CONSERVATIONIST FOR KIDS

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"Design an Invasive Species" Activity—30 minutes

Materials: art supplies, items to make 3-D figures (i.e. pipe cleaners, paper towel paper rolls, scissors, glue, tape, construction paper, google eyes, buttons, fake flowers, etc.)

Intro: Discuss what an invasive species is, give three examples (terrestrial or aquatic, plant, animal, insect or disease) and the characteristics that make them successful invaders.

Terrestrial plant example—Wild parsnip

- Wild parsnip is an invasive plant from Europe and Asia. This plant comes from the Apiaceae family which includes carrots, celery, and parsley. It can grow to be 2-5 feet tall and has small yellow flowers that are clustered together.
- What makes them successful invaders:
    - Its seeds are flat and slightly winged which means the seeds are easily dispersed by wind, wildlife and humans.
    - It can grow well in areas with frequent disturbance, like roadsides, fields, and lawns, giving it a head start over more site sensitive natives.
    - If you get the sap on your skin and your skin is exposed to sunlight before you wash it off, it causes painful burns and blisters. This adaption provides the plant with protection.

Aquatic plant example—Hydrilla

- Hydrilla is an aquatic plant from Asia that is extremely difficult to get rid of once it invades a waterbody. It is a popular aquarium plant and was likely dumped into our waterbodies by aquarium owners.
- What makes them successful invaders:
    - It is very easily spread—small fragments of the plant can sprout and be easily carried elsewhere by boats, trailers, and more.
    - It can grow up to an inch a day and creates a thick mat of vegetation that shades out many native aquatic plants, killing them or preventing them from growing. This reduces its competition for resources from surrounding vegetation.

Insect example—Hemlock woolly adelgid (HWA)

- Hemlock woolly adelgid (HWA) is an insect that feeds on hemlock trees. It arrived in the U.S. from Japan on infested hemlocks from tree nurseries. The insects are so tiny (1.5

mm) that you may not even see them at the base of a hemlock needle. You're more likely to spot their egg masses—they look like the cotton of a Q-tip.

- What makes them successful invaders:
    - Lays eggs twice annually—once in late winter and again in late spring. HWA can lay up to 300 eggs.
    - They reproduce asexually, so there only needs to be one to start a population.
    - HWA has no native predators in New York to keep population numbers low.

Activity description:

- Students will gain a basic understanding of invasion ecology, what make some species successful invaders.
- Students will work in small groups to design their own invasive plant, pest or animal.
- Present 'new' species to the larger group, explain its characteristics and how those make the species likely to outcompete its native neighbors.