

BIRD MIGRATION

Words

Write the letter of each definition with the word it defines. If you don't know the definition, use the context of the reading passage to help you. Look for the words in bold as you read the passage.

PARAGRAPH 1

Words	Definitions
1 migration	A n., movement from one place to another
2 inhabit	B v., to interest greatly
3 fascinate	C n., a priority; an urgent need
4 observer	D v., to live in
5 imperative	E n., a person who watches something
6 evolve	F v., to develop and change

PARAGRAPH 2

Words	Definitions
7 breed	G v., to reproduce
8 optimal	H n., one half of the Earth; one half of a sphere
9 hemisphere	I adj., best; most favorable ¹
10 species	J n., type; a basic group in biological classification

PARAGRAPHS 4-6

Words	Definitions
11 windswept	K v., to provide energy
12 endure	L v., to live under difficult conditions
13 fuel	M adj., unprotected from the wind
14 aspect	N n., a difficult act or achievement
15 feat	O n., a part or feature

¹BrE: favourable

PARAGRAPH 6

Words	Definitions
16 nocturnal	P adj., active during the day
17 obscure	Q adj., active at night
18 stray	R v., to leave the correct route; to become separated from the group
19 diurnal	S v., to make difficult to see
20 navigation	T n., finding and following one's route

Reading

Bird Migration

- (1) **Migration** is the regular movement of animals between their breeding grounds and the areas that they **inhabit** during the rest of the year. Many types of animals migrate, but bird migration in particular has **fascinated observers** for centuries. Migration is an excellent example of how nature has responded to the biological **imperative** for species to **evolve** and spread out into all possible ecological niches that can provide the conditions necessary for species to breed and raise young.
- (2) The most common form of bird migration involves traveling¹ to higher latitudes to **breed** during the warm season and then returning to lower latitudes during the non-breeding period. This form of migration allows birds to breed in areas that provide **optimal** conditions for nesting and feeding their young. Because of the way in which the continents are placed upon Earth, migration of this type takes place primarily into the higher latitudes of the Northern **Hemisphere**. No land birds are known to migrate into the higher latitudes of the Southern Hemisphere; only **species** of seabirds migrate to the Southern Hemisphere to breed.
- (3) Although most bird migration takes place between the lower and higher latitudes of the Northern Hemisphere, many species are **trans-equatorial**, living in the Northern Hemisphere during the breeding season and in the Southern Hemisphere during the rest of the year. A well-known example of trans-equatorial migration is the arctic tern. This tern, which breeds in the arctic regions and winters in antarctic waters, travels 24,000 miles a year during migration.

¹BrE: travelling

- (4) Not all migration is long distance. Some species exhibit altitudinal migration. Their breeding areas are in higher elevations, near or at the peaks of mountains, while they spend the non-breeding season in neighboring¹ valleys or other nearby low country. This variety of migration is typical of many grouse species, including the ptarmigan, a form of arctic grouse. Many rock ptarmigan never leave the high arctic tundra, spending their breeding season atop **windswept** arctic peaks and the winter season in nearby valleys, **enduring** some of the coldest conditions on earth.
- (5) During migration, most birds fly for a limited period each day, probably about six to eight hours, typically flying distances of several hundred miles. Some birds, however, undertake much longer flights when their routes include crossing large bodies of water or other geographic features such as deserts and mountains. For example, many species regularly cross the Gulf of Mexico, a trip that requires a continuous flight of over 1,000 miles and takes from twenty-four to thirty-six hours or longer. An extreme example of non-stop bird migration is done by the bar-tailed godwit, which makes a continuous flight of over 11,000 miles from Alaska to New Zealand each year. At the start of its trip, about 55 percent² of its bodyweight is made up of the fat necessary to **fuel** this amazing journey.
- (6) How birds manage to unerringly travel between distant locations is one **aspect** that has fascinated observers for centuries. Modern-day researchers have attempted to understand this **feat**. Most studies have found that migratory birds all have some ability to navigate and an innate drive to travel in a particular direction. **Nocturnal** migrants, those species that travel at night, seem to take their navigational cues from the stars. When the stars are **obscured** by clouds, nocturnal migrants become confused and may return to earth or **stray** off course. **Diurnal** migrants, those migrating during the day, take their cues from the location of the sun. In addition, diurnal migrants have also been shown to use geographic features such as mountain ranges or sea coasts as other cues for **navigation**. Because the stars and the sun move constantly over the course of twenty-four hours, this suggests that migrating birds also have a sense of time.

¹BrE: neighbouring

²BrE: per cent

Answer the questions about **Bird Migration**.

Questions 1–4

Do the following statements agree with the information in the reading passage?

Write

TRUE if the statement agrees with the information.

FALSE if the statement contradicts the information.

NOT GIVEN if there is no information on this in the passage.

- **1** Trans-equatorial birds cross from one hemisphere to the other when they migrate.
- **2** Many migratory birds breed in the Southern Hemisphere.
- **3** Migrating birds spend the warm months where conditions for breeding are optimal.
- **4** Many birds fail in their migration because they do not have enough body fat to fuel the journey.

Questions 5–8

Look at the following descriptions of migratory habits. Match each type of bird with the correct description.

Write the correct letter, **A** or **B**.

A Diurnal species of birds

B Nocturnal species of birds

- **5** They navigate by looking at the sun.
- **6** They navigate by looking at the stars.
- **7** They may stop flying when clouds obscure the sky.
- **8** They navigate by looking at landforms.

Word Families**A**

Complete each sentence with the correct word from the word family chart. Make nouns plural where necessary. Use the correct form of verbs.

noun	verb	adjective
evolution	evolve	evolutionary

- 1 Scientists believe that birds from dinosaurs.
- 2 Our research plans have gone through many and are now quite different from our original plans.
- 3 Through the process, birds have developed adaptations that allow them to survive in different environments.

noun	verb	adjective
fascination	fascinate	fascinating

- 4 The study of birdsong is a subject.
- 5 The study of the lives of birds many people.
- 6 There are several birdwatchers in his family, so his with birds is not hard to understand.

noun	noun	verb	adjective
migration	migrant	migrate	migratory

- 7 Bird generally takes place twice a year, in the spring and the autumn.
- 8 Scientists study the habits of birds.
- 9 Some birds thousands of miles to reach their summer breeding grounds.
- 10 stop to rest several times during their journey.

noun	noun	verb	adjective
navigation	navigator	navigate	navigational

11 Migratory birds are born with skills; they don't have to learn them.

12 Migratory birds are amazing

13 Birds use landforms as well as the sun and stars for

14 Birds by looking at the sun and stars.

noun	noun	verb	adjective
observation	observer	observe	observant

15 Many people birds as a hobby.

16 If birds become aware of the presence of an, they quickly fly away.

17 We can learn a great deal about the lives of birds through simple

18 You have to be really to spot most types of birds.

Word Families

B

Choose the correct word family member from the list below to complete each blank.

1 fascination	fascinate	fascinating
2 observation	observer	observe
3 migration	migrate	migratory
4 evolution	evolved	evolutionary
5 navigation	navigate	navigational

Birds are 1..... to many people, and bird watching is a popular hobby. The best time to watch birds is in the early morning, because birds are usually very active at that time of day. The 2..... must keep still and quiet in order not to frighten the birds away. If you live in a part of the world where 3..... birds spend their breeding season, then you will have the opportunity to see nest-building activity. Over the ages, different species of birds have 4..... with different types of nest-building skills. It makes an interesting study to look at the different types of nests built by birds and to watch them as they build their nests. After the breeding season is over and the babies have left the nest, it is time for the birds to head for warmer parts of the world to spend the winter months. Birds 5..... to their winter feeding grounds, using the stars or the sun as their guide.

Paraphrases

Read the sentence from the reading passage. Then, choose the sentence that has the same meaning.

- 1 *Many types of animals migrate, but bird migration, in particular, has fascinated observers for centuries.* (paragraph 1)
- A Animal migration is a subject that has been studied for many years.
 B People have long observed the fact that many animals, including birds, migrate.
 C The migration of birds, more than other animals, has been interesting to people for a long time.
- 2 *When the stars are obscured by clouds, nocturnal migrants become confused and may return to earth or stray off course.* (paragraph 6)
- A When the sky becomes dark, migrating birds know it is time to stop and rest for the night.
 B If birds traveling at night can't see the stars, they might stop flying or get lost.
 C When clouds move in front of the stars, there is not enough light for migrating birds to see the earth beneath them.

Dictionary Skill

PARTS OF SPEECH

The word *imperative* can be a noun or an adjective.

Read the dictionary definitions below. Then read the sentences and write the letter of the correct definition for each sentence.

im-per-a-tive [im-PER-uh-tiv]

A *adjective.* very important; essential

B *noun.* a priority; an urgent need

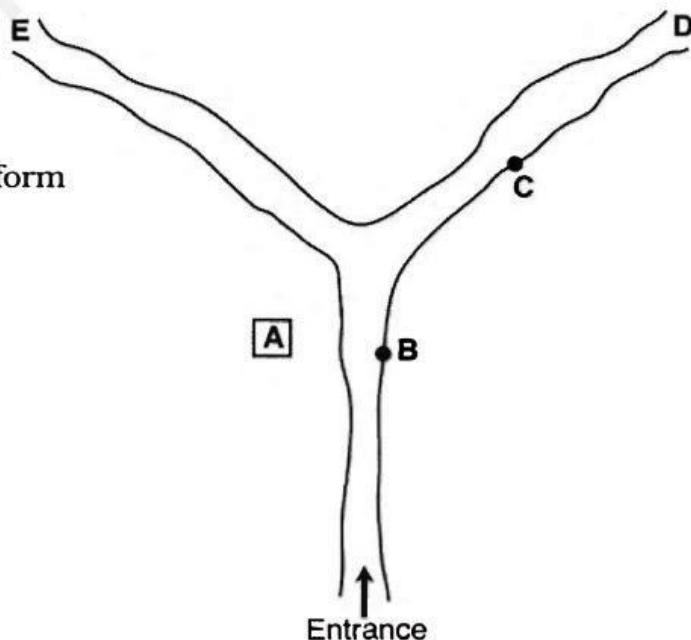
- 1 It is our *imperative* to protect the natural environment.
- 2 It is *imperative* to keep dogs and cats away from the bird breeding area.

Listening

Track
2

Listen to the talk. Look at the map below labeled A-E. Look at the list of places and write the correct letter, **A-E**, next to numbers **1-5**.

- 1 species list
- 2 restricted area
- 3 observation platform
- 4 gift shop
- 5 donation box



Writing (Task 1)

The chart¹ below shows information about different species of birds observed in Woodchuck County at different times of the year.

Summarize² the information by selecting and reporting the main information and making comparisons.

Write at least 150 words.

**Species of Birds Observed
in Woodchuck County by Season
(partial list)**

Species	Winter	Summer
bluebirds		X
cardinals	X	X
crows	X	X
juncos	X	
mockingbirds		X
orioles		X
vireos		X
woodpeckers	X	X

Speaking

Talk about the following topics.

Many people enjoy observing birds because they find them fascinating.
Why do you think people are fascinated by birds?

Are you fascinated by birds? Why or why not?

What animals are fascinating to you?

¹BrE: table

²BrE: summarise