

Name _____

Read each article. Then use evidence from them to answer the questions.

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The Story of Washoe

That chimpanzees are capable of communicating by sign language is demonstrated by the story of Washoe, a chimpanzee captured in the wild in 1966. At the age of ten months, she was turned over to the husband and wife research team of Beatrix and R. Allen Gardner, who raised her as if they were deaf parents raising a hearing child. They communicated with Washoe using American Sign Language (ASL), and rarely used the spoken voice to communicate. They taught her by imitation, gestural “babbling,” and instrumental conditioning. As Washoe learned more words, the Gardners and several independent observers added the words to a checklist. In order to make it onto the list, Washoe had to use the sign in an appropriate context and without having been prompted. She also had to use it at least once a day for 15 days straight before the Gardners considered it to have become part of her vocabulary. Washoe eventually learned to differentiate between different signs to express different but related ideas. For example, for a time she used the sign for “flower” to express the concept of “smell.” The Gardners were eventually able to teach Washoe to correctly use the sign for smell. Washoe also learned to transfer a sign from meaning one specific object (like a specific shoe) to meaning “shoe” in general. Finally, Washoe learned to combine words appropriately into phrases and sentences, like “please hurry.” When Washoe began to teach ASL to other chimpanzees, her caretakers felt confident that Washoe was, indeed, learning the language.

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Communication vs. Language

Sign language may have uses beyond communicating with the deaf, though not all experts agree about them. For instance, some people teach sign language to their babies before they are physically able to communicate verbally, and there is a theory that this speeds up the child's cognitive development. Sign language has allegedly also been taught to chimpanzees, bonobos and gorillas, with some trainers claiming the primates are able to master over a hundred signs. Reportedly a chimpanzee named Washoe learned to use 150 signs proficiently within a six-year time period, and Koko, a gorilla and Chantek, an orangutan made similar progress. Sarah, another chimpanzee, learned to manipulate arbitrary plastic symbols standing for words, and another chimpanzee, named Lana, used an early computer keyboard, with arbitrary symbols the researchers called lexigrams. There is no dispute that trained apes can learn to use two or three signs in a sequence in order to communicate, but does this constitute apes having learned a language? Many researchers think it does, but popular psychologist Steven Pinker, author of *The Language Instinct*, does not. In an interview on public radio, Pinker said that "no chimpanzee has learned sign language. . . They've certainly learned some gestures, but sign language is not just a system of gestures. It's a full, grammatical language with its own systematic grammar, like Latin."

1. Can primates communicate with humans? _____

2. What do you think: did Washoe learn American Sign Language (ASL)? Why or why not? _____

3. Is your answer based on matters of fact or interpretation? How do you know? _____

ANSWERS WILL VARY