

MINING LINGO BINGO

STANDARDS

See summary of National Science Education Standards.

Original: <http://books.nap.edu/readingroom/books/nses/>

Standard Concept	General Standard	Specific Standard	General Standard	Specific Standard	General Standard	Specific Standard
Grade Level		K-4		5-8		9-12
Science in ... social perspectives (F)	Types of resources	F.3.4.1	Science and technology and society	F.5.8.3		
		F.3.4.2				



MINING LINGO BINGO

INTRODUCTION

Each area of specialization has a specific terminology that allows specialists to communicate accurately and quickly with each other. Such terminology is not meant to exclude others, but it does require other people to learn the words if they do want to understand the specialists.

PURPOSE:

To acquaint the students with mineral industry terminology.

MATERIALS

- Terms and definitions sheets to give to students
- Definitions cards to be drawn from container
- Container for definitions
- Bingo cards
- Bingo markers

INSTRUCTION:

- 1) Have the definitions cut up into separate slips and placed in a container before beginning.
- 2) Instruct the students not to clear their cards when someone calls bingo until it has been verified.
 - a) This saves some upsets if a student has marked the wrong definition on his/her card and the game resumes.
- 3) Have some bingo markers available. (Gummie Bears or M & M's are great or you can have the students mark spaces with a pencil).
- 4) Review the terminology (definitions) with the students then have them put the definition sheet away.
- 5) Give each student a bingo card.
 - a) Students should refer to the list of terms at the bottom of the bingo card to write the terms to fill in each square using one word or term per square.
 - b) Do not put anything in the free space.
 - c) Note that each word can only be used once and there are more terms than squares.
 - i) This allows for more diversity in each of the bingo cards.
- 6) Students should be instructed that the definitions of the terms will be read and if they have the term that matches the definition on their card they should mark that square.
 - a) Definitions are pulled out of the container and read one at a time until someone calls a bingo. (Five squares in a row either horizontally, vertically or diagonally).
 - b) Do not read the part of the definition in parenthesis.



EVALUATION:

- 1) Which terms are used in general situations?
- 2) Which came from the Minerals Industry?
- 3) In reality, do all the terms fit in the Minerals Industry? If so, how do the terms fit?

OPTIONS:

- 1) Modify the bingo game by playing 4 corners or blackout.



MINING LINGO TERM DEFINITIONS

AFTERGASES	Gases produced by mine explosions or mine fires.
AGGREGATE	Uncrushed or crushed gravel, crushed stone or rock, sand, or artificially produced inorganic materials which form a major part of concrete.
AMIGO	A stick tied to the end of a rope on which men sit when being raised or lowered in a shaft. The technique may be illegal in some locations.
BAR GRIZZLY	A series of spaced bars, rails, pipes, or other members used for rough sizing of bulk material.
BRINE	(1) Water saturated or strongly impregnated with salt. (2) A saturated solution of a soluble mineral in water.
BRONZE	Any of the many alloys of copper and tin, with or without other elements.
CLEAVAGE	A tendency in rocks to split along definite, parallel or crystal planes characteristics of the mineral.
CONCENTRATING	Separating the waste materials from the minerals.
COPPER	A common element, reddish in color; one of the best conductors of electricity and heat.
CRUSHER	Machinery designed to crush or pulverize rock or other materials. There are many types of crushers: Jaws, Stamps, Rollers, Rod, or Ball.
DRIER	An oven used to remove water from damp molded ware by heating with forced circulation of air.
FLOTATION	Separating ore from waste materials by floating away the materials of lower specific gravity, while the heavier materials sink.
GEODE	A hollow nodule, the cavity of which is commonly lined with inward pointing crystals of quartz.
GONDOLA	A flat bottom railroad car with no top that is used chiefly to haul steel, rock or heavy bulk items.
GUY	A rope or wire line that holds the top of a drill derrick or pole. It is anchored into the ground.
IMPURITIES	Undesirable elements or compounds in a material.



LEACH	To dissolve metals or minerals out of ore by use of chemical solutions, acids, or water.
LODE	(1) An ore deposit, usually referring to a vein or veins of ore that can be mined as a unit. (2) Tabular (table-like) deposit of a valuable mineral confined within definite boundaries.
MAGMA	Molten material within the earth from which igneous rocks are formed.
MINERAL	A solid inorganic homogeneous crystalline substance resulting from the inorganic process of nature, with distinctive physical properties and definite chemical composition (or compositions). Also, any substance that is neither animal nor vegetable.
MINING	The science, technology, and business of mineral discovery, extraction, and marketing.
OBSIDIAN	Volcanic glass. Usually black, but known also to be red, green, and brown.
ORE	A source of minerals that can be mined at a profit. Ore refers to either metallic deposits or to non-metallic deposits such as sulfur.
OVERBURDEN	The soil or rock that covers a mineral deposit.
PERCOLATION	(1) A leach treatment of minerals whereby chemical solutions flow through a bed of ore dissolving the desired soluble materials. (2) The slow seepage of water through soils or porous deposits.
QUARRY	An open excavation, usually for obtaining building stone, slate, or limestone.
QUICK SILVER	The element mercury, formerly used in processing of gold and silver ores.
REFINERY	A plant in which metal or valuable mineral is extracted from ore.
SEAM	A stratum or bed of coal or other mineral; generally applied to large deposits of coal.
SMELTING	A heat process applied to ore, which separates a metal from impurities.
SMUT	A thin band of soft, inferior coal.



STRIP MINE	An open cut mine in which the overburden is removed from a coal bed before the coal is taken out.
VEIN	A mineral deposit with definite boundaries that separate it from the surrounding rock.
ZINC	A lustrous, bluish-white metallic element. Brittle at ordinary temperatures; malleable at temperatures 100 to 150 degrees Celsius. Used in many alloys, including brass, bronze, nickel-silver, bearing metal and soft solder.



MINING BINGO

		FREE		

TERMS TO ENTER INTO BINGO CARD

AFTERGASES	GEODE	OVERBURDEN
AGGREGATE	GONDOLA	PERCOLATION
AMIGO	GUY	QUARRY
BAR GRIZZLY	IMPURITIES	QUICKSILVER
BRINE	LEACH	REFINERY
BRONZE	LODE	SEAM
CLEVAGE	MAGMA	SMELTING
CONCENTRATING	MINERAL	SMUT
COPPER	MINING	STRIP MINE
CRUSHER	OBSIDIAN	VEIN
DRIER	ORE	ZINC
FLOTATION		

