The Lung Cancer Mystery

A case study
Sit with your group and choose your “jobs”

• **Take 2 minutes to decide who will be the**
  
  • **Reader**
    - **Job:** You will read the case study to your group, you will read the questions and you will lead group discussions. You will proofread answers and you are responsible to ensure editing has been done on all text.

  • **Ambassador**
    - **Job:** You will be presenting to the group. If your group has a question, you will ask the teacher, you will pick up materials, and turn in work.

  • **Investigator**
    - **Job:** You are the lead investigator. You can choose what you will study first and you make sure everyone is researching timely. Keep everyone on task. Make sure everyone is using reputable websites. Help in editing research questions and check everyone’s answers.

  • **Writer**
    - **Job:** You make sure all the questions have answers, all the names and jobs are on the paper, and the table is filled. You are responsible for all written text. Ensure there is no plagiarism.
It was 1982 when Mr. and Mrs. Jones moved into their new home. They had 2 children and lived a relatively healthy and active life, except that Mr. Jones had been an avid smoker for many years. He quit smoking after 20 years. They lived in California and lived through an earthquake in 1994 of a magnitude of 6.7. In 1999 Mrs. Jones was diagnosed with lung cancer and died in 2000. Mr. Jones decided to quit smoking when his wife was diagnosed, and neither child ever smoked. Mr. Jones went to the doctor because he had a cough for the last 3 months that would not go away, even after taking cough medicine. He also lost 20 pounds.

Mrs. Perez moved to the same neighborhood 3 years before. Around the time Mr. Jones went to the doctor, Mrs. Perez who never smoked, found that she was also losing weight and had a cough that would not go away. Both Mr. Jones and Mrs. Perez were eventually diagnosed with lung cancer. Over the next two years their neighborhood had 20 total cases of lung cancer. Is this a coincidence?
Answer the questions (7-10 minutes)

• Read the questions aloud
• Each member of the group will focus on answering one of the questions
  • You may use the links provided for more information
• Write down preliminary answers
• Verify each other’s answers
• The writer will write down the final answers
Case Study Mystery – Part II (3 minutes)

• The reader will read aloud Case Study Part II
  • You may have enough time to read it a second time and start to ask questions
  • Do not start on the background information yet.

• Please be ready to discuss these questions
  • Did Part II help you answer the questions you asked on Part I?
  • Would you revise the questions you want to ask the patients?
  • How does this new information change your approach?
Whole Class Discussion (5 minutes)

• The ambassador from each group should be ready to answer these questions
  • Did Part II help you answer the questions you asked on Part I?
  • Would you revise the questions you want to ask the patients?
  • How does this new information change your approach?
  • How are cancers related to chemistry class?
Independent work (10-15 minutes)

• Stay with your group.

• Each person needs to read and annotate the background research portion of your case study.
  • Find 2-3 vocabulary terms and underline them.
    • Use extra time to define each term
  • Write 2-4 questions you have about the background information.
    • Question examples
      • What is ________________?
      • How does ________________ work?
      • I wonder why _________________.
      • If ________________ will ________________ be correct?
Group work (15 minutes)

• Work together in answering the questions on the back. Each student will pick a research question and fill in the Important Details table.
• Please turn in your work (one per group) before you leave.