



Cookie Mining

Activity E. ff

GRADE LEVEL: 4&5

OBJECTIVE: To illustrate the difficulty of mining natural resources.

MATERIALS:

Chocolate chip cookies

Toothpicks

Napkins

VOCABULARY: Minerals, Nonrenewable resources

PROCEDURE:

Distribute one cookie on a napkin to each student. (They cannot eat them... yet!)

Tell the students the cookie represents land and the chocolate chips represent **minerals** (ex: Coal)

Give each student a toothpick.

Using only the toothpick, have the students attempt to extract the chocolate chips from the cookie leaving as little damage to the cookie as possible. The students must keep the cookies laying flat on the table. (After all, land cannot be picked up!)

After they have finished this activity, ask the students to share the difficulties they had in their mining operation. Relate their difficulties to the difficulties in real mining companies.

Have students brainstorm ways to rebuild their cookies (the land). Can the cookie return to its original state?

Remind students that **minerals** are **nonrenewable resources** which need to be conserved and recycled to prevent extinction. Ask students for suggestions on how these elements can be conserved. (ex: Tin cans can be recycled; Aluminum cans can be recycled and remade; saving 95% of the energy used to make new cans from newly mined aluminum; Gold can be melted down and reused)

NOTE: Most of the soil from which rocks are mined are sterile and plants cannot grow in it.

*Adapted from Treasures Underground, "Mining for Chocolate", Population Connection: 1994.