Animal Migration Obstacle Course

Some questions to ask students before they complete the obstacle course are listed below. The students could even help create the obstacle course after talking about migration and obstacles that animals encounter along the way.

Excellent resources about migration in Wyoming animals can be found at University of Wyoming Migration Initiative and Wyoming Game and Fish Department.

What is migration?
To migrate is to travel seasonally (spring and autumn) between different and usually distant areas. Animals return year after year to the same summer and winter areas. Animals move from one area to another to find better habitat to survive and raise more young than they would otherwise.

What are some animals that migrate?
Animals from all groups migrate!!
Mammals— ungulates, bats, whales
Birds – songbirds, geese, Sandhill cranes, raptors
Reptiles – sea turtles, salamanders
Insects – monarch butterflies
Fish – catfish (415 miles into Montana), salmon, trout

Do you think it is an easy journey for them?
In Wyoming, we have the longest deer migration in the country. 150 miles from the Red Desert to Hoback Basin which takes them 4 months. What are some obstacles they might face in their migration?
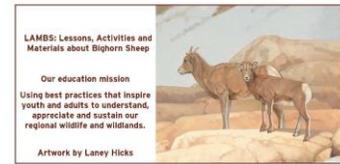
> Fences
> Roads and cars
> Rivers
> Predators
> Adequate food
> Homes and Development
> Deep snow
> Mountains

Avtivity: Students are bighorn sheep migrating through obstacles between winter and summer ranges. These are ideas we have used but feel free to come up with your own ideas. Use something to designate the side boundaries of the obstacle course such as rope, ribbon, tape or chalk. We would love to see pictures of your obstacle course! If you have questions or would like to see what we have used as obstacles, please let me know karen@bighorn.org.

Predators	Have several pictures or stuffed animals that the student has to jump over or go around. If they touch a picture or stuffed animal, they have been eaten by that predator. Predators of bighorn sheep include bears, mountain lions, wolves, coyotes and golden eagles. Make this section 3-5 feet long.
River crossing	Students have to jump over a river which can be represented by a carpet remnant, tape outline, chalk outline, ribbon, pillow case, etc. This section should be a size they can jump over fairly easily.
Deep Snow	Students have to jump on one foot through this area to represent the difficulty animals can have moving through the snow. The snow can be represented by carpet runner, tape or chalk outline, sheet, etc. Make this section about 5 feet long.
Road crossing	Students have to cross the road without a collision with a vehicle. You can use pictures of vehicles, hot wheels or other toy vehicles that are staggered so the students have to find a way though them without stepping on one. Make this section 3-5 feet long.
Low fence	Students have to jump over a fence which can be represented by a ribbon or rope, taped or tied to a chair or other object on each side of the course. The ribbon or rope should be low enough that they can jump over it and flimsy enough that they won't trip and be injured if they can't jump over it.
High fence	Students have to go under a fence which can be represented by a ribbon or rope, taped or tied to a chair or other object on each side of the course. The ribbon or rope should be high enough that they have to crawl or bend to get under it.
Forest	Students have to hurry through the forest because bighorn sheep prefer open areas instead of dense forest so they can watch out for danger. We used a play tunnel that the students crawled through to show the limited vision sheep have when in dense forest.
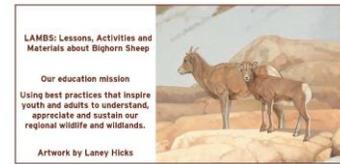
Wyoming Science Curriculum Standards and Connection Ideas

K-ESS3-1. Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live.

- Use the obstacle course as a model to represent the needs of animals as they migrate.

1-LS1-2. Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.

- Read or use media to learn more about migration patterns in a particular species and determine how migration helps the offspring survive.

3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.

- Use the obstacle course as a basis to discuss why different animals would have either an easier or a more difficult time with each obstacle.

4-LS1-2. Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.

- With the obstacle course as a model, have students describe how they had to use their senses to process the information about each obstacle and respond to each challenge.

MS-LS1-4. Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively.

- Have students explain how animal migration behavior affects their probability of successful reproduction.

MS-LS2-4. Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.

- Discuss ways that changes in an ecosystem affect animal migrations.

HS-LS4-6. Create and/or use a simulation to evaluate the impacts of human activity on biodiversity.

- Using the obstacle course as a simulation, discuss ways that human activity on migration corridors could affect biodiversity.

HS-LS2-8. Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.

- Have students explain how animal migration behavior affects their probability of successful survival and reproduction.