

ARTS IMPACT PROJECT BASED LEARNING UNIT PLAN

Dance and STEM Infused PBL Unit

Save a Habitat, Save an Animal

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Grade Level: Second – Third Grade

Project Idea:

Help endangered animals, research climate change and other things that impacts habitat. Create an action plan to lessen habitat destruction. Share about how human impacts on the environment affect animals and how we can help.

Driving Question:

How can we help save the animals?

Unit Summary (Completed at end of project. Use for sharing out public product.)

Students research habitats and the animals that live in them. They will display their research findings visually (poster, scientific drawing, etc.) Students will create a dance showing the cause and effect of changes in habitats. Students will create an action plan of how they will make changes to lessen habitat destruction. They will present to an audience about human impacts on the environment and what they can do to help animals.

Learning Targets and Assessment Criteria

Target: Identifies natural habitat(s) and the animals that live there.

Criteria: Researches, creates, and presents a visual representation of a habitat and its animals (poster, scientific drawing, etc.).

Target: Understands the cause and effect (interdependent relationships) of changes in and between the habitats.

Criteria: Creates and presents a dance with narration that begins with a shape, followed by movement to show cause and then show effect, and then ends in a shape.

Target: Identifies their own impact on the environment.

Criteria: Develops a written personal action plan to lessen habitat destruction.

Target: Educates their chosen audience about helping endangered animals.

Criteria: Creates and presents a visual representation (e.g. dance video, PSA video, oral presentation, art installation) about how their impacts on the environment affect animals and what they can do to help.

Vocabulary

Arts:
Energy
Levels
Mirroring
Self and General Space
Shadowing
Shape
Time

continued

Materials

Resources (Websites, experts, texts)

YouTube video: *Climate Change 101 with Bill Bye / National Geographic*, other videos that show the effects of climate change on animals
Fieldtrips: Woodland Park Zoo, other local habitats
Local experts: zookeepers or zoo educator program specialists

Museum Artworks or Performance

Meany Center for the Performing Arts
Pacific Northwest Ballet

continued

<p><u>Arts Infused:</u> Cause and Effect</p> <p><u>STEM:</u> Adaptations Biodiversity Characteristics Climate Diversity Ecosystems Endangered Habitat Interdependent Relationships Patterns</p> <p><u>Social Emotional Learning:</u> Preserve Protect</p> <p><u>21st Century Skills:</u> Creative Thinking Communication Collaboration</p>	<p>Materials Video, photographs, and other supplies to transform part of a classroom into a habitat Chartpaper or whiteboard and markers Habitat graphic organizer Supplies for visual representations of habitat research Music for dance, music player, drum Paper and pencils for action plans Contract self-assessment forms Class assessment worksheet</p>
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Standards to Drive the Inquiry

Arts

WA Arts Learning Standards

For the full description of each anchor standard and the grade level performance standards, see:

<http://www.k12.wa.us/Arts/Standards>

Anchor Standard 2: Organize and develop artistic ideas and work.

Performance Standard (DA:Cr2.1.2): a. Improvise a dance phrase with a beginning, a middle that has a main idea, and a clear end. b. Choose movements that express a main idea or emotion, or follow a musical phrase. Explain reasons for movement choices.

Performance Standard (DA:Cr2.1.3): b. Develop a dance phrase that expresses and communicates an idea or feeling. Discuss the effect of the movement choices.

Anchor Standard 5: Develop and refine artistic techniques and work for presentation.

Performance Standard (DA:Pr5.1.2): b. Move safely in a variety of spatial relationships and formations with other dancers, sharing and maintaining personal space.

Performance Standard (DA:Pr5.1.3): a. Replicate body shapes, movement characteristics, and movement patterns in a dance sequence with awareness of body alignment and core support. b. Adjust body-use to coordinate with a partner or other dancers to safely change levels, directions, and pathway designs.

Science, Technology, Engineering

Next Generation Science Standards

<http://www.nextgenscience.org/search-standards>

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

3-LS4-3 Biological Evolution: Unity and Diversity: Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.

3-LS4-4 Biological Evolution: Unity and Diversity: Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.

Scientific and Engineering Practices

Planning and Carrying Out Investigations

Engaging in Argument from Evidence

21st Century Skills

<http://www.p21.org/our-work/resources/for-educators>

- Creative Thinking: *Gathers ideas; considers and tries multiple solutions; and makes artistic choices*
- Communication: *Actively listens; expresses ideas – visually/physically/verbally; responds to others*
- Collaboration: *Communicates ideas to others; makes compromises; and incorporates input/feedback*

Teacher Project Planning

(Questions for teachers.)

1. *What will the entry event be to launch this unit?*

Teachers might create multiple habitats (a different one in each classroom using video, pictures, art installations, etc.) and students tour each classroom.

Students discuss what was experienced; compare and contrast chart observations; fill out the KW on a KWL chart.

After the classroom habitat tours, show video of the effects of climate change on animals, then share the driving question.

2. *What resources might we need?*

(Experts, fieldtrips, texts, websites, data, equipment, materials)

Video, photographs, and other supplies to transform part of a classroom into a habitat

YouTube video: *Climate Change 101 with Bill Bye / National Geographic*, other videos that show the effects of climate change on animals

Fieldtrips: Woodland Park Zoo, other local habitats

Local experts: zookeepers or zoo educator program specialists

3. *What is the duration of this unit?*

6 weeks

4. *What will be group work?*

Habitat research, visual representation of research, cause and effect dances, final product to educate community

What will each individual student do?

Research, action plan, self-evaluation

5. *What will the formative assessments/moments for reflection be?*

(Journal entries, plans, outlines, rough drafts, sketches, turn and talk, physical brainstorm, idea mapping, diagramming)

Verbal and body brainstorms, cause and effect dances, rough plans for final presentation, action plans

6. *What will the summative assessment/ public product be?*

(Performance, exhibition, publication, public presentation, website, installation)

Video, dance, psa, presentation, or art installation, and final reflections

Facilitating Student Understanding of the Problem

(Questions to guide student inquiry.)

1. *What do we know about this problem before we begin?*
2. *What do we need to learn in order to solve it?*
3. *Where will we look for resources?*
4. *Who is our audience? Who will be helped by our solution?*
5. *How will we share our solution?*
6. *How will we assess our own learning?*

PBL Unit Outline of Inquiry

(Begin each step with a question. Follow that with a brief description of what students do to address the question.)

1. What do we need to know about our habitats?

- The students brainstorm, as a whole class, research categories (a list of habitats).
- The teacher creates a graphic organizer (e.g. location, climate, animals, dangers, plants, survival – what they eat & what eats them) to guide students' habitat research.
- The students create groups based on habitat interest and begin researching their habitat.
- The students in groups create a visual representation of their research and present it to the class.

Student reflection and assessment: Researches, creates, and presents a visual representation of a habitat and its animals (poster, scientific drawing, etc.)

2. What do we need to know to create a dance to represent our research? What dance concepts and skills do we need to know (e.g. general space, self-space, shape, levels, tempo, mirroring and shadowing)?

- The students define the classroom norms for physical and emotional safe and creative dancing.
- The students brainstorm a list of concepts and skills they will need to know to communicate their ideas through dance.
- The students warm up with a BrainDance and explore each concept and skill through guided improvisation.

Student reflection and assessment: Lists and explores dance concepts and skills.

3. How do we dance the cause and effect of habitat change?

- The students in groups identify a cause and effect of habitat change.
- The students create and perform a dance demonstrating the cause and effect of habitat change beginning with a shape, followed by a movement to show cause and then effect, then end in shape. They include narration that communicates the habitat, cause, and effect.
- The students discuss how they used creative thinking, communication, and collaboration to create their dances.

Student reflection and assessment: Creates and presents a dance with narration that begins with a shape, followed by movement to show cause and then show effect, and then ends in a shape. Uses creative thinking, communication, and collaboration

4. What actions can I take to lessen the impact of habitat destruction?

- The students come up with lists of things they do that harm the animals by impacting the environment.
- The students create a list of ways they could lessen the impact of habitat destruction (e.g. recycle, reduce, reuse, drive cars less, use public transportation, green power, plant trees in the gardens).
- The students make their own action plans and contracts. (This could be done individually or as a small group.)

Student reflection and assessment: Develops a written personal action plan to lessen habitat destruction.

5. How do we share this information with our community?

- The students determine who their audience is and what their product will be (e.g. video, dance, psa, presentation, art installation).
- The students create and present their products that communicate how human actions affect the animals by impacting the environment. They include actions that the audience members can take to help save the animals by lessening their impact on the environment.

Student reflection and assessment: Creates and presents a visual representation (e.g. dance video, PSA video, oral presentation, art installation) about how their impacts on the environment affect animals and what they can do to help.

6. What have you learned? How is your life different?

- The students reflect on their journey to save the environment.
- The students review their KWL chart. They notice what they knew at the beginning of the unit and what they wanted to know. They work together to fill out the section of the chart that lists what they have learned.
- The students consider the progress they have made on their personal action plans and write self-evaluations of the steps forward they will need to make to achieve the goals on their contracts.

Student reflection and assessment: Reflects on the learning. Writes a self-assessment of their progress achieving the goals on their contract.

Public Product/Sharing

Who is our audience?

The students will determine their audience (e.g. other classes, the school community, West Seattle Community Organizations).

Begin with a question, followed by the description of the culminating event that shares the learning from the PBL unit.

How do we share this information with our community? How do our actions affect the animals by impacting the environment? What can we do?

Create and present a student designed visual representation (e.g. dance video, PSA video, oral presentation, art installation) to educate the audience on how human actions affect the animals by impacting the environment. They include actions that the audience members can take to help save the animals by lessening their impact on the environment.

ARTS IMPACT LESSON PLAN Dance and STEM Infused PBL Unit

Second – Third Grade: *Save a Habitat, Save an Animal*

CLASS ASSESSMENT WORKSHEET

The following assessment checklist can be used along with other assessment tools developed by teachers and students.

Disciplines	SCIENCE	DANCE/SCIENCE	SCIENCE	ARTS/SCIENCE	Total 4
Concept	Habitats	Choreography	Action Plan	Communication	
Criteria	Researches, creates, and presents a visual representation of a habitat and its animals (poster, scientific drawing, etc.).	Creates and presents a dance with narration that begins with a shape, followed by movement to show cause and then show effect, and then ends in a shape.	Develops a written personal action plan to lessen habitat destruction.	Creates and presents a visual representation (e.g. dance video, PSA video, oral presentation, art installation) about how their impacts on the environment affect animals and what they can do to help.	
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Percentage					

What was effective in the unit? Why?

What do I want to consider for the next time I teach this unit?

What were the strongest connections between arts discipline and STEM?

Teacher: _____

Date: _____

ARTS AND STEM INFUSED PBL: *Save a Habitat, Save an Animal*

Dear Family:

We are engaged in a dance-infused project based learning unit in which we are trying to solve this challenge:

Driving Question:

How can we help save the animals?

- We asked what we knew and wanted to know about habitats.
- We discovered many important things about one habitat and presented our learning visually (in a poster, scientific drawing, etc.).
- We created a dance to show the cause and effect of habitat change.
- We made an action plan of what we can do to help the animals by lessening the impact of destroying a habitat.
- We created presentations to the community (e.g. video, dance, psa, art installation) to communicate the ways human actions affect the animals by impacting the environment of a habitat.
- We included actions that the audience members can take to help save the animals by lessening their impact on the environment.

At home, you could extend the learning by talking about their personal action plans to lessen the impact of habitat destruction.