

Clash of the Cavemen: Neanderthals versus Cro-Magnons

We will watch the excellent documentary “Clash of the Cavemen” to learn about Neanderthals and the early humans who lived in Europe. Do a search of “Clash of the Cavemen” at www.youtube.com. (In 2012, when this sheet was printed, you can search for “Neanderthal vs Cro-Magnon 1of10” that was uploaded by PrimitiveByNature.)

“Neanderthal vs Cro-Magnon 1of10” found at <http://www.youtube.com/watch?v=gUifwntZBZw>

In Southern Europe, in 28,000 BC, Neanderthals were hunting a reindeer herd and then they meet Cro-Magnons.

	Neanderthals	<i>Homo sapiens</i> (Cro-Magnons)
Physical and Mental Characteristics		
Weapon Technology		
Problem Solving Solution		

- Before the arrival of modern humans, Neanderthals lived in Europe for _____ years. But they disappeared within a few thousand years of contact with the Cro-Magnons. Why did that happen? Answer this question at the end of the video.
- All the fossils of Neanderthals and Cro-Magnons could fit into the back of a _____.

Skull		
Body (Below the Neck)		--

- A single 38,000 year old bone fragment allowed scientists to reconstruct the Neanderthal genome. Neanderthals are the first extinct primate species to be mapped.
- Chimpanzee are _____% identical to us; Neanderthals are about _____% identical to us.
- The common ancestors of Neanderthals and *Homo sapiens* might be _____ (“Heidelberg Man”) or _____ (“Rhodesian Man”).
- _____ years ago, Neanderthals and *Homo sapiens* met for the first time. Both had similar technology. Neanderthals drove them out of Europe or *Homo sapiens* retreated to Africa.

How did the Cro-Magnons survive the worst part of the Ice Age when their bodies were not as well adapted to the cold as the Neanderthals bodies were?

“The Great Leap” of the Cro-Magnons.

- A 32,000 year-old bone with holes in it was found—it was a _____ to track the movement of reindeer herds.

Handout by William Jones

- About _____ years ago: New, sharper tools appear. Cave paintings, jewelry, and sculptures also appear. A dramatic change in culture! Bone tools appear that are shaped and shaved. All this about 100,000 years after our species came into being. This is referred to as “The Great Leap” of the Cro-Magnons.
- A symbol-ready brain sparked by major cultural stimulus of language?
- Evidence of language: _____.
- Neanderthals also had a complex communication system, but not sure if it was a “true” language.
- FOXP2 shared gene, i.e., both species have it. Neanderthal’s larynx (voice box) was set high, ours is set low—we can say vowels. They could not say certain vowels like “oo” and “ah.”
- Europe was shared by two species of upright ape for about _____ years.

Diet		
Caloric Intake (per day)		

- Stable isotope analysis allows us to see what people ate.

Were Neanderthals cannibals? _____

Neanderthals hunt a woolly rhinoceros.

Hunting Techniques		
Mobility	_____ % more energy needed to run than Cro-Magnons. Stocky bodies not good for running long distances.	

- Neanderthals and Cro-Magnons lived together for about 5000 years—from the time of the first pharaoh of Egypt until now.

Was there any interaction between us and them? _____

Camps or Dwellings		
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Could humans and Neanderthals have babies together? _____

Did Neanderthals bury their dead? _____

Did our modern human ancestors killed off Neanderthals with respiratory related infections?

What factors caused the extinction of the Neanderthals?



Differences

Humans shared the earth with Neanderthals for thousands of years.
Both species were very similar and very different.

Critical Thinking: Do you think that humans treated the Neanderthals badly simply because they were different and less technologically advanced? Why or why not?

Critical Thinking: In today's society, do you think people tend to focus on differences of religion, culture, skin color, etc. more than what everyone has in common? Share how you feel about this.

Self-Examination: How do you treat people who are different than you? Do you "look down" on other cultures or countries? Do you think that your culture is better than other cultures?

Practical Application: In situations where you come into contact with different cultures or people who are "different," what can you do to get along with them?

Rubric:

Ideas/feelings shared poorly/satisfactorily/well = ___/3

Reasons for ideas were stated poorly/satisfactorily = ___/2

___/5

**CONTENT CHECKED,
not conventions.**

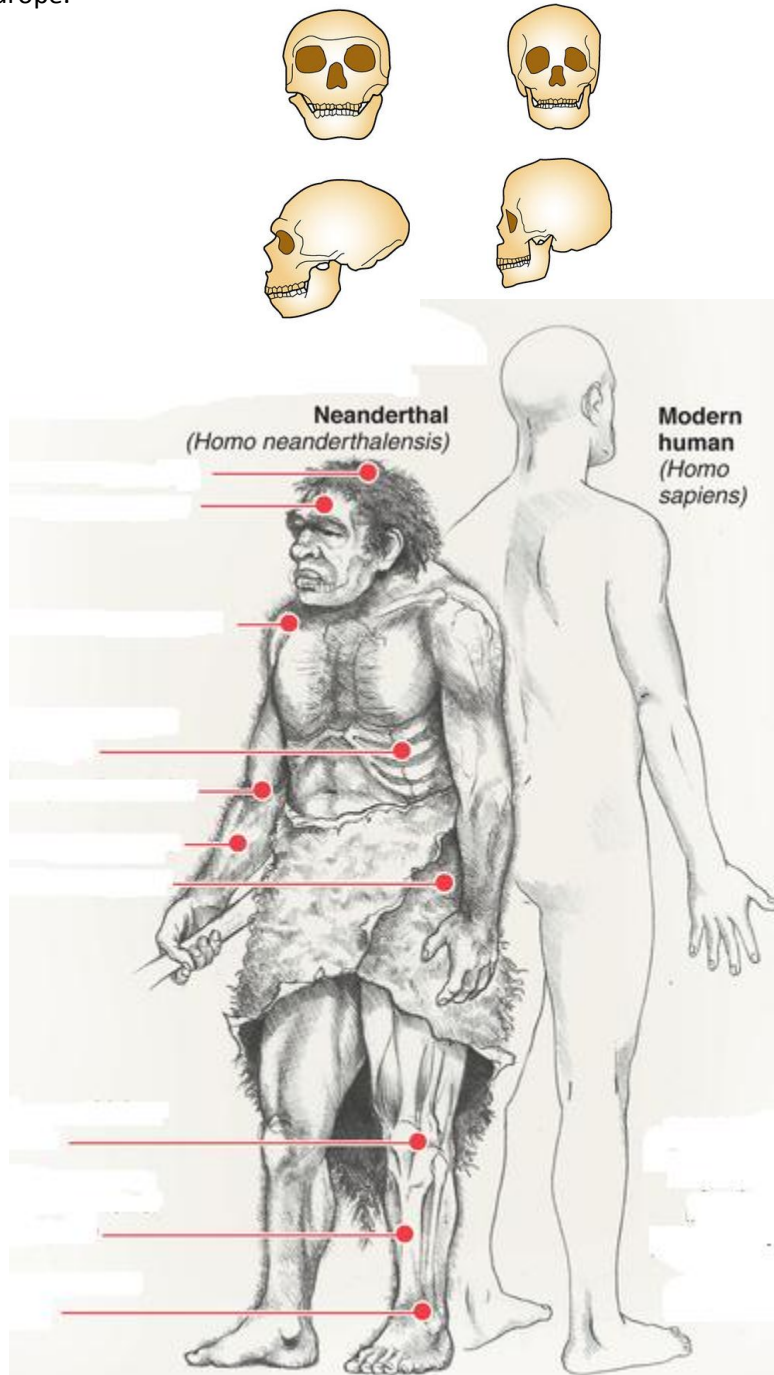
Write on every line. Answer all the questions.
Give reasons for your ideas and feelings.

SELF-ASSESSMENT: ___/5

PEER ASSESSMENT: ___/5

Comparing Neanderthals to Modern Humans

Scholars' interpretations of the lives of Neanderthals have changed over time—from mere brute beasts to almost as evolved as modern humans. Even what to call Neanderthals (or Neandertals) is in dispute: *Homo neanderthalensis* or *Homo sapiens neanderthalensis*. We now believe that Neanderthals did not contribute to our gene pool, but it cannot be denied that, with around 99.9% genetic similarity, they were very similar to us. For about 5000 to 10,000 years, humans (Cro-Magnons) and Neanderthals coexisted in Europe.



IS THIS PLAGERISM?

Who really named the Neanderthal? You might be surprised to know that Joachim Neumann, a 17th Century minister, indirectly named the Neanderthal. One particular place Neumann enjoyed walking came to be known as the "Neander Thal" in German (the "Neander Valley" in English). Because he was famous for writing many Christian hymns, people named the valley after him when he died. However, the valley was given the Greek name "Neander" that Joachim Neumann had made for himself that was based on the meaning of his last name—"new man."

When fossils were found in the Neander Valley in 1856, they were called "The Neander Thal Man." In 1864, William King coined the name *Homo neanderthalensis*. However, two years later Ernst Haeckel suggested the name *Homo stupidus*: "stupid man." Some scholars have proposed we use the name *Homo sapiens neanderthalensis* because they believe that Neanderthals were a subspecies of modern human. (This is the reason that modern humans are called *Homo sapiens sapiens* by some scholars.)

So who really named the Neanderthal? It seems many people have tried to! At least Neanderthals were never called *Homo sapiens stupidus*: "stupid wise man!"

Information taken from <http://www.talkorigins.org/faqs/homs/spelling.html>

Neandert/hal or Neandertal?

The first such fossil was discovered in 1856 in the Neander Thal, or "Neander Valley" in German, and became known as "Neanderthal Man". In 1904, German spelling was regularized to be more consistent with pronunciation, and "thal" became "tal". In 1952 Henri Vallois proposed that it should be spelt as the Germans spell it, and the "-tal" spelling has become widely used since then. The "-thal" spelling persists most strongly in England.

'Neanderthal' can be pronounced with either a 't' or a 'th' sound - both are acceptable and widely used in English. The German pronunciation, however, has always been 't' (German has no 'th' sound).

None of this affects the taxonomic name of the Neandertals. William King proposed the name *Homo neanderthalensis* in 1864. Since then, opinion has fluctuated as to whether they should be considered *Homo sapiens neanderthalensis* (a subspecies of *Homo sapiens*) or a separate species, *Homo neanderthalensis*. For the first half of the 20th century, they were usually considered a separate species. For the last few decades they have usually been considered a subspecies, but recently *Homo neanderthalensis* has been gaining in popularity again. In either case, the 'h' must remain in the name, because the laws governing biological nomenclature forbid changing the spelling.

It is fascinating to think that, but for a matter of historical chance, we might now be classifying Neandertals as *Homo stupidus*! (Or, even stranger, *Homo sapiens stupidus*: "stupid wise man".) Ernst Haeckel created that name in 1866. Fortunately for the Neandertals, who have a bad enough image problem as it is, King's name was published two years earlier and hence has priority. (Wolpoff and Caspari, *Race and Human Evolution*, 1997, p.271)

The Neander Tal was named after a minister, Joachim Neumann, who used to take walks there in the late 17th century. Neumann composed many hymns, some of which are still sung today. Wanting to use a Greek pseudonym, Neumann, whose name means "new man", chose "Neander", a translation of his name into Greek. By a strange coincidence, the "New Man Valley" named for him after his death gave its name to a new type of human that was discovered there.

Copied from <http://www.talkorigins.org/faqs/homs/spelling.html>