



Scoutmaster Bucky

MINING IN SOCIETY

Merit Badge Workbook

This Workbook has been developed to help aid in organizing notes and references while working on the Mining in Society Merit Badge Requirements.

Visit www.ScoutmasterBucky.com for more information

SCOUT'S INFORMATION	MERIT BADGE COUNSELOR INFORMATION
Name _____ Phone _____ Organization _____	Name _____ Address _____ City State Zip _____ Phone _____ Mobile _____ Email _____
WORKBOOK INFORMATION	
Scoutmaster Bucky Workbook based off of <i>Boy Scout Requirements - 2016 Edition</i> Visit www.ScoutmasterBucky.com for more information.	

REQUIREMENT 1A: **SELECT 10 DIFFERENT MINERALS. FOR EACH ONE, NAME A PRODUCT FOR WHICH THE MINERAL IS USED.**

Mineral 1:		Used in/for:	
Mineral 2:		Used in/for:	
Mineral 3:		Used in/for:	
Mineral 4:		Used in/for:	
Mineral 5:		Used in/for:	
Mineral 6:		Used in/for:	
Mineral 7:		Used in/for:	
Mineral 8:		Used in/for:	
Mineral 9:		Used in/for:	
Mineral 10:		Used in/for:	



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REQUIREMENT 1B: EXPLAIN THE ROLE MINING HAS IN PRODUCING AND PROCESSING THINGS THAT ARE GROWN.

Notes:

REQUIREMENT 1C: FROM THE LIST OF MINERALS YOU CHOSE FROM REQUIREMENT 1A, DETERMINE THE COUNTRIES WHERE THOSE MINERALS CAN BE FOUND...

Mineral 1:		Countries found:	
Mineral 2:		Countries found:	
Mineral 3:		Countries found:	
Mineral 4:		Countries found:	
Mineral 5:		Countries found:	
Mineral 6:		Countries found:	
Mineral 7:		Countries found:	
Mineral 8:		Countries found:	
Mineral 9:		Countries found:	
Mineral 10:		Countries found:	



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REQUIREMENT 1C:

...AND DISCUSS WHAT YOU LEARNED FROM YOUR COUNSELOR.

Notes:

REQUIREMENT 2:

OBTAIN A MAP OF YOUR STATE OR REGION SHOWING MAJOR CITIES, HIGHWAYS, RIVERS, AND RAILROADS. MARK THE LOCATIONS OF FIVE MINING ENTERPRISES. FIND OUT WHAT RESOURCE IS PROCESSED AT EACH LOCATION, AND IDENTIFY THE MINE AS A SURFACE OR UNDERGROUND OPERATION. DISCUSS WITH YOUR COUNSELOR HOW THE RESOURCES MINED AT THESE LOCATIONS ARE USED.

Mining Enterprise #1:

Resource:

Surface or
Underground operation:

How is/are this/these resource(s) mined:



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Mining Enterprise #2:

Resource:

Surface or
Underground operation:

How is/are this/these resource(s) mined:

Mining Enterprise #3:

Resource:

Surface or
Underground operation:

How is/are this/these resource(s) mined:

Mining Enterprise #4:

Resource:

Surface or
Underground operation:

How is/are this/these resource(s) mined:



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Mining Enterprise #5: _____

Resource: _____

Surface or
Underground operation: _____

How is/are this/these resource(s) mined:

REQUIREMENT 3: DISCUSS WITH YOUR COUNSELOR THE POTENTIAL HAZARDS A MINER MAY ENCOUNTER AT AN ACTIVE MINE AND THE PROTECTIVE MEASURES USED BY MINERS.

Notes:



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REQUIREMENT 3A:

IN YOUR DISCUSSION, EXPLAIN HOW THE MINER'S PERSONAL PROTECTIVE EQUIPMENT IS WORN AND USED, INCLUDING A HARD HAT, SAFETY GLASSES, EARPLUGS, DUST MASK OR RESPIRATOR, SELF-RESCUE DEVICE, AND HIGH-VISIBILITY VEST.

Hard Hat:

How is it worn:

How is it used:

Safety Glasses:

How are they worn:

How are they used:

Ear Plugs:

How are they worn:

How are they used:



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Dust Mask or Respirator:

How is it worn:

How is it used:

Self-Rescue Device:

How is it worn:

How is it used:

High-Visibility Vest:

How is it worn:

How is it used:



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Other: _____

How is it worn:

How is it used:

Other: _____

How is it worn:

How is it used:

Other: _____

How is it worn:

How is it used:



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REQUIREMENT 3B: IN YOUR DISCUSSION, EXPLAIN HOW MINERS PROTECT THEIR HANDS AND FEET FROM IMPACT, PINCH, VIBRATION, SLIPPING, AND TRIPPING / FALLING HAZARDS.

Notes:

REQUIREMENT 3C: IN YOUR DISCUSSION, EXPLAIN HOW MONITORING EQUIPMENT WARNS MINERS OF IMMINENT DANGER, AND HOW ROBOTS ARE USED IN MINE RESCUES.

How does monitoring equipment warn of danger:

How are robots used in mine rescues:



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REQUIREMENT 4:

DISCUSS WITH YOUR COUNSELOR THE DANGERS SOMEONE MIGHT ENCOUNTER AT AN ABANDONED MINE. INCLUDE INFORMATION ABOUT THE "STAY OUT - STAY ALIVE" PROGRAM.

Notes:



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DO ONE OF THE FOLLOWING (5A, 5B, 5C, 5D, 5E, OR 5F) IN REQUIREMENT 5

REQUIREMENT 5A: WITH YOUR PARENT'S APPROVAL AND YOUR COUNSELOR'S ASSISTANCE, USE THE INTERNET TO FIND AND TAKE A VIRTUAL TOUR OF TWO TYPES OF MINES.

Type of Mine #1:

Web Site:

Type of Mine #2:

Web Site:

_____	_____	
Parent's Name	Phone	
_____	_____	<input type="checkbox"/> approved to use the Internet
Parent's Signature	Date	

REQUIREMENT 5A: DETERMINE THE SIMILARITIES AND DIFFERENCES BETWEEN THEM REGARDING RESOURCE EXPLORATION, MINE PLANNING AND PERMITTING, TYPES OF EQUIPMENT USED, AND THE MINERALS PRODUCED. DISCUSS WITH YOUR COUNSELOR WHAT YOU LEARNED FROM YOUR INTERNET-BASED MINE TOURS.

Resource Exploration:

Similarities	Differences



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Mine Planning and Permitting:

Similarities

Differences

Types of Equipment Used:

Similarities

Differences

Minerals Produced:

Similarities

Differences



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Notes:

REQUIREMENT 5B: WITH YOUR PARENT'S PERMISSION AND COUNSELOR'S APPROVAL, VISIT A MINING OR MINERALS EXHIBIT AT A MUSEUM.

Museum: _____

Mining/Mineral Exhibit: _____

Date and time of Visit: _____

Parent's Name

Phone

Parent's Signature

Date approved

Counselor's Name

Phone

Counselor's Signature

Date approved



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REQUIREMENT 5B: FIND OUT ABOUT THE HISTORY OF THE MUSEUM'S EXHIBIT AND THE TYPE OF MINING IT REPRESENTS.

Notes:

REQUIREMENT 5B: GIVE THREE EXAMPLES OF HOW MINERAL RESOURCES HAVE INFLUENCED HISTORY.

Example #1:



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Example #2:

Example #3:



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REQUIREMENT 5C: WITH YOUR PARENT'S PERMISSION AND COUNSELOR'S APPROVAL, VISIT AN ACTIVE MINE.

Mine: _____

Location: _____

Date and time of Visit: _____

Parent's Name

Phone

Parent's Signature

Date approved

Counselor's Name

Phone

Counselor's Signature

Date approved

REQUIREMENT 5C: FIND OUT ABOUT THE TASKS REQUIRED TO EXPLORE, PLAN, PERMIT, MINE, AND PROCESS THE RESOURCE MINED AT THAT SITE.

Tasks required to explore resource at site:



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Tasks required to plan and permit resource at site:

Tasks required to mine resource at site:

Tasks required to process resource at site:

REQUIREMENT 5C: TAKE PHOTOGRAPHS IF ALLOWED, AND REQUEST BROCHURES FROM YOUR VISIT. SHARE PHOTOS, BROCHURES, AND WHAT YOU HAVE LEARNED WITH YOUR COUNSELOR.



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REQUIREMENT 5D: WITH YOUR PARENT'S PERMISSION AND COUNSELOR'S APPROVAL, VISIT A MINING EQUIPMENT MANUFACTURER OR SUPPLIER.

Mining Equipment
Manufacturer/Supplier: _____

Location: _____

Date and time of Visit: _____

Parent's Name _____

Phone _____

Parent's Signature _____

Date _____

approved

Counselor's Name _____

Phone _____

Counselor's Signature _____

Date _____

approved

REQUIREMENT 5D: DISCUSS THE TYPES OF EQUIPMENT PRODUCED OR SUPPLIED THERE, AND IN WHAT PART OF THE MINING PROCESS THIS EQUIPMENT IS USED.

Type of Equipment:

Utilized in what part of the mining process:



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Type of Equipment:

Utilized in what part of the mining process:

Type of Equipment:

Utilized in what part of the mining process:

Type of Equipment:

Utilized in what part of the mining process:

REQUIREMENT 5D: TAKE PHOTOGRAPHS IF ALLOWED, AND REQUEST BROCHURES FROM YOUR VISIT. SHARE PHOTOS, BROCHURES, AND WHAT YOU HAVE LEARNED WITH YOUR COUNSELOR.



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REQUIREMENT 5E:

DISCUSS WITH YOUR COUNSELOR TWO METHODS USED TO REDUCE ROCK IN SIZE, ONE OF WHICH USES A CHEMICAL PROCESS TO EXTRACT A MINERAL.

Method 1:

Method 2:



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REQUIREMENT 5E:

EXPLAIN THE DIFFERENCE BETWEEN SMELTING AND REFINING.

Smelting:

Refining:



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REQUIREMENT 5F:

LEARN ABOUT THE HISTORY OF A LOCAL MINE, INCLUDING WHAT IS OR WAS MINED THERE, HOW THE DEPOSIT WAS FOUND, THE MINING TECHNIQUES AND PROCESSES USED, AND HOW THE MINED RESOURCE IS OR WAS USED.

Local Mine:

Location:

History Notes:



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What was/is mined at this mine:

How was the deposit found:

Mining Techniques and Processes used at mine:

How resource was/is used:



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REQUIREMENT 5F:

FIND OUT FROM A HISTORIAN, COMMUNITY LEADER, OR BUSINESS PERSON HOW MINING HAS AFFECTED YOUR COMMUNITY.

Name of person: _____

Title / Position: _____

Notes:



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REQUIREMENT 5F:

NOTE ANY SOCIAL, CULTURAL, OR ECONOMIC CONSEQUENCES OF MINING IN YOUR AREA.

Social Consequences:

Cultural Consequences:

Economic Consequences:

REQUIREMENT 5F:

SHARE WHAT YOU HAVE LEARNED WITH YOUR COUNSELOR



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REQUIREMENT 6A:

CHOOSE A MODERN MINING SITE. FIND OUT WHAT IS BEING DONE TO HELP CONTROL ENVIRONMENTAL IMPACTS. SHARE WHAT YOU HAVE LEARNED ABOUT MINING AND SUSTAINABILITY.

Mine Site: _____

Location: _____

Notes:



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REQUIREMENT 6B: EXPLAIN RECLAMATION AS IT IS USED IN MINING.

Notes:

REQUIREMENT 6B: EXPLAIN HOW MINE RECLAMATION PERTAINS TO SCOUTING'S NO-TRACE PRINCIPLES.

Notes:



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REQUIREMENT 6C: DISCUSS WITH YOUR COUNSELOR WHAT VALUES SOCIETY HAS ABOUT RETURNING THE LAND TO THE BENEFIT OF WILDLIFE AND PEOPLE AFTER MINING HAS ENDED.

Notes:

REQUIREMENT 6C: DISCUSS THE TRANSFORMATION OF THE BSA SUMMIT BECHTEL FAMILY NATIONAL SCOUT RESERVE FROM A MINE SITE TO ITS CURRENT ROLE.

Notes:



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DO ONE OF THE FOLLOWING (7A, 7B, 7C, OR 7D) IN REQUIREMENT 7

REQUIREMENT 7A: EXPLORE THE ANTICIPATED BENEFITS OF INTERPLANETARY MINING.

Notes:

REQUIREMENT 7A: LEARN HOW NASA AND PRIVATE INVESTORS MAY SEARCH FOR, EXTRACT, AND PROCESS MINERALS IN OUTER SPACE, AND THE PRIMARY REASONS FOR MINING THE MOON, OTHER PLANETS, OR NEAR-EARTH ASTEROIDS.

Notes:



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REQUIREMENT 7A: FIND OUT HOW EXPLORATION AND MINERAL PROCESSING IN SPACE DIFFER FROM EXPLORATION ON EARTH.

Notes:

REQUIREMENT 7A: SHARE WHAT YOU HAVE LEARNED WITH YOUR COUNSELOR, AND DISCUSS THE DIFFICULTIES ENCOUNTERED IN EXPLORING, COLLECTING, AND ANALYZING SURFACE OR NEAR-SURFACE SAMPLES IN SPACE.

Notes:



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REQUIREMENT 7B: IDENTIFY THREE MINERALS FOUND DISSOLVED IN SEAWATER OR FOUND ON THE OCEAN FLOOR

Mineral #1: _____

Mineral #2: _____

Mineral #3: _____

REQUIREMENT 7B: LIST THREE PLACES WHERE THE OCEAN IS MINED TODAY.

Location #1: _____

Location #2: _____

Location #3: _____

REQUIREMENT 7B: DISCUSS THE CHIEF INCENTIVES FOR MINING THE OCEANS FOR MINERALS

Notes:



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REQUIREMENT 7B:

DISCUSS THE RECLAMATION NECESSARY AFTER MINING IS OVER

Notes:

REQUIREMENT 7B:

DISCUSS ANY SPECIAL CONCERNS WHEN MINING MINERALS FROM THE OCEAN.

Notes:



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REQUIREMENT 7B:

FIND OUT WHAT SUSTAINABILITY PROBLEMS ARISE FROM MINING THE OCEANS.

Notes:

REQUIREMENT 7C:

LEARN WHAT METALS AND MINERALS ARE RECYCLED AFTER THEIR ORIGINAL USE HAS ENDED.

Notes:



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REQUIREMENT 7C: LIST FOUR METALS AND TWO NONMETALS, AND FIND OUT HOW EACH CAN BE RECYCLED.

Metal #1: _____

Notes:

Metal #2: _____

Notes:

Metal #3: _____

Notes:

Metal #4: _____

Notes:



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Nonmetal #1: _____

Notes:

Nonmetal #2: _____

Notes:

REQUIREMENT 7C: FIND OUT HOW RECYCLING AFFECTS THE SUSTAINABILITY OF NATURAL RESOURCES AND HOW THIS IDEA IS RELATED TO MINING.

Notes:



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REQUIREMENT 7D: WITH YOUR PARENT'S PERMISSION, USE THE INTERNET AND OTHER RESOURCES TO DETERMINE THE CURRENT PRICE OF GOLD, COPPER, ALUMINUM, OR OTHER COMMODITIES LIKE CEMENT OR COAL, AND FIND OUT THE FIVE-YEAR PRICE TREND FOR TWO OF THESE. REPORT YOUR FINDINGS TO YOUR COUNSELOR.

Parent's Name

Phone

Parent's Signature

Date approved

CURRENT PRICE FOR

Gold	Copper	Aluminum	Other
Cement	Coal	Other	Other

LAST FIVE YEAR ANNUAL AVERAGE COST

Past Years	Commodity	Commodity	Commodity



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DO ONE OF THE FOLLOWING (8A, 8B, OR 8C) IN REQUIREMENT 8

REQUIREMENT 8A: WITH YOUR PARENT'S AND COUNSELOR'S APPROVAL, MEET WITH A WORKER IN THE MINING INDUSTRY. DISCUSS THE WORK, EQUIPMENT, AND TECHNOLOGY USED IN THIS INDIVIDUAL'S POSITION, AND LEARN ABOUT A CURRENT PROJECT. ASK TO SEE REPORTS, DRAWINGS, AND/OR MAPS MADE FOR THE PROJECT.

Person's Name: _____

Association: _____

Position: _____

Date and time of Visit: _____

Parent's Name _____ Phone _____

Parent's Signature _____ Date _____ approved

Counselor's Name _____ Phone _____

Counselor's Signature _____ Date _____ approved

Notes:



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REQUIREMENT 8A: FIND OUT ABOUT THE EDUCATIONAL AND PROFESSIONAL REQUIREMENTS FOR THIS INDIVIDUAL'S POSITION.

Educational Requirements:

Professional Requirements:

REQUIREMENT 8A: ASK HOW THE INDIVIDUAL'S MINING CAREER BEGAN.

Notes:



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REQUIREMENT 8B:

FIND OUT ABOUT THREE CAREER OPPORTUNITIES IN THE MINING INDUSTRY. PICK ONE AND FIND OUT THE EDUCATION, TRAINING, AND EXPERIENCE REQUIRED FOR THIS PROFESSION. DISCUSS THIS WITH YOUR COUNSELOR, AND EXPLAIN WHY THIS PROFESSION MIGHT INTEREST YOU.

Career Opportunity #1:

Career Opportunity #2:

Career Opportunity #3:

Selected Mining Industry Opportunity:

Educational Requirements:

Training Requirements:

Experience Requirements:



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REQUIREMENT 8C:

WITH YOUR PARENT'S PERMISSION AND COUNSELOR'S APPROVAL, VISIT A CAREER ACADEMY OR COMMUNITY COLLEGE TO LEARN ABOUT EDUCATIONAL AND TRAINING REQUIREMENTS FOR A POSITION IN THE MINING INDUSTRY THAT INTERESTS YOU. FIND OUT WHY THIS POSITION IS CRITICAL TO THE MINING INDUSTRY, AND DISCUSS WHAT YOU LEARNED WITH YOUR COUNSELOR.

Career Academy /
Community College: _____

Location: _____

Position in Mining: _____

Date and time of Visit: _____

Parent's Name _____

Phone _____

Parent's Signature _____

Date _____

approved

Counselor's Name _____

Phone _____

Counselor's Signature _____

Date _____

approved

Notes: