

## Treasure hunt for year 1 Secondary "Migration of birds"

### 1. Big Idea

1.1. Why do we propose this activity? Because it allows us to establish a relationship between Migration of birds and the climatic characteristics and annual seasons.

The Treasure hunt we propose will be based on the "inquire based learning"

1.2. Learning-based methodology: student-centered learning and collaborative work.

The student will study the "Migration of birds":

1.3. Objectives and Results

- Students get familiar with the following concepts:
- What is migration
- Why do birds migrate?
- Elements that determine migratory movements of birds.
- To know all about migratory movements
- Know its area of reproduction or wintering
- Species have been changing their migratory behavior and some of them have shorten their movements.
- Identify Migratory strategy and characteristics of migration development: date of beginning and end, speeds, altitudes, orientations, average daily distances, schedules, rest areas, etc.
- Fidelity to their migration routes year-on-year.
- Use ICT for learning and familiarize the student with the use of different resources (iPad, mobile, project app, ....)
- Develop transversal competences such as critical thinking, decision making, autonomous learning, teamwork ...
- Show interest and rigor in using scientific vocabulary in their observations, exploration, explanation and when they elaborate and communicate their own knowledge.
- Show interest and rigor about the respect and care of birds and respect for the environment, getting to know all of the nearest environment and what happens with the same bird in other countries with different weather.
- Know how to synthesize the knowledge acquired, presenting the results using different supports
- Encourage discussion and exchange of ideas among students.
- be responsible of their own learning process

1.4. Decisions on how to integrate the lesson into the curriculum. It is a lesson of the curriculum of 1° of the ESO in Galicia

1.5. Decisions about the ICT that we are going to use (besides the app and the server). students will use conceptual maps, we think it is a simple and very useful tool so that the students can elaborate the contents of the subject and it facilitates that all the students have all the necessary information at hand.

# Introduction

Is a very common phenomenon in nature and in fact there are many species of butterflies, fish, bats or turtles that are migratory. However, in the case of birds the air means used, the ability to fly and the great distances traveled by many species make this group particularly well represented. While short-distance migrants may simply leave the mountainous areas to look for milder winters in lower areas, long-distance migrants often travel tens of thousands of kilometers bypassing all physical barriers (such as mountains), ecological barriers (such as deserts ) or meteorological (storms, winds against, etc.).

The teacher divides the class in groups of 2/students each of them will be in charge of preparing a topic.

You are going to solve a **big question** about “Migration of birds” In teams of 2/3 you are going to solve a big question about this fact, but before each group has to write more or less 15 lines about each of the following topics, using the suitable vocabulary of sciences studies and you have to explore the migration of birds ( swallow?) using own observations but also the project APP and the Geomap, you can also search for information in internet about your specific topic. You must be able to explain your colleagues your findings and to elaborate a document with photographs or links to enlighten them about the topic

These are the topics (one for each pair):

- What is migration?
- Why do birds migrate?
- Elements that determine migratory movements of birds.
- Study of the vital processes that occur at each stage of the route (courtship and mating, nesting and breeding ...)
- Know its area of reproduction or wintering
- Species have been changing their migratory behavior and some of them have shortened their movements.

- Identify Migratory strategy and characteristics of migration development: date of beginning and end, speeds, altitudes, orientations, average daily distances, schedules, rest areas, etc.
- Fidelity to their migration routes year-on-year.

### **Big Question:**

In groups you are going to make a Presentation about Swallows migration it will include:

Description of the route, detailing zones of passage and times in which it passes (with a map) through each of them, mentioning the climatic and ecological characteristics. Study of the vital processes that occur at each stage of the route (courtship and mating, nesting and breeding ...)

You should compare with other countries like UK, Lithuania and Denmark . what is the difference with these countries?

### **Evaluation**

Your work will be evaluated using the following criteria:

Engagement in the learning process

How students articulate their ideas in their own words and debate on their own ideas?

How students apply, expand or elaborate concepts and skills applied to a new situation using scientific rigor and suitable vocabulary.

Team work

Evidence of accuracy in gathering and recording information

High quality in presenting information (website or other digital format which will include)