

Our goal

We sought to reach a broader audience with basic conservation knowledge and easy conservation applications. To do so, an assessment of the current Beardsley Zoo achievements was polled; educational posters were created; and a workshop was organized to equip younger generations with an awareness of some standard conservation issues, simple and practical ways to conserve, and possibly a passion to conserve the earth.

Creating Educational Posters

Purpose:

Connecticut's Beardsley Zoo has zoo literature and informational graphics throughout the park. Within the zoo's Research Station, which houses the zoo's small educational animals, signage is lacking. In order to amend this issue, posters with images of the animal, critical information, and possible conservation information were created. The goal of these posters was to provide a fun and attractive way for zoo visitors to learn about the research station animals, and provide ideas for visitors to partake in conservation.

A Baby American Alligator

Alligator mississippiensis

- The American Alligator is one of the few examples of an endangered animal that was not only saved from extinction, but is now thriving
- Scientists say that the American Alligator is more than 150 million years old
- They live nearly exclusively in the freshwater rivers, lakes, swamps, and marshes of the southeastern United States
- They are extremely well adapted swimmers
- Males average 10 to 15 feet in length and can weigh 1,000 pounds
- Females grow to a maximum of about 9.8 feet
- Hatchlings are between 6-8 inches
- They mainly feed on fish, turtles, snakes, and small mammals but alligators are opportunists will eat just about anything

HELLBENDER

Cryptobranchus alleganiensis

- One theory of how hellbenders got their name is that settlers thought "it was a creature from hell where it's bent on returning"
- Some nicknames are snot otter, lasagna lizard, devil dog, mud-devil, grampus, Allegheny alligator, mud dog, water dog, and leverian water newt
- Although the hellbender has functioning lungs, it often gets its oxygen through its skin
- They can grow up to 2 feet in length
- It is the third largest aquatic salamander in the world
- Live in shallow, rocky, fast flowing streams
- It is the largest in North America
- It generally lives in the eastern side of the US from New York to Georgia

Primarily feeds on crayfish and small fish

Brook Trout

Salvelinus fontinalis

- The brook trout is a part of the salmon fish family
- It is native to Eastern North America in the United States and Canada, but has been introduced elsewhere in North America and to other continents
- They can grow to nearly 3 feet, 14 pounds, and can live up to 9 years
- The female trout can lay up to 5,000 eggs during a spawn
- The natural predator list for a brook trout is large brown trout, fish-eating birds, otters, and snapping turtles
- Adult brook trout feed on organisms such as worms, leeches, minnows, crayfish, amphibians, and insects
- Young trout feed on plankton and progress to insects until they are adults
- Brook trout are located in streams, creeks, and lakes

Fig. 1 A-C. Educational posters about the baby American alligator, hellbender, and brook trout, to be put in the Beardsley Zoos research station to help give guests more information about the less showcased animals.

Planning and Executing Youth Summit

Goal & Premise:

In order to provide 4-7th grade students in the Fairfield County area with practical and fun ways to partake in conservation efforts, an educational conservation workshop was organized.

The Plan:

Water Conservation:

How much water do you use in your house?

- A worksheet that allows the kids to estimate how much water they use on a daily basis

How much WATER do you use in your home?

Activity	Water Used	Number of Times	Gallons Used
Dishwasher	12 Gallons per load		
Toilet Flushing	4 Gallons per flush		
Bathing	45 Gallons- Full tub		
Laundry	40 Gallons per load		

Activity	Water Used	Number of Times	Gallons Used
Garbage Disposal	4 Gallons per min.		
Brushing Teeth	4 Gallons per min.		
Washing Hands	4 Gallons per min.		
Washing Dishes	4 Gallons per min.		
Shower	4 Gallons per min.		
Yard Watering	9 Gallons per min.		

*Total Gallons Used:

Recycling:

Trash or Ca\$h

- A group game that educates kids on the basics of recycling in a fun way

Objective: To educate kids on the basics of recycling in a fun whole group activity!

Instructions:

- Split the group into 2 sides of the room
- There will be a line across the middle of the room and participants cannot cross from there designated side
- At the end of each side, there will be a recycling bin and a trash can

Deforestation:

Lumberjacks vs Planters

- A group game that can start conversation about deforestation and its detrimental effects

Objective: To lead with a fun activity that can then start conversation about deforestation and its disastrous effects.

Instructions:

- Set up approximately one traffic cone per kid across a room

Wildlife Conservation:

Animal Ambassadors

- The zoo has various animal ambassadors which can be shown to the kids to connect with bigger animal conservation ideas

Objective: The Connecticut Beardsley Zoo has many "Animal Ambassadors" which are small animals that have been injured or are kept in the research station, that are used for educational purposes. These animals can be used to be connected into bigger picture conservation themes.

Instructions:

- Have all the kids sit, clustered together
- Have a zoo staff member bring in 3 Animal ambassadors
- The zoo staff member will then take out each of the animals and give a small presentation about the conservation of said animals
- If possible allow the kids to take turns getting a closer look at each animal and possibly interact with said animal
- Have a group talk about endangerment and extinction and give big picture examples

Plant Conservation:

Plant Planting

- Uses a recycled can for the kids to plant a plant, in order to give a real life example of a way to repurpose things while also showing them that they can be a part of the solution

Objective: To use a recycled can that the kids will bring in order to give a real life example of a way to repurpose things while also showing them that they can make a change and be a part of the solution

Instructions:

- Set up tables around the room with large bowls of soil and a packet of flower seeds and a spray bottle with water
- Have the kids fill the cans 3/4 of the way with soil
- Have the kids make a hole with their fingers to put the seed in
- Cover the seed with a little soil
- Spray the soil with a little water
- You're done! Give the kids a care card for their flower!

General Conservation Knowledge:

Conservation Trivia

- A fun whole group activity that goes over some mixed conservation topics in order to further students knowledge and understanding of some conservation issues

1. More than half of the breathable oxygen in the world comes from where?

- The ocean
- Forests
- Flowering plants
- Clouds

2. How much of the world's oxygen is produced by just the Amazon rainforest?

- 1%
- 20%
- 10%
- 20%

3. How much oxygen does an average 50-year-old tree produce?

- Enough for 1 person for 1 year
- Enough for 10 people for 1 year
- Enough for 8 people for 1 year
- Enough for 10 people for 1 year

What does the public know about conservation?

To determine the Zoo's effectiveness in educating visitors on conservation issues and efforts that they could be taking, surveys were formulated and distributed. 126 were completed on the zoo's most popular day (Saturday). These surveys were completed during between October, 2017 and January, 2018.

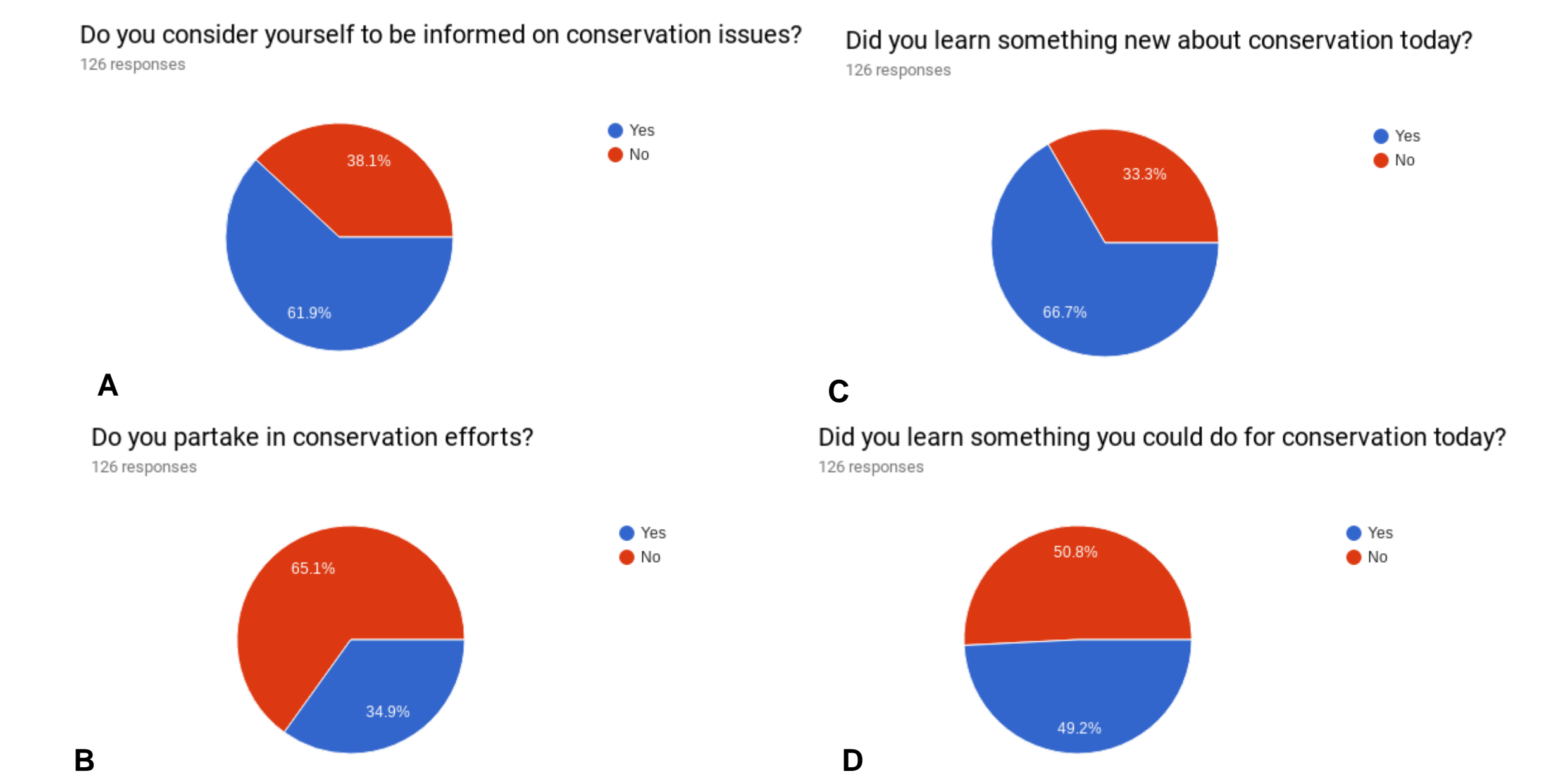


Fig 2 A-D (above). Cumulative graphs from the surveys completed as visitors exit the zoo. Fig 3 (below). Hannah explains the conservation survey to the zoo visitor.



Interpretation of Data

Based on the responses of the zoo guests, the zoo is adequately informing guests on conservation issues, but needs improvement on educating them with applicable ways on how to contribute to conservation efforts. As such, the youth summit could help meet this need. The source that is best educating guests is adult zoo volunteers (see supplemental material). Due to the season, students were the least helpful, but if the surveys had been filed during the summer, the number would most likely significantly change, as students are unable to volunteer during the school year.

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