

CRYSTAL WISDOM : 101

A 5 week program to explore your crystal connection through ancient shamanic practices, a splash of science, and creative crystal play.



by Lori A Andrus

CRYSTAL WISDOM : 101

CLASS 1 : DISCOVER CRYSTAL SCIENCE

Welcome to class 1 of Crystal Wisdom : 101!

We are about to embark on an exciting journey into the realms of crystals and stones. Over the next 5 weeks you will be diving deeper and deeper to create a better understanding of how to work with crystals in your everyday life so that you begin to bring reality to your highest dreams and visions.

Today we are going to begin with one of the most common questions I receive . . .

How and why do crystals heal?

Little warning . . . I may completely bum you out with this answer.

Crystal healing is believed to be rooted in ancient healing arts practices. But these practices (like many ancient ways of being) are largely undocumented and have been sadly lost over time. Our world has changed so much since these practices were considered to be everyday, common ways of healing and affecting ones life and well-being.

For many of us highly intuitive and highly sensitive individuals, these unexplained and undocumented histories resonate as truth. Our soul feels them as alive and as we read about them, we reawaken unconscious, soul memories accessing these undocumented processes and techniques.

But not everyone feels so deeply. Not everyone is able to look further back in history than the past two thousand years and receive the

wisdom of those ancient times. Not everyone is open to awakening those parts of self. Perhaps this is you. And if it is, that's totally cool! I get it.

Right now, we live in a time when science is greatly valued and in many cases valued above anything else.

It's a well defined field.

Theories, ideas, and practices are researched, studied, proven and disproven every day. Science has done A LOT to move us forward as a culture.

The challenge that is faced when it comes to the overlap between modern medicine and science is that many of the ancient practices that seem to be emerging in more and more mainstream place have typically not been researched due to religious conflicts, drug company funding, political reasons, and so much more.

So the reality is that we don't have conclusive evidence not because it doesn't work, but because it just simply has not been sufficiently studied.

So let me be clear right away; the lack of supporting or conclusive research does not mean that crystals don't heal, it just means that this is a place where science and spirituality or ancient medicine have not fully met yet.

Right now, the theories that we have about crystals and crystal healing typically apply what we know about energy, vibration, and how how it can be affected by other objects with a specific energy or vibration.

I know that you are here taking this program because you have the courage and strength to see the world a bit differently, to step outside of the norm, outside of what others perceive as real or the conditioned

beliefs of culture, and open to having your own experience, to exploring fresh ways of thinking and experiencing life.

You are attuned to your soul, your souls wisdom, and are open to spiritual truths that others may dismiss. And you desire you deepen your relationship with all of life.

There is just so much we do not yet know. What was once commonly accepted as scientific truth and modern medicine just fifty years ago is dramatically different today.

I feel like science has advanced exponentially in the past century, as has spirituality. But the two are running in parallel paths and very rarely intersecting.

Many people in one world or the other have little interest in how the two intersect. Many are comfortable hanging out in one camp or another. But I know you are here because you are curious about how the two worlds can come together.

So let's start exploring this with a phrase you have likely heard over and over because this is an area where research is actively happening.

Energy follows intention.

Scientists such as Bruce Lipton, Gregg Braden, and William Tiller are actively working to bridge science and spirituality by demonstrating the connection between thought and reality, belief and creation, the power of belief and healing, and so much more.

And these theories and areas of research are what is being applied to crystal healing.

Judy Hall talks about this in one of her recent books, *Crystal Workshop*. (Great book to pick up and work through, she has a lot of great exercises and I really enjoy her take on working with crystals).

Anyway here's what she says when asked "How do crystals work?"

The blunt answer to this question is that no one knows exactly! People talk about color resonances between crystals and chakras, about the effects of light and energy on our bodies, and the fact that our bodies contain a huge volume of water through which vibrations can pass. But quite why they work as they do is something that we may have to leave to quantum science to explain - which suggests that waves and particles are the same and can be in two places at once. What we do know, however, is that although they may look calm on the outside, internally crystals form a seething mass of energy as their tiny particles vibrate around atomic cores. Whatever else crystals do, they most certainly emit and absorb energies, and this energy can be measured - and experienced.

So, as we move forward in this program, I invite you to approach the idea of energy healing from two perspectives. The first that crystals are energy. They vibrate at a specific frequency. Their frequency is stable.

Our bodies (physical, emotional, and spiritual) also vibrate at a specific frequency . . . one that is easily influenced by our environment, circumstance, life events, beliefs, and so much more. Our energy or vibration is much less stable and much more easily affected by external things including the stable vibration of crystals and stones.

We will dive more into this in Class 2 when we talk about the energy body and how crystals harmonize with it to bring it into balance. But for now, I invite you to recognize this as a key piece in how crystals work.

The other perspective I would like to invite you to open your heart to (which has nothing to do with science) is how the wisdom of working with crystals for healing has been channeled by deeply spiritual and crystal connected individuals.

Much of what we know about crystal healing is what has been channeled or experienced from a more subjective perspective. Sadly, this does not hold up in the science world. I get it. I have a strong research background.

And at the same time I still feel something with my crystals that is beyond logic and reason. Even further, as I was applying shamanic practices such as journeying to my work with crystals and stones I would have some incredible experiences that shared information about crystal structure, history, landscape, the minerals uses, and so much more that when I finally was ready to say yes to taking a geology class at the local university I was left in awe by how the class reflected my spiritual experiences.

One of the things that happened for me when I took a geology class was that I began to see how earth is truly formed, the layers, pockets of molten hot lava, crystals, and so much more. And not only that, but what I learned in the class matched experiences I had in my shamanic journeys into the depths of the earth and what the crystals were sharing with me about their formation.

This is, from all logical and scientific senses, a backwards way to test what I was learning from the crystals. But it made sense to me. And even more, it deepened my trust in what the crystals were sharing.

What is the difference between crystals, rocks, stones, and minerals?

For the purposes of crystal healing, we identify each of these as crystals (including items such as amber, pearls, and mother of pearl). But, when

we approach it from the science perspective, we look at it a little differently.

This is so cool!

So first, let's start with minerals.

"Minerals shape our world and touch our lives in hundreds of ways. these natural substances make up most of the world's rocks, but they are also found inside (and worn outside!) our bodies, as well as in the machines that we use and the buildings we live in." - Sean Callery and Miranda Smith

There are over 5000 minerals and that number continues to grow. Minerals are what we recognize as having a crystalline structure. They are formed when the perfect ingredients (elements) come together as magma cools. And, most minerals are formed by a combination of 2 of the 118 elements.

In the next section we will talk about what needs to happen in order for minerals to form. But for now, let's just say this is creation at its finest!

Next, lets talk about rocks.

"We could not live with out rocks - we would have nothing to stand on or build with! Rocks form the crust of the Earth, which rests on a thick layer of hot rock that flows like glue. At incredibly high temperatures, new rock forms as magma rises to the Earths surface, where it cools to a solid and becomes anything from a mountain to a seabed." - Sean Callery and Miranda Smith

Rocks are a combination of crystals or grains of one or more minerals.

I'm sure you're familiar with the three types of rock formations that have been talked about for years: igneous, metamorphic, and sedimentary.

Igneous rocks are solidified from melted rock. The shaman in me gets really excited about the fiery aspect of igneous rocks. I love looking at how these rocks connect us with working with the element of fire, an element that supports us in letting go, shedding our past, surrendering what isn't working and so much more.

Sedimentary rocks are formed by sediments deposited on earth's surface. They gather together and become a solid rock. For me, sedimentary rocks connect with the earth element and teach us what it means to come together and unite to create something greater.

Metamorphic rocks are formed by pre-existing rocks that re-crystallize due to pressure or temperature changes beneath the earth's surface.

How are Crystals Formed?

Five things need to happen in order for crystals to form . . .

1. The right ingredients need to come together.
2. Those ingredients need to hit the right temperature.
3. The right levels of pressure.
4. Time for creation and growth.
5. Space to expand and grow into.

And all of these things occur within the belly of Mother Earth!
This is so cool, right?!

A lot has to happen within the earth to trigger each of those five factors, but these factors are happening every day.

Beneath us is the earth's crust. This crust varies from 3 miles thick (under the ocean floor) to 25 miles thick under the continents.

Then, beneath the earth's crust is the mantle which is a combination of molten rock that we know as magma (and when it reaches the earth's surface, lava).

It is typically slow moving and in constant motion. And where it meets with the earth's crust . . . well that is where the creative magic happens. It's hot. It's pressurized. It's bringing together all of the right ingredients to destroy and re-create something amazing.

Crystals will form in cavities created at this intersection. These cavities open and crystal growth happens. They close and growth stops. The cavity opens again with a new combination of minerals and new growth occurs. Then it closes is again. This happens over and over. Its a pretty incredible process.

But if this happens anywhere from 3 -25 miles beneath the earths surface, how do they show up close enough to the surface to be mined and found?

Well, eventually the earths crust is moved and pushed in all of the right ways to literally recreate the surface and bring to the surface what is deep within. Super cool

How do we identify common minerals?

Over the years I have spent way TOO MUCH money on crystal fakes . . . whether manmade or dyed. Every time I would find myself feeling deceived, a bit annoyed (ok, more than a bit annoyed . . . haha) and frustrated that vendors would mix fakes among natural crystals and stones.

And this happens A LOT in the jewelry industry. I cannot begin to tell you how many bead vendors (and jewelry artists) co-mingle materials. Totally

cool if they know and share with their customers, but not cool when they pass them off as real.

Has this ever happened to you? . . . You purchased a stone thinking it was one thing only to find out it was fake? . . . plastic, glass, dyed, or something else entirely?

This has happened to me as recently as last year. I was in Peru, shopping the markets (they are filled with gorgeous crystals and stones). In the hustle of what was going on I quickly picked out a handful of pendants. When I got back to my room something felt a bit off about one of them, but it actually took me bringing it home and putting it side by side with my favorite pieces of malachite to discover that it just couldn't be real. And even then, I still doubted a bit because it looks pretty spectacular. Sometimes people are intending to deceive. Sometimes people just truly do not know what they have. And sometimes people just don't care enough to find out.

Now we can try to shop exclusively from retailers we know we can trust, but there comes a point when they just don't have what we are looking for or we feel ready to brave the markets and discover more of what is available . . . and let me tell you, having a couple little tricks up your sleeve for identifying minerals quickly is pretty amazing!

Over the years I've become quite masterful at identifying real crystals and stones. And this became infinitely smoother as I learned some basic crystal science.

First, let's talk about minerals and what they are . . .

According to Charles E. Jones and Norris W. Jones in the Laboratory Manual for Physical Geology "A mineral is a naturally occurring compound or chemical element made of atoms arranged in an orderly, repetitive pattern."

Now of course there are a couple exceptions to this but they are really just a couple, including opals and shells or mother of pearl

This is pretty cool, because that means minerals have a defined structure and formation that helps us identify them.

We will talk more about that as we move through this class and talk about mineral identification.

How do I know if it's real?

I cannot even begin to tell you how many times I have been asked this question. And it is a great one!

You have likely wondered or asked it yourself.

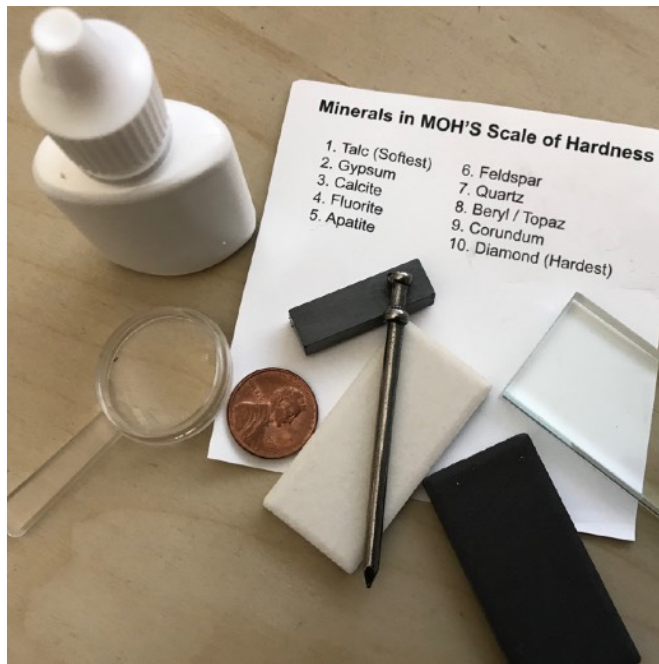
When we know a couple basics, it becomes really easy to discern natural crystals and stones from those who've been heat treated, dyed, are plastic or glass, or simply misidentified.

So how do we identify our minerals?

- Color
- Luster
- Hardness
- Streak
- Cleavage
- Fracture
- Crystals structure
- And other indicators including: reaction to acid, magnetism, gravity or density, tenacity, taste, odor, feel, and striations.

We will dive into each of these in depth, but before we do I want to share with you a little kit that makes this process even easier . . . a Mineral Test Kit.

You can make your own, or you can purchase one as I did.



Make your own:

<https://lifestyle.howstuffworks.com/crafts/other-arts-crafts/science-projects-for-kids-crystals-and-minerals1.htm>

Purchase:

www.carolina.com

Search: Rock/Mineral Test Kit

Price: \$12.85

Now, this isn't something you really need, but it can be really fun to get experimental with some of the crystals you've been a bit curious about and as we move through each of the mineral identifiers, you'll begin to see how all of the pieces come together to support you in getting to know your crystals.

Let's dive in and talk about each of the physical properties for mineral identification.

Color

This is often very obvious, but I can't tell you how many times I've had people share a picture of a beautiful ruby colored agate and sincerely believe that the stone they have is a ruby.

So color is a great indicator, however so many stones in today's market are dyed creating confusion around crystals.

All of that said. It's a great place to start.

So when shopping jewels, it's great to start with color and then to identify if a stone is a natural color or if it appears a little off, too good to be true, or if it feels patchy or inconsistent. These are great indicators for identifying whether a stone is dyed.

Luster

When we look at luster, we are looking at how a mineral naturally reflects light. Now this can be a bit tricky once a mineral has been cut and polished, but there are ways to see beyond that.

The first thing you want to identify is if the mineral is shiny or dull. Then, is it glass like or metallic. Sometimes identifying a metallic luster can be difficult because minerals like copper and steel can become tarnished or dull looking when exposed to the air for long periods of time. For this reason, it can be helpful to look at a part of the mineral that was recently broken.

If a mineral has a non-metallic luster, you may recognize it as vitreous (glass like - think of mica or biotite), dull (earthy or chalky), pearly (talc is a great example), greasy (oily), waxy (just like paraffin), or resinous (like tree sap)

Hardness

I love knowing the hardness of stones. This is a great way to make a quick identification . . . especially when I'm shopping crystal beads at gem shows.

It's also really helpful for knowing how to care for your beloved mineral friends. Softer minerals are more susceptible to knicks, scratches, and

breaks. These are minerals that love to be individually wrapped and protected. And from my jewelry artist perspective . . . any mineral with a hardness below a 3 is not the best for jewelry. That said, the softer the mineral, the easier it is for me to make slight changes such as drilling a hole or deepening a groove with my little dremel tool.

The most commonly used scale for measuring hardness was created by Friedrich Mohs, a German mineralogist. Now you can buy a special little kit of pokers that match this scale or there are some everyday items you can use to get a sense of a minerals hardness. In the scale below I share some of those items and their hardness based on this scale.

Mohs Scale of Hardness

1 - Talc

2 - Gypsum

2 - 2.5 Fingernail

3 - Calcite

3.5 - Copper Coin

4 - Fluorite

5 - Apatite

5 - 5.5 Glass

5 - 6 Steel Knife or Steel Nail

6 - Orthoclase

6.5 - 7 - Streak Plate

7 - Quartz

8 - Topaz

9 - Corundum

10 - Diamond

Streak

This is the minerals color when in a fine powder form. This can be seen when we scratch a mineral on an abrasive surface (kind of like writing with chalk on the sidewalk). You could use something like a piece of sandpaper, the sidewalk, or as you could see in my mineral test kit, there

is actually something called a streak plate. There is both a white plate and a black plate.

These plates are designed to cause a mineral to leave a fine powder. For example, iron rich hematite leaves a reddish brown streak, but when we hold this lovely stone in our hands, it's silver in tone.

Cleavage and Fracture

When a crystal forms, the atoms are arranged in specific orders and the strength of the chemical bonds determines how it is held together.



Sometimes, when a crystals breaks, it breaks relatively evenly along a flat surface. This is recognized as a plane of cleavage.

A crystal can have anywhere from one plane of cleavage (such as in biotite or mica pictured on the right) up to six planes of cleavage (as in the garnet pictured here). Fluorite octahedrons are a perfect examples of four planes of cleavage.

Crystal Fracture is when a crystal breaks in an irregular pattern such as the way quartz crystals break. Have you ever noticed that despite their clearly defined crystalline structure they break irregularly in colloidal patterns? The same is true for obsidian, agate, chalcedony, and many other minerals.

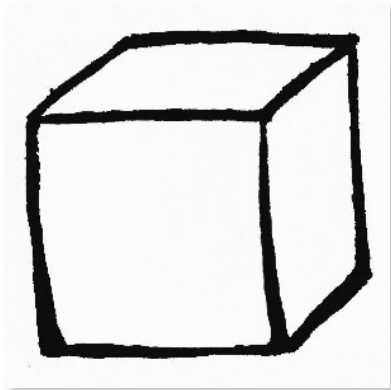
For some minerals, the cleavage will match the crystal structure, but not always. This is easy to see in chipped specimens, but much more difficult to see in a stone that has been cut and polished. Again . . . this is why we

need to look at several different physical properties to identify our minerals.

Crystal Structure . . .

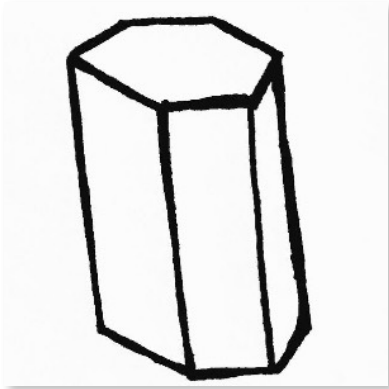
Is basically the way the atoms organize creating what we recognize as crystal faces, sides, or natural shapes.

Isometric (also known as Cubic)



- This crystalline lattice is created by squares with right angles at each corner.
- This shape is incredibly grounding and creates stability or a solid foundation for your intentions, dreams, and visions.
- Crystals with a cubic crystalline structure include: pyrite, almandine garnet, halite (salt), galena.

Hexagonal

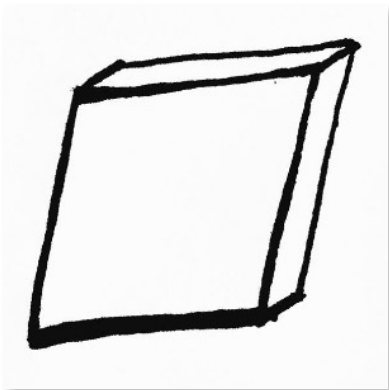


- The hexagonal crystal structure is identified by four axes

- This shape offers a very focused energy and helps us to target specific issues or challenges.

- Crystals with a hexagonal crystal structure include: beryl, corundum, quartz, agate, carnelian, chalcedony, and tourmaline.

Monoclinic



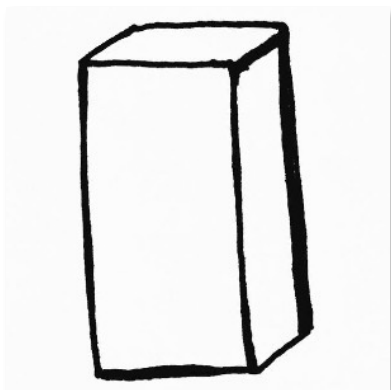
- The monoclinic crystal structure is formed of parallelograms.
- This shape is powerful for opening and purifying our core channels of energy creating a balance between our mind, body, and spirit.
- Crystals with a monoclinic crystal structure include: Selenite, mica, biotite, azurite, malachite, gypsum, and staurolite.

Orthorhombic



- The orthorhombic crystal structure is formed by rhomboids.
- This shape is a powerful ally for cleansing and clearing as it opens pathways for one to receive crystal clear information.
- Crystals with an orthorhombic crystal structure include: aragonite, barite, topaz, prehnite, and danburite.

Tetragonal

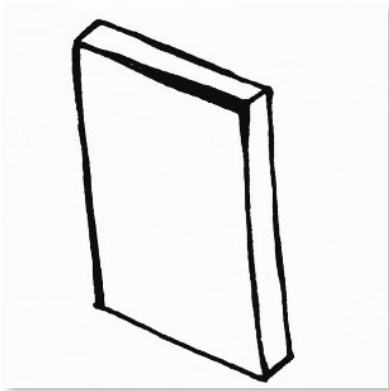


- The tetragonal crystal structure is formed by rectangles with both long and short axes.
- This crystal shape is

a great ally for activating ones own light and activating clear energy flow.

- Crystals with a Tetragonal crystal structure include: zircon, rutile, apophyllite, and chalcopyrite.

Triclinic



- The triclinic crystal structure is formed by trapezoids.

- This crystal structure is powerful for journeying through other realms and accessing ancient

wisdom.

- Crystals with a Triclinic crystal structure include: larimar, labradorite, rhodonite, and turquoise.

Amorphous



- There is no distinct crystal structure.

- Crystals with an amorphous crystal structure include: obsidian and opal.

Other Mineral Properties

Reactions to Acid . . .

Some minerals will visibly react to acid . . . especially carbonate minerals. That said, it is one of the most useful properties for distinguishing between calcite and dolomite (these match up in almost every other area, but calcite will effervesce in response to hydrochloric acid and dolomite will not). You can also substitute a strong white vinegar for the HCl.

Magnetism

Of course some minerals will be magnetic, magnetite is a great example and this is a quick way to make sure what you have is truly magnetite. Now . . . let's talk about magnetic hematite. Sorry, hematite is not naturally magnetic. These pieces are manmade . . . beautiful, but not natural.

Striations

Some stones such as feldspars will have natural striations or parallel grooves making it easy to identify.

Taste, Odor, Feel

Halite (salt) will taste like salt. Sulfide minerals will smell like rotten eggs. Talc is slippery. When we pay attention to such distinctions, it is easy to be more definitive in our identification.

Tenacity

This is your crystals flexibility or ability to bend without breaking. Think about a quartz. It's pretty hard and brittle. It's not really going to bend. But something soft with one plane of cleavage like mica may bend a bit more easily. So here you would look at if the mineral is brittle, flexible, elastic, or malleable (can it be hammered and reshaped).

Get to Know Your Crystals . . .

You may already know the identification of each of your crystals, but getting familiar with their different properties can be helpful as you are out in nature: hiking, combing the beach, and even shopping where crystals maybe mis-identified.

Use the chart below to help you flow with your identification.

Luster	Hardness	Streak	Cleavage	Other Properties	Mineral Name

Discover and Experiment . . . Get curious about your local landscape.

Go out for a hike or visit a local beach or river stream. Go someplace that is familiar. Perhaps this is a place you visited as a child, or a place you go on a regular basis to nourish your spirit.

In my local area there are a couple places I love to hike: along the Niagara Escarpment (a unique land formation that runs from central Wisconsin to Niagara Falls), along the shores of Lake Michigan, by the Fox River, and in what is known as the Kettle Moraine area and some other areas in Northern Wisconsin along Lake Superior. The rocks in each of these places are significantly different and this shares something unique about the medicine each of these places offers those who live nearby, those who visit, and how it balances the collective energy.

Let yourself explore the rocks you find. Keep in mind that rocks are a combination of minerals. And they are classified a little different (sedimentary, igneous, and metamorphic).

When I visit the shores of Lake Michigan I primarily find sedimentary or metamorphic rocks. But if I go up to Lake Superior, I find stones with high copper content as well as igneous rocks.

Let yourself explore and be curious. If you feel like you have no idea, that is ok. You may wish to pull out some books or do a couple great google searches to learn more about what is found in your area.

What do you know about your local landscape?

Are there any significant landscape features in your area? Waterfalls, mountains, volcanos, lakes, rivers, streams, glacial beds or streams, prairies, etc?

You can begin exploring your area by first observing. What do you notice? Are there any specific areas that you feel attracted to, interested in or perhaps light up for you?

What do you notice about this landscape? Tune in with all of your senses. What do you see? What do you feel (physically, emotionally, and spiritually)? What does the earth feel like to walk upon it? What do you hear?

How do you feel in this landscape? . . . how do you experience it?

What kinds of rocks do you notice here? Are they rough and broken or smoothed by water? Ask this landscape if it is willing to offer some stones for you to take home and study. Then, take home some specimens and check out their properties.

Do a little research . . .

What minerals and rock types are commonly found in your local area?

What do you know about those rocks and minerals from a science perspective and from a crystal healing perspective?
