

GRADE FOUR: LET'S EXPLORE HABITATS AND COMMUNITIES

Lesson Goals:

Activity One: Students will demonstrate their ability to identify the living and non-living factors within various artworks.

Activity Two: Students will demonstrate an understanding of habitats and how various living and non-living factors interact to create a community.

Curriculum Expectations:

- **3.1** demonstrate an understanding of habitats as areas that provide plants and animals with the necessities of life.
- **3.3** identify factors that affect the ability of plants and animals to survive in a specific habitat.
- **3.4** demonstrate an understanding of a community as a group of interacting species sharing a common habitat.

Class Discussion Prompts:

Activity One:

- What do you see in the artwork? What is living and what is non-living?
- How do living and non-living factors interact?

Activity Two:

- Is your element living or non-living?
- If non-living, how does your element interact with the other elements in the habitat?
- If living, how does the habitat provide your element with the necessities of life?

Structure + Activity:

Activity One : Artwork Analysis

- As a group, students will have a discussion about the different things they can see in the two artworks. They will discuss and how they all work together to function as a habitat/community. Teachers can use the above prompts to facilitate discussion, or use the additional resources listed below.
- Optionally, teachers can have students complete the "Habitat Art Analysis" worksheet to assess student's individual understanding of habitat interactions.

Activity Two : Collaborative Habitat Creation

- Students will choose a habitat type for the collaborative activity (a list of habitat examples and environmental factors are included on the second page of this document).
- As a group, students will brainstorm the various elements of the habitat.
- Teachers will assign one living or non-living factor of the habitat for each student to create (this can either be done on paper, or with physical media like clay).
- Once all students are finished their factor, each student will describe how their piece fits into the greater cooperative diorama.

Additional Resources:

Video: <https://www.youtube.com/watch?v=ZrSWYE37MJs&t=2s>

Website: <https://kids.nationalgeographic.com/nature/habitats>

<https://www.dkfindout.com/us/animals-and-nature/habitats-and-ecosystems/>

Book: "Many Biomes, One Earth" by Sneed B. Collard

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Habitat:

Arctic
Tundra

Locations:

- Canada
- Russia
- Greenland
- Iceland

Living Factors: polar bear, spotted seal, walrus, arctic hare, arctic fox, beluga whale, narwhal, arctic cod, falcon, snowy owl, puffin, moss, shrub.

Non-Living Factors: strong winds, ice sheets, heavy snow, little sunlight, cold temperatures, permafrost.

Further Information:

- **Video:** <https://www.youtube.com/watch?v=RT6x5GVPFg8>

Habitat:

Tropical
Rainforest

Locations:

- Brazil
- Peru
- Indonesia
- Columbia

Living Factors: toucan, parrot, three-toed sloth, howler monkey, mountain gorilla, ant, beetle, lichen, moss, orchid, fungi, python, salamander, frogs.

Non-living Factors: intense sunlight, precipitation, humidity, hot temperatures, dead trees, rocks, streams.

Further Information:

- **Video:** <https://www.youtube.com/watch?v=3vijLre760w>

Habitat:

Savanna
Grassland

Locations:

- Kenya
- Zimbabwe
- Tanzania
- Namibia

Living Factors: acacia tree, bluestem grass, shrub, fungi, termite, vulture, giraffe, elephant, hyena, leopard, lion, impala, warthog, aardvark, ostrich.

Non-Living Factors: soil, rocks, humidity, hot temperatures, river, intense sunlight.

Further Information:

- **Video:** https://www.youtube.com/watch?v=nKnV_7QzpNo

Habitat:

Freshwater
River

Locations:

- Canada
(Detroit
River)
- USA
(Missouri)

Living Factors: algae, water lily, mayfly, crayfish, sunfish, bass, trout, perch, zebra mussels, beaver, river otter.

Non-Living Factors: sunlight, water temperature, water movement, rainfall, rocks, soil.

Future Information:

- **Video:** <https://www.youtube.com/watch?v=GlRW7t-iWv4>

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Aquatic Habitat

Title: Coral Reef

Artist: Kasey Brown

Science Meets Art (SMArt)

Faculty of Science

University of Windsor

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Terrestrial Habitat

Title: Tallgrass Prairie

Artist: Lauren Szucki

Science Meets Art (SMArt)

Faculty of Science

University of Windsor

Name: _____ Date: _____



HABITAT ART ANALYSIS

Artwork One: Aquatic Habitat

Name three *living* factors you see in the artwork.

Write two *non-living* factors you see in the artwork.

Describe one way that two factors *interact with each other* within the habitat.

Artwork Two: Terrestrial Habitat

Write three *living* factors you see in the artwork.

Write two *non-living* factors you see in the artwork.

Describe one way that two factors *interact with each other* within the habitat.

Describe one *positive* and one *negative* impact that humans have on habitats.
