

Name: \_\_\_\_\_

Period: \_\_\_\_\_

## Selective Breeding: Dog Domestication

### Essential Questions:

- What is the relationship between dogs and wolves?
- Approximately how long ago were dogs domesticated?
- What is the difference between natural and artificial selection?

Read the first paragraph of *National Geographic* Magazine's [Wolf to Woof: The Evolution of Dogs](#), which describes these possible scenarios by which dogs became domesticated:

- Scenario 1: "Humans adopted wolf pups and natural selection favored those less aggressive and better at begging for food."
- Scenario 2: "Dogs domesticated themselves by adapting to a new niche—human refuse dumps. Scavenging canids that were less likely to flee from people survived in this niche, and succeeding generations became increasingly tame."

Which scenario is more likely and why?

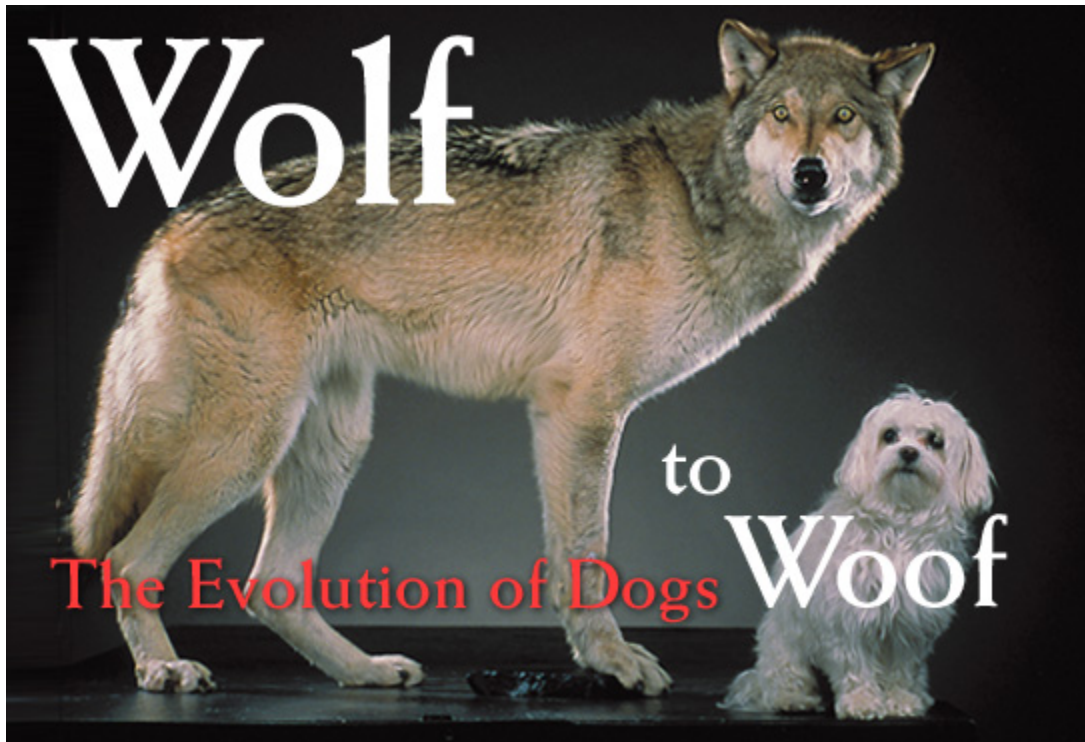
In small groups (2-3), look up the following dog breeds at the [Dog Breed Info Center](#) and the [American Kennel Club](#) :

- Alaskan Malamute
- Labrador Retriever
- Lhasa Apso
- Miniature Poodle
- Newfoundland
- Otterhound
- Rhodesian Ridgeback
- Saluki
- St. Bernard
- Yorkshire Terrier

1. Label your outline maps with the locations where each breed originated
2. List these breeds' "duties" (What did/do people use them for?)

3. List characteristics that helped these breeds succeed in their geographical locations and in their duties.

What are some of the reasons people have bred certain types of dogs? Are there negative consequences to breeding dogs for very specific traits?



By **Karen E. Lange**      Photographs by **Robert Clark**

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## **After wild dogs learned not to bite the hand that fed them, French poodles weren't far behind.**

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**Get a taste of what awaits you in print from this compelling excerpt.**

About 12,000 years ago hunter-gatherers in what is now Israel placed a body in a grave with its hand cradling a pup. Whether it was a dog or a wolf can't be known. Either way, the burial is among the earliest fossil evidence of the dog's domestication. Scientists know the process was under way by about 14,000 years ago but do not agree on why. Some argue that humans adopted wolf pups and that natural selection favored those less aggressive and better at begging for food. Others say dogs domesticated themselves by adapting to a new niche—human refuse dumps. Scavenging canids that were less likely to flee from people survived in this niche, and succeeding generations became increasingly tame. According to biologist Raymond Coppinger: "All that was selected for was that one trait—the ability to eat in proximity to people."

At the molecular level not much changed at all: The DNA makeup of wolves and dogs is almost identical.

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The dog evolved in the company of humans and cannot exist without them. Even the vast majority living "wild" as village scavengers depend on proximity to humans. That relationship has become so intimate that dogs are often viewed as creatures apart, writes biologist James Serpell. "The domestic dog exists precariously in the no-man's-land between the human and nonhuman . . . neither person nor beast." The ancients saw dogs as messengers between the living and the dead. Today dogs are often used in experiments that might threaten human lives.