

What Do We Tell the Sheriff? Determining Minimum Numbers of Individuals (MNI) for a Scatter of Human Bones

by

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Part I – A Walk in the Park

It is a gorgeous fall day and people are enjoying it by bicycling, hiking, and picnicking at Itasca State Park. The day's mood changes however when you receive a phone call from the local sheriff's office asking your forensic anthropology team to come out to the state park.

“A hiker found some bones near Lake Itasca and wants us to come out and identify them. We're wondering if these are the three brothers who disappeared last summer. Can you help us?”

You tell them that you'll be there as soon as possible and quickly place a few calls to other members of your forensic team. You load your SUV and drive over to Itasca State Park to meet your colleagues and investigate the situation.

Write answers to the following questions in your notebook:

1. What questions do you want to answer at this scene?
2. What data will you collect and how?
3. What equipment will you pack in the vehicle?

Now share your answers with members of your group and tell me:

4. Did you get the same answers as other group members? Why or why not?

After discussing this as a whole class, go to Part II.

Part II – A First Assessment

The sheriff's officers and the hiker lead you to the scene. By the time you arrive, there is only half-an-hour of daylight remaining. In the somewhat secluded glade of trees you see scattered bones. While the sheriff's officers hurriedly photograph the scene, you map the bone scatter and determine that the bones are human. One of your team members compiles a preliminary inventory as you collect each bone:

- 3 skulls
- 6 femora
- 4 os coxae
- 2 humeri
- 2 tibiae
- 5 scapulae

Refer as needed to your handout entitled “Human Skeletal Elements” for the locations of these bones in the human skeleton.

Write answers to the following questions in your notebook:

1. How could you determine if these bones were human?
2. How many bones are in the collection? (This is the NISP or Number of Identified Specimens.)

Determine how many individuals these bones represent, and answer the following questions in your notebook:

3. What is the maximum number of individuals who could be represented by these bones?
4. What is the MNI (the Minimum Number of Individuals—the lowest number of individuals needed to account for the bones present)?
5. Why is MNI important?

Now share your answers with members of your group and tell me:

6. Did you get the same answers as other group members? Why or why not?

After discussing this as a whole class, go to Part III.

Part III – What Do You Tell the Media?

As you leave the scene, local reporter Harry Harrison of the *Itasca Daily Newspaper* approaches you. While walking the bike trail back to your vehicle he says he wants to interview your team about the bones. The parents of the three brothers are calling the sheriff hourly to get more information about the skeletal remains; they want to confirm the identifications and plan the memorial service.

Write answers to the following questions in your notebook:

1. What do you do about the newspaper reporter?
2. What do you do about the family?

Now share your answers with members of your group and tell me:

3. Did you get the same answers as other group members? Why or why not?

After discussing this as a whole class, go to Part IV.

Part IV – The Final Inventory

The next morning your team returns to work in the laboratory, where you get a call from the sheriff. The family of the three missing boys is pressuring him for information. Your team begins the final osteological exam. After careful examination, you produce your final inventory. You are working with the same number of bones, but you now have determined which side of the body they come from (when applicable).

You have:

- 3 skulls
- 6 femora (4 right and 2 left)
- 4 os coxae (1 right and 3 left)
- 2 humeri (right)
- 2 tibiae (left)
- 5 scapulae (3 right and 2 left)

Write answers to the following questions in your notebook:

1. Based on the revised inventory, would you change your NISP? Why or why not?
2. Based on the revised inventory, would you change your MNI? If so what would be the new MNI?
3. What do you tell the sheriff?
4. Why is this important?

Now share your answers with members of your group and tell me:

5. Did you get the same answers as other group members? Why or why not?

We will discuss answers as a whole class.

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Human Skeletal Elements

