DATE: NAME: CLASS:

CHAPTER 10

Who Dunnit?

Activity 10

Goal • Eliminate the suspects and solve the crime while answering questions about minerals and rocks.

Teacher Instructions

1. Divide the class into groups of 3 or 4. Each group needs its own set of Question Cards and Clue Cards. Hand each group its first Question Card.

2. You will be in one spot in the room with the remainder of the cards in front of you. Designated group members bring the group's answers to you as completed, lining up in order of arrival.

3. When each group provides a correct answer to the first Question Card, it gets its first Clue Card. When each group provides a correct answer to the first Clue Card, it gets its next Question Card. Continue until all the cards are distributed.

4. The first group to answer all the cards, and solve the puzzle, wins.

DATE: NAME: CLASS:

Activity 10
continued

The Scenario

Your school's amateur geology club has just unearthed what looks to be the site of a crime! Bones are found between layers of sedimentary rock. Lying on top of the bones is a piece of incriminating evidence: a hammer. Whose hammer is it, and what happened?

Answers to the Question Cards

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

The Suspects

Charlotte Keen	Pele	J. Tuzo Wilson
S.B. Misra	Joseph Burr Tyrrell	Friedrich Mohs
Alfred Wegener		

Question Card #1

Members of your school's amateur geology club have found a mineral deposit. Determine the mineral from the following properties:

A) glassy lustre
B) streaks white when rubbed on a porcelain tile
C) a steel file will not scratch it, but sandpaper will
D) white in colour

Question Card #2

Which type of rock creates large crystals as it cools?

Question Card #3

Which two processes can change igneous and sedimentary rocks into metamorphic rock?

Question Card #4

A metamorphic rock, gneiss, is formed under heat and pressure from which igneous parent rock?

Question Card #5

A sedimentary rock, formed from the shells and skeletons of dead organisms, will change into a metamorphic rock used in statues, monuments, and building stones.

A) What is the parent rock?
B) What processes are involved?
C) What is the name of the rock it becomes?

Question Card #6

Pebbles and stones are types of sediments that can form sedimentary rocks called conglomerates. Which two processes make this rock from sediments?

Question Card #7

Which mineral has these properties?

A) has cleavage
B) a copper penny can scratch its surface

DATE: NAME: CLASS:

Clue Card #1

This scientist had too much on his plate to do the dastardly deed. He could never have transformed from the enthusiastic Canadian scientist who studied the mantle rocks at Gros Morne National Park to the perpetrator of this crime.

Clue Card #2

It's no mistake that this student has imprinted his name in the stone as an important player in the geology of Newfoundland and Labrador, but an unlikely suspect in this crime.

Clue Card #3

On a scale of 1 to 10, this scientist is a 10, but it is unlikely that he would even cause a scratch on a flea, and certainly not on these bones!

Clue Card #4

Although she had a fiery temper, she was not the person who owned the hammer.

Clue Card #5

Her experience is with guns rather than with hammers. Although she likes to make waves, it doesn't sound like this is her type of crime.

Clue Card #6

Since, at first, he appeared to be a drifter, he was a suspect. Then it became obvious that he was not a part of the puzzle.