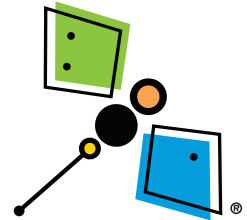


DragonflyTV: GPS Activity 6

E-I-E-I-O



SciWorks
Winston-Salem, NC
www.sciworks.org



Farm Animals

We're Imran and Nabil, and we like to write science fiction stories—crazy stories like when our positronic brains jump on the space time continuum to alternate universes. When we want to brainstorm new ideas, we go to SciWorks, our hometown science center in Winston-Salem, North Carolina. Some of our favorite exhibits there are actually about our own planet. We have fun seeing the farm animals in the Barnyard exhibit and wild animals in the Environmental Park. That got us thinking: What makes some animals farm animals and others not?

We decided to use our ESP—OK, our powers of simple observation—to figure out the answer to our question. So we made a list of simple observations to compare in farm animals and wild animals: what they eat, where they live, friendliness to people, and usefulness to people. Then we took this list into the barn and kept a scorecard for horses, cows, sheep, and goats. We did the same for the wild animals in the environmental center: deer, ducks, and otters. If the animal demonstrated a behavior that made it a good match for life on a farm, it got a green check. If its behavior wasn't a good match for life on a farm, it got a red check.





Icebreaker

Compare and observe the differences between domestic animals and wild animals.

DragonflyTV Skill: Interpret results



**30 minutes prep time and
30 minutes activity time**

Preparation

Tape or glue a picture of an animal onto a piece of cardstock. Punch a hole in the cardstock and put a string through it. Make the string long enough to fit over someone's head like a necklace. Hang a picture of an animal around each child's neck so that the picture is hanging down their backs. Don't tell children what animal they have.

Guide your kids as they

- 1) Walk around the room and try to figure out what kind of animal they are, based on clues from the other kids in the group.
- 2) When they meet another "animal," look at the picture and give one clue as to what kind of animal they are.
- 3) Each person may give only one clue to another. If the child doesn't guess it correctly, he or she has to move around and get a clue from someone else.
- 4) Once they have figured out which animals they are, they need to find their wild counterpart.
- 5) When all the kids have found their partners (wild and domestic) have them answer these questions: What is your wild/domestic animal partner? Do you share the same characteristics?
- 6) Regroup and have each child say what animal he or she is and tell something about that animal.

You'll need:

- pictures of domestic animals
- corresponding pictures of domestic animals' wild cousins. For example:
zebra – horse
wolf – dog
- string
- card stock or other stiff paper
- a hole punch
- tape or glue

DFTV Science Helper

This is a great activity to get kids to use their observation and listening skills. You can make the matching as difficult or as easy as your students' skill level. For younger students you might try matching adult and baby animals such as a cow and a calf.



For more simple activities like this one, surf to pbskidsgo.org/dragonflytv/superdoit/index.html



Investigation Farm Animals



1-2 hours

Guide your kids as they

- 1) Select a farm animal they might like to raise. They may also select wild animals, such as deer or bison.
- 2) Make a chart on poster board or a dry-erase board. On the left side make a list of all the animals that have been selected by the group. Across the top of the chart write the various needs of the animals such as types of food, amount of space, etc.
- 3) Research the basic needs of the animal they have chosen and the costs involved in raising that animal.
- 4) On an index card, make a "Farm Card" with information about an imaginary farm. Include things like amount of land on the farm, climate and location, annual income, whether or not the farm is commercial or hobby, and cost of living for that location.

Kids' cards may say something like this:

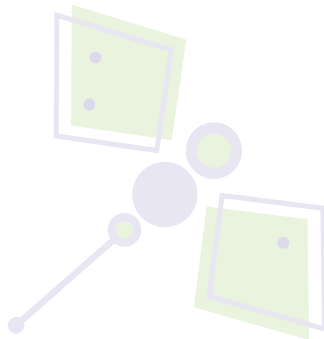
I am the owner of Old Cedar Farm which is located in a mountainous region with an average temperature of 60 degrees. I have 150 acres of woods and 3 acres of field. There are no structures on my property. I raised chickens and cows when I was a child but that was a long time ago. I would like to retire and start a hobby farm to supplement my retirement fund of \$50,000 per year.

You'll need:

- farm animal resources: Internet, books, and magazine articles
- graph paper
- pencils
- notebooks
- a poster board or dry-erase board
- index cards

DFTV Science Helper

Commercial farmers have to know the requirements of an animal and the costs associated with that animal in order to make a living. The cost of maintaining livestock is not quite as important if you do not rely on farming as your only source of income.





DFTV Kids Synthesize Data and Analysis

Complete your chart like the sample one below. There are so many variables when determining these facts that you may want to assign some parameters. For example, find maintenance information for one adult, non-lactating animal of average age for a year's time. To keep things simple you may also assign a point system.

Animal	No. of acres needed	Amount of food	Cost of food	Vet expenses	Shelter	Special needs	TOTALS	Income or product expected?
Dairy cows		90 lbs/day				Milking parlor		
Beef cows	2/cow							\$500/cow
Horses						Hooves trimmed		
Goats	.25 acre/goat							
Chickens					Hen house			
Pigs			0.20/lb					
Sheep						Shearing, Ear tags		6-7 lbs of wool

Guide the kids as they select one of the previously written "Farm Cards" and discuss the following questions: (They may or may not need all the information provided on the card.)

- 1) Based on your research, which animal could you afford to own?
- 2) Which animal is more suited to your farm situation?
- 3) What changes would you need to make to your farm?
- 4) Could you accommodate a herd or just a few animals?
- 5) Do you have the right skills and education to care for these animals?

Other questions to discuss:

- 1) What are other variables to consider?
- 2) Can you think of any wild animals that are farmed?



Keep Exploring!

Try the investigation again using different variables. Add economics to the activity by researching the current cost of grains and relating that to your average food bill. Add more math and biology to the activity by determining how many pounds an animal should eat per day or what percentage of calcium and phosphorus they need. The Internet, livestock books, and your local county livestock agent can give you mathematical formulas for analyzing food rations for livestock.