

# POST-SITE ACTIVITY

## EXOTIC INVASION GAME



**Grade Level:** Fifth

**Subject Area:** Science,  
Social Studies

**Activity time:** 30-45  
minutes

**Setting:** Classroom

**Skills:** Analyzing,  
Brainstorming, Collecting  
information, Communicating,  
Connecting, Presenting

### Objectives:

- 1) Describe what an exotic species is and why exotics are a threat to native species
- 2) Be able to list two exotic species that are causing problems in the United States
- 3) Be able to list two exotic species in the Great Smoky Mountains National Park

### Materials:

- \* Activity sheets
- \* World Map

### Procedure:

Refresh students on what an exotic is. Compare it with a native species. Summarize what the students learned at Clingmans Dome regarding exotics. Play the Exotic Invasion Game with students and lead class discussion of exotics.

Divide the class into groups. Tell them they will be playing a guessing game. You will read them a series of five clues. After you read each clue, give them a moment to think of the correct answer to write down on a piece of a paper. A group representative will bring the answer to you. Even if a group feels they have the answer after only two clues, read all five clues. When all the clues are read, every group must submit an answer. Note the order in which the groups bring you their answers. The first group with the correct answer gets five points, the second, four, etc. Students can confer with their group but at no time should they shout out their answers or discuss them with a competing group. Add up the group's points before the end of the game. You may also wish to have a world map handy so students can see where these exotics came from and how far they traveled.

Summarize what the students learned about exotics and their impact. Exotics can be fungi, germs, insects, mammals, reptiles, birds, or plants. Not all are harmful, but many can have an incredible impact on man and the environment. As people travel greater distances at faster speeds, exotics will become more of a problem. Students can help us in the Smokies by educating others, by volunteering their time (to pull up Japanese grass, or plant a native tree, for example), and by never taking anything into or out of the Park.

### Extension:

Pick one exotic that has affected your area of the country and do an oral report on it.



# EXOTIC INVASION GAME (CONTINUED)



**Exotic #1** Exotics are not a new problem. In fact we'll go back several hundred years, back to the Dark Ages, for our first exotic. Nowadays we worry about exotics harming native plants and animals, but we should remember that anything that affects the environment also affects us, and could do us a lot of harm. As I read these clues, keep in mind that an exotic is not always an animal, plant, or insect.

- Clue 1. I came from the Middle East to Europe in the 1300's.
- Clue 2. I hitched a ride with some fleas in the fur of rats that came by ship to Europe.
- Clue 3. A few hundred years ago I made over 1/3 of the people in Europe get sick and die.
- Clue 4. The disease I cause made their tongues turn black. That's where I got my name.
- Clue 5. Just recently I popped up again, this time in India.

**Exotic #2** We see that exotics are a problem all over the world. The exotics we've talked about came from very far away to their new home. Some exotics in the U.S. didn't travel so far. They just moved from one state to another. That's what happened with our next exotic.

- Clue 1. I live in the Rocky Mountains, but was transported to Oregon and Washington.
- Clue 2. I love mountains, and I'm a great climber.
- Clue 3. I get very hungry and eat native plants and grasses other animals need.
- Clue 4. People enjoy looking at me. Maybe it's my big horns.
- Clue 5. You can find some of my relatives on any farm in North Carolina. You can even find relatives of mine in Hawaii. I'm a big problem there, too.

**Exotic #3** Some exotics are bad not only for the environment, but they hurt us economically. Our next exotic is one of the biggest environmental problems we have today. This exotic seems to be spreading all over the country.

- Clue 1. I came over by getting in tanks filled with water in the bottom of ships from the Middle East. These tanks help balance the ship and were a perfect home for me.
- Clue 2. I attach myself to drain pipes, sewage lines, etc. I clog and damage pipes.
- Clue 3. My North Carolina cousins are unhappy to see me. I eat too much of their food. That is bad because these native species are big business in North Carolina. The Japanese make pearls from them.
- Clue 4. The first part of my name refers to my black and white shell (African animal).
- Clue 5. I got the last part of my name because my whole body is one of these. Hint: What does Arnold Schwarzenegger have a lot of?

**Exotic #4** We've talked about exotics in other countries and other parts of the U.S. Now, let's talk about problems here in the Smokies. As you know from our visit to Clingmans Dome exotics are a big problem here in the Great Smoky Mountains.

- Clue 1. I was brought to this country from Asia to stop erosion. I am good for the soil.
- Clue 2. I can grow as much as two feet per day.
- Clue 3. You've probably seen me growing all over hillsides in North Carolina
- Clue 4. You can make baskets, cookies, medicine, and even gravy from me.
- Clue 5. Unfortunately, I grow too fast. I choke out native plants.





## EXOTIC INVASION GAME (CONTINUED)

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**Exotic #5** Our next exotic has been in the Smokies a little less than a hundred years, but this exotic has multiplied fast. I bet lots of you have seen one of them, maybe even touched one.

- Clue 1. I was brought from Europe because people thought it would be a lot of fun to catch me.
- Clue 2. I'm brightly colored, that's how I got my name.
- Clue 3. I'm kind of a bully, so I chase my native cousins here in the Smokies upstream where they don't breed as well.
- Clue 4. I was first released here in the Smokies in the area that's now called Elkmont campground.
- Clue 5. One of my other cousins is found in the Smokies. He does not belong here either and was also brought in for people to catch. He's not as attractive as I am. He's brown.

**Exotic #6** Now let's talk about the most famous exotic here in the Smokies

- Clue 1. I was brought from Russia so people could hunt me. I was penned up in a game preserve in North Carolina, but about 70 years ago I got loose and now there are lots of me.
- Clue 2. Females of my species can have thirteen babies at a time, twice a year.
- Clue 3. I was a little worried when there were red wolves in the Smokies because they like to eat me.
- Clue 4. I like to stick my snout in the ground and root up plants. I have a healthy appetite too, so I take away a lot of food from native animals.
- Clue 5. As you walk through the Great Smoky Mountains National Park, you may see traps set out to catch me.

Answers.

1. *Black plague (Bubonic plague)*
2. *Mountain goats*
3. *Zebra mussels*
4. *Kudzu*
5. *Rainbow trout*
6. *Wild hog*

