Alaska Oil Spill Lesson Bank

Formerly: Alaska Oil Spill Curriculum

Origins

- Written and compiled by local educators shortly after the oil spill (1989).
- Grassroots effort by the education community, led by Belle Mickelson.
- Beth Trowbridge, one of the original authors, led outreach and teacher training from the PWS Science Center in the 90’s.
- PWSRCAC became the host.
- Last big update in 2013.
- New teacher-generated lessons regularly added.

How has it been used?

- Teacher Trainings
- Masters of Disaster
- Classrooms
- Homeschool groups
- Field programs & camps
- Science clubs

Who has used it?

These are just the ones we know of!
Educations Resources page has received 8,000+ visits
#16 most popular content on our website

How does this further our mission?

Content includes:

- History of Exxon Valdez oil spill
- Chemistry of oil
- Ecosystem science
- Engineering oil response strategies
- Citizen engagement & advocacy
- Stewardship ethic

Update 2019-2021

- More professional
  - Template
  - Science standards
  - Modernized content

Update 2019-2021

- More user-friendly
  - Educator tips
  - Assessments and grading rubrics
  - How-to guide

Update 2019-2021

- More accessible
  - Search & Filter webtool
  - Teacher-driven design and language
  - Rename

What's next?

- Outreach!
  - Strategic: who, how, where, when
  - Covid complications

What's next?

- Next steps
  - Photos & videos
  - Kits for teachers & at-home parents
- Gaps analysis
  - New areas of content
  - Accessible and culturally relevant education

What's next?

- Better story telling and data gathering

Lesson Bank

> About these lessons

Search Keyword or term...

Grade Select Grade Range(s) Subject(s) Filter by Subject(s)

NGSS Standard Filter by Next Generation Science Standard(s)

Submit Reset

Basic Properties Of Oil

Basic Properties Of Oil, Basic-Properties-of-Oil.pdf (0.3 MB) - **Lesson Overview**

Oil is an important compound with unique characteristics that make it both useful to humans and dangerous.

Objectives

- Students will understand that petroleum is different from vegetable ...

More about this lesson

Bouncing Polymers

Bouncing Polymers by Katie Gavenus, Bouncing-Polymers.pdf (0.5 MB) - **Lesson Overview**

- It is challenging to safely construct, operate, and navigate an oil tanker.

Objectives

- Students will build an oil tanker using design requirements.
- Students will test their ...

More about this lesson

Build An Oil Tanker

Build An Oil Tanker, Build-an-Oil-Tanker.pdf (0.3 MB) - **Lesson Overview**

It is challenging to safely construct, operate, and navigate an oil tanker.

Objectives

- Students will build an oil tanker using design requirements.
- Students will test their ...

More about this lesson

Lesson Bank Tool

pwsrcac.org/lessons/search-lessons/?_search=habitat&file_custom_cur6=K-2%2C%203-5

Apps | Sharepoint | PWSRCAC.net | pwsrcac.org | Project Team Login | Dropbox | Alaska RRT - Home... | Noun Project | women | Science Talk | FP Portal | Alaska Region NOS... | New Board Onboar... | Other bookmarks | Reading list

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Lesson Bank

> About these lessons

Search habitat

Grade K-2, 3-5 **Subject(s)** Filter by Subject(s)

NGSS Standard Filter by Next Generation Science Standard(s)

Submit Reset

Habitat Model

Habitat Model, Habitat-Model.pdf (0.3 MB) - **Overview**

All living organisms need habitat to survive.

Objectives

- Students will know that a habitat is a natural home.
- Students will construct a habitat model for an animal.
- Students will be ...

More about this lesson

Local Plant Studies

Local Plant Studies, Local-Plant-Studies.pdf (0.3 MB) - **Lesson Overview**

It is important to use all of your senses when observing the natural world. Observing plant structures can help us to understand how plants function and survive in a habitat.
...

More about this lesson

4:55 PM 9/9/2021

Habitat Model

Overview

All living organisms need habitat to survive.

Objectives

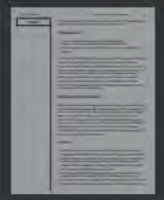
- Students will know that a habitat is a natural home.
- Students will construct a habitat model for an animal.
- Students will be introduced to the specific habitat requirements of different animals.

View: Habitat Model

Date: April 14, 2021
File size: 0.3 MB
Category: 0001 2021 Lesson Plans

Grade Level: K-2, 3-5
Subject: Life Science
Concept: Scale Proportion and Quantity
Type: Classroom
File type: lesson plan
Standard: 3-LS4-3


1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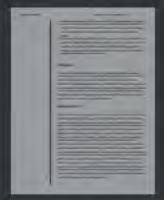
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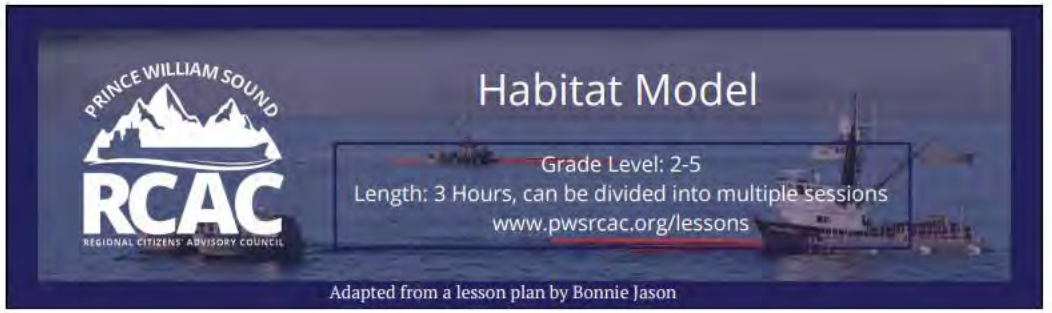

Adapted from a lesson plan by Bonnie Jason

NGSS Standards

3-LS4-3 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.

Crosscutting Concepts

Scale, Proportion, & Quantity In considering phenomena, it is critical to recognize what is relevant at different size, time, and energy scales, and to recognize proportional relationships between different quantities as scales change.

System & System Models A system is an organized group of related objects or components. Models can be used for understanding and predicting the behavior of systems.

Related Resources

Overview

All living organisms need habitat to survive.

Objectives

- Students will know that a habitat is a natural home.
- Students will construct a habitat model for an animal.
- Students will be introduced to the specific habitat requirements of different animals.

Materials

- ☐ Graph Paper
- ☐ Whiteboard (or easel with paper)
- ☐ Dry Erase Markers (or markers)
- ☐ Pencils/Pens/Markers
- ☐ Large Pieces of Cardboard (for model foundations-can be reused cardboard boxes)
- ☐ Local Animal Identification & Information Books, Access to Online Resources, and/or Access to Experts in the Community
- ☐ Habitat Registration Form
- ☐ Miscellaneous Construction Items (popsicle sticks, pipe cleaners, construction paper, cardboard scraps, tissue paper, egg cartons, wood scraps, felt pieces, yarn, glue, tape, etc.)

Lesson Bank

> About these lessons

Search rov

Grade Select Grade Range(s) Subject(s) Filter by Subject(s)

NGSS Standard Filter by Next Generation Science Standard(s)

Submit Reset

Environmental Change Makers

Environmental Change Makers, Environmental-Change-Makers.pdf (0.3 MB) - **Lesson Overview**

We can all be stewards of the environment and ecosystems that support us.

Objectives

- Students will identify and analyze an environmental problem.
- Students will create a plan to ...

More about this lesson

Oil's Wandering Paths: ROV Lesson Plan

Oil's Wandering Paths: ROV Lesson Plan, Oils-Wandering-Paths.pdf (0.3 MB) - **Lesson Overview**

It is challenging to clean up oil once it has been spilled.

Objectives

- Students will work cooperatively to design and build an ROV (remotely ...

More about this lesson

Preparation & Prevention-ROV Monitoring Challenge

Preparation & Prevention-ROV Monitoring Challenge, Preparation-Prevention-ROV-Monitoring-Challenge.pdf (0.4 MB) - **Lesson Overview**

ROVs with video capability can be used to monitor the environment and perform inspections to prevent oil spills.

Objectives

- Students will learn ways that ROVs ...

More about this lesson

Oil's Wandering Paths: ROV Lesson Plan

Lesson Overview

It is challenging to clean up oil once it has been spilled.

Objectives

- Students will work cooperatively to design and build an ROV (remotely operated vehicle) in response to a mock oil spill.
- Students will demonstrate how to operate equipment similar to real-life oil response equipment.

Supporting Materials

- "ROV Design and Oil Spill Response" Power Point Presentation
- "ROV Design and Oil Spill Response" Worksheet
- "Points to Ponder When Designing ROVs" Handout
- "ROV Frame Examples" Handout (PDF)

View: Oil's Wandering Paths: ROV Lesson Plan


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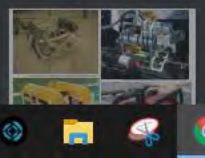

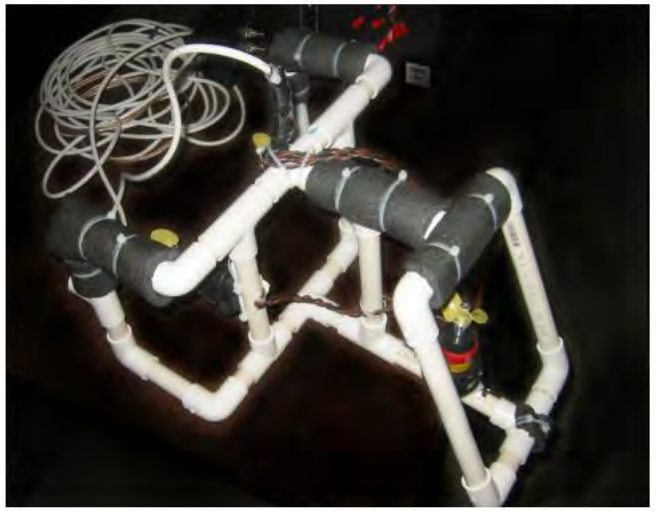
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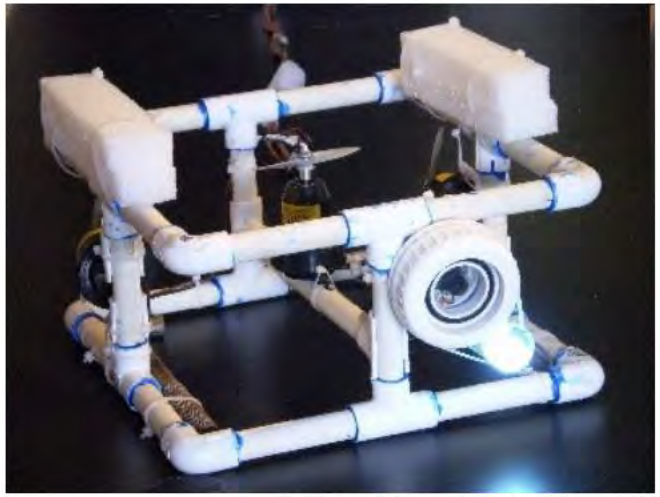
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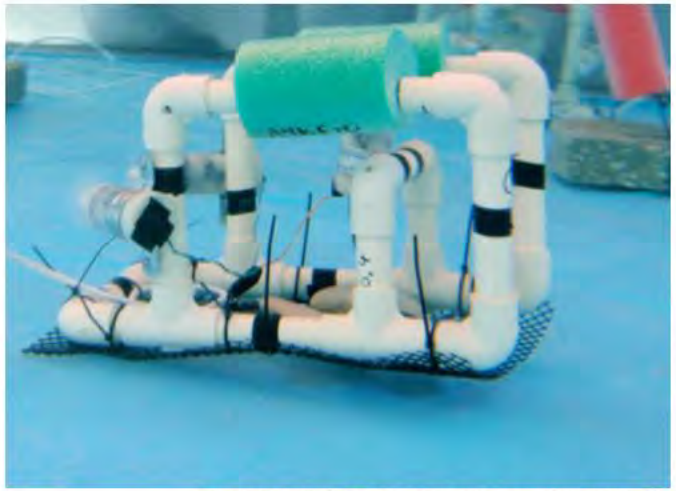
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