



# Wild Kids

## Strangers in Our Waters

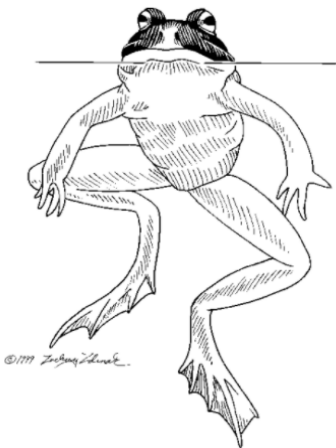
### STUDENT GUIDE

Arizona is home to many different plants and animals. Some are **native** species, which means they are found here naturally. They are supposed to be here. Black bears, roadrunners and tarantulas are all examples of native species.

Some plants and animals are strangers, however. They have been brought to Arizona from other places, usually by people. They are **non-native**. Sometimes they are brought on purpose. For example, a person might move to Arizona from another area and want plants that remind them of that place. Other times they are brought on accident. Someone may have been hiking in one place and gotten plant seeds stuck to their boots. Then they return to Arizona to hike and accidentally leave those seeds on the trail.

Many of these non-native species are harmless. They often cannot survive the Arizona's harsh environments. However, some of these strangers can be harmful to our native species and habitats.

Watch for these strangers that have been brought into Arizona's waterways:



Bullfrogs are strangers to Arizona. They were brought into the state many years ago because people liked to catch and eat them. Unfortunately, bullfrogs will eat anything they can fit into their mouths, including native frogs and fish.

Crayfish were brought to Arizona to be used as fishing bait. These fast-growing strangers can spread quickly to other waterways. They eat the same food as our native fish and live in their habitat.



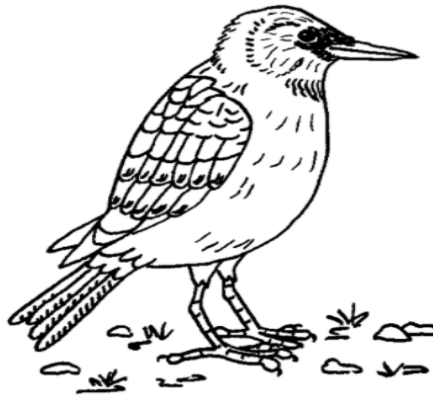
What does non-native mean? Why are non-native species a problem?

Besides the ones already mentioned in the text, list some ways how non-native species may have gotten into Arizona.

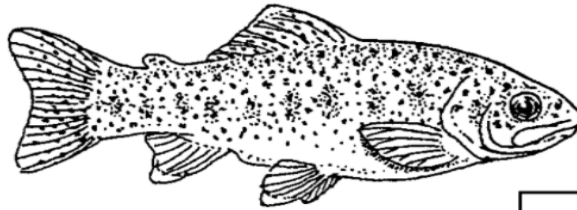
### Native or Non-native Identification

Each of the species below lives in Arizona. Read the information about each one. Then, write in the box if it is "native" or "non-native."

European starlings are common birds, especially in neighborhoods. They were brought from Europe and Africa.



The Apache trout is Arizona's state fish and one of only two trout naturally found in the state.



Salt cedar was brought from Eurasia to help keep soil from washing away. It has become common along rivers and streams.





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### TEACHING GUIDE

#### Overview

In this activity, students will read a short passage about native and non-native species. They will be introduced to a couple harmful non-native species as well as reasons why some species are introduced into new areas. Then, they will answer some questions and try to identify species that are native and non-native.

#### Suggested Procedures

1. Print the worksheet above. If possible, print it double sided.
2. Ask students to read the short passage.
3. Once they have read the passage, have the students answer the first two questions on the second page. Note: they should come up with new reasons in the second question, not answers that were already mentioned in the text.
4. Discuss their answers.
5. Have the students complete the Native or Non-native Identification section. They should read about each species and then write whether or not it is native or non-native in the box next to each picture. They should be able to use context clues to arrive at the answers. If done correctly, they should identify the first and last ones as non-native and the second one as native. Discuss the answers as a class.
6. To recap, have the students answer the following questions:
  - Why should biologists be concerned about non-native species?
  - The Apache trout is endangered. One of the reasons is because of the introduction of non-native species such as bullfrogs and crayfish. How could these non-native species impact native fish like the Apache trout?
  - When visiting a different place, what can you do to make sure you don't accidentally bring a non-native species back with you?

#### Grade

1st

#### AZ Science Standards

- 1.L4U3.11

#### Science and Engineering Practices

- Ask questions and define problems

#### Crosscutting Concepts

- Cause and Effect
- Stability and Change