorating. Make a comic strip on A4 size sheet.</p>	<p>Have you ever read about Sindabad- The sailor? Read Sindabad’s Second Voyage, in which Sindabad and other sailors exploit birds to get diamonds. Change the end of the story according to the plight of birds in the present scenario. Use A4 size sheet and decorate your sheet for a beautiful presentation.</p>	<p>Have you ever read about Sindabad- The sailor? Read Sindabad’s Second Voyage, in which Sindabad and other sailors exploit birds to get diamonds. Change the end of the story according to the plight of birds in the present scenario. Use A4 size sheet and decorate your sheet for a beautiful presentation.</p>
SCIENCE	<p><u>Flight aerodynamics in birds-Why do birds fly in V form?</u></p> <p>Express your findings in the form of a report explaining the aerodynamics involved in terms of-</p> <ol style="list-style-type: none"> 1Timings of the wing flaps and wing beats 2Size of the wings 3Birds energy savings & flight efficiency 4 behavioral perspective 5factors which help them to align in a specific pattern <p>The handwritten report will be on A4 size sheets</p>	<p><u>How do migrating birds navigate?</u></p> <p>Conduct a research on the incredible journeys of the migrating birds & the factors which make them move from one fixed place to another fixed place year after year. Write 10 amazing facts on migrating birds. You are expected to put your facts in the form of a big, bright & colourful collage. Be as creative as you can.</p>	<p><u>Which birds-which plants?</u></p> <p>Research on the most suitable native trees for nesting & feeding of birds keeping in mind the following points-</p> <ol style="list-style-type: none"> 1 Type of trees- deciduous, coniferous, vines, shrubs 2 Description of trees 3 Season in which it starts giving fruits 4 Part of the plant which is the food for the birds 5 Types & names of the birds nesting on these trees <p>Restrict your research to 10 trees. Your work will be in the form of a multimedia presentation of not more than 15 slides. The prints of the same will be a part of your holidays homework folder</p>
MATHS	<p>A1-Using the concept of Cartesian Plane, draw a grid on the given picture. Taking help of the coordinate geometry make this pencil sketch of birds on A4 size sheet and write the coordinates of the points marked on the picture (details overleaf)</p> <p>A2- Those Amazing Flying Mathematicians(details overleaf)</p> <p style="text-align: center;">(Both activities to be done by all students)</p>		

S ST	CASE STUDY: Human activities are causing serious decline of many migratory bird species. Prepare a Power Point Presentation on major migratory birds form American Continent to India.	CASE STUDY: Human activities are causing serious decline of many migratory bird species. Prepare a Power Point Presentation on major migratory birds form Australian Continent to India.	CASE STUDY: Human activities are causing serious decline of many migratory bird species. Prepare a Power Point Presentation on major migratory birds form Siberia to India.
SANSKRIT	maaor hmaara raYT/lya pxalhO– [saka vaNa-na saMskRt saaih%ya maom saundrta sao ikyaa gayaa hO. ?iYa kNva ko AaEama maom maaor kl]pyaaogata taqaa mah%va ko baaro maom sambainQat Slaaok tqaa ica~aom sao sajaakr p`stut kroM.	Svaot hMsa – ivaVakl doval sarsvatl ka vaahna hO. saMskRt saaih%ya sao]d\QaRt , hMsa sao sambainQat Slaaok ³ Aqa- saiht`tqaa mah%va ica~ saiht vaNa-na kroM.	saMskRt saaih%ya maom ivahga – ivasqaapna ³ Bird migration ` ` ka vaNa-na Anaok saqaanaom pr imalata hO. Kiva kailadasa AaOr mahaaBaart ko p`saMgaaom sao ivahga ivasqaapna ka]d\hrNa laokr Slaaok tqaa ica~aom ko saaq p`stut kroM.

HINDI

Maths details (Activity-1)

Keoladeo Ghana National Park is a man-made and man-managed wetland and one of the national parks of India. This diverse habitats are home to 366 bird species. Every year thousands of migratory waterfowl visit the park for wintering breeding etc. The Sanctuary is one of the richest bird areas in the world. It is known for nesting of its resident birds and visiting migratory birds including water birds. The major attractions of tourists visiting the park are the numerous migratory birds, who come from as far away as Siberia and Central Asia and spend their winters in Bharatpur, before returning to their breeding grounds.

How do they know which direction to fly? There are several possibilities. Most of them seem to require mathematical computations that most humans would find challenging. Assuming that the average bird is not the mathematical equivalent of a secondary school maths, how do the birds do it?

To put the question another way, why is it that a pilot of a Boeing 747 needs a small battery of maps, computers, radar, radio beacons, and navigation signals from GPS satellites -- all heavily dependent on masses of sophisticated mathematics -- to do what a small bird can do with seeming ease, namely, fly from point A to point B.

The evidence seems to suggest that birds use a combination of different methods. Let's explore what concept of Mathematics is used and how is it used under the various possibilities given below:

POSSIBILITIES	CONCEPT	HOW IS IT USED?
1. Visual Clues for navigation		
2. Solar Navigation		
3. Magnetic Fields		
4. Star Navigation		
5. Polarized light		

Make the above table on A4 sheet and record your findings