



**DREAM FLIGHT
ADVENTURES**

Inspiring the world to think and dream

Enrichment Materials

Resources for deeper inquiry and advanced students



The following third-party resources are recommended as enrichment materials for gifted or advanced students.

Aquatic Ecosystems & Food Chains

Videos

Aquatic Ecosystems

<http://www.youtube.com/watch?v=kL-9TB4qAho>

Human Effect of Aquatic Food Chains

<http://www.youtube.com/watch?v=roRQQZIGlvM>

National Geographic: Marine Food Webs

<http://video.nationalgeographic.com/video/education-videos/edu-ocean3-foodweb/>

Educational Portal: Ecosystems of Oceans and Freshwater: Biological Diversity and Water

<http://education-portal.com/academy/lesson/ecosystems-of-oceans-and-freshwater-biological-diversity-and-water.html#lesson>

Websites

National Geographic: Freshwater Aquatic Ecosystems: Connecting, Water, Land, People and Wildlife

<http://environment.nationalgeographic.com/environment/freshwater/aquatic-ecosystems/>

Scholastic: Study Jams: Videos and Quizzes

<http://studyjams.scholastic.com/studyjams/jams/science/ecosystems/aquatic-ecosystems.htm>

Tutor Vista: Aquatic Food Chains

<http://www.tutorvista.com/science/aquatic-food-chains>



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Teach Ocean Science: Aquatic Food Webs

http://www.teachoceanscience.net/teaching_resources/education_modules/aquatic_food_webs/get_started/

Additional Instructor Resources

Penn State University: Water Lesson Plans

<http://ecosystems.psu.edu/youth/sftrc/lesson-plans/water>

Discovery Education: Aquatic Habitat

<http://www.discoveryeducation.com/teachers/free-lesson-plans/aquatic-habitats.cfm>

Sarah Anderson: Aquatic Lesson Plans and Handouts

<http://sarah-anderson.net/aslp.htm>

Scientists in Residence Program: Aquatic Ecosystems

<http://scientistinresidence.ca/science-lesson-plans/aquatic-ecosystems/>

Projects

Build a Marine Food Web

<http://www.sciencelearn.org.nz/Contexts/Life-in-the-Sea/Teaching-and-Learning-Approaches/Build-a-marine-food-web>

Making Your Own Aquatic Ecosystem

http://www.ehow.com/list_5930956_ecosystem-science-projects.html



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Contamination & Purification

Videos

Water Purification Process: King Street Water Treatment Plant Tour

<http://vimeo.com/65647674>

Websites

NRDC (Natural Resources Defense Council): Water Pollution Facts

<http://www.nrdc.org/water/>

EPA (Environmental Protection Agency): Water Contaminants

<http://water.epa.gov/drink/contaminants/>

Science Daily: Water Purification

http://www.sciencedaily.com/articles/w/water_purification.htm

Princeton University: Guide to Water Purification

<http://www.princeton.edu/~oa/manual/water.shtml>

Additional Instructor Resources

National Geographic: Contaminants in the Water Cycle

http://education.nationalgeographic.com/archive/xpeditions/lessons/14/g912/tgsouhegan.html?ar_a=1

Chewonki: Water Pollution

http://www.chewonki.org/cleanwater/water_pollution.asp

Utah State University: Water Pollution Lesson Plans

<http://extension.usu.edu/waterquality/htm/educator-resources/lessonplans/wp/>



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CIESE Collaborative Project: Water Purification

<http://www.ciese.org/curriculum/purification/lessons.html>

Seametrics: Water Lesson Plans

<http://www.seametrics.com/water-lesson-plans>

AAAS: SciencNetLinks: Ecosystem Services- Water Purification

<http://sciencenetlinks.com/lessons/ecosystem-services-water-purification/>

Projects

Build Your Own Watershed

[http://water.epa.gov/learn/kids/drinkingwater/
activity_grades_9-12_buildyourownwatershed.cfm](http://water.epa.gov/learn/kids/drinkingwater/activity_grades_9-12_buildyourownwatershed.cfm)

Role of Plants in Water Filtration

[http://water.epa.gov/learn/kids/drinkingwater/upload/
2005_03_10_kids_activity_grades_4-8_plantsinwaterfiltration.pdf](http://water.epa.gov/learn/kids/drinkingwater/upload/2005_03_10_kids_activity_grades_4-8_plantsinwaterfiltration.pdf)

Building a Model Aquifer

[http://water.epa.gov/learn/kids/drinkingwater/upload
2009_04_29_kids_activity_grades_9-12_buildingamodelaquifer.pdf](http://water.epa.gov/learn/kids/drinkingwater/upload/2009_04_29_kids_activity_grades_9-12_buildingamodelaquifer.pdf)

Recycling, waste disposal, and the environment

Videos

Wast Management Single Stream Recycling

<http://www.youtube.com/watch?v=GP3JuiX5BY>

HowStuffWorks: Cell Phone Recycling

<http://electronics.howstuffworks.com/13-how-cell-phone-recycling-works-video.htm>



Wast Management: Think Green

<http://www.wm.com/thinkgreen/index.jsp>

Websites

EPA (Environmental Protection Agency): Reduce, Reuse, Recycle

<http://www2.epa.gov/recycle>

HowStuffWorks: How Recycling Works

<http://science.howstuffworks.com/environmental/green-science/recycling.htm>

NRDC (Natural Resources Defense Council): Recycling 101

<http://www.nrdc.org/recycling/>

Guide Network: Water Pollution Guide: What Can You Do?

<http://www.water-pollution.org.uk/preventingyou.html>

NRDC (Natural Resources Defense Council): 10 Simple Ways You Can Help Reduce Pollution and Runoff

<http://www.nrdc.org/water/pollution/gsteps.asp>

eSchool Today: Cool Facts and Tips on Water Pollution

<http://eschooltoday.com/pollution/water-pollution/prevention-of-water-pollution.html>

EPA (Environmental Protection Agency): What You Can Do to Prevent NPS (Non Point Source) Pollution

<http://water.epa.gov/polwaste/nps/whatudo.cfm>

Additional Instructor Resources

Department of Environmental Protection Pennsylvania: Recycling Lesson Plans

http://www.dep.state.pa.us/dep/deputate/enved/rec_lessons/contents.htm



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Recycle Guys: Recycle Lesson Plans and Activities

<http://www.recycleguys.org/lessonplans.html>

Science Kids: Recycling Activities

<http://www.sciencekids.co.nz/lessonplans/earth/recycling.html>

Acidity and alkalinity

Videos

NOAA (National Oceanic and Atmospheric Administration): Ocean Acidification

http://www.ioos.noaa.gov/ocean_acidification/welcome.html

Websites

Virginia Community College System: Introduction to Alkalinity

http://water.me.vccs.edu/exam_prep/alkalinity.html

Free Drinking Water: Alkalinity of Drinking Water Explained

<http://www.freedrinkingwater.com/water-education2/74-alkalinity-water.htm>

U.S. Geological Survey: pH -- Water Properties

<http://water.usgs.gov/edu/ph.html>

EPA (Environmental Protection Agency): What is pH? Introduction to pH and the pH scale.

<http://www.epa.gov/acidrain/measure/ph.html>

Free Drinking Water: pH Values of Water Completely Explained

<http://www.freedrinkingwater.com/water-education/quality-water-ph.htm>

National Geographic: Ocean Acidification

<http://ocean.nationalgeographic.com/ocean/critical-issues-ocean-acidification/>



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Additional Instructor Resources

LaMotte: Outdoor Education Lesson Plans: Water Quality, Water Treatment, Water pH and more.

<http://www.lamotte.com/en/environmental-education-resources/lesson-plans>

Salt River Project: Lesson plan: How Do We Know What is Healthy Water?

<http://www.srpnet.com/education/pdfx/RawWater.pdf>

Projects

Middle School Chemistry: Testing pH Levels

<http://www.middleschoolchemistry.com/lessonplans/chapter6/lesson8>