

Invasive Species

**affecting ecosystems
and resources**

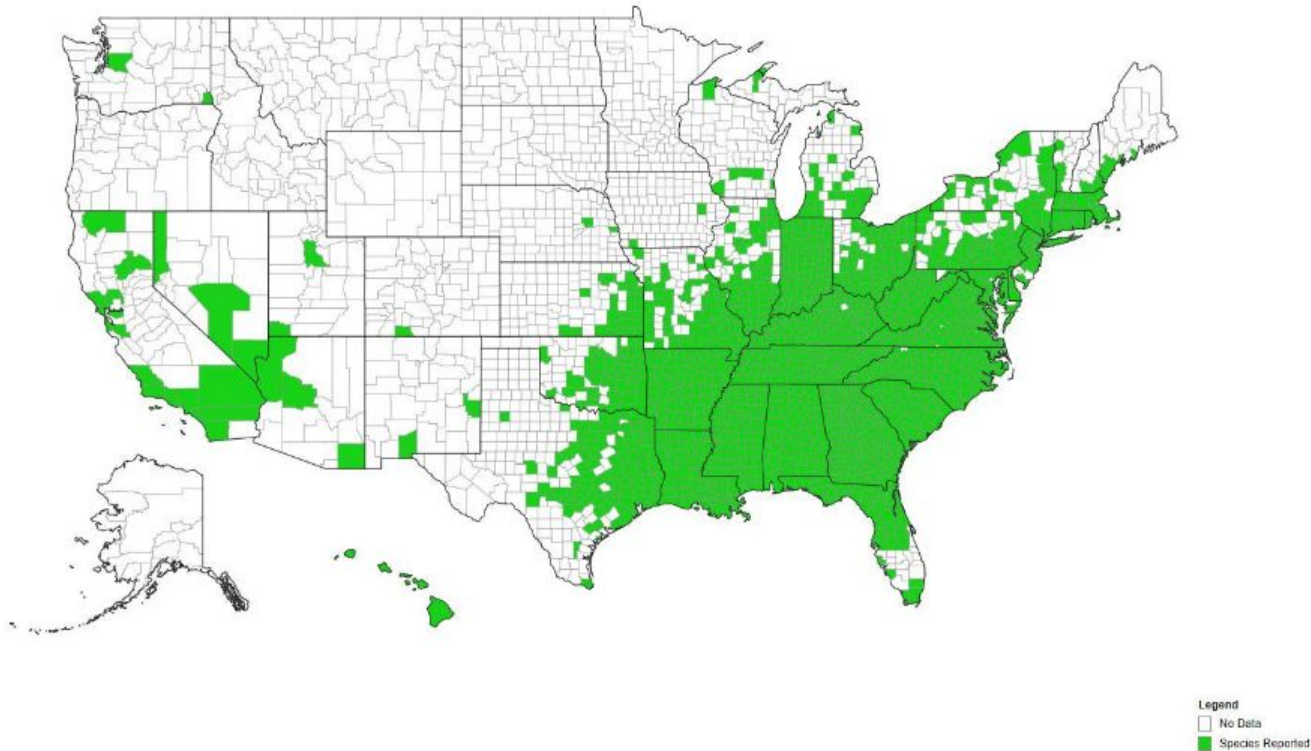
Grade 4 Science

Activity 1

What is a species?



What do you notice? What do you wonder?



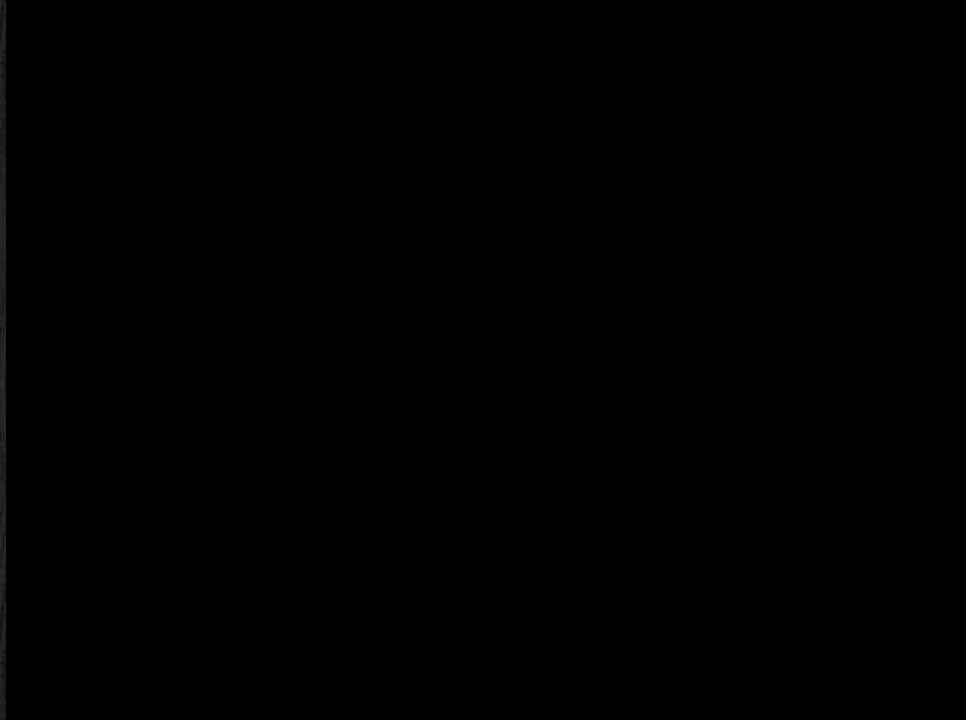
Japanese honeysuckle US county distribution. Courtesy eddmmaps.org.



What makes a species invasive?

Turn and share your thoughts with a classmate.


Focus Question:
What makes
something an
invasive species?



Read and respond.

Wonder of the Day #1581

What Is an Invasive Species?

 Listen

SCIENCE – Life Science

Have You Ever Wondered...

- What is an invasive species?
- What harm can invasive species do?
- What are some examples of invasive species?



Respond after reading: Tell your neighbor the difference between native and invasive species.

INVASIVE PLANT SPECIES FACT SHEET

Japanese Honeysuckle
Lonicera japonica

IPSAWG
Invasive Plant Species Assessment Working Group

Description:
Japanese honeysuckle is a perennial woody vine of the honeysuckle family that spreads by seeds, underground rhizomes, and above ground runners. It has opposite oval leaves, 4-8 cm long that are semi-evergreen to evergreen. Older stems are hollow with brownish bark that peels in long strips. The flowers are fragrant, two-lipped, and are borne in pairs. The berries are black. It creates dense tangled thickets by a combination of stem branching, nodal rooting, and vegetative spread from rhizomes.

Problem:
Japanese honeysuckle damages forest communities by out competing native vegetation for light, below ground resources, and by changing forest structure. The vine covers adjacent vegetation by twining about and completely covering, small trees and shrubs. As it becomes established it forms a dense blanket that reduces light and water to other plants, herbs, and trees.

Origin:
Japanese honeysuckle is native to East Asia, including Japan and Korea. It was introduced to the United States as an ornamental plant for erosion control, and for wildlife forage and cover. However, there are many better plant choices for these uses (see back for good alternatives).

Distribution:
The species was introduced into the United States in 1816, on Long Island, NY. It now occurs throughout the eastern half of the United States, an area encompassing 28 states. Japanese honeysuckle's range is limited to the north by severe winter temperatures and to the west by insufficient precipitation and prolonged drought. It is in all 20 Indiana counties, but is much more aggressive in Southern Indiana.

IPSAWG Ranking:

Highly Invasive	Medium Invasive	Low Invasive

IPSAWG Recommendation:

- Do not buy, sell or plant Japanese honeysuckle in Indiana.
- Help by eradication Japanese honeysuckle on your property.

This report contains the results of an assessment conducted by the Invasive Plant Species Assessment Working Group (IPSAWG), which is a group of many organizations representing concerned area resource managers. IPSAWG's goal is to assess which plant species may threaten natural areas in Indiana and provide recommendations to reduce their use in the state.

For more information about IPSAWG and the assessment tool used to rank invasive species, visit this website: www.invasivespeciesin.org

Photo by: The Nature Conservancy

Photos by: Steve Hahn, Benjamin C. Bergman, J. Macklin and J. R. Hiller @ www.invasive.org

Steve Updegraff, 10/20

Invasive Plants are a Threat to:

- Forests and wetlands
- Native plants
- Perennial gardens
- Wildlife
- Lakes and rivers
- Human health
- Farmland

Japanese honeysuckle
Lonicera japonica
Fact Sheet

NH Department of Agriculture, Markets & Food, Division of Plant Industry, 20 Hazzard Dr., Concord, NH 03301
(603) 271-3100

Common Name: Japanese honeysuckle
New Hampshire Invasive Species Status: Prohibited (sp. 303)

Latin Name: *Lonicera japonica*
Native to: Eurasia

Description: Climbing vine. **Stems:** Slender. Barkish brown, pubescent. **Leaves:** Opposite and are, changing the stem as reported in the three native honeysuckle taxa that do climb the stem. **Flowers:** 1-2" long, opened at base. **Flowers:** Tubular, white or yellow. **Berries:** May to mid July. **Berry:** smooth, blackish to slightly purpleish. **Uses:** F.F. **Diagnosis:** Profuse rootlets and fall run to aerial stems. **Control:** best opened by visible. **Comments:** Vines grow quickly, covering native vegetation, resulting in loss of habitat. **Control:** hand or mechanical removal, cutting, pulling, chemical.

General Considerations:
Japanese honeysuckle is a trailing or climbing, perennial woody vine that can grow to 30' (9 m) in length. The young stems are hairy, while the old stems can be glabrous and hairy ranging from 50° to as large as 110° (36° to 100°) in diameter. Bark is somewhat corky and peels easily on older stems. The berries are opposite, dark green and glabrous above and slightly pubescent beneath. They are usually more with entire margins, but young berries can be lobed. Rooting depth is generally 5' to 12' (1.5-3.0 m) on moist sites, and up to 40' (12.2 m) on dry sites. Berries may extend laterally to 12.4 m from the stems. Japanese honeysuckle often remains in leaves near winter, with dieback sometimes occurring after new leaves have fully developed in spring.

Mini-Research Task

Using the two fact sheets on the Japanese Honeysuckle plant to research how this invasive species impacts an ecosystem. Record your findings on this research [document](#).

“

*How do we know that the
Japanese honeysuckle is an
invasive species?*

Activity 2

Ecosystem

All living and nonliving things are part of an ecosystem. Interdependent relationships of these things create a balanced system. Healthy ecosystems support a variety of food webs and habitats for living things. For humans, ecosystems are necessary to provide necessary resources for survival.

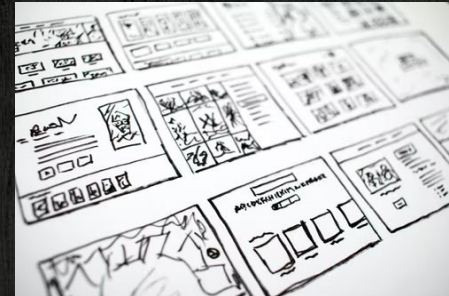
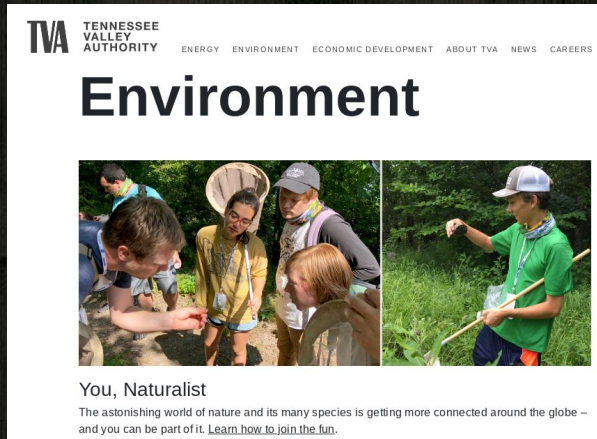


Image from Unsplash <https://unsplash.com/photos/vHsh8PtI0jk>

Make a Model

Congratulations on being selected to contribute to the TVA Newsletter!

Your task is to create a physical or digital diagram to communicate the impact of an invasive species in Tennessee.



Model & Presentation Rubric

Model & Presentation rubric	Demonstrates Proficiency	
Minimum Requirement	<input type="checkbox"/> I constructed a model about an invasive species. <input type="checkbox"/> I presented my diagram to another classmate.	
Science Standard(s)	<p>4.LS.2.4 Develop and use models to determine the effects of introducing a species to, or removing a species from, an ecosystem and how either one can damage the balance of an ecosystem.</p> <p>4.ETS.2.1 Use appropriate tools and measurements to build a model.</p>	<input type="checkbox"/> Minimum requirement(s) <input type="checkbox"/> I explained the effects of introducing an invasive species into an ecosystem. <input type="checkbox"/> I used digital or physical tools to make a diagram.
STEM Process Skill: Collaboration ELA Standard	<p>4.SL.CC.1 Prepare for collaborative discussions on 4th grade level topics and texts; engage effectively with varied partners, building on others' ideas and expressing one's own ideas clearly.</p>	<input type="checkbox"/> Minimum requirement(s) <input type="checkbox"/> Engage in collaborative discussions with other classmates by <ul style="list-style-type: none"> <input type="checkbox"/> asking questions <input type="checkbox"/> building on other's ideas <input type="checkbox"/> sharing connections to your invasive species.

Credits

STEM Ready

This lesson was designed for TVA.

Special thanks to all the people who made and released these awesome resources for free:

- ◆ Presentation template by [SlidesCarnival](#)
- ◆ Photographs by [Unsplash](#)
- ◆ Backgrounds by [SubtlePatterns](#)