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.
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 ____________.

More powerful than a ____________.

Able to ____________ __________ trees in a single bound.

Look! Up in the ____________!

It’s a/an ____________. It’s a/an _________________.

It’s Superplant!

Yes, it’s Superplant – strange visitor from ____________ who

came to America with powers and abilities far beyond those of

normal plants. Superplant - who can change the course of

________________ forests, ____________ trees with its

______________________ vines, and who, disguised as bittersweet,

a/an ________________ - mannered vine, fights the never-

ending battle for ____________, ____________ and the

American ________________.

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 ___________ hike to visit a favorite field of wildflowers. When they arrived, they ___________ in shock. The wildflowers were gone and the field was covered with ___________ plants. The plants were ___________ and ___________ with ___________ dripping off of their leaves. When little ___________ reached out to touch a plant, it gave him a/an ___________ ___________ on his little ___________. Suddenly, a ___________ went flying through the air and landed on big sister ___________’s ___________. The whole family turned and ___________. As they ___________ down the path, the ___________ jumped off big sis’s ___________ 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!