

Skeletal Report Form: Teachers Guide (correct answers marked with *)

1. Look at the skeleton diagram. The sailor's broken nose would have been found on his

- a. femur
- b. humerus
- c. cranium*
- d. mandible

2. Based on evidence from the skeleton's hips, vertebrae, and tarsus, our sailor probably walked

- a. bow-legged
- b. swaggering, like a pirate
- c. with a limp*
- d. with an elegant stride

3. Judging from the jawbones (mandible, maxilla), and teeth (dentition), the sailor

- a. may have used his canine teeth as a tool
- b. had lost several teeth from cavities and gum disease
- c. was an adult
- d. all of the above*

4. Why did the researchers hope to get a sample of the sailor's DNA?

- a. to compare with that of living members of the Barange family in France and prove that his name was C. Barange
- b. to establish for certain if he was male or female
- c. to see whether he had a single or double helix
- d. answers a and b*

5. Look at the skeleton diagram. What bones are connected to the pelvis (pelvic girdle)?

- a. metatarsals
- b. vertebrae (spinal column)*
- c. phalanges
- d. tibia

6. We know the skeleton was that of a man based on

- a. the narrow width of his pelvis and overall robustness*
- b. the size of his head
- c. the name on the ID card in his wallet
- d. the shape of his feet

7. We think the sailor died of dehydration (thirst) because

- a. he had no mortal wounds
- b. there was no evidence of fatal diseases
- c. a diary written by one of La Salle's colonists says that the sailors ran out of water and some had died
- d. all of the above*

8. There was no usable DNA in bones, teeth, or brain of the skeleton because

- a. it had all dried up
- b. it had become contaminated with marine organisms and bacteria*
- c. it was too old
- d. its genes had gone out of style

9. Look at the diagram of the skeleton. The longest bone in the body is the

- a. humerus
- b. metacarpal
- c. femur*
- d. molar

10. Look at the diagram of the skeleton. The fibula is part of

- a. the leg*
- b. the hand
- c. the spinal column
- d. the body element that makes some people tell fibs

Sum up your data on the skeleton by circling the correct answer below

Sex: male* female

Ethnicity: European* Native American

Stature (height): tall (about 6 feet) short (about 5 feet 4 inches)*

Age: teenager in his 20s to late 30s* old (60s to 70s)

Health: feeling good in pain (many injuries) but otherwise healthy*

Dig Deeper (*Ask students to write their answers on the back of the page or use as a basis for class discussion and debate.*)

1. The *La Belle* wrecked just $\frac{1}{4}$ mile from land. Why do you suppose the sailor didn't swim ashore to find water, instead of dying of thirst?

Answer key points:

- *18th-century European sailors typically could not swim.*
- *They knew there were hostile Karankawa Indians on land who had already killed some of the French group who had gone to shore by boat.*

2. Do you think scientists can say for sure what color eyes the sailor had?

No, not based on the information they had. If they had found usable DNA, they might have been able to learn more. At least four genes can be studied to help determine eye color. By analyzing these genes scientists can classify someone into one of three eye-color groups: a) dark eyes (black and brown), b.) light eyes (blue and grey), or c.) hazel, with a high percentage of certainty.

3. While you're alive, are your bones alive, too?

Yes! Bones are made up of living cells with nerves and blood vessels. Old bones, such as that of our skeleton, are dried up and dead.

4. If your DNA could prove you were related to any famous person living now or in the past, who would you choose to be related to?

5. Based on all you have learned, what do you think life was like for this sailor while on board *La Belle*?

Answer key points:

- *Stress from hard work, heavy lifting*
- *Stress from insecure food and water supply*
- *Stress from hostile Karankawa on shore*
- *Pain from many cavities, lost teeth, and gum infections*
- *Pain from broken nose and injured hips and spinal disk*
- *Fear of what life might be like in New World*
- *Fears of storms, drowning, and pirate attacks*