MUSEUM OF NATURAL HISTORY

Geology

Post-Activity –Minerals and Their Uses

Grade	Four	**Subject**	Science	**Time Estimated**	40 minutes
Objectives	Students will explore the various uses of different minerals. They will create and draw a fictional machine and associate five different minerals with the materials that would be needed to construct it.				
Outcomes	• Investigate rocks and minerals and record questions and observations (204-1, 205-7). • Explore physical properties of local rocks and minerals, using appropriate tools to collect and compare with those from other places (204-8, 205-5, 300-5, 300-6). • Relate characteristics of rocks and minerals to their uses (300-8).				
Materials	• Mineral Machine Worksheets • Pencils • Colored pencils •				
Introduction	Using the provided table of common minerals and their uses, teachers will facilitate a class discussion about the various uses of different minerals and where they are found in our day to day lives. The teacher will record the observations on a whiteboard. It is recommended that students complete the "Mineral Bingo" post-activity that is also provided so that students have already been introduced to some mineral uses.				
Procedure	Using the whiteboard list of minerals and their uses, the teachers will explain the "Mineral Machine" activity to the students. Students will be instructed to think up a fictional machine and draw a sketch of it in the space provided. If a student is having difficulty making up a machine, allow them to draw an existing one (car, airplane, etc.). Students will then fill out the spaces beneath their creation, indicating the name and function of their machine. They will also indicate **five** different minerals that could be found in different parts of their machines construction (e.g. copper in wires, talc used in rubber wheels, etc.)				
Conclusion	Have students pair and share their mineral machines. As a class, teachers can create a master list of the students' machines on the board as a way to demonstrate how minerals are commonly found and used every day.				

Mineral Machine

Create and draw a machine in the space below. Be creative. If you could create any machine, what would it be?

Name of your machine: _____

What is it used for? _____

What are five different minerals you would need to build this machine?

Mineral Needed to Build Your Machine	Where Is It Found in Your Machine?

List of Mineral Uses

Type of Mineral	What Can It Be Found In?
Aluminum	Aluminum Cans, Aluminum Foil
Cobalt (From Cobaltite)	Magnets, Cutting Tools
Copper	Coins, Electric Wires, Pipes
Diamond	Jewelry, Drill Bits
Feldspar	Glass, Cement, Paper, Pottery
Gallium (From Bauxite)	Computers, LEDs, Solar Panels
Garnet	Jewelry
Gold	Coins, Jewelry, Decorations, Electronics
Graphite	Pencils, Batteries, Vehicle Brakes
Ice	Ice Cubes, Snowflakes
Iron	Steel for Buildings and Vehicles
Mercury	Thermometers
Nickel	Coins, Stainless Steel, Batteries, Guitar Strings
Platinum	Jewelry, Electronics, Watches
Quartz	Gemstones, Glass, Paint
Silver	Coins, Jewelry, Cutlery, Solar Panels
Talc	Make-up, Chalk, Powder, Soap, Paint, Rubber
Tin	Tin Cans, Pipes
Titanium	Jet Engines, Armour, Airplane Frames
Topaz	Jewelry
Zinc	Anti-Rust Coating, Batteries