In the document, Patrice and Patricia discuss how they initiate a rocks investigation. Patrice first asks what the children think about investigating rocks, observing them collecting rocks and treasuring them. Patricia appreciates the idea because children need more opportunities to get outside and explore. Patrice and Patricia together create a list of standards and make an activities menu. They discuss how the children's needs are being met through the investigation. The book they use is If You Find a Rock, which introduces different ways to use rocks. The investigation aims to support literacy, math, and sensory activities, as well as dramatic play and blocks. Throughout the investigation, there is constant communication and reflection on what is happening in the classroom and how children's needs are being met.
Breaking Rocks

Patty: Each child was able to break open a geode. Prior to our activity we talked about what they might find inside, and the children mostly came up with colors. They talked about a texture that it might be on the inside.

Patrice: At group time I believe Patty asked them:
  Patty: “How can we find out what’s inside this rock? What kind of tools can we use?”

Patrice: Then she wrote down all the answers that the children were saying.
  Patty: A hammer...You can bang it...Xianna?

Patrice: And then she showed them the hammer and we talked about safety.
  Patty: And everybody has goggles to use...okay.

Patrice: We purchased small geodes for every child.
  Patty: This is called a GEODE...it’s called a Geode. It’s a rock that has special things on the inside. It might look the same or it might look different than what’s on the outside.

Patrice: We went on to the floor and wrapped the rock up and they got to break their geode.

Patty: It was a challenge to break the geode even for the young children, but they were able to do it.

Patrice: And they could see what was inside and then take it home.

Patty: And that was something I think they took to heart.
  Child: “Woo...alright!”

Patty: After we did the Geodes—we were talking about the inside and the outside—we wanted to make a connection to their real world again, and we brought in some fruit, and talked about inside and outside of fruit.

Rock Tower

Patrice: They were asked to work cooperatively and build a tower.

Patty: We came over and broke up into co-op groups...

Patrice: ...Three or four children in each group. And we had fairly flat, smooth rocks.

Patty: We wanted to see how many rocks the children could stack.

Patrice: We’d say one child was going to put a rock on and then the next child would put the next rock on.
Patty: Did you notice how Janiel is trying to find a rock...that fits just right...alright...ok! So wait, so how many do we have?
Child: One...two...three, four, five...
Patty: Ok.

Patrice: A lot of the rocks, they would get to a certain—maybe seven or eight rocks—and the tower would fall over.
Patty: Why do you think it’s falling down? Is there a rock we should switch out and not use in our tower?
Patty: He put it on and kind of like tested it like he would a puzzle piece, and right away figured out that this wasn’t a best fit and then put it down and got another one.

Patrice: They were supposed to sketch their tower.
Patty: Some of the children were very representational; some children chose to trace the rocks, you know, just trace around it. Some children chose just to draw circles in a flat surface instead of one stacked on top of the other.

It’s important when you do any kind of investigation, to get a child’s perspective on something. What gives them a record of what their learning is? And they can go back and look and it and you can talk about it and then they can show their families.

**Nature Walk**

Patrice: We went to the arboretum and this time...
Patty: ...We wanted to go down to a stream that we walk by all the time.

Patrice: And we thought if we could wear old shoes and boots we could go into the stream and collect rocks.

Patty: So, we walked down; we talked about the different rocks that we’ve seen. Before we even jumped in the water the children were taking the rocks...

Patrice: ...Big rocks, little rocks...
Patty: Throwing the rocks in and...

Patrice: ...See what kind of sound it would make.
Patty: Listen to the sounds. Listen to the sounds that it’s making when you throw the rock in.

Patty: They even discussed about, “Oh, gee, that’s a big rock; I wonder what kind of sound that makes?” Patrice: Ooh did you hear that sound?
Patty: “Wow, that big rock made a really big sound.”
Patty: So, we decided that we were just going to jump in and explore those kinds of rocks. So we did.

Patrice: We also picked the rocks up and looked underneath the rocks.

Patty: What happened when we flipped it up? What was left in the sand?
   Patty: Look what happened when I picked up this rock. I made a big hole. See, that rock was here, and now I have all these tiny rocks.

Patty: One of the children grabbed a stick...

Patrice: To pry this big rock up...

Patty: Because he was unable to do it with his fingers.

Patrice: He was using it as a tool to get that rock up to see what was underneath.

Patty: It’s taking something that’s familiar to them, that’s in their environment, and giving them a chance to just look at it just a little bit differently.

Nature Talk

Patty: When we come back to the classroom, we like to reflect on what we did and see what the children learned.

Patrice: We took some samples back from the stream, the rocks from the stream.

Patty: We talked about the different kinds of describing words...

Patrice: ...Color, shapes, whether it was smooth or bumpy.
   Patrice: What do you notice about all these rocks? Every rock that I pull out. What do you notice?

Patty: And somebody said it’s wet and it’s sandy.
   Patty: What is a describing word for that rock?
   Child: A mossy covered rock!

Patrice: What they looked like and what they smelled like.
   Patty: Ooh, what shape rock is that?
   Child: Looks like a pizza!
   Patty: Looks like a pizza.

Patty: Tell me one thing about our trip down to the stream to look at rocks in the water.
Patty: One of the children talked about the big rock and how it was...
  Child: “A Boulder!”
  Patty and Patrice: “It was a boulder.”
Patty: Everything about it excited her, and it got her more comfortable to share some more words with her peers.

**Rock Painting**

Patty: There’s a large rock that groups can ask permission to paint.

Patrice: And we called to get permission to paint it.

Patty: We generated ideas from the children about what colors they wanted to paint the rock.

Patrice: And then we tallied up, and we came up with blue, because we’re the Blue Room.

Patty: So we went over and we painted the rock all one color, all one color blue.

Patrice: And they made a sketch of what they wanted to put on the rock.

Patty: And the children came up with many, many, many wonderful ideas.

Patrice: Whether it was a butterfly or their name or they all had, you know what they wanted to put.

Patty: And then the second day the children were able to choose whatever colors they wanted.

Patrice: And they brought their sketch with them and the second time we went over they painted their sketch on the rock.
  Patty: Tell me about what you’re doing there?
  Child: A butterfly.
  Patty: You’re making a butterfly.

Patty: There’s a lot of opportunities for when we do those activities for self-regulation, and that’s a huge, huge skill for children to have.
  Child: You did good with that guy!

Patty: This was a true test if they could control their body and I thought our children just thrived.

Patrice: Do you want to try yellow?

Patrice: We didn’t have pink and everybody wanted pink but I said...
  Patrice: What makes pink?
  Child: Red and white.
  Patrice: Excellent. So I’m going to put a little bit of red. Will you do the mixing?
  Child: Yeah.
Patrice: And then we ended up mixing all the different colors so they could get the colors that they wanted.

Child: It’s making teal!

Patty: I thought they did a phenomenal job.

What We Learned

Patty: As the investigation went on, we realized how much more we could do with it. It was one of those investigations where it was like Ooh! Ooh! Ooh!

Patrice: It just got bigger and bigger. We could do more than we thought we could with rocks; we had rocks in every center. We painted rocks and made them markers for our garden, and we have a stone wall in our garden.

Patty: It spurred a lot of scientific exploration, a lot of math, a lot of literacy; we came up with describing words.

Patrice: Sorting and counting and going from smaller rocks to bigger rocks.

Patty: It just gets you excited, gets you engaged, gets the children engaged.

Patrice: They treasured the rocks. It was something that they could keep and take home and have forever, so I think that’s why they enjoyed it and how much I enjoyed it and how much our team enjoyed it.

Patty: It made me happy though, as a teacher, to see the children so excited about something that we were doing in the classroom.