

**Challenge Question:** When you get home from school, your mother grabs you, and your family rushes to the hospital. Your grandmother fell and was taken by ambulance to the emergency room. The doctor tells your family your grandmother has a fractured hip, and he referred her to an orthopedic specialist. The orthopedic doctor decides to perform a DEXA scan. The result showed her BMD was -3.3. What would be a probable diagnosis to her condition? What are some possible causes of her condition? Should her family be worried that this condition is hereditary, and if so, what are possible prevented measures they could take to prevent this from happening to them? What statistical method did you use to determine if this condition is hereditary?

## Answer the following: (BY YOURSELF)

1. What are your initial ideas on how the questions can be answered?

2. What background knowledge is needed?

3. Is all the background knowledge you listed above possible to obtain, if not please explain why?

4. What do you already know that is relevant?

## Class Suggestions: