

Invasive Species Resources for K-12 Teachers				
	Age Group	Topic(s)	Description	Notes
Curricula				
"Invasive Plants: Taking Root in Alaska"	9-12	Invasive plants in Alaska	Curriculum created by Homer Soil and Water Conservation District in 2007 - covers all things related to invasive plants, and includes hands-on activities, lab investigations, and a technology component	
Presentation to accompany "Invasive Plants: Taking Root in Alaska" curriculum	9-12	Invasive plants in Alaska	Powerpoint presentation intended for teachers to use as an introduction to the "Invasive Plants: Taking Root in Alaska" curriculum	
"Weed Wackers! - K-6 Educators Guide to Invasive Plants of Alaska" by Katie L. Villano and Christine P. Villano	K-6	Invasive plants in Alaska	Comprehensive invasive plants curriculum for K-6 students. Specific to Alaska. Twenty lessons, divided among three units: 1. Invasive Plants in Alaska, 2. Experimenting with Invasive Plants, and 3. Humans and Invasive Plants - What can Alaskans do?	
Invasive Species and Seabirds	6-8	Seabirds, island ecosystems, and invasive species	Developed by the Seabird Youth Network. Five-lesson curriculum covers invasive species (focus on land mammals), biodiversity, stewardship, biosecurity, and seabird biology	
Washington Pest Watch's school curriculum	6-8	Invasive species	Excellent collection of lesson plans for middle school students. Applicable and adaptable for Alaska. Lessons use research, technology, mapping and GIS, and stewardship projects to teach basic invasive species concepts.	
Oregon Sea Grant's "Aquatic Invasions! Menace to the West" curriculum	3-12	Aquatic invasives	Collection of aquatic invasive species lesson plans for grades 3-12. Lessons can easily be altered to focus on any invasive species.	
BioBullies	4-8	Invasive species	Ten lesson plans for indoor and outdoor use. Incorporates anti-bullying and diversity concepts, using ecosystem and invasive species as metaphor. While the species covered are specific to Pennsylvania, the curriculum has some great activities that could be adapted for Alaska.	
KP-CISMA's Introduction to Invasive Species Mini-Curriculum	6-8	Alaska and Kenai Peninsula-specific invasive species topics	A hybrid-style virtual/in-class (teacher-led) four-lesson mini-curriculum. Each lesson includes a short introductory video (think, virtual guest speaker) and lesson plan for an in-class activity. Lessons build on one another, each focusing on a different essential question: What is an invasive species?, Why are invasive species a problem?, How do invasive species spread?, and What can we do about invasive species? NOTE: In draft format and being piloted in classrooms during the 2022 school year.	Currently in draft format and seeking feedback from teachers (piloting in classrooms during 2022 school year). Contact Jen Chauvet at jen@homerswcd.or for more information.
Lesson Plans & Activities				
Invasive Species Poster Project & Gallery Walk	All ages	Invasive species, in general	Students research an invasive species, create a one-page poster or infographic that describes their species, and share their work with their classmates during a "gallery walk". Lesson plan adapted from Kendra Nelson at Homer High School.	
Canadian Council on Invasive Species Activity Books	ages 6-12	Waters, landscapes, forests	Two activity books for ages 6-12 and one "Invasive Species in Our Forests" resource guide for teachers. In English and French.	
Invent and Invasive	44359	Invasive plants and plant adaptations	Students work in groups to design the ultimate invasive plant and share their invented invasive with their classmates	Contact: Katie Spellman, University of Alaska, Fairbanks
Know Your Enemy - Invasives Jigsaw Activity	44359	Invasive plants and management options	Students work in groups to research various aspects of a focal invasive plant before working as a class on a weed pull. Option to discuss control and management options.	Contact: Katie Spellman, University of Alaska, Fairbanks
Reed Canarygrass Tag and Population Simulation	44359	Invasive plants population dynamics and impacts on ecosystems	Students play a game to simulate the spread of an invasive plant in its introduced environment	Contact: Katie Spellman, University of Alaska, Fairbanks
Weed WANTED Poster Activity	44359	Invasive plants	Students research an invasive plant and create a "WANTED" poster to share what they learned about the species. Easily adaptable beyond the realm of plants.	Contact: Katie Spellman, University of Alaska, Fairbanks
Invasive Plant Management Dilemma Activity	44359	Invasive plant management	Students conduct an invasive plant survey, collect and record data, and debate management options with their peers.	

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Videos				
TedEd Video: "The Threat of Invasive Species"	Middle school and up, but could be used for younger kids	Global perspective of invasive species	An animated video (4:45 minutes) about the global problem of invasive species (e.g. rabbits in Australia, Kudzu in the southern U.S., Burmese python in Florida, zebra mussel). Video discusses what an invasive species is, how they become so successful, ecological impacts, how they are introduced.	
National Park Service Introduction to Invasive Species	All	Native, non-native, invasive, pest species	Discusses the difference between native, non-native, invasive, and pest species with examples.	
Invasive Species Council of British Columbia Kids Questions	K-6	Questions and answers	Kids' questions about invasive species are answered in this collection of short (<1 min) videos	
TedEd Video: "Attack of the Killer Algae"	Middle school and up, but could be used for younger kids	Invasive aquatic plants	Animated video (3:23 minutes) about Caulerpa taxifolia and its spread outside its native range. Though Caulerpa taxifolia isn't found in Alaska, it is very similar to Elodea and could be used to support a conversation about Elodea or the spread of invasive species, in general.	
"A Tale of Invasive Species" video	Upper middle school	Introduction to invasive species	Adorable silent (students will need to be able to read the story as it pops up on the screen) animated video (1:59) about Oliver and Frank, two invasive species.	
"How to Stop the Spread of Invasive Species" video by PlayCleanGo.org	Middle school and up	Prevention for outdoor enthusiasts	Animated video (1:05) describing how to prevent the spread of invasive species. Covers inspecting and cleaning shoes, gear, and pets, weed free animal feed, cleaning boats, bikes, and ATVs.	
Leave No Trace "How to Clean, Drain, and Dry Your Boat" video	Middle school and up	Aquatic hitchhikers and clean, drain, dry	Clean, drain, dry video (1:32 minutes) with a focus on kayakers	
"Stop Arctic Aliens" video	Middle school and up	Preventing the introduction of invasive species to the Arctic	Animated film (2:00) built around the character of a polar bear who guards the entrance to the Arctic and educates travelers about how they might accidentally be bringing invasive species to the Arctic and how to prevent bringing invasive species to the Arctic.	
"Invasion of the Earthworms" video by MinuteEarth	Middle school	Earthworms	Animated film (2:32) that discusses introduction of earthworms to North America and their impacts on forest ecology	
National Geographic's "Invasive Species 101" video	Middle school and up	General introduction to invasive species	Video (3:31 minutes) about invasive species, in general (what is an invasive species? why are they a problem? how are they transported?). Examples include multiple taxa. Discusses prevention that local kids could likely relate to (cleaning boats, not releasing pets into the wild). Could be used as an introductory video at the beginning of an invasive species unit or as a wrap-up.	
"Playing Smart Against Invasive Species"	High school (possibly 8th grade)	Prevention	Video (19:31) with focus on preventing the spread of invasive species in relation to public lands and outdoor recreation - very applicable for Alaskans. Excellent for communicating preventative measures. There are three versions of this video: full-length, short, and trailer. All three are available on the WildlifeForever YouTube channel and the USFS website.	

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Organizations				
Kachemak Bay National Estuarine Research Reserve (KBNERR)	All ages	Marine invasives of concern in Alaska, particularly Kachemak Bay	Classroom and field-based activities, upon request.	
Center for Alaskan Coastal Studies	All ages	Marine invasives, particularly Kachemak Bay	School programs (mostly field-based), upon request.	
Cook Inlet Aquaculture Association	All ages		School programs and outreach events	
Kenai Watershed Forum	All ages	Invasive species on the Kenai Peninsula and their impact on watershed health	K-12 programs upon request. * Currently offering virtual support for teachers with two units about invasive species. * Northern pike classroom kits (available Spring 2021) provide a hands-on approach to exploring invasives. * Adopt-A-Stream program: interactive education program designed to increase understanding of the connections between healthy watersheds, salmonid life cycles, and ecosystem conservation. Students adopt a nearby stream site to monitor and protect through scientific investigations and active environmental stewardship. Curriculum meets K-12 science, literacy, and math standards adopted by the Alaska Board of Education and NCSSE	
Alaska Maritime National Wildlife Refuge	6th grade	Invasive species of Alaska Maritime NWR	School program available, by request at the Islands and Ocean Visitor Center in Homer	
Kenai Peninsula Cooperative Invasive Species Management Area / Homer Soil and Water Conservation District	All ages	Invasive species on the Kenai Peninsula, their impacts, and how to stop the spread of invasive species	Offers information about where teachers can find support for teaching invasive species concepts in the classroom. Maintains a list of curriculum, lessons, organization, and online resources. Teachers can find information about invasive species of concern on the Kenai Peninsula on the Homer Soil and Water website .	
Websites & Online Tools				
Kenai Peninsula Cooperative Invasive Species Management Area (KP-CISMA)	For teachers	Kenai Peninsula invasive species	species profiles, prevention tips, invasive species in the news, and other helpful resources about invasive species in Alaska and on the Kenai Peninsula	
Invasive Species Council of BC Educators Page	For teachers	Invasive species education	Excellent collection of activities and lesson plans for all ages and all topics	
USFWS, Alaska Invasive Species webpage	For teachers	Alaska invasive species	General information about invasive species with links to other resources	
Kenai Watershed Forum	For teachers	Invasive species and watershed health (Kenai Peninsula)	Information about invasive species of concern on the Kenai Peninsula. Offer K-12 in-class support for teachers.	
PlayCleanGo.org	For teachers	Invasive species prevention for outdoor enthusiasts	Source of information and links to other resources about invasive species and how to stop the spread. Focus on midwest species, but general information applies to any location.	
Alaska Dept. of Natural Resources Invasive Plants and Agricultural Pest Management	For teachers	Agriculture and invasive plants	Source of information on invasive plants and their impacts to agriculture in Alaska. Links to the Weed Free Forage and Gravel Certification programs.	
National Invasive Species Information Center	For teachers	Federal, state, local, and international invasive species information	Invasive species in the news, species profiles, links to additional resources	
Clean Your Boat: Learn About Invasive Species	For teachers & students	Boating and aquatic invasive species	Information and tips for boaters with links to many other resources about aquatic invasive species	Recommended by students at Lakeville Nature Conservancy as a helpful resource for learning about invasive species
Teacher Kits				
USFWS Alaska Region's Invasive Species Teacher Kit	44298	Invasive species of Alaska	Kit includes series of lesson plans for 4th-6th grade & 9th-12th grade with accompanying materials including games, models, laminated species info sheets, and a powerpoint presentation. Kits not yet available for use.	Available to check out from various locations in Alaska. Contact USFWS Alaska Region Outreach Coordinator
Cook Inlet Aquaculture Association's Northern Pike Teacher Kit	K-12	Northern pike	Offers a hands-on approach to understanding invasive species, using Northern pike as an example	Contact KWF Education Specialist, www.kenaiwatershed.org

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Reporting Tools				
Invasive Species Reporting Hotline: 1-877-INVASIV	for teachers and classrooms		Report invasive species sightings	
Alaska Invasives ID App	all ages		Use the app to identify plants and report invasive species sightings	
Alaska Department of Fish and Game Online Invasive Species Reporter	for teachers and classrooms		Report sightings of invasive fish, wildlife, birds, insects, and plants	
Alaska Invasives Reporter				
UAF Cooperative Extension Reporter	for teachers and classrooms		Report sightings of plants, insects, and diseases	
Citizen Science				
U.S. Forest Service Coastal Alaska Spruce Aphid Monitoring Program	high school	Non-native spruce aphid presence in coastal Alaska	Intended for high school students in coastal Alaska that are interested in helping the U.S. Forest Service Monitor for spruce aphids in their community.	Program overview: https://www.fs.usda.gov/detailfull/r10/forest-grasslandhealth/?cid=FSEPRD536326&width=full / How to video: https://www.youtube.com/watch?v=HN1whdce6gc / Datasheet: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd899215.pdf
Naturalist Invasive Species Program	for teachers and students	Monitoring, citizen science, biodiversity	The project uses citizen science to study biodiversity and identify and monitor for invasive species throughout the country.	
Early Detection and Distribution Mapping System (EDDmapS)	for teachers and students	Reporting, monitoring, citizen science	Find, map, and track invasive species. A citizen science project of the University of Georgia, this website allows you to explore maps	