

Lesson: Where in the world is the Ruby-Throated Hummingbird?

Grade Level: Second Grade, Life Sciences

Overview: In this lesson, students will learn about the Pennsylvania state hummingbird, the Ruby-Throated (R.T.) Hummingbird. Students will learn how this special hummingbird is a natural pollinator and about its amazing annual journey through the United States. Students will work together to discover this pollinator's migration route through North America. Students will receive 5 diary passengers written from R.T. Hummingbird who is migrating north for the summer months. Each diary passage has geological context clues. Students will use the clues and a physical region map as a key to help them identify the 5 correct "pit stops" that R.T. Hummingbird makes along his journey. Students will then connect the 5 locations to observe the northern migration route of the R.T. Hummingbird. Students will also learn about different types of flowering plants that grow due to certain environmental factors, and how animals adapt to change.

Science Content & Standards:

Pennsylvania New Academic Standards for Science-
<https://www.pdesas.org/Page/Viewer/ViewPage/11>

Life Science- Biological Evolution: Unity and Diversity

Standard- 2-LS4-1: Make observations of plants and animals to compare the diversity of life in different habitats.

Science Practices:

APPENDIX F – Science and Engineering Practices in the NGSS

<https://www.nextgenscience.org/sites/default/files/Appendix%20F%20%20Science%20and%20Engineering%20Practices%20in%20the%20NGSS%20-%20FINAL%20060513.pdf>

Practice 8 Obtaining, Evaluating, and Communicating Information

- Compare and/or combine across complex texts and/or other reliable media to support the engagement in other scientific and/or engineering practices.
- Obtain and combine information from books and/or other reliable media to explain phenomena or solutions to a design problem.
- Communicate scientific and/or technical information orally and/or in written formats, including various forms of media as well as tables, diagrams, and charts.

Social Studies Content & Standards:

Pennsylvania Academic Standards, Social Studies
<https://www.pdesas.org/Standard/View>

Geography: 7.2: Physical Characteristics of Places and Regions

Standard- 7.2.2.A: Identify the physical characteristics of places.

Standard- 7.2.2.B: Identify the basic physical processes that affect the physical characteristics regions.

Social Studies Practices:

<https://www.pdesas.org/Standard/View>

Geography is the science of space and place on Earth's surface. Its subject matter is the physical and human phenomena that make up the world's places and their environments. Geography helps students understand spatial contexts, recognize places and regions as human concepts, and understand physical processes that have shaped the Earth's surface and the patterns resulting from those processes.

Materials:

- Pencils
- Optional: U.S. regional maps

Resources:

- Read a-loud, "*My Tiny Life By Ruby T. Hummingbird*" by Paul Meisel
<https://www.amazon.com/Tiny-Life-Hummingbird-Nature-Diary/dp/0823443221>
- Physical U.S. Map, <https://gisgeography.com/physical-map-united-states/>
- "Where in the World is R.T. Hummingbird?" student guided worksheet
- Student resource videos:
 - <https://youtu.be/PQ8ESSsjiKq>
 - <https://youtu.be/1lpE8NaGVKA>
 - <https://youtu.be/dUHSiFphyVU>

Learning Objectives:

- Students will learn about the state hummingbird and pollinator, The Ruby Throated Hummingbird.
- Students will learn about these hummingbirds' amazing migration.
- Students will learn about how hummingbirds are pollinators.
- Students will find the correlation between context clues and using a physical region map.
- Students will work together to communicate and evaluate context clues to find the correct location of the Ruby-throated Hummingbird.

Procedure:

1. The teacher will introduce the lesson by showing students one of the student resource link videos, "Ruby-throated Hummingbird Facts". Students will gain knowledge about the hummingbird with the video.
2. The teacher will then read aloud, "*My Tiny Life By Ruby T. Hummingbird*," a book by Paul Meisel. The teacher will check student participation by asking questions during the reading.
3. The teacher will then start the activity by explaining the Great Northern Migration of the Ruby-Throated Hummingbird.
4. The teacher will model to students how to read a physical region map by using the "U.S. Physical Map" in the listed resources as a way to demonstrate understanding.
5. Then, the teacher will put students into small groups. Groups will receive the student guided worksheet, "Where in the World is R.T. Hummingbird?".

6. Students will have 15-20 minutes to work together in small groups to locate the northern migration journey of the Ruby-throated Hummingbird. Students will need to use the two maps on the guided worksheet as a guide to locate the 5 “pit stops” the hummingbird took in his journey.
7. Once students have completed the activity, the teacher can guide students into checking the completion of work.
8. Once the activity is completed, the teacher can show another short resource video about the Ruby-Throated Hummingbird, *“How do Hummingbirds Help Pollinate?”*.