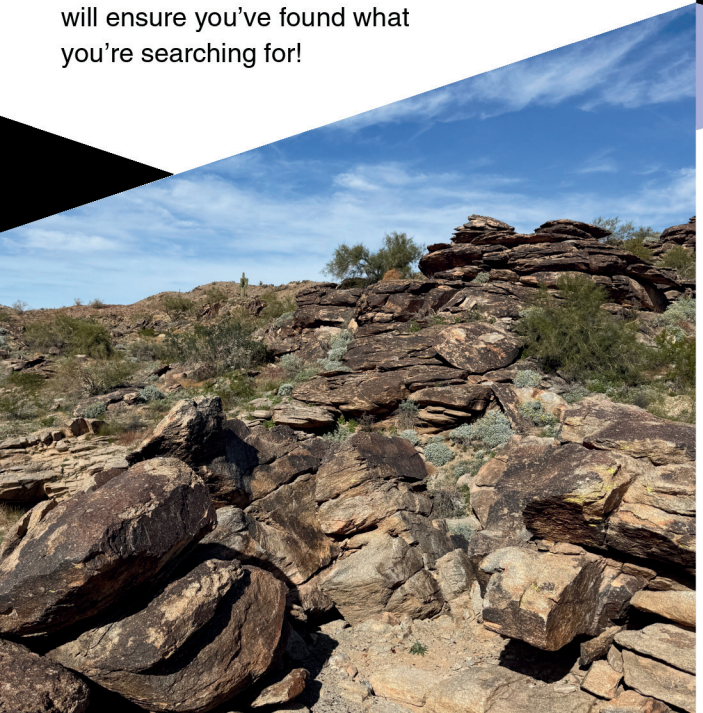
A Brief Geological History

Maricopa County's history began 1.7 billion years ago when volcanic islands collided to form an ancient metamorphic basement. Tectonic forces later triggered the Basin and Range extension, stretching the crust to create our rugged peaks and deep, sediment-filled valleys.

What You'll Discover

On this scavenger hunt, you will encounter the diverse structure of the Sonoran Desert, specifically the jagged, silvery schist fins of Piestewa Peak and the tall Granite monolith, Tom's Thumb. You'll have the chance to touch dark, blocky Greenstone at North Mountain and peer into the hollowed-out conglomerate caves of Papago Park. While choosing your own adventure, our simple field tests will ensure you've found what you're searching for!



Our Mission

Inspiring leadership and community engagement for a sustainable world through volunteer service to natural resource agencies in the state of Arizona.

Interested in joining?

azmnmcp.org

Email Us:
info-mcpmn@azmasternaturalist.org

Organized by:

ARIZONA MASTER NATURALIST
Maricopa County Chapter

Ancient Earth Quest

Maricopa County

A 7-day scavenger hunt unearthing over a billion years of history

Step 1 Pack Your Field Kit

Copper Penny
To test if a rock is softer than metal.

Magnet
To test if rocks contain magnetite.

Magnifying Lens
To see ancient crystal structures or sand grains.

Phone
To access trail maps and app for documenting findings

Step 2 Access Trail Maps

Scan the QR Code to view the AllTrails maps

Easy and moderate to hard options are available in the list!

Step 3 Begin Your Journey

OLDEST

Ga = Billions of years ago
Mya = Millions of years ago

Day 1: The Foundation (~1.8 Ga)
The Birth of AZ: Ancient islands weld together.
Greenstone

Day 2: Ancient Mud (~1.7 Ga)
Settled Silts: Ancient ocean muds compressed into stone.
Phyllite

Day 3: The Big Squeeze (~1.6 Ga)
Deep pressure bakes & bends these rocks into new shapes.
Schist

Day 4: Deep Freeze (~1.4 Ga)
Molten rock cools slowly deep underground to form crystals.
Granite

Day 5: Baked Solid (~1.3 Ga)
Deep Change: Heat and pressure transform sand into stone.
Quartzite

Day 6: Big Stretch (15–6 Mya)
Earth pulls apart, creating our mountains and valleys.
Conglomerate

Day 7: Fire & Ash (5–2 Mya)
The final volcanic fireworks erupt to build our peaks.
Basalt

YOUNGEST

Found it!

Step 4 Log Your Findings

Use the **Rockd** app to contribute to community science!

Hint: *Use your lens to see light-colored crystals on a sandy green background.*

Grey-green to dark green; can appear blocky or flattened and layered

Hint: *Look for tiny layers that shine like silk with your magnifying lens.*

Smooth, silky sheen; feels like a hard, dried clay plate.

Hint: *See the "mica glitter" with a magnifying lens.*

Silvery-gray; looks like vertical jagged book pages

Hint: *Interlocking white/black crystals.*

Light gray or pink with a salt-and-pepper crystal look.

Hint: *Use your penny; it will not scratch the surface.*

Granular, sugary texture; like fine-grained sandpaper. Very hard.

Hint: *Looks like man-made concrete.*

Color varies; rounded river stones glued into mud.

Hint: *Magnet can stick to a rock with high iron content.*

Dark gray to black; fine-grained, hard, and heavy with tiny vesticles.