Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period:\_\_\_\_\_

**Songs/Calls/Communication Notes**



\_\_\_\_\_\_\_\_\_\_ signals in birds are usually divided into calls and songs

* + Birds communicate for many reasons, including to:

1. - impress and \_\_\_\_\_\_\_\_\_\_ a mate
2. - declare territorial \_\_\_\_\_\_\_\_\_\_
3. - identify \_\_\_\_\_\_\_\_\_\_ members
4. - announce the presence of a \_\_\_\_\_\_\_\_\_\_

5 - convey information about \_\_\_\_\_\_\_\_\_\_

Calls are usually vocalizations with a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ sound followed by a silent gap.

Used in specific contexts such as contact, mating, \_\_\_\_\_\_\_\_\_\_, begging, flight and \_\_\_\_\_\_\_\_\_\_.

\_\_\_\_\_\_\_\_\_\_ are vocalizations that may include a continuous series of elements or phrases (group of elements either similar or dissimilar in structure).

Purpose: Used for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ its territory and calling for a mate.

In other words, songs are \_\_\_\_\_\_\_\_\_\_, complicated sounds, whereas calls are relatively \_\_\_\_\_\_\_\_\_\_ and simple.

***Syrinx:*** *“\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_”,* sound producing organ of birds. Muscles tense and \_\_\_\_\_\_\_\_\_\_ to change the air flow through the syrinx. Non-song birds have \_\_\_\_\_ pairs of muscles while song birds have \_\_\_\_\_ pairs!

***Phrases(\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_):*** Structural \_\_\_\_\_\_\_\_ of the songs, made up of elements.

It takes brains!

The songbirds have a specific \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and some centers in their brains, which play an important role in the production of songs. This is a complex \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ with many clusters of \_\_\_\_\_\_\_\_\_\_.

* + When to sing?
    1. Only during \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ season, i.e. Thrushes and Chats
    2. Throughout the whole year, i.e. Bulbuls
  + Who sings?
    1. Only \_\_\_\_\_\_\_\_\_\_
    2. Both sexes, together in a \_\_\_\_\_\_\_\_ or separate
       1. Females sing primarily to defend \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, prevent \_\_\_\_\_\_\_\_\_\_, attract males, coordinate \_\_\_\_\_\_\_\_\_\_ activities.
       2. Sometimes, they sing together with very precise temporal \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. This is called “*duet singing”*.
       3. Other “couple” songs may be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and each take turns singing.

‘*\_\_\_\_\_\_\_\_\_\_ Singing*’, more than two birds of a family or \_\_\_\_\_\_\_\_\_\_ are involved in singing.

Besides calls and songs, birds also use visual \_\_\_\_\_\_\_\_\_\_ in order to communicate. Some examples include:

* + 1. Elaborate or \_\_\_\_\_\_\_\_\_\_ plumage
    2. Brightly colored/bare \_\_\_\_\_\_\_\_\_\_
    3. Wattles, tail, beak

Birds use these with or without accompanying \_\_\_\_\_\_\_\_\_\_\_\_ signals/sounds.

***Posture:*** Still-body show that is generally performed by \_\_\_\_\_\_\_\_ birds using elaborate/ornament \_\_\_\_\_\_\_\_\_\_\_\_, i.e*.* tail posture of magpie robin.

***Display:*** Generally used for \_\_\_\_\_\_\_\_\_\_ actions, i.e. courtship \_\_\_\_\_\_\_\_\_\_ in birds.

Some species of birds possess \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ plumage, where the feathers absorb ultra-violet (UV) light and re-emit it as another 'color' such as yellow, orange or red. Although such fluorescence leads to extraordinary color \_\_\_\_\_\_\_\_\_\_\_\_\_\_, it has never been studied in detail. Most importantly, it is not known whether fluorescent plumage plays a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ role in signaling or whether it is simply a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the chemical composition of feather pigments.

