

5. Scavenger Hunt



Human Signs in the Bosque

Description: Students search for impacts of humans in the bosque by walking a bosque trail and using a scavenger hunt list to keep track of human signs.

- Objectives:** Students will:
- identify human signs in the bosque;
 - understand impact of human activity in bosque; and
 - evaluate their own actions while in the bosque.

Materials: Student Activity Sheet: Scavenger Hunt—Human Signs in the Bosque, one per student
pencil
optional: field journal

Background: The bosque reflects the many activities of homesteaders, visitors, developers and agencies, which alter bosque plant and animal communities and the hydrological system. Every activity has results, some of which we are just beginning to see. Some of these activities are beneficial, while many others produce long-term detrimental effects.



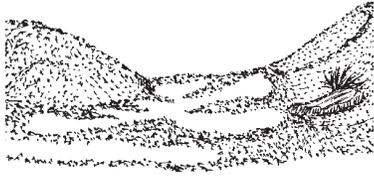
Russian olive leaves

Russian olive and saltcedar or tamarisk trees were originally planted along riverbanks during the reclamation projects. They were to serve as windbreaks and to hold soil in place when the river flooded. They have now become “naturalized,” meaning they reproduce and spread on their own.

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| 5. Scavenger Hunt—Human Signs in the Bosque | | |
| Grades: | 3–8 | |
| Time: | material preparation: 10 minutes class activity: one hour | |
| Subjects: | science, social studies | |
| Terms: | sign, scat, trash, salt deposit, domestic, tree carving, graffiti, vandalism, detrimental, exotic, naturalized, acequia | |



Other exotic plants such as elm, mulberry, pampas grass and juniper were transported to the bosque in beds of pick-up trucks. People used to dump yard waste there after cleaning their yards and pruning trees.



Salt deposits, a white crusty substance on the surface of the ground, occurs when water evaporates and the salt that the water contained is left behind. Where does the salt come from? It is within the soil deposited there from the river or from salt-concentrating plants such as tamarisk (also called saltcedar).

Exotic animals have also been introduced. Starlings were brought to America in 1890 by the American Acclimatization Society who wanted to establish all of the birds mentioned in Shakespeare's works into the Shakespeare Garden in New York City's Central Park. The house sparrow (English sparrow) was introduced to New York City in 1852 or 1853 and by 1900 was one of the most abundant birds in North America. Since their introductions, both starlings and house sparrows have spread across the United States, including the Middle Rio Grande Valley.



Jetty jacks were also placed in the riverbed and along the riverbank to slow the floodwater and protect the levees. Some of these jetty jacks are now buried in river sand or submerged in the river.

Feral dogs and cats have been abandoned in the bosque by people no longer wanting them as pets. Also abandoned are the domestic ducks, rabbits, and chickens often given to children at Easter. When the animals have lost their appeal they are abandoned here.

Sawn logs tell of a woodcutter, someone seeking firewood or building material for their home.

Burned logs indicate a fire. Lightning causes a very small percentage of bosque fires, about 2% according to one study. Smoking, weed burning, fireworks and arson are the most common causes of bosque fires.

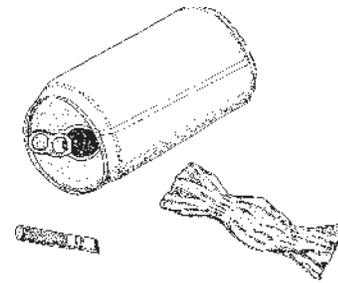


Tagging and graffiti became a sport of dare in recent years, as have paint guns.

Birdhouses have been installed to attract owls, woodpeckers, wrens, chickadees and some bats.

A sneaker print or bike track is a record of your visit to the bosque. The paved bike trails are part of Albuquerque's bike trail system. Sadly, some bike riders want to experience the thrill of riding in the sand and ducking in and out of the cottonwood trees, churning the soil and uprooting plants.

Trash: The bosque has a long history of being used as a dumping ground. Tons of garbage were removed from the bosque including old household appliances, car bodies, trees, broken-up concrete from sidewalks and streets, stumps and logs from cut trees. Some of this rubbish remains. Present-day trash consists of cigarette butts, candy wrappers, honey sticks, and tissues. Beer and soft drink cans, glass and plastic bottles and dog poop show a lesser degree of care. Plastic bags used by hikers or picnickers blow away and land in trees, stuck forever, as they become tattered flags of human disrespect for natural areas. Some people carve their names and dates in trees, opening the tree's protective bark to disease and insects.



Floating debris in the river itself: Plastic and aluminum containers, pieces of Styrofoam coolers, plastic six-pack rings, and tires are seen. Motor oil is washed from city streets into the storm drains that discharge into the river. Some people dump their used motor oil directly into city drains causing a detrimental effect on the plants and animals of the river community.

Procedure:

1. Just like finding signs of wildlife in the bosque, students are to look for evidence of human activity in the bosque.
2. Explain that since the time of indigenous people of North America and as the Spanish began to settle along the Rio Grande, people have made changes to the bosque. Some changes were to trap floodwater or dig acequias to divert river water to irrigate crops. All of these manipulations have impacted the ecological system. In the last 100 years large-scale changes have altered the river. Introduced plants and animals, roads, levees and jetty jacks, irrigation systems, homes, farms and recreational activities have altered the natural flow of the river.



3. Question students about how their activities during a field trip in the bosque may also cause changes. Dropping trash or trampling plants are two effects. Reseeding native grasses, clearing deadwood or installing nesting boxes are others.
4. Distribute student activity sheet “Scavenger Hunt: Human Signs in the Bosque.”
5. Have students circle or draw the signs of human activity as they find them on their walk. Have students add other things they see that are not on the list.

Assessment: Discuss the impact of the human signs.

1. What human activity caused this sign?
2. Was this item introduced, released, placed here or planted for a purpose? What was that purpose?
3. What other signs of human influence can you find?
4. How many of the signs you have found result from intentional vandalism?
5. How many signs are unintentional results of other actions?

Extensions: Have students carry a litterbag on their walk.

Have students plan and carry out a service-learning project (see Chapter 7).

Back in the classroom, have students draw a human impact bosque scene and a scene as it might be without human impact.

Scavenger Hunt



Human Signs in the Bosque

Sometimes the only proof of animals in the bosque is the sign they leave which tells of their activities. A feather from a preening bird falls to the ground; scratches in the soil mark the hole of a hiding mouse. Perhaps scat on the trail tells the story of a night's hunt. Tracks in mud record the passage of those who came to drink. Humans also leave signs of their activities. As you walk the trail, check your list for signs of human activity.

| | | |
|----------------------|------------------------|-----------------|
| Russian olive | jetty jacks | starling |
| saltcedar | salt deposit on ground | dog |
| elm | sawn log | domestic duck |
| mulberry | burned log | graffiti |
| pampas grass | bird house | sneaker print |
| trash | trail | bike track |
| carving in tree bark | floating trash | plastic in tree |

Discuss the human signs noticed.

What human activity caused this sign?

Was this item introduced, released, placed or planted for a purpose?

Was the introduced item useful or harmful?

What other signs of human influence can you find?

How many of the signs you've found are the result of intentional vandalism?

How many signs are unintentional results of other actions?