Co-constructed Inquiry

[Music]
^M00:00:15
>> The following video segments are intended to provoke your thinking as educator teams about learning. We invite you to position yourself in a learning stance, and consider these questions as you reimagine the literacy and numeracy throughout the day.
^E00:00:32

Provoking an Inquiry Stance

>> Inquiry is a word that holds multiple meanings. For example, inquiry can be attached to a discipline, like the processes and skills in science and technology. In the following video segments, inquiry is referring to a mindset or a stance.
>> Why do they have two kinds of blue?
>> Rather than being limited to a time of the day or a topic or a project of the children's choosing. Rather than focusing on a topic of children's interest or listening for a topic, such as rocks, birds, space, or trains, the educator listens to children's thinking and working theories in relation to the concepts in the overall expectations.
^M00:00:51
>> So a few weeks ago, we had, we had birds come stay with us for awhile.
>> Yeah! And they had a purple cage!
>> So now that the birds have returned, how have they changed?
>> Their white feathers changed.
>> The white feathers?
>> And, and they, they, they have two [inaudible] and now we got three!
>> How do you think that happened?
>> I don't know.
>> I guess, I guess, how could the birds change?
>> I don't know. What do you notice?
>> They got a different cage.
>> They got a different cage. But what about the birds?
>> They changed!
>> Oh, what's different about them?
>> They're white!
^M00:01:40
[Inaudible Comments]
^M00:02:00
>> And like black feathers on the back.
>> Black feathers on the back. And what was the other part?
>> Grey feathers on the side.
>> [Inaudible], what do you notice?
>> What is that, that red thing and the green?
>> We were wondering if that's watermelon at the bottom. It looks kind of gross, doesn't

it?
>> Yeah.
>> Yeah, but how do we know its watermelon?
>> All the black stuff.
>> Maybe it's a piece of fish.
>> [Laughing] Maybe it's a piece of fish?
>> Or maybe it's rotten?
>> Maybe it's rotten? And, and did that remind you, do you remember when we researched...do you remember when we researched how fruit changes? Do you remember that? What did we notice then?
>> Um, the, the bananas changed into a, they were squishy.
^E00:02:50

Making Connections to Build Working Theories

>> So you guys have some amazing questions and observations about the birds. I'm going to put them over to the side right now. And just before we get into our work this morning, while I'm putting those away, maybe Mrs. [inaudible] can help make some connections, and think about other things that change, okay? So, I know you have lots to say about the birds. We're going to have lots of time to research them because we're adopting them!

>> Mrs. [inaudible], I got a bouncy ball that changed colours whenever I bounce it.

>> So you're already making a connection. Did you hear what [inaudible] said? She said she has a bouncy ball that changes colours.

>> And, and then, when it lights up, it changes colours, whenever I bounce it.

^M00:00:51
>> What other kinds of things change?

^M00:00:54
>> The colours don't come out.
^M00:00:55

>> [Inaudible] what else can you think of that changes?

>> Chameleon.

>> Chameleons.

>> Leaves change colour every season.

>> Leaves.

>> And sky!

>> The sky.
^M00:01:09
Monica had up her hand, so I'm going to ask Monica.

>> Sky changes and leaves change.

>> The sky and the leaves.

>> And grass.

>> Grass. How does grass change?

>> Well, when, when it's snowing, it, when, when all the snow is melting, there's just frost, and then as it gets warmer, there's, just starts getting green.

>> Right. Because when the snow goes the grass is sort of brown, isn't it? Madison?

>> Caterpillars change.

>> How do caterpillars change?

>> Because first they're caterpillars, and then they change into cocoons and then they go to butterflies. And, and trees change every season.

>> That's right. Trees change every season.
^M00:01:59
Georgia?

>> Temperature.

>> Temperature changes, that's right. Did we have a temperature change today?

>> No.

>> Is it a little bit cooler outside than yesterday? Yeah.

>> It's raining today.

>> And it's raining today, so what else changes? The weather. Yeah, the weather changes.

>> The temperature changes, and your feelings change.

>> That's right. Flowers change. How do the flowers change?

>> They start like into a seed to, grows and then it blooms to a flower.

>> Good job. I like how Zane showed me with his hands. Julianna?

>> The clouds change because when it, when it rains, it goes to dark.

>> That's right, the clouds get darker. Good. A couple more? Jacob?

>> Days.

>> Days change. How do the days change?

>> You could go, night, blue to, to the afternoon to dark.
^M00:03:16

>> It's kind of like a pattern.

>> Kind of like a pattern, yeah.

>> Tadpoles change.

>> What do tadpoles change into?

^M00:03:23
>> First they start out as little eggs, and then they go into tadpoles and then they grow into big frogs.

^M00:03:36
>> See how Sarah did that to, see how Sarah used her hands to show? Matthew just said dogs change.

>> Dogs change?
^E00:03:48
^B00:03:50
>> Like from small to big?
^M00:03:52

>> Let's see what Matthew's thinking.

>> Like with dog's babies, and they go to two months old, then they go three months, so then they get bigger, and they'll, and then they're really old.

>> So, so Matthew said they start out as babies and then they get two months, and then three months, and then they get bigger and then they get really old.

Communicating Understanding Through Writing

>> Did you guys bring baby pictures?

>> [Classroom] Yeah!

>> We need to see them. So today, we're going to continue to look at our baby pictures, and ourselves and think about how we've changed.

>> A diaper, diaper, diaper.
^M00:00:19

>> Let me see!
^M00:00:20
Oh dipe-y!

>> Small, dark and handsome. That's what it says!

>> Oh, Jackie [phonetic], you still have the smile, don't you? You, this picture reminds a lot of Grace.

^M00:00:35
>> I look the same still.
^M00:00:37

>> You do look the same still.
^M00:00:39
[Background Conversations]
^M00:00:42
So let's read what you have so far.
^M00:00:45
When I was a baby, I was small!
^M00:00:56
My hair.
^M00:00:59
So let's leave a space.
^M00:01:01
Okay, let's think of the word hair.
^M00:01:03
What sound do you hear first?
^M00:01:05
[Breathing Out Sounds]
^M00:01:09
What, what letter is that?
^M00:01:10

>> Hot hair!
^M00:01:12
H!

^M00:01:13
>> Hot.
^M00:01:14

>> Like hot, yeah, what letter makes that sound? Good. Hair. What sound do you hear next?
^E00:01:20
^B00:01:24
A.

^E00:01:26
^B00:01:29

Yeah good, my hair! Hair.
^E00:01:35
^B00:01:38
Okay, my hair was, so we want to leave a space. And that word, was, and we've already written the word was twice, right? So now we know how to write it!
^E00:01:51
^B00:01:55
Where's your W?

^M00:01:57

[Background Conversations]

^M00:02:04
There you go. My hair was short.

>> Sh...

>> Sh...

>> That's not even a letter.

>> No, you're right. Jacob might be able to help you with that.
^M00:02:15

>> S, H.
^M00:02:16

>> How did you know that Jacob?

^M00:02:18

>> I don't know.

^M00:02:19
>> S, H.
^M00:02:21
Okay, what sound do you hear next, shh--orrrrt.
^E00:02:26
^B00:02:29
Over here next.

Shor--or--
^E00:02:34
^B00:02:36
Oh that's good Jacob.

^E00:02:38
^B00:02:42

>> You're tired.
^M00:02:44

>> I'm very tired there.
^M00:02:46

>> I sleep all the time!
^E00:02:48
^B00:02:50

>> Good! What do you hear at the end?
^E00:02:52
^B00:02:55
Do you hear another sound before the period? Say the word short.

Noticing and Naming the Learning

>> So why are, why are we looking at baby pictures?

>> To see how much we looked different when we were, how, how, how much more different the way we are now to when we were a baby.

>> Right. We're looking at how much you've changed and how much you've grown. So we've been looking at change for the past couple of weeks, haven't we? And we've

talked about different things. So we've talked about how animals grow. We've got the birds and we talked about how the birds grew and how the birds changed. And then, one day, somebody said, "Hey! We grow too and we change too!" So what did we ask you to do?

>> Bring in a baby picture.

>> Yeah, bring in a baby picture. And who else brought in a baby picture?

>> Mrs. [inaudible] and Mrs. [inaudible].

>> Yeah! We brought in baby pictures of ourselves. Do we look a lot different? Yeah. Could you tell which one was Mrs. [inaudible] and which one was Mrs. [inaudible]?

>> I think you were cute!

>> You think I was cute? Oh, thanks George.

^E00:01:12

Co-constructed Negotiated Learning

>> They saw things about change that we didn't think about. I think because they go through so many changes as they grow that they were much...much more able to connect those things and see the relationship between themselves and how things change. I think it, it's a really authentic way for them to, to look at change and see how things change and grow. We, we actually chose the topic of change, and that was something that we really talked about a lot, because we've sort of found that...if it's a topic of their choosing it may not be as rich. So we talked a lot about, like we did something on amusement parks, and, and that stemmed from their interests, but it just, the, the inquiry just didn't have that richness to it and there wasn't a, a lot of deep learning in it. So we talked about whether or not it would be okay for us to choose the topic of change, and...but where they went with that within the topic was up to them. So, the topic of change actually came from Keri [assumed spelling] and I, but where it's gone and what they've looked at, that's all stemmed from the children. And so the learning I think is a lot deeper and a lot richer and a lot more complex. Because they can take it anywhere. But it's still within that realm of change.
^E00:01:29

Provoking an Inquiry Stance in Mathematics

[Music]

^M00:00:32

[Background Conversations]

^M00:00:37

>> Sit down with me? So what did you notice about the geranium?

^M00:00:42

[Inaudible Comment]

^M00:01:20

>> What did you notice about the flowers?

>> I put X's in the middle, and then I just didn't do it on the other ones.

^M00:01:32
>> Did you see X's in the flower?^M00:01:34 Do you want to bring me the flower so I can see the X's too?

^M00:01:38

>> No I didn't see X's [inaudible].

^M00:01:48

>> Ohh, were the blooms different sizes? Have you seen a flower like that?

^M00:01:54
>> Uh, no.

^M00:01:56
>> It's called a geranium. Geranium. Yeah! People put them in their gardens.

>> I collect leaves at home.

>> You collect leaves at home? Do you have a garden at home? Do you plant flowers too? I wonder what the flowers look like at your house?

>> It's just not really flowers.

>> It's not flowers?

>> Someone dug up the flowers.

>> Really? Who do you think would dig up flowers?

>> It was someone that snuck into our back...our backyard last night.

>> Oh no. Who do you think might dig up flowers?

>> Maybe like a villain?

>> A villain? I wonder. You should ask your friends, where did the flowers go? It's kind of a mystery now, isn't it? You have a mystery on your hands! Or it could be your dog? Have you ever heard of other people telling stories about their flowers disappearing at night?

>> Yes!

>> Have you heard that in town?

>> See, I had lilies disappear at night, but I have a theory about who took the lily.

>> Yeah, but...

>> There was a certain animal in town. It seems to be eating flowers from gardens. Why don't you, why don't you ask your friends? Kianna would you like to do like a survey, to ask your friends if they've ever lost flowers in the night?

^M00:03:34

So Kianna started with a painting, which is an observational painting of a geranium, and she made a connection to her own house, and shared with me that, in the night, some flowers had been dug up, and...so it was just significant because the, the painting just served, served as that starting point to really have this huge story unfold. And, you know, I shared with her that that's a mystery, and, and how could we solve that mystery? So she's decided, and now Monica's joined in, she's decided to survey the class and ask if they've ever had this happen to them. And from that information, we can support her in, in solving that mystery.

^E00:04:20

The Inquiry Process in Action

^B00:00:01:15

>> Monica's got dug up on this [inaudible]. And Jessie, and you got [inaudible] on this one too. Dug up.
^M00:00:10:29

>> So does that mean I have flowers but then it got dug up?
^M00:00:14:15
>> Yeah.
>> OK.
>> Dug up flowers.
^m00:00:18
[Inaudible Multiple Conversations]

^m00:00:36:05

>> This the flowers that didn't get dug up. ^M00:00:40:05 These are just for checking.
^M00:00:43:05
>> [Inaudible] dug up? Or not?
>> What?
^M00:00:48

>> Have your flowers got dug up? Or not?
^E00:00:54 ^B00:00:56

>> Not.

^e00:00:57
^B00:01:06:05
>> Madison have your flowers got dug up, or not?
>> Hmmm. Not.

^E00:01:14
^B00:01:18
>> Have you ever got flowers dug up?
^M00:01:22:05
>> Yeah?

^E00:01:23 ^B00:01:24:15
Wow, there are so many people for dug up flowers.

^E00:01:31

Being in an Inquiry Stance

>> Educational researcher, Steven Katz, encourages us to think about learning as a shift in thinking and action. Part of the shift in thinking and action for educator teams is to consider the impact of being in an inquiry stance when offering materials to build on or provoke more complex thinking and learning. Let's listen in to the educators from the previous video segments discussing the thinking that informed the classroom practice

just viewed.

^M00:00:34

[Music]

^M00:00:38

>> Well, what I was wondering about was how do you, without always bringing in new materials, how do you use the materials that exist in your classroom now, but change it to change the play that happens with it?

>> I think a good example, the other day, we used to keep the materials all sorted into different baskets, and the other day we just said, let's just try this and see what happens. So we put all of the red materials in one basket, all of the blue materials in one basket, where we had never done that before. So, you know, they'd go to the carpet and they want to take all these things with them. So they'd be trying to carry all these baskets. Well now they can take one basket and it has a variety of materials in it, and I think it just gives them more opportunities and more -- they can put more complexity into their creations.

>> It's almost, they're encouraged to use different materials because they have them there so they might incorporate them like they would if they didn't have them there, they might not.

>> Like not too long ago, our room had just kind of become, like I said before, stagnant. So, our morning circle was just about how can we use these materials again in a new way? So we got a box of blocks out that the kids had been playing with every day, and I just pulled a pile out and said, "What can we do with these?" And it just happened to be a bunch of blue and a bunch of purple. So it got into patterning. Then they said, "Well, why don't we make a pyramid?" So then we started making a pyramid, and just, I think, them seeing us kind of play with the materials was really helpful because then after that, we said, okay, that's when we challenged them to choose a material that they might not have used in a while or that they've never played with before. Just go out and look at it and play with it and see what happens. And we've had some of the most amazing creations and questions and discoveries that we've had in a long time.

^E00:02:36

Re-imagining Learning Through an Inquiry Stance

[Music]
^M00:00:05
>> We see how this really is about relationships, and, you know, relationship with self, in, in that the children become self-reflective, we've become self-reflective.

Relationships with each other, relationships with materials, relationships with inquiry.
>> Relationships with their parents, families.
>> You know, and, and so, when we think about growth and, and learning, I think that occurs through those relationships because it's through those experiences that we can gain multiple perspectives on, on the work. You know, the, the children are so excited when their families are invited to share in the experience, and, you know, our own experience is, is deepened when we can take time to have conversations with each other because we're constantly living with questions. You know, when, when we take that inquiry stance, we're kind of agreeing to, to live with questions on a daily basis.
>> Yeah, like we have to kind of put ourselves in the spot that we expect the kids to be in, when they're in an inquiry. We want them to wonder and come up with theories and not be afraid to research, and that's what we need to do. We can't be afraid. We don't know everything, like we can't, we don't expect them to, so we can't expect the same of ourselves.
^M00:01:36
>> A lot of the times we're learning with them and from them.
>> They will see things in ways that, that we would never think of, and that is, is pivotal for, for learning.
>> Just in listening to you and in conversation with you, your willingness to be open and to wonder with the kids, so, all of the learning that happens, you're right there with them, and it is very relevant and the kids were able to make connections, and then you're building on that together. So it's not, you're not pushing anything on them, really you're just extending whatever it is that they're thinking about and wondering about at the time, and it's so much more meaningful and valuable and that's where you see the learning coming through in all these different places, because it's something that they're living with, because you're living it with them right there.
^E00:02:26

Reflections on Learning - Lucy West

[Music]

^M00:00:06

>> Student thinking, and if you're going to give feedback to students, one of the most important things you can do is find out what they're thinking. If you don't know what somebody's thinking, then how do you give them feedback? If you don't know why they're doing what they're doing, how, what feedback are you going to give them? Some feedback that's in your head? Some feedback that tells them to do what you want them to do? Most teaching is about getting kids to do what the teacher wants them to do, it is not about understanding where kids are, meeting them there, and then inviting them to move to the next level, based on how they think. Not in how the teacher thinks. So the teacher's job is actually to understand how students think, not to get the students to think about how they think. How well do the adults in your setting listen to one another, with an ear toward understanding and possibility? So are we, like, I've got

my point of view, you keep your point of view, and we will agree to disagree and just stay stuck in our status quo? Or are we going to get to the point where we can actually hear each other's point of view and then search and look for evidence as to who's points of view is actually working with whom, when, under what circumstances, in terms of student achievement, In terms of what pedagogical strategies work best. And, finally, my hypothesis, is it possible that the quality of adult discussions are mirrored in the quality of classroom discussions?

^E00:01:45

Deepening Our Understanding: Co-Inquiring at the Water Table

>> As you watch the following video segments, we encourage you to try documenting what you are seeing and hearing without judgement. Learning is complex and dynamic. Viewing the video multiple times provides an opportunity for you to think about what you are seeing and hearing from a variety of perspectives. The following reflective frames may be helpful to keep you in an inquiry mindset and assessment for learning stance. When I saw, I am thinking this is evidence of. When I heard, I wonder if it means? When I saw, I am thinking it might be evidence of the conceptual understanding in overall expectation.

^M00:00:52

[Music]

^M00:00:58

>> Anybody need some?

>> I have Cheerios.

>> So what's happening here guys? [Inaudible] Look at what happens when Matthew pours the water in there.

>> Goes down the other funnel.

>> It goes down the other funnel.

>> What if he pours it through this one?

>> I don't know! That's a good question, Cade. Cade said what if you pour it through this one? What happens if you pour it through that one?

>> I'm trying to try something Matthew!

>> You, just let her try something.

^M00:01:36

[Background Conversation]

^M00:01:44

You didn't get wet? That's good.

>> Just make more water in there.

>> It just makes more water.

^M00:01:50

[Background Conversation]

^M00:02:05

What are you going to do with that?

>> [Inaudible] and then it helps you attach it through. And then, and then, and then it's just going to go all around.

>> Yeah, but [inaudible] too big.

>> Maybe it'll stop [inaudible].

>> No! It can, it can actually go through!

>> If you put --

>> It's not too big!

>> Do you want to try Monica?

>> Yeah.

>> So Monica wants to try. She wants to take one of those off, and try putting that hose through there. Will you let her try that?

^M00:02:36

[Background Conversation]

^M00:02:44

>> That was easy!

>> It was easy to me.

>> Do you like that there's only a little bit of water in here?

>> No!

>> You like it when there's more water?

>> Yes!

>> Remember we talked about, what happens when there's lots of water in there?

>> It overflows.

>> It overflows. So you made it work by putting both ends in there?

>> And then you can put water through here, and then --
^M00:03:07 >> How am I going to get that through the funnel?

>> Okay, well give it a try. Let's fill it up. Let's see if Monica's theory is right.

>> I'll try!

>> Oh, Jackie's got a nice, full bucket there. Let's see. So what's happening to the water? Can you see, in the tube?

>> It's stopping.

>> It's going up, oh, and then it came out the top, why did it come out the top like that?

>> Because it's too full.

>> It's too full.

>> How about this? Connect this. That'll be [inaudible].

>> Whoa! It's pouring down my arm!

>> It's pouring down your arm? I think the tubes are really full!

^M00:03:54 >> Pour more water!

>> You want it to run down your arm?

>> Yes! I want to be funny!

>> You're getting your dress wet.

>> I know. ^M00:04:07 Now it's getting on my shoes! I love getting my sandals wet!

>> Then go outside!

>> Yeah!

>> Can I go outside?

>> Maybe after, we'll go outside, if it stops raining, we can go out. So what do you think might happen if you take that hose now, Monica, and you attach it to one of the funnels? ^M00:04:31 What do you think might happen if you put that hose into the funnel?

^M00:04:36 >> It is a hose.

>> Yeah. What'll happen if you put it through the funnel? You want to put it through there?

^M00:04:48 >> Nothing's happening!

>> Nothing's happening, how come? Where's all the water sitting?

^M00:04:53

[Background Sounds]

^M00:04:59

>> Pour more, you should pour water through here.

>> If we poured water through there? See, you need to lift this up to get the water down, right? ^M00:05:07 Yeah.

>> This is easy.

>> You can lift that around there.

>> Well this is pretty easy.

>> That's pretty easy?

^E00:05:16

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