

Ad-libbed Aliens

Method

Students will invent crazy plants as they put together new combinations of nouns, verbs, and adjectives. They will be amazed when you introduce real living plants that have adaptations as bizarre as the ones they have created. Then they will create their own alien plants.

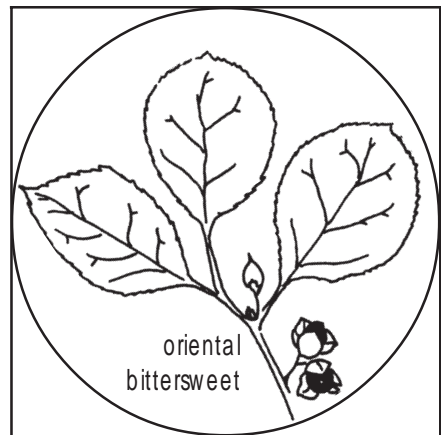
Introducing the Activity

How many of you have played Mad Libs®? You might remember that you have to list nouns, verbs, adjectives, adverbs, and other words without knowing how they will be used. When we insert these random words into the blanks of a story, the results can be weird, funny, or just plain silly!

Doing the Activity

1. **Explain the game.** Briefly show the blank story and explain how the game is played.
2. **Collect nouns, verbs, and other words.** Elicit responses and fill in the blanks in the story.
3. **Read the story.**
4. **Share the *Truth is stranger than fiction!* section.** Show the drawing of the invasive species.
5. **Discuss the invasive species' adaptations.** Discuss what adaptations are and give some examples (e.g., tall plants can take advantage of extra sunshine and shade out their competition). Talk about why plants need adaptations. Ask students to recall the adaptations from the story. **Optional:** Discuss other adaptations that give invasive plants a competitive edge.
6. **Design a super alien.** Instruct each pair of students to design a super alien plant that can invade a forested area. The new plant must have at least five adaptations that allow it to outcompete native plants. Students should brainstorm new super plants, draw pictures of them, label the adaptations, and share their illustrations with the class.

Optional project: Working individually or in small groups, students could brainstorm new super plants and construct 3D



Objectives

- Recognize that invasive species are equipped with adaptations that give them competitive advantages over native species.
- Become familiar with oriental bittersweet, kudzu, and leafy spurge.
- List common adaptations of invasive plants.
- Illustrate an invasive plant that is adapted to invade a forest ecosystem.

Grades

2 – 8 (and up!)

Group Size

Small groups of 4 – 10

Activity Time

One 50-minute period

Setting

Anywhere

Materials

- Fill-in-the-blank stories (pages 26 – 28)
- Art materials

Connections

See next page.

Academic Standards

Grades 2 – 4

- English Language Arts: B.4.1, B.4.3
- Environmental Education: B.4.6
- Science: F.4.1, F.4.2, F.4.3

Grades 5 – 8

- Science: F.8.2

Scout Connections

- Junior Girl Scouts: Earth Connections, Plants and Animals

replicas using art or scrap materials of their choice. Students could also write papers describing the new species and plan formal presentations for the class.

This activity was adapted from “Ad-libbed Aliens” and “Super Alien.” **Non-Native Invasive Species Learning Kits — Meet the Invaders.** United States Forest Service. 2005.

Assessing the Learning

Observe student participation in the discussion. Evaluate each student’s ability to use the information to design a new forest invader. See the sample rubric.

Sample rubric for older students

Drawings/descriptions/presentations will include the following:

1. **Describe the invasive plant’s native climate.** Where did the plant come from? How is the climate of its native habitat similar to the climate of the area it is invading?
2. **Describe the forested habitat that the super alien is invading.** Is it a hardwood or conifer forest? Is it open or shady? Is there thick undergrowth? Is it hilly or flat? What is the average temperature? Include any other characteristics that are relevant to your particular plant.
3. **Illustrate or create the super alien plant.** Prepare a full-color illustration or a 3D representation of the plant. Include all parts listed below.
4. **Describe the super alien plant.** Include a full description along with both a common and scientific name.
 - What kind of plant is it (i.e., annual, perennial, biennial)?
 - Describe the roots (e.g., fibrous, taproot, adventitious).
 - Describe the stem (e.g., hollow, hairy, weak).
 - Describe the leaves (e.g., big, whorled, glossy, hairy).
 - Describe the flowers (e.g., showy, colorful, fragrant).
 - Describe the fruits (e.g., succulent, dried, hairy).
 - Describe the seeds (e.g., small, winged, bristled).
 - Describe any other special parts or attributes that help it survive and thrive.
5. **Describe the five adaptations.** Include a short paragraph for each adaptation that describes how it allows the super alien to outcompete native vegetation. For example, do the seedpods explode and propel seeds into uninfested areas? Do the roots release a toxin that prevents other plants from growing nearby?
6. **Describe why the plant is so difficult to control or eradicate from an area.** For example, describe the effects of cold, heat, desiccation, herbicides, or mechanical removal on the plant. Does the plant survive and persist even when people try to control it?

Extending the Learning

Create more *Ad-libbed Alien* stories. Ask students to write fill-in-the-blank stories based on other invasive forest plants. After assuring that they have used the correct parts of speech, ask them to try their stories on their classmates. Draw pictures of the plants or animals that result and compare them to the real invasive species.

Draw an alien. Many invasive species are unfamiliar creatures with strange parts and weird adaptations. Your students can get to know some invasive plants better through this activity. Give students pictures of invasive plants. Ask students to study their pictures secretly and to write a paragraph describing the plant they have received. Collect the original pictures. Now collect the paragraphs and redistribute them to different students. Using only the descriptions they have received, students should draw pictures of the plants. Now comes the fun part! Post the original pictures, the written descriptions, and the students' drawings on a bulletin board. Can the students match the original pictures with their descriptions and drawings?

Finding Out More!

invasivespeciesinfo.gov. United States Department of Agriculture. 2005. The species profiles at this site include links to Web pages and pdf files sponsored by the federal government, state governments, and universities.
<www.invasivespeciesinfo.gov>

Parts of speech

Adjectives

describe something or somebody.
(big, bug-eyed, hairy)

Adverbs

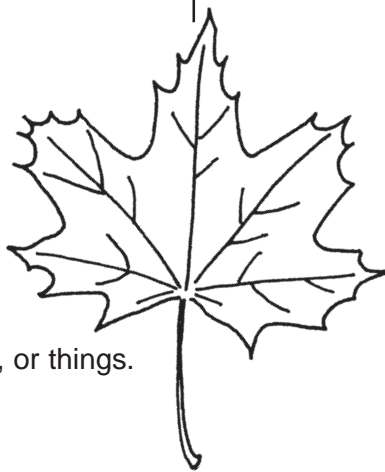
tell *how* something is done.
(madly, quickly, joyfully)

Nouns

are the names of persons, places, or things.
(forest, armpit, brother)

Verbs

are action words.
(sink, explode, grow)



Look! It's Superplant!

Faster than a speeding _____.
noun

More powerful than a _____.
means of transportation

Able to _____ _____ trees in a single bound.
verb adjective

Look! Up in the _____!
place

It's a/an _____ . It's a/an _____ .
animal means of transportation

It's Superplant!

Yes, it's Superplant – strange visitor from _____ who
place

came to America with powers and abilities far beyond those of
normal plants. Superplant - who can change the course of

_____ forests, _____ trees with its
adjective verb

_____ vines, and who, disguised as bittersweet,
adjective

a/an _____ - mannered vine, fights the never-
adjective

ending battle for _____, _____ and the
noun noun

American _____.
noun

Truth is stranger than fiction!

Oriental bittersweet is a superplant from Asia. It goes about daily life disguised as an attractive vine with yellow and orange fruits.

Homeowners and craftspeople plant it for use in landscaping, flower arrangements, and holiday wreaths.

But, unlike Superman, its other life is sinister! Oriental bittersweet readily escapes from cultivation and invades

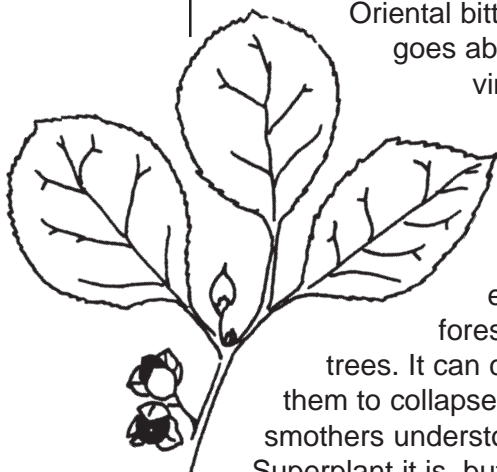
forested areas. It can strangle shrubs and

trees. It can cover tall trees in a season, causing

them to collapse from the weight of its vines. It

smothers understory plants and steals the light.

Superplant it is, but don't expect it to fight any battles but its own!



The Great Cover-up

The other day, _____ stepped out of the house for
some fresh air. _____ was tired, so he/she
stretched out under a/an _____ tree to rest.

He/She fell into a deep sleep just like that old guy in the story
named _____. He/she slept like a _____
for _____ weeks.

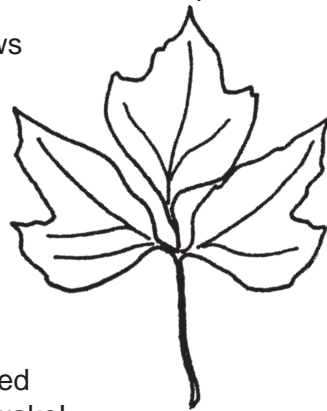
When _____ awoke, he/she could not move a
_____. Vines wrapped around _____'s
_____ and _____. Above his/her head,
_____ saw _____ flowers in the dim
light. The tree was gone and so was his/her _____
house. Was this a dream?

Truth is stranger than fiction!

Kudzu is a vine from eastern Asia. The Japanese government introduced the plant to Americans at a Centennial Exposition in 1876. Its abundant vegetation and sweet-smelling flowers made it a popular ornamental plant. Our government promoted it as a plant to feed livestock and to help control soil erosion, but it quickly escaped and took over!

Kudzu can grow up to 12 inches in one day. It grows right up telephone poles and tree trunks. Kudzu covers the landscape and smothers every other plant in its path. Other plants simply can't grow, because kudzu grows so thick that it blocks the sun. When the native plants die, the animals that depended on them can't find the food and shelter that they need to survive. Just like in the story, kudzu is taking over the landscape!

News flash! Kudzu is moving north and has invaded Illinois. It has not reached Wisconsin – yet. Stay awake!



Fields of Screams

The _____ family went on a/an _____
last name adjective
hike to visit a favorite field of wildflowers. When they arrived,
they _____ in shock. The wildflowers were gone
verb ending in "ed"
and the field was covered with _____ plants. The
color
plants were _____ and _____ with
verb ending in "ing" verb ending in "ing"
_____ dripping off of their leaves.
something you drink

When little _____ reached out to touch a plant, it
boy's name
gave him a/an _____ _____ on his little
adjective noun
_____. Suddenly, a _____ went flying
body part part of a plant
through the air and landed on big sister _____'s
girl's name
_____. The whole family turned and
piece of clothing
_____. As they _____ down the path,
verb ending in "ed" verb ending in "ed"
the _____ jumped off big sis's _____
same part of plant same article of clothing
and turned into a whole new plant. Next year, the whole field
might be invaded!



Truth is stranger than fiction!

Leafy spurge is a very invasive plant from Eurasia. It can completely take over fields and pastures. The plant looks like it is dripping with milk, but the white liquid is really a toxic latex. When an animal eats a leafy spurge plant, the inside of its mouth can become covered with small, irritating scratches. If you touch it, it can cause a bad skin rash. Be extra careful not to get the milky latex in your eyes; it can even cause blindness! Leafy spurge spreads by root and by seed. When leafy spurge fruits are ripe, they explode, sending the seeds up to 15 feet through the air!