

ARTS IMPACT PROJECT BASED LEARNING UNIT PLAN

Visual Arts and STEM Infused PBL Unit

Whale Watch

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Grade Level: 1

Project Idea:

Students will go whale watching on the ferry in order to observe Orca's natural habitat and ultimately ask "Where have the Orcas gone?" Students learn about the Salish Sea marine ecosystem and threats to Orca through interacting with experts and making art. Students research the human impact on Orca Whales, and develop a plan to raise funds to support Orca conservation. Students collaborate to complete research projects (in the form of lapbooks). The culminating project will be the production of Orca post cards, which students will then sell in order to adopt an Orca through the whale museum.

Driving Question:

Where did the Orcas go, and what can we do to help them?

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

Students build awareness of, research and make art about threats to our Orca whales of the Salish Sea, then collaboratively take action through making and marketing art to raise funds to protect Orca.

Learning Targets and Assessment Criteria

Target: Identifies the primary threats to Orcas.

Criteria: Creates a triptych that depicts threats that are harming Orcas using multiple images in a sequence.

Target: Collaborates in order to research and produce a shared research project about Orcas.

Criteria: Creates a lapbook that provides information about Orcas using both visuals and texts.

Target: Collaborates in order to produce, market, and sell an Orca-themed product to benefit Orca conservation.

Criteria: Works effectively together to earn enough money to adopt a whale through the "Whale Museum" (located in Friday Harbor).

Vocabulary

Arts:

Acrylic
Contrast
Ghost print
Plate
Printing
Reproduction
Triptych

Arts Infused:

Sequence
Research

STEM:

Conservation
Ecosystem
Environment
Habitat
Marine Biologist
Orca
Pod
Salish Sea

Salmon
Threat

21st Century Skills:

Collaboration, Communication

Materials

Resources (Websites, experts, texts)

Seattle Aquarium
Whale Museum, Friday Harbor
Orca Network www.orcanetwork.org
<http://killerwhaletales.org/students/listen-orcas-live/> Sounds of Orcas
<https://kids.nationalgeographic.com/animals/orca/#orca-jumping.jpg> Orca Facts
<https://whalemuseum.org/> Orca Adoption, misc. information and data
https://www.google.com/search?q=artwork+of+orca&rlz=1c9bkja_enus590us590&hl=enus&prmd=isnv&source=lnms&tbn=isch&sa=x&ved=0ahukewj1k5dju8vyahvh2gmkhup_a3aq_auiessgb&biw=1024&bih=653&surl=1&safe=active&ssui=on#imgdii=CfGUOImkMiMnTM:&imgsrc=vfvPjRMDpHzECM: Orca art

Museum Artworks or Performance

Royal British Columbia Museum

Bill Reid, *Killer Whale*, 1986),

Seattle Art Museum

Calvin Hunt (Tlasutiwalis), *Three Killer Whales* 1998 2014.4.14
Tlingit, *Basket: Orca Whale Design* Ca. 1910 91.1.100

Materials

Sketchbooks, pencils, art paper, acrylic paints, gel plates, pens, watercolor, Class assessment worksheet.

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 1: Generate and conceptualize artistic ideas and work.

Performance Standard (VA:Cr1.1.1): a. Engage collaboratively in exploration and imaginative play with materials.

Performance Standard (VA:Cr1.2.1): a. Use observation and investigation in preparation for making a work of art.

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

Performance Standard (VA:Cr2.1.1): a. Explore uses of materials and tools to create works of art or design.

Anchor Standard 11: Relate artistic ideas and works with societal, cultural, and historical context to deepen understanding.

Performance Standard (VA:Cn11.1.1): a. Understand that people from different places and times have made art for a variety of reasons.

English Language Arts

Common Core State Standards in ELA

For a full description of CCSS Standards by grade level see: <http://www.k12.wa.us/CoreStandards/ELAstandards/>

RI.1.1: Ask and answer questions about key details in a text.

RI.1.7: Use illustrations and details in a text to describe its key ideas.

Science, Technology, Engineering

Next Generation Science Standards

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

K-ESS3-3 Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.

21st Century Skills

(Select the one or two that are most important in this lesson and delete the others.)

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

- 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?*

Our launching event will be a field trip to the aquarium. We will speak directly with an aquarium staff member about Orcas so that students can become oriented towards the problems facing Orcas.

2. *What resources might we need?*

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

Aquarium experts should be consulted during initial field trip.

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

8 weeks

4. *What will be group work?*

Groups will work together to complete shared research projects to learn more about Orcas. Students will work together to price and sell cards with their art work on it and will decide which orca to adopt.

What will each individual student do?

Individual students will complete artwork for postcards to be reproduced and sold.

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)

Sketches of orca, group discussions and brainstorming

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

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

Postcards, Sharing lapbooks and Triptychs

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 marine animals live in our local ecosystem?

Aquarium Field Trip

- The students will visit the Seattle Aquarium in order to develop background knowledge and a basic working knowledge of marine habitats and animals.
- The students record observations of marine creatures by drawing pictures and writing descriptions using their sketchbooks.

Student reflection and assessment: Exit ticket for students to paste in sketchbooks asking them to share one thing they learned.

2. How can we use art media to depict our favorite marine animal?

Gel Printing Favorite Marine Animal

- The students choose an animal they would like to represent using gel printing and acrylic paints.
- The students will complete an art walk of their peers' completed art work, providing positive feedback in a whole group setting.

Student reflection and assessment: Gallery walk

3. Where did the Orcas go?

Ferry Ride

- The students will go whale watching by riding the ferry—and they will be shocked to see that there aren't any whales waiting for them! This will prod students to begin grappling with the driving question—where are the Orcas? Why aren't they here?

- The students will develop hypotheses for where the Orcas have gone and will develop ways to learn more. If needed, teachers will suggest that we call an expert, search on the internet, look for a video, and read a book.

☑ Student reflection and assessment: Written and drawn reflection in notebooks to share hypotheses related to the driving question.

4. What’s hurting our Orcas and what can we do?

J-Pod Research Day, Skype call with expert.

- The students will talk with an Orca expert and ask questions relating to the challenges facing Orca whales in our local environment.
- The students will create a Cause and Effect Triptych.
- The students will work with a partner to research and produce an Orca lapbook.

☑ Student reflection and assessment: Creates a triptych that depicts threats that are harming Orcas using multiple images in a sequence. Creates a lapbook that provides information about Orcas using both visuals and texts.

5. How can we use our art to save the Orcas?

Make Orca Cards

- The students compare and analyze diverse examples of Pacific Northwest Native American art depicting Orcas.
- The students produce original artwork depicting Orcas with an Orca fact on the back, to be duplicated and sold in a fundraiser.
- The students will develop a simple business model in order to price, market, and sell post cards.

☑ Student reflection and assessment: Works effectively together to earn enough money to adopt a whale through the “Whale Museum” (located in Friday Harbor).

Public Product/Sharing

Who is our audience?

Students will identify a target consumer for their Orca post cards—possibilities include the school and students at West Seattle Elementary, a local business, West Seattle, etc.

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

Where have the Orcas gone, and what can we do to help them?

Students will ultimately produce Orca cards with Orca facts to be sold. Profits will benefit Orca conservation.

ARTS IMPACT LESSON PLAN Visual Arts and STEM Infused PBL Unit

Grade One: *Whale Watch*

CLASS ASSESSMENT WORKSHEET

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

Disciplines	Visual Arts/Science			Total
Concept	Research/Visual and Written Communication	Collaboration/Conservation		3
Criteria	Creates a triptych that depicts threats that are harming Orcas using multiple images in a sequence.	Creates a lapbook that provides information about Orcas using both visuals and texts.	Works effectively together to earn enough money to adopt a whale through the "Whale Museum" (located in Friday Harbor).	
Student Name				
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29.				
30.				
Total				
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 UNIT: *Whale Watch*

Dear Family:

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

Driving Question:

Where did the Orcas go, and what can we do to help them?

- We went whale watching on the ferry in order to observe Orca's natural habitat and ultimately ask "Where have the Orcas gone?"
- We visited the Seattle Aquarium and learned about the Salish Sea marine ecosystem. We made a print about our favorite marine animal.
- We learned about threats to Orca through interacting with experts and making art.
- We researched more about the human impact on Orca Whales, and developed a plan to raise funds to support Orca conservation.
- We collaborated to create research projects (in the form of lapbooks).
- Our culminating project is the creation of art for and marketing of Orca post cards. We are selling them in order to support Orca conservation by adopting an Orca through the whale museum in Friday Harbor.

At home, you could extend the learning by sharing your art with your family and community as a way to raise awareness of the threats that Orca face. You can communicate a call to action before it is too late!



Killer Whale, Bill Reid

Bill Reid's (1920–98) *Killer Whale* (1986), bronze sculpture with dark green patina on a bronze base: This sculpture is on display in the Royal British Columbia Museum. Measuring 112.1 x 74 x 49.8 cm, it is one of an edition of 9.[1]



Three Killer Whales,

By Calvin Hunt (Tlasutiwalis) 1998 Seattle Art Museum 2014.4.14



Basket: Orca Whale Design

Tlingit, Ca. 1910, Seattle Art Museum 91.1.100