Learning about the biological diversity that exists in biomes and habitats around the world is a goal for grade four students. *Wildlife Worlds*, a series by award-winning natural history author Tim Harris, helps students achieve this goal by taking them on a captivating journey to see the rich and astounding variety of landscapes and wildlife that live around the world. Stunning photography features examples of landforms, plants, and animals from various regions across each continent. Accessible text and detailed captions make these books perfect for readers of different reading abilities studying geography and life sciences.

The *Wildlife Worlds* Teacher’s Guide supports curriculum standards for physical geography, science, and language and develops research skills by incorporating a variety of information relating to geographic concepts. The information presented provides a springboard for further inquiry and research into the natural world and the human impact on the natural processes that surround us. Students will become equipped with the vocabulary to discuss and explore issues that affect wildlife and natural features of our world. Visual learners and all levels of readers will access vibrant pictures, captions, and text features that support comprehension. Features provide detailed examples of the land and wildlife in each location to help students expand their knowledge and inquiries about geography. The inquisitive nature of students will be sparked by the many visuals and easily accessible text features that show the diversity of the natural world.

The lessons in this Teacher’s Guide are aimed at grade four, and can be taught sequentially or individually. Reproducible worksheets and assessment tools follow each lesson. The books in the *Wildlife Worlds* series include:

- *Wildlife Worlds Africa*
- *Wildlife Worlds Asia*
- *Wildlife Worlds Australia and Antarctica*
- *Wildlife Worlds Europe*
- *Wildlife Worlds North America*
- *Wildlife Worlds South America*
## Pacing Chart and Vocabulary

<table>
<thead>
<tr>
<th>Lesson Plan Title</th>
<th>Pacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-Chart: Geographical Features</td>
<td>3 to 4 class periods*</td>
</tr>
<tr>
<td>Venn Diagram: Compare and Contrast Animals</td>
<td>3 to 4 class periods</td>
</tr>
<tr>
<td>Around the World with Animals or Physical Features</td>
<td>5 to 6 class periods</td>
</tr>
</tbody>
</table>

* 1 class period = 40-60 minutes

The following are vocabulary examples that when defined and applied can be used in effective persuasive pieces, descriptive writing, and oral texts. They are drawn from across the series.

<table>
<thead>
<tr>
<th>Title</th>
<th>Vocabulary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wildlife Worlds Africa</td>
<td>alkaline, basin, chasm, delta, dense</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Wildlife Worlds Asia</td>
<td>altitude, canopy, coniferous</td>
</tr>
<tr>
<td>Wildlife Worlds Australia and Antarctica</td>
<td>crevices, evaporates, expeditions, fiords</td>
</tr>
<tr>
<td>Wildlife Worlds Europe</td>
<td>arable, caldera, hibernate</td>
</tr>
<tr>
<td>Wildlife Worlds North and South America</td>
<td>cloud forest, extinct</td>
</tr>
</tbody>
</table>
ACCOMMODATION STRATEGIES

Accommodations provide equal access to learning and equal opportunity to demonstrate what is learned. Accommodations allow a student access to the subject or course without any changes to the knowledge and skills the student is expected to demonstrate.

Educators are encouraged to adapt the instructional approach, activities, and assessments included in this guide to best meet the diverse interests, needs, and abilities of their students. Possible accommodations may include:

**Instructional Strategies**
- Break tasks into parts with accompanying time lines
- Provide extra time for processing of oral information.
- Pair oral instructions with visual ones (writing or symbols)
- Pre-teach new vocabulary and regularly review previously taught vocabulary
- Provided model of completed work
- Frequently check with the student to get him/her started
- Provide oral and visual instructions and examples
- Provide a checklist of tasks for the student

**Environmental Strategies**
- Proximity to teacher
- Strategic seating
- Flexible or mixed-ability grouping
- Provide an alternative setting for learning that is free from visual and auditory distractions.

**Assessment Strategies**
- Build in extra time to allow student to process questions asked and answers given
- Provide written instructions and rubrics for assignments
- Offer a choice of assessment activities so that the student can choose one suited to their strengths
- Space out or extend assignments to prevent student feeling overwhelmed
- Reduce the number of tasks used to assess skill or concept
- Allow students to use assistive devices or technology
### LESSON 1

#### T Chart: Geographical Features

<table>
<thead>
<tr>
<th>Curriculum Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Common Core State Standards</strong></td>
</tr>
<tr>
<td>RI.4.1; RI.4.2; RI.4.4; RI.4.7, 4.9</td>
</tr>
<tr>
<td><strong>Ontario Language Arts Curriculum</strong></td>
</tr>
<tr>
<td>Grade 4 Oral Communication</td>
</tr>
<tr>
<td>1.2, 1.4, 1.6</td>
</tr>
<tr>
<td>Grade 4 Reading</td>
</tr>
<tr>
<td>1.4, 2.3</td>
</tr>
<tr>
<td>Grade 4 Writing</td>
</tr>
<tr>
<td>1.2, 1.3, 1.4, 1.5, 1.6, 3.7, 3.8</td>
</tr>
<tr>
<td>Grade 4 Media Literacy</td>
</tr>
<tr>
<td>3.2, 3.3, 3.4</td>
</tr>
<tr>
<td><strong>Ontario Science and Technology Standards</strong></td>
</tr>
<tr>
<td>Grade 4 Understanding Life Systems: Habitats and Communities</td>
</tr>
<tr>
<td>3.1, 3.4, 3.7</td>
</tr>
</tbody>
</table>

#### Materials

- Chart paper and markers
- Wildlife Worlds series
- World Map
- Notebook or paper with T chart
- T-Chart Self-Assessment Reflection
- T-Chart and Self-Assessment Teacher Assessment

#### Setting the Stage

Introduce students to the geographical world by showing them the printouts or digital versions of the World Map. Have students look at the map and discuss the physical features of the world that make Earth unique: water, mountains, deserts, rainforests, glaciers, etc.

Next, plot where the continents are that are featured in the *Wildlife Worlds* series. Have students look through the books and together, plot some of their chosen geographical features (e.g., savannas, volcanos, mountain ranges, coral reefs, etc.) on the map.

If time does not allow for the previous provocation, you can show a video online [https://www.youtube.com/watch?v=Hxqcb1QnMak](https://www.youtube.com/watch?v=Hxqcb1QnMak), or images from *Wildlife Worlds* that show the physical regions of each continent.

Explain to students that you will explore in the next few lessons how to find the similarities and differences between one type of physical feature in two different areas of the world.

Activate students’ knowledge and scaffold information about similarities and differences between geographical/physical features by using prompting questions during the conversation, such as:

- Why do you think so many rainforests have large rivers or oceans nearby?
- Why are volcanoes shaped like mountains?

#### Activity

Using *Wildlife Worlds* series, decide on two general geographical features of the earth that students would like to know more about. For example, students could choose mountain and rainforest.

Using those features, model a T-Chart on chart paper with students that incorporates knowledge of general features. T-Chart could include the following:

- Mountain: vertical elevation, snow capped most of the year, formed by glaciers, affected by weather and erosion
- Rainforest: tree canopy shades undergrowth, lots of precipitation, diverse animals

#### Objectives

Students will be able to:

- Compare and contrast the characteristics of two different geographical features using a graphic organizer to help understand similarities and differences
- Analyze informational texts to make meaning of shared characteristics by skimming and scanning words and images to describe and explain elements they chose to compare
After modeling the creation of a T-Chart, discuss and compare high quality supporting details versus lower quality supporting details. For example:

- Mountains high quality: “Mount Everest is as tall as the Mariana’s Trench is deep in the ocean”
- Mountains low quality “Mountains are very steep”

Working independently, students will now choose their own two features from one of the Wildlife Worlds books. Keeping the features from the same continent is easier. If you have students needing enrichment, could have them choose two different continental features.

Working from the class model, have students create a T-Chart in their notebooks or on piece of paper. Each side of the T-chart will include facts about one specific physical or geographical feature from the continental book they chose. Encourage students to choose a specific place featured in the book, such as Amazon Rainforest and Amazon River, or Yellowstone National Park and Redwood National Forest.

Review appropriate note taking strategies that have been pre-taught (e.g., take out extraneous information from sentences like connector or introductory words; use your own words especially if you don’t understand a word; no copying sentences from text).

Before students begin, highlight any points that you feel should be included for all students. For example, encourage students to include the following:

- Wildlife examples found in each feature
- A problem the feature has had
- How humans use the feature.

Invite students to write a fictional travel diary entry about visiting one of the physical features described in their T-Chart. Use supporting facts from their research and clear voice that illustrates knowledge of the feature.

Have students exchange completed T-charts with another student by orally sharing information.

Then, have each student create a hashtag that illustrates knowledge of one of the main characteristics of the partner’s topics. For example:

- Volcanos #magmareleasedthroughcone
- River #picksupsedimentleavesnutrients

Share the hashtags or have students write them on Post-it notes and stick them on the whiteboard.

Hand each student a T-Chart Self-Assessment Reflection to complete.

Extensions

- Invite students to write a fictional travel diary entry about visiting one of the physical features described in their T-Chart. Use supporting facts from their research and clear voice that illustrates knowledge of the feature.

Wrap-Up

Have students exchange completed T-charts with another student by orally sharing information.

Then, have each student create a hashtag that illustrates knowledge of one of the main characteristics of the partner’s topics. For example:

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Hand each student a T-Chart Self-Assessment Reflection to complete.

Assessment

Using the T-Chart and Self-Assessment Teacher Assessment, assess students’ T-Charts and self reflections.
T-Chart Self-Assessment Reflection

1. What was one thing you learned about the physical features of Earth?

____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

2. What would you like to know more about the physical features of Earth?

____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

3. If you were to write a good question about one of your two chosen topics for classmates to research further, what would it be?

____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
T-Chart and Self Assessment Teacher Assessment

### T-Chart

<table>
<thead>
<tr>
<th>KNOWLEDGE AND UNDERSTANDING</th>
<th>LEVEL 1: DID NOT MEET EXPECTATIONS</th>
<th>LEVEL 2: APPROACHING EXPECTATIONS</th>
<th>LEVEL 3: MET EXPECTATIONS</th>
<th>LEVEL 4: EXCEEDED EXPECTATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student incorporated extensive facts about their chosen feature.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student had minimal errors or misconceptions evident in their chart</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student used strong note-taking strategies and made notes in their own words</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Self Assessment

<table>
<thead>
<tr>
<th></th>
<th>LEVEL 1: DID NOT MEET EXPECTATIONS</th>
<th>LEVEL 2: APPROACHING EXPECTATIONS</th>
<th>LEVEL 3: MET EXPECTATIONS</th>
<th>LEVEL 4: EXCEEDED EXPECTATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Application</strong></td>
<td>Student applied learning about chosen feature to show fact acquisition.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Thinking</strong></td>
<td>Student extended learning by including a relevant question that illustrates understanding and connection to the topic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td>Student framed a question that is at the correct level, is relevant, and that invites further research.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Additional comments:**

____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
LESSON 2
Venn Diagram - Compare and Contrast Animals

Curriculum Correlations

Common Core State Standards
RI.4.1; RI.4.2; RI.4.4; RI.4.7, 4.9

Next Generation Science Standards
3-LS4-4

Ontario Language Arts Standards
Grade 4 Oral Communication
1.2, 1.4, 1.6
Grade 4 Reading
1.4, 2.3
Grade 4 Writing
1.2, 1.3, 1.4, 1.5, 1.6, 3.7, 3.8
Grade 4 Media Literacy
3.2, 3.3, 3.4

Ontario Science and Technology Standards
Grade 4 Understanding Life Systems: Habitats and Communities
3.1, 3.4, 3.7

Materials
- Chart paper and markers
- Wildlife Worlds series
- Sticky notes
- Computers for research
- Venn Diagram: Compare and Contrast Animals
- Venn Diagram Assessment Chart

Objectives

Students will be able to:
- Compare and contrast the characteristics of two different animals using a graphic organizer to help understand similarities and differences
- Analyze informational texts to make meaning of shared characteristics by skimming and scanning words and images to describe and explain animals they chose to compare

Setting the Stage

Explain to students that in the next few lessons, you will explore how to find the similarities and differences between one type of animal in two different areas of the world.

Activate their knowledge and scaffold information about similarities and differences between animal features by modeling an example of a Venn Diagram with an easy animal type. For example, could use birds in North America: eagle and goose.

- Activate prior knowledge by first getting ideas for the Venn Diagram without the books opened. Then, as they run out of characteristics, ask them to look at the books for ideas.
- When modeling, it is usually easier to start with differences, then add similarities as students begin to understand that the middle section is shared characteristics.

As you discuss with students, monitor for misconceptions of where to put characteristics.

- For example, if they say “Eagles have feathers,” prompt “Do geese have feathers too? Where should I put this fact?” to make sure they understand that facts both animals have should be in the overlapping middle circle, not in the two outer circles.

Encourage interesting facts to move beyond just physical characteristics, adding behavioral characteristics they both may have or that make them unique.
Activity

Introduce the Venn Diagram by recalling modelled Venn Diagram about birds. Hand students each a blank diagram: the worksheet entitled Venn Diagram: Compare and Contrast Animals.

Have students choose their own type of animal: spider, mammal, amphibian, insect, fish, etc. Then, they need to decide which two animals within that type they’d like to compare and contrast.

Using the Wildlife Worlds books and computers, they will fill in the Venn Diagram with points that illustrate similarities and differences between the animals. Ideally, students should have between 5 and 10 points in each section. The points should reflect physical and behavioral characteristics of the animals (how they look and how they act).

Extensions

• Have students participate in a drama game titled “Animal Hot Seating.” Instructions are as follows:
  • Two students sit on chairs at the front of class and have to become an animal character. Have students choose one of the animals they used in their Venn Diagram.
  • Teachers and students ask the students at front questions about their animal, as the student in the hot seat answers in character. For example: “Koala, what continent would I find you on?”
  • If the student answers incorrectly or can’t answer (to the best of teacher’s knowledge), another student who can answer the question replaces them.
  • The goal is to get as many students in the hot seat as possible, but class may also have a student that is “ruler” of the hot seat and can answer many questions staying up the longest.

Wrap-Up

Post completed Venn Diagrams in class on bulletin boards, white boards, or on desks. Have students complete a gallery walk, in which they circulate with sticky notes and put at least 5–10 further facts they know or remember about the animals on students’ work.

Students return to their original Venn Diagram and before submission, can decide if they want to incorporate any of the facts that other classmates have contributed.

Assessment

Assess the Venn Diagrams with the Animal Venn Diagram Assessment.
Venn Diagram: Compare and Contrast Animals

Features of this animal group

Features of this animal group

Shared features
### Animal Venn Diagram Assessment

**Animals compared:**

<table>
<thead>
<tr>
<th>Expectations</th>
<th>Level 1: Does not meet expectations</th>
<th>Level 2: Approaching expectations</th>
<th>Level 3: Meets expectations</th>
<th>Level 4: Meets expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Different (Left and right section of Venn Diagram)</td>
<td>My Venn Diagram shows how the two topics are different from one another.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alike (Overlapping middle section of Venn Diagram)</td>
<td>My Venn Diagram shows how the topics are alike.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ideas and Content (Physical and behavioral characteristics)</td>
<td>My Venn Diagram shows that I understand how to gather information about two different animals.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication (relevant information, final presentation)</td>
<td>My Venn Diagram has relevant main ideas and supporting details about my animals in appropriately phrased point form.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________
LESSON 3
Around the World with Animals or Physical Features

Curriculum Correlations

Common Core State Standards
RI.4.1; RI.4.2; RI.4.4; RI.4.7, 4.9
Next Generation Science Standards
3-LS4-4
Ontario Language Arts Standards
Grade 4 Oral Communication
1.2, 1.4, 1.6
Grade 4 Reading
1.4, 2.3
Grade 4 Writing
1.2, 1.3, 1.4, 1.5, 1.6, 3.7, 3.8
Grade 4 Media Literacy
3.2, 3.3, 3.4
Ontario Science and Technology Standards
Grade 4 Understanding Life Systems: Habitats and Communities
3.1, 3.4, 3.7

Materials

• Wildlife Worlds series
• Computers
• Reference materials on animals and geography
• List of websites to conduct further research for presentations
  • Animals: https://bit.ly/2ZX02x2
  • Geographical Features: https://bit.ly/37JF9sb
• Multimedia Presentation Rubric

Objectives

Students will be able to:

• Create a multimedia presentation that highlights one type of animal or physical feature to consolidate knowledge gained from text and technology about shared and unique characteristics from around the world.
• Display information in a format that illustrates students’ knowledge of topic, and knowledge and application of online tools to create slideshow or project with dynamic illustrations, text, and text features.
• Incorporate graphics and maps that show understanding of location and place of geographic or animal features around the world.

Setting the Stage

Show the Google Earth project tutorial to students to give an introduction to Google Earth as a potential tool to explore.
https://www.youtube.com/watch?time_continue=45&v=5KtwMRedAbc&feature=emb_title

Activity

Using the Wildlife Worlds series as a springboard and thinking about their previous work on learning about animals and the physical/geographical features of our world, decide on one topic that each student would like to explore further.

Students will research and orally present a multimedia presentation (slideshow, online poster, bristol board poster, etc.) with text, graphics, text features, and technological features of their chosen media. Explore chosen multimedia applications to help them plan their work.

Teacher may post some suggested headings for their inquiries on chart paper or on projector:
• Animals
  • Habitats, Habits, Adaptations, Family Structure, Food, Environment, Physical Features, Behavior, Interesting Facts
• Physical/Geographic Features
  • Locations around the world; Disasters affecting feature; How people use resources provided by feature; Animals found in and around feature; Settlements around feature; Transportation to and around feature; Weather; Extremes of feature (best, worst, largest, smallest, hottest, coldest, etc.); Interesting Facts
Co-create some success criteria to guide students, keeping in mind the rubric should also be shared with students before beginning research. Sample success criteria:

- Uses graphics, images, text features
- Puts facts into own words
- Uses a variety of books and facts
- Has titles and subtitles on every page or paragraph
- Makes each page or section unique with colours, fonts, and added media
- Found many interesting facts about topic
- Uses complete sentences

**Extensions**

- Have students write a letter to an animal organization or an organization that aims to protect one of the physical features chosen. Tell the organization any ideas you have to help save or preserve the animal or physical feature you researched. Ask if there are any ways you can help in your classroom or community. Share the slideshow you made about the organization’s animal or physical feature.

**Wrap-Up**

Share all the presentations either individually, or have 4 corners of the room set up with students’ presentations where they can present to a smaller group of their friends.

After each presentation, give Glow/Grow comments.

- Glow: things that went very well in their presentation or positive comments about their multimedia work or oral communication.
- Grow: comments that would help build on their skills and suggestions to make their presentation or multimedia work better.

**Assessment**

Use the Multimedia Presentation Rubric to assess the presentations.

Worksheet: Animal/Physical Feature Multimedia Presentation Rubric
## Multimedia Presentation Rubric

### Topic:

<table>
<thead>
<tr>
<th>Information Tech and Media Forms (Thinking)</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slide transitions, graphics, pictures, text features (titles, captions, etc.) are limited or ineffective for the multimedia presentation.</td>
<td></td>
<td>Some planning has gone into slide transitions, graphics, pictures, text features (titles, captions, etc.) to create a presentation that shows emerging media and information technology ideas.</td>
<td>Slide transitions, graphics, pictures, text features (titles, captions, etc.) are chosen appropriately to create a presentation that shows many media forms and information technology ideas.</td>
<td>Careful planning has gone into all slide transitions, graphics, pictures, text features (titles, captions, etc.). Extensive and appropriate media forms and information technology ideas have been included and enhance the presentation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Language (Communication)</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>My research on my topic was used to create a slideshow but many of the facts are lacking detail or are copied from the text.</td>
<td>My research on my topic was used to create a slideshow and the writing is simple but in my own words.</td>
<td>My research on my topic was used to create a slideshow and the writing communicates many interesting ideas and is all in my own words.</td>
<td>My research on my province was used to create a slideshow and the writing is all in my own words. I have also included extra detail in my writing that was above and beyond the assignment guideline.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social Studies (Application)</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research on animal or physical feature incomplete or unorganized and hard to follow along.</td>
<td>Research on animal or physical feature sometimes hard to follow because they are not clear or not as developed.</td>
<td>Research on animal or physical feature is organized and the facts presented are detailed and varied.</td>
<td>Research on animal or physical feature is very well organized and easy to follow along. The facts presented are well researched, plus there is extensive detail/information on each one.</td>
<td></td>
</tr>
</tbody>
</table>

### Additional comments:

____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________