

Acres For Elephants

Square inch, square foot, square yard, square mile, square elephant . . . square elephant?

All living things need space. Some things, such as plants and barnacles, need very little space in which to live out their lives. Others need considerably more room, but every living thing needs some amount of space.

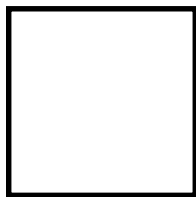
The exact amount of space any species needs is determined by a number of factors, such as — size of individuals, size of family groups, diet, and the resources within a particular habitat. For example, a 300-pound tiger living in a forest inhabited by many species of deer, antelope, monkeys, etc. will need less territory than a 150-pound Florida panther living in a cypress swamp where there are fewer and smaller animals to prey upon.

A species that feeds on specific vegetation and then migrates to a new area when that vegetation is eaten requires more space than an animal that can eat a variety of foods and therefore stay in one area.

A large animal with a big appetite needs more space than a small animal.

The only thing that is true for all is that everyone needs “space.”

ACTIVITY IDEAS AND DISCUSSION QUESTIONS



This box is 1 inch wide and 1 inch long, or a square inch. Use rulers, yardsticks, or tape measures, and masking tape to mark out a **square foot** and a **square yard** on the floor. (This can be done with chalk on the parking lot or playground.)

Think of some species (plants and animals) that could live within these spaces. (Don't forget about single-celled species.) Consult the planting directions on seed packets or in gardening books to determine how many tomato plants, corn stalks, etc. could grow in a square foot or square yard.

Why do plants need space?

Do all plants have the same space requirements?

How are animal space requirements different?

Now determine how much space you need. Work in pairs, or small groups, using rulers, yardsticks, and masking tape. While each student stands in a comfortable position his/her partner(s) use the rulers and masking tape to mark out the person's space. Remember, the person may be wider at the shoulders than at the feet and the space goes up from the floor.

(With younger students it might be necessary to use cardboard to demonstrate the 3-dimensional aspect of personal space. With older students try calculating the volume, or cubic footage, of a personal space.)

After each person in the group has a marked “space”, test the spaces to see how “livable” they are. Have each person occupy his/her space and time them to see how long they can stay within that space.

Repeat the activity but have each person sit down (or lie down) before their “space” is marked. How does this added area affect the amount of time each person can stay within his/her own space.

TALK ABOUT

- Could the students realistically live in such small spaces? Why not?
- Are some people more uncomfortable than others in small spaces? How about crowds?
- If the classroom were a country, would there be “space” for everyone in a standing position?
- How about sitting or lying down?
- Would there be any “wild” or unclaimed space left for other species?
- What do the students know about population pressures on wild species (plants as well as animals)? (See the Activity “Population Pressure” from Discovering Elephants.

SQUARE ELEPHANTS

Using a tape measure and masking tape, lay out a rectangle on the floor that is 6 feet wide and 12 feet long. This is about the amount of space you would have marked if Tarra the Elephant had been in your group in the first part of the activity. This is how much space Tarra needs just to stand still — a **square elephant (SqE)** (trunk and tail included.) (In order for Tarra to lie down, you would need a space 9 feet wide and 14 feet long — a **sleepy square elephant.) (SSqE)**

- How many student spaces could fit into a *square elephant*? (First calculate an “average” student space.
- How many *square elephants* could you get into the classroom, the gym, or the playground?
- Do the students think this is enough space for an elephant to live? Why not?

ELEPHANT SPACES

Elephants are herbivores, plant eaters. Specifically, elephants are grazers, they eat mostly grass with some leaves, twigs, fruits, roots and berries thrown in to balance their diets. A 7,000-pound elephant needs to eat 150 - 200 pounds of food every day to stay in shape (elephant shape). Obviously, an elephant cannot find that much food in a **elephant square**

(unless someone brings it to them), but must walk around to find grasses, leaves, vines, and so on. In the wild, elephants spend 16 to 20 hours every day walking and eating, and may walk 30 to 50 miles to find enough food.

Since elephants in the wild live in herds, and each elephant has a big appetite, you might think elephants are pretty hard on the environment. In fact, elephants are good for their environment for several reasons. First, 50% to 80% of the nutrients they consume are not fully digested and become elephant manure, which is excellent fertilizer. Second, elephants spread seeds from many plants as they eat and walk, helping to reseed their environment. Finally, the elephants' appetites keep the vegetation from becoming too overgrown.

Walking and eating over a large area is good for the elephants, too. It keeps them in shape (elephant shape), keeps their toenails and the pads of their feet worn down, and allows them to socialize with other elephants, all important for elephant survival.

The key to this mutual benefit is that elephants must have a large enough territory (space) in which they can walk and eat without overgrazing any one area. Population growth in Asia (and Africa) means humans are taking more and more of the elephants' space and wild elephants are being pushed into territories too small to meet their needs.

In the wild, Asian elephants need an area from 200 square kilometers to 1000 square kilometers in size in order to find enough food. The variation in size depends upon the availability of food. In an area where the plants are plentiful and grow quickly, the space needed is closer to 200 sq. km. In those areas where parts of the forest have been cleared, or dry periods prevent the plants from growing quickly, the elephants need much more space, up to 1000 km. A square kilometer is equal to about 247 acres (247.1).

In an area with plenty of plants, how many acres would an elephant need? (200 sq. km x 247 acres = 49,400 acres)

SQUARE ELEPHANT MATH (SqEM)

If a SqE is 6 feet x 12 feet, it equals 72 square feet or 8 square yards. One acre is then equal to 605 SqE, and 1 square mile equals 387,200 SqE. A square kilometer is equivalent to 149,495.5 SqE.

A Sleepy Square Elephant is 9 feet x 14 feet, or 126 square feet, which equals 14 square yards. So, an acre contains about 346 SSqE (345.7 to be exact.) A square mile is equal to 221,257 SSqE, and a square kilometer equals 85,422.5 SSqE.

THE ELEPHANT SANCTUARY

For most captive elephants space is a rare luxury and being able to walk and eat like wild elephants is only a dream.

The Elephant Sanctuary in Hohenwald, Tennessee is a captive elephant's dream come true. There the resident elephants spend their days peacefully walking, eating, and socializing. The current residents, Tarra, Barbara, Jenny, and Shirley have more than 100 acres of grass, trees, shrubs, wildflowers, and berry bushes to choose from. And they do move around, choosing to feed from different areas and plants at different times in the growing season. They know that some plants are more tasty and nutritious early in the growth cycle while others are better left to ripen. Tarra particularly keeps an eye on the blackberry bushes so she can (carefully) pick the ripe berries before the birds eat them.

This freedom for the elephants to roam about and feed themselves is central to the Sanctuary's mission of providing a "natural-habitat refuge where sick, old and needy elephants can once more walk the earth in peace and dignity."

ACRES FOR ELEPHANTS

The Sanctuary now has an opportunity to add nearly 100 acres to its existing property. Champion Paper has offered to sell 93 acres that adjoin the Sanctuary. These additional acres will not only ensure that the Sanctuary elephants will have plenty of space to walk and eat, but will also serve as a buffer to insulate the elephants from the outside world and maintain their peaceful existence.

(The 93 acres Champion has offered the Sanctuary equals 56,265 SqEs. (93 acres x 605 SqE per acre.)

The **Acres for Elephants** campaign goal is to raise the money to purchase these acres and build a fund to purchase additional land in the future. Individuals and groups can help us reach this goal by "purchasing" one or more **Square Elephants** for a mere \$2.00 each. Larger parcels are also available for "purchase":

<u>Categories</u>	<u>Donation</u>
Sleepy Square Elephant - - - 1 SSqE or 9 x 14 feet	\$ 3.00
Dumbo - - - 20 SqE or 1,440 square feet (house size)	35.00
Jumbo - - - 151 SqE or 1/4 acre	246.00
Mammoth - - - 1 full acre	984.00

For more information on Acres for Elephants and what you or your group can do to help, call the Elephant Sanctuary at **800-98-TRUNK** or check our website at **www.elephants.com**.