SARAH KENNEDY: Thank you very much. I just have to say that, just as much as you will say that you are our groupies, I think that I am one of Pennsylvania's groupies because I know that there's been so much that has been done. I need to grab the remote. I didn't test that earlier.

Okay. So again, thank you so much for being here today. And we are, as again, Marielle, not Sarah. But as we were talking about what we were going to be doing, we're really talking about looking at the standards. And in -- when we're looking at the core content standards, one of the things that we like to talk about is the whole fact that with the last reauthorization of IDEA, we looked at the fact that there was this big emphasis on making progress in the general education curriculum. And in order for a student to really make progress in the general curriculum, there needs to be instruction in that academic content that is related to that curriculum.

So sometimes when we think about alignment and aligning instruction with academic content standards, we kind of get a little skewed because we don't really want -- sometimes we don't really understand what the content standard is all about, sometimes we have construct about what it is all about. You know, what does it really mean? What are they really assessing? What are they really looking for the student to be able to do?

So what are the things that happened when NAAC first came together? And NAAC was really a consortium of different entities. The group from Diane Browder et al., Links for Academic Learning, came out of NAAC. And this group is UNC-Charlotte. You've probably seen a lot of stuff that came out of there. There was also CAST, the National Center for Improving Educational Assessment out of New Hampshire, Scott Marian and the groups up there. And then NCEO. So -- as well as the University of Kentucky. Those five entities, or those five groups, came together as a consortia to really work on the National Alternate Assessment Center. And one of the things that came out of the-- out that work was the Links for Academic Learning. So if any of you have heard about the Links for Academic Learning, that really came out of this.

Now again, for those of you familiar with the Links for Academic Learning, one of the things that you'll know is that it really was more or less to take a picture, to take a broad picture of what is aligned. And it looked at the whole picture. It looked at not just how closely aligned to the standard of academic content, but it also looked at how aligned the assessment was. So they looked at what the skills were all of those different pieces.

Now again, as I said, this is really kind of when we talk about this whole emphasis of is it reading, is it math, is it science? Because we're going to go through that. I just want to frame this for you and say that the -- we're going to use something that was really focused originally to look at the big picture, validity, is this truly aligned? Is it assessing? What we say, it's assessing when they look at an assessment. But again, if you're thinking about when you're looking at assessment, what do you assess? You assess what you teach, right? So you want to think about making sure that what you're teaching is truly aligned.

And so this whole piece, we're going to kind of -- this is the framework that we use. So these questions are the framework. And you can use these questions, even though, again, it was used

primarily to look to see if an assessment was aligned because it looked at student work and it looked at the types of questions and those types of student performance, those kinds of things. But what we're looking at it for is to see if really the work and the instruction is aligned. And you can look at it to help impact where you're going with the student, okay.

So some of the questions that they use when they're looking at this is it's really these bigger pieces, is is it academic? And that really means, is it content reference? Is it related to reading, math, and science? Is it on the student's grade? The grade the student should be assigned, where their typical peers would be. How many of you still refer students as 18 months in the developmental -- using developmental language? Okay, we usually get asked questioned like that. We're not talking about where we think they are developmentally, we're talking about what grade would they be assigned based on their age. So you want to think about, is the content reference to the assigned grade level? A grade that they would be enrolled in if they were, you know, if they were a typical student. And then does the focus of achievement maintain the fidelity with the content of the original grade level?

Now this is like content centrality. Like what is it that the student is really doing? Are they truly demonstrating that skill or are they truly demonstrating what this is all about? Does it focus on the performance? The level of student performance, are you really looking at the original grade level standard? And again, if they were doing it at the same difficulty, they wouldn't be in an alternate. So that's one of those things they're saying is that it might be less difficult, but it's truly the same type of skill. The difficulty is reduced. And then, lastly, is the expected achievement to show learning on grade reference content? So these are some of the bigger things that bigger picture looks at. Okay.

So, again, when we talk about the questions, one of the things we really need to think about is, you know, now that most states have signed on to the Common Core, we really need to have a common definition of what it means to be aligned and to be working towards that and looking at what the learning is for students. So we really, now more than ever, we really need this common definition.

So some of the things that we're talking about here are the target of the student, the performance of the typical student and the same-age peer and the content, and is it meaningful? You know, one of the things that we have found in working with different professionals and educators in the field is that general educators never ask the question, "Is this meaningful?" I mean, it's one of those things that's very typical of special educators. We seem to be the one group of people who think that we get to ask the question, "Is this meaningful? Should this student learn this?" And you know, the thing is, general ed doesn't ask that. And if it's relevant and meaningful for general education students, then it is relevant and meaningful for all students.

So we really need to start thinking of this. We're not saying that you give up on the other kinds of compensatory skills and things that students need to learn, but we still need to teach the content. And I think that, in some ways, we've kind of thought that we could replace some of these things, but we need to make sure that we are truly staying aligned. Okay.

So in using the Common Core Standards to address instruction, we really think that teachers need to be looking at applying those strategies. What are those strategies that work? Also, identifying

clear instructional goals so that we know exactly what it is that we expect the students to learn. And then also identifying the construct to be measured. One of the things that we often find is that sometimes teachers often think they're assessing or they're teaching one thing and assessing that same thing, but they're often not really truly assessing that. So you have to be very explicit and truly understand what it is that the student is expected to do.

And also, we have to make sure that the right supports are in place when you think about that because one of the things that we often find is that we often put artificial barriers in the way of students learning and demonstrating certain skills. Like we expect students to be able to decode when what they really need to do is be able to understand the theme of a story. But we make them read, physically decode and read big chunks that they can barely get through. If they're supposed to comprehend the theme of a story, do they need to have -- I mean, do they have to decode that text to do that? Absolutely not. They don't. They don't have to do that. So you really need to think about what is it that is being taught and tested. And let's try not -- let's try to ensure that the appropriate supports are in place, that you don't put things -- you don't actually make it more difficult for a student.

One of the things that I like to tell people, especially now that I'm getting older and I have to use reading glasses because there's no way I can see print anymore without them, is that I would love to give you a ten-point test and not let you wear your glasses. How well do you think you would do on that? If you need glasses, you'd do very poorly. So, but you may know the material. So you really need to think about what are those kinds of things? And that's a very simplistic view of it, but think about the fact that we need to keep in mind that we need to focus on not just understanding the standards. Again, alignment really kind of comes down to do we really know what the standard is all about? Do we know what it is that the student is supposed to learn and demonstrate?

So, are there any questions up to this point? Just basically kind of giving you the framework for what we're talking about here. Okay, so our biggest question is, is it really what we think it is? Are we really looking at what it is? And we need to think about learning how to build complexity because one of the things that we do see a lot of is the fact that we'll see a standard, we'll see it, and we'll say, okay, but our students can't do that. Okay? But remember, students in general ed are built, that skill -- those skills are built. And so, yes, now you may have a student who's in the tenth grade who's never had academic instruction up to this point. And you still have to teach to their tenth grade standards. Well, one of the things you want to think about is you're still going to have to look at instructing and you might have to build that.

Now one of the things that we're going to see here is the initial activity. The learning standard might be linked to a similar standard from another grade. In that case, it might be a far link. So, is it a far link? We don't want to stay at far links, and you may need to build things, build, you know, and teach additional skills to get the student to that. But you do not want to stay at a far link or below. And then you want to build knowledge and skills. Then when we're getting closer to meeting the learning target, we're going to see that it's actually considered a near link. And when it's actually close to or a matched link, that means that we're working on that standard, but the difficulty is reduced. It's not the same difficulty.

So, this is kind of like a -- think of this as almost like a progression. I'm not going to call it a learning progression because it's really not the learning progression. But one of those things is how do I move the student to that level? So -- and again, in the world of LAL, Learning, Academic -- Links to Academic Learning, when they come -- when they look at the overall linkage, what they're saying is that a near link or far link doesn't matter, it's all linked. But what we're trying to say is don't stop at a far link. Move towards that matched link if you can.

So, in this particular instance, this is a 12th grade -- or, K-12, the Common Core Standards -- love the ringtone. It's cool. Love the ringtone. No, I think it's a cool ringtone, it was great. See, now that's usually me. My phone usually is the one that rings and I had to remember, I think, to turn that off, which I'm going to do right now. My ringer, yes. Thank you, yes, I do need help, a lot of it, so. But I do like the ringtone. Okay, so, and we're talking about 9th and 10th grade. We have -- this is one of the Common Core Standards and it happens to be under Craft and Structure. Standard five, analyze how an author's choice concerning how structure to a text orders events within and manipulates time, so we have the examples of like parallel plots, manipulating time, pacing and flashbacks, to create such effects as mastery, tension, or surprise.

So, I'm going to give you some scenarios and we're going to talk about this. And you're going to see how we move from far links -- you should have these as handouts. Do you have these handouts?

AUDIENCE MEMBER: They were available electronically. There was one that had [inaudible] conference list up. But if you don't have it, you can go get it and [inaudible].

FEMALE: I'm sorry because I didn't realize if people had these or not. Okay. Sorry.

AUDIENCE MEMBER: [inaudible] you're using Sarah's handout.

FEMALE: I'm using Sarah's PowerPoint and handouts, yes. And I know -- I hope I don't do her a disservice today. So, okay. In looking at this, we were talking about how we were going to look at how you take the student from like a near link to -- from a far link to a near link to a matched.

Okay, so here in this place, we are going to see Josh, and he's going to order notable events in "Romeo and Juliet" using pictures with simple captions. So those basic questions that we're going to ask are, is it academic? Is that skill reading? Absolutely. It is reading. Is it a learning target that's similar for students of the same age working or same grade working on the same content? No. What grade level would students be doing that, ordering events? Very early on, wouldn't they? Right. And again, you know, they may do it as they get older because I remember having to order events, but it was much more sophisticated, you know, as we got older. Okay, so it is a far link. "Romeo and Juliet" is an adapted text. And he is simply ordering the events with an over -- and I don't think I have the video link on this one. But maybe I could try it. I don't know if it connected on your guys'. No, that's just the next --

AUDIENCE MEMBER: I think it's the next slide.

FEMALE: Yeah. It didn't work there. Okay, so the video link is not there. Sorry. Okay, so he is actually just simply ordering events and there was a video clip that showed him doing this. Is the level of performance typical for a student of the same age? No. Again, it's a far link, but it is linked.

So if Josh is ordering events of the story of "Romeo and Juliet," it is related to this, but it's a far link. It's linked, but it's a far link. So let's look at moving a little bit closer, building knowledge and skill. Josh here is using a graphic organizer to lay out details of a notable event. And you can see that in the center they actually have -- he's actually mapping it out that they're going to marry, they have a deep -- they have a secret, they have met at a masquerade ball, that the family is Montague and Juliet is a Capulet.

Okay, so in this case, he's going to complete a graphic organizer. Is this reading? Absolutely, it's reading. Is the learning target typical of a student the same age? No. Once again, it's a far link. He's working on Shakespeare. But the details are overt -- are not overtly related to the text. And then the performance is typical again. He's just simply working out the level of recall and organizing data. So he's doing some simple application, but it does not include analysis, which is really required by the standard.

How many of you do a lot of work with webs? So when we talk about the difficulty or the depth of knowledge, you know it's that level, one of those four levels, right? So when we talk about recall, that's at level one. You talk about application, you're moving on. Then analysis is a higher level, right?

Okay, so when we're looking at this, when we look at this standard -- let me go back just a tad, we see that this is at what kind of level? Oh, I went too far, sorry. It's at what level? It's at analysis. And when we look at -- this is what we're talking about the depth of knowledge. Is he analyzing? Well, we don't see him analyzing here. He is simply at the level of recall, absolutely.

Then we move onto this next one, where he's laying out details. He is doing some simple application and some basic recall, but he is not at the level of analysis. So we still are at a far link. Does that make sense to everybody? See how we're building? Because we're looking at that level.

Again, here, we have -- now we have text structure and problem solution. We see the standard again, analyze how the author's choice. So Angelica will answer questions related to a problem and solution, distractors included. We have the same problem and solution, we have actual questions. What is the problem? Romeo and Juliet marrying in secret. Who had the problem? Their families, Romeo and Juliet. You know, what is causing the problem? So this is problem, this is all problem. What solution is suggested? Juliet should take a potion to look like she is dead, okay. So we can actually see that we have problem, solution.

So for Angelica, is this academic? Absolutely. Is she learning the target that's typical of the same age students would be working on in that content area? It's still a far link, okay. "Romeo and Juliet," in this version, she -- Angelica really is investigating the problem and solution, an element of text structure, but there's no evidence of how it's related to text structure, is it? Okay, so it's still a far link. The level of performance is typical to a student the same age. She's answering questions, which include recall, but at least one includes a description, which requires comprehension. So it's still not analysis, but she is

having to do some comprehension or, I guess, application. And then analyzing the author's use when we're looking at moving a little closer. He used pace, like fast or slow, to create. And then they actually have some -- they're making laughter, tension, tragedy, problems. And then Romeo and Juliet marry in secret. Romeo kills himself. See if I can get this to link. Probably not. Or is going to? Doesn't look like it's going to go. Okay. Probably, okay. Okay.

Well, so in this case, we can see that when she's answering the questions, and you know, I don't know how many of you do this, but like sometimes when you set up the questions here, what she actually used was a dauber, bingo dauber. So the worksheets are set up, they're adapted worksheets. She's using a dauber to answer the questions. But here she's looking at the pace and it was used to create. So he used a fast pace to create tension, tragedy, and problems. And Romeo married in secret, it was fast, and Romeo kills himself was fast. So he's -- she's actually looking at the text to see that.

Okay, analyzing the structure. Again, we see we have the pace, Romeo and Juliet, and we have actually answering the questions at the bottom. I think she's writing that out. Analyzing how they use text structure. So is it what we think it is? Answering questions related to the problem and solution. Yes, it's academic. Here, it's a near link because they're showing the author's use of pace to cause a reaction in his audience, okay. So even though here he's answering questions related to problem and solution, it's not just simplistic. Hers were more simplistic, right? This is actually related too. So even though they're both answering questions, in this case it's related to pace and how the author used it and what they were using it to do. So, it's a near link.

Is the performance level typical of a student? Again, it's near link because they're analyzing how the fast pace and the order of events caused the audience to use the examples of events when resulting the tension. And a timeline. So he used all of that.

Do you have any questions about that? See, I guess the thing is right here is we're showing the difference between Josh and Angelica. When we look at this again, we see here -- and I thought that was still Angelica, but apparently. This was Angelica when we looked at hers, where she was just simply answering the questions about -- so it's really the kinds of questions they were asking if you look at these. So, in hers, it's just what is the problem? Who had the problem? And so it was still a far link because it really wasn't looking at the author's use of those. Then we get to the work where we're talking about Shakespeare used the pace, fast pace or slow pace, to create tension, tragedy, problems.

So we see that the types of questions themselves that they were asking were actually getting at the heart of that standard. And that can be the difference between the far and the near link. Does that make sense? Okay. So. We talked about reading. Now we're going to talk about mathematics. Does anybody have any questions so far on using this process of really looking at, is it truly the content? Is the expectation really what students would be doing and the student's performance really what typical students would be doing?

AUDIENCE MEMBER: How would you relate that to -- I work at a licensed private school with kids with autism. And this is really isn't [inaudible] dimension that at the 18- to 24-month functioning level maybe

by the 10-, 12-, 13-year-old kids. How would you draw that link between the standards and where their functioning level is?

SARAH KENNEDY: Okay, the question was, how do you draw the link between the standard and the functioning level of the student? In the case that we were just talking about, again, you really need to think about what are the standards that students are learning at that grade level? So the student would typically be in what grade? I mean, based on their chronological age, what grade would that student be in?

AUDIENCE MEMBER: Like fifth or sixth grade.

SARAH KENNEDY: Fifth or sixth grade. So you would look at fifth or sixth grade standards. And as in such of the case of these, you would look at -- well, first you look at the standard and you see, well, what level is it at? Is it at the level of recall? Is it at the level of -- what's -- application? And it's analysis. And then what's the last one? Extended thinking. Is it -- so it is recall, application, analysis, and strategic or extended thinking, something like that, the four levels. And I just want to let you know that rarely do you ever find a question that's ever at that level four on an assessment.

We may be expected to teach to the higher level, but I don't think any test that I've ever seen, norm-referenced or otherwise, is ever at that level. So just to let to you know that part of it. Where do you start? You start by looking at that standard. And you look to see where it's written. Where is this student -- where's the standard actually written? And then you break it down and you look at what is the expectation? What is that standard all about? So I'm just going to kind of go back to that language art standard here. I'll go back to the last -- sorry. Let me get this. Last page because it actually had the standard listed. Here it is here. Now this happens to be a ninth grade -- ninth, tenth grade standard. But if you look at this, it says, analyze how an author's choice concerning how a structure -- to structure a text, order events within, like plot, parallel plots, that kind of thing, and manipulates time using pacing or flashbacks to create such effects as mystery, tension, or surprise.

What is that standard all about? Well, one, first we look at what are the nouns, what are the verbs, right? Okay. This is my simple down and dirty way of doing this. Okay. The -- what the student is expected to do is they're expected to analyze, right? They're going to analyze what? They're going to analyze structure of a text. They're going to -- and how time is manipulated. And they get to -- actually to reflect on how that structure and how time is manipulated to create different effects. So that's really what that standard's about, right? They have to analyze text and events and the manipulation of time. So those are the big things they have to do. So you break that all down. And then you start to think about, okay, so I'm near link. When I think about near links, what are they really looking at? They're looking at the structure, order of events, and manipulating time, okay.

You think about how you might make that less difficult. And when you move down, notice how Josh started working on recall first? So he was using recall. And then they built it up to doing some simple application, right? So he was moving towards that standard. And you may break it down so that you're only working on something like, you know, you might be doing -- for him it was ordering events. So you're breaking it down. It's like, okay, how can I build up to this? And a lot of times one of the things

I like to say is, think about a thematic unit. In thematic units, if you're teaching -- if you use "Romeo and Juliet," you don't just do one lesson on it, right? No. In gen ed., how long do they spend on "Romeo and Juliet"? Too long, okay. Now I'm going to choose how much -- how long too long is.

AUDIENCE MEMBER: For tenth grade boys, it's way too long.

SARAH KENNEDY: Way too long. Okay. I don't know. Some teachers spend a different amount of time. I know that in middle school -- and again, it depends on the types of activities they use because in middle school, and when my son was doing "The Giver," I thought that book was never going to end. And it is not a big book. It is not a big book. But when they were doing "The Giver," they had so many really rich activities. They did -- they went into the theme, they did role play, they took on personas, they wrote additional endings. They really did so much with that book. But those kids learned "The Giver" and they learned the theme and they learned all of the different aspects through that one book.

Now the other thing you need to realize is that most of these standards, notice how the standard doesn't say "Romeo and Juliet." The standard says analyze these things. So you use the literature -- excuse me?

AUDIENCE MEMBER: Let's just add to my questions. Do you have to use grade-appropriate books?

SARAH KENNEDY: You should use a grade appropriate book. Now you can like modify the text. There are different software systems that actually do that modification for you. So -- oh, well okay, well, let me see. One of things that I like to use, and again, I don't know if some people still do this -- there's -- my daughter, when she was in high school, she used to go SparkNotes. My daughter has graduated college now so that's beyond the time of frame, but she actually would go on SparkNotes.com when she was reading a lot of her stories, and they have like the summaries, they have the themes, they have samples tests that students can take. They have the character analyses, all of the different components. And they'll do summaries by chapter on a lot of the books that are being taught in general education. SparkNotes, all one word, dot com.

AUDIENCE MEMBER: Do they cover elementary level material?

SARAH KENNEDY: That's high school. Now elementary, I know there's some sites for elementary and I'm just trying to think of what they are.

AUDIENCE MEMBER: [inaudible]?

SARAH KENNEDY: Which [inaudible] project?

AUDIENCE MEMBER: Rhode Island.

SARAH KENNEDY: Rhode Island? I'm not sure. I'm not familiar with the Rhode Island. Book builder.

AUDIENCE MEMBER: Book builder is one of them. [inaudible] CAST and the CAST website. It has tons of resources. [inaudible] David Rose, is the director of CAST, and I'm sure he's going to be providing a lot of references. But if you go to the CAST website, there's lots and lots of links there. Or each own

immediate unit has its technology consultants that very knowledgeable [inaudible]. We also have, in our short term loan system, the American Reading Corporation has done ten science textbooks that address grade level students at a lower reading level and we have kits of those to borrow. So there's lots and lots of resources and we can connect to those. So [inaudible] with PaTTAN folks on that, Pennsylvania resources.

SARAH KENNEDY: That's really good. Yeah, and you can use books on tape. You can -- a lot of times, I would get Classics Illustrated. I used all of the Classics Illustrated little -- and sometimes you can get the books or you can just get the -- almost like the comic books version with even less text. So it's something that I would supplement. A lot of times I would use auditory books with those so that they would get the full richness of the language.

But one of things I like to do is when I used to use students who used pictures, I would actually go to SparkNotes, get the summaries from a chapter, and put it in writing with symbols and it would come up. And then you can actually make it shorter. You can actually, you know, make those. I think it's Symbolate now is what they use. Because I don't think Writing with Symbols is for purchase anymore. Yeah, I know, but Symbolate, it's from Boardmaker. They used all Boardmaker. Question in the back.

AUDIENCE MEMBER: How do you recommend balancing these type things with teaching the kids how to read? And then talking more of students who have learning disabilities that are maybe three or four years behind grade level, but still are -- would be able to read at grade level, how do you balance the instruction?

SARAH KENNEDY: I think that's more of a Pennsylvania.

AUDIENCE MEMBER: I'll try that one. First of all, I'm Penny Brinkley. [inaudible]. First of all, it's really important that the IEP team be engaged in making that decision. So, I mean, that's the first thing to say because there's not one right answer. You have to take into account all sorts of things, you know. How old the student is, you know, where -- what strategies are in place? But if you think of it in kind of an RtII framework, where all students get access to the Core and then students get tiered interventions to add to that, I would put it that way, then what I would say is you'd be using this sort of approach if the Core was addressed at literature and those kinds of analysis of text structures. And then when you were doing your tiered intervention, that might be when you could [inaudible] additional direct skill instruction. Does that help?

AUDIENCE MEMBER: Yeah, I guess it's just hard at the secondary level because of scheduling. And--

AUDIENCE MEMBER: It absolutely is.

AUDIENCE MEMBER: And you know, you have a 45-minute block or possibly an 80- or 90-minute block. And, you know, at the elementary level it's very easy.

AUDIENCE MEMBER: And in middle school and high school --

AUDIENCE MEMBER: It's easier!

AUDIENCE MEMBER: Scheduling out of time.

AUDIENCE MEMBER: I'm in the elementary buildings too, by the way. So I know it's not --

AUDIENCE MEMBER: The idea of what infrastructures need to be in place in terms of scheduling, it's a huge question because scheduling can either facilitate you delivering things in the way you need to do it, or it can be a barrier. So that's one of the reasons that it's really important that we work with principles. PaTTAN's doing a lot of work with building leaders on, you know, how you can establish a schedule. There's no one easy answer, though. And if you approach on a student-by-student basis, it's harder than if you look at it structurally in the school for how can we set up our schedule to allow it. So I do feel your challenge.

AUDIENCE MEMBER: Wendy from Pittsburgh . My expertise is in reading. And what I would offer is that we not spend six months on the outsiders, that we use excerpts to teach themes. We use excepts to teach figurative language. You don't need to spend -- I mean, you can get the point of "Romeo and Juliet" without ripping it apart ad nauseam. So when we're were talking about time, we have to really blend the fine meshing between what we want to teach from a standard perspective and what we love to teach as educators. I love "Romeo and Juliet." I think every word is critical. But the standards don't say teach "Romeo and Juliet" ad nauseam. So what we have to remember is what's the standards say? It says to teach theme, as you mentioned. It doesn't say teach "Romeo and Juliet." So how do we best teach theme in the most effective and efficient manner? That would help us having to drone on with six weeks of the outsiders.

SARAH KENNEDY: I think that that was a very good point, you're right. And so it is true that you want to think about what is the standard really saying, and it kind of helps you when you think about that because then you start to think about that the standard isn't saying that I have to teach certain literature, it's saying that I have to teach the student certain aspects. Like they have to be able to analyze, they have to be able to analyze the theme, they should be able to understand how different features are used or pacing is used to actually do certain -- bring about certain feelings, how events are used, how problems and solutions are used.

So again, we're going to talk about math again and these were all brought to be, I believe, as separate types of PowerPoints. So I'm just going to move into -- once again, you use the same process. You think about looking at learning, the learning target, linked to, you know, a similar standard as a far link, building that knowledge and skills -- yes?

AUDIENCE MEMBER: This is -- this makes perfectly good sense to me for grading language arts and science.

SARAH KENNEDY: Yes.

AUDIENCE MEMBER: Math, I don't have serious issues with because math is skill built. If you don't have the previous skills, how do you teach the skills that are way beyond. Like even in the presentation on math, math is progressive. You can't go [inaudible]. Algebra [inaudible].

SARAH KENNEDY: Well, again, you want to think about how you're going to build those -- that knowledge and skills. And also think about do they have do that -- what kinds of supports can be in place? When they're using algebra, they are -- do you need to have everything memorized? I mean, do have to know math facts? No. You can, what? Use calculators, absolutely. So you want to make sure you have the appropriate supports in place. So, yes, math is skill based. Absolutely.

I used to know students who had a math dictionary that they had with them, okay. And they had all the formulas. They actually had worksheets that when it was a certain formula that was called for, they just plugged in the numbers. So, they took the problem, they knew how it was supposed to be set up, and they were taught to use that. But they could actually do that.

Now, again, in math you're using those skills. You have to the appropriate supports. And I think one of the things is -- and we were just having this conversation and I can't remember -- I can't see her face, but she's here, I know. She was talking about math earlier. There you are. Yes, and she was in our math group in June. And I work with a wonderful colleague, Luann Land, who loves math. And she's actually the person who developed this component of the math standard for this math component piece. But she is really one of those people who says, you know, I think our problem with math is that people just don't -- they don't understand the math and they have a hard time really thinking about how they're supposed to teach it. And her biggest thing is, she said, "You know, if I don't understand it, then how can I teach it? I need to go to somebody who really understands math and what it really means and how it makes sense." And one of the things that I started to see because I started working with her on some of these things, is -- and see, the comic was made this morning as we were sitting up here before I think Jeanine came in this morning, was that, wow, had I known this back in the day, math would have made so much sense; it would have been so easy.

So, there's a lot of things that we have to think about. You know, what does it really mean? What is it really doing? So, when we look at -- we're going to look at math and we're going to see that, one, the standard here, this is one of the standards from the Common Core. Numbers and operation, base ten, that's the domain. The standard itself is using place value, understanding to round whole numbers to the nearest ten or one hundred. The grade here is grade three. And then this is a cluster of standards. So this is kind of how they're set up. And then for this eighth grade -- for eighth grade, in the domain of expressions and equations, we have the standard analyze and solve linear equations and pairs of simultaneous linear equations. The cluster number -- and number seven is solve linear equations in one variable, give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. So what is this standard about?

AUDIENCE MEMBER: I'd have to ask a math teacher.

SARAH KENNEDY: Okay, what are they going to do? Can we just pick up the verb? The verbs, what are the verbs? Analyzing and solve. So it's at what level? There's kind of actually two levels here, isn't there? Application and analysis. Because the main standard itself is saying that it's analyze. But then that cluster, that number seven that we're focusing on, what level is that at? It's at application, isn't it?

Because it's solve linear equations in one variable. So they're going to solve linear equations, right? That's what we're looking at.

And really, okay, so here's the equivalent. Show which of the possibilities is the case by successfully transforming the given equation into simpler forms until an equivalent equation of the form *X* equal *A*, *A* equal *A*, or *A* equal *B* results, where *A* and *B* are different numbers. That make sense? Who's a math person and can explain what that might look like?

AUDIENCE MEMBER: [inaudible]

SARAH KENNEDY: That's right. That's why you really need to collaborate with your general ed. colleagues. Okay, here is another standard. Use functions to model relationships between quantities. And that cluster four is construct a function to model a linear relationship between two quantities. Determine the rate of change and the initial value of the function from a description of a relationship or from two *XY* values, including reading these from a table or from a graph. Interpret the rate of change and the initial value of a linear function in terms of the situation it models and in the terms of its graph or a table of values.

So what are we going to see here? They're going to use functions to what? Model relationships between quantities. Okay, does that make sense to anybody? This one makes more sense to me because I can see this one, okay. They're going to construct a model basically, this is number four. To -- they're going to construct a model of a linear relationship between two different quantities, okay. Oftentimes, function tables, it's like, you know, *A* -- so you have *X* and *Y*. So -- and then you look at the rate of change, what's the change? Like if you have one hour, you're going to go ten miles. Two hours, how many miles do you go? So what's the rate of change? That kind of thing. You're going to do function tables here. That one I can see.

Okay, Josh, we're working with Josh again. Josh is creating a growing number pattern given the rule of five. This might -- again, is this math? Yes. Is this typical of a student this age? No. Can you see how you might start here? Because if he's looking at patterns and he's going to have to look at rate of change, you might start by having him do something like this, right? You wouldn't stop here. This wouldn't be the place to stop, but you would do that because he is creating a number pattern based on a constant rate of change if he is doing a pattern of plus five, okay. So that is a constant rate of change. It's a far link. It's not what other students this age are doing with regard to this standard, but it's still related.

Then let's move into the next one. Is this the performance? No, again, this is not at the same grade level. It is -- he's using skip counting to model a constant rate of change. He's not determining the rate of change based on that relationship between those two variables. So here, here we have him completing an input-output table given the rule of plus two. So is this academic? Absolutely. Is this a near link, far link? I mean, is this typical of what the content is? It's still a far link, right? Because he's modeling a situation in which a quantity or an output changes at a constant rate. So he is simply modeling this. So the input's one, the output's three. So if he completes this, he's told what the rule is, he's told what the rate of change is. So he's -- it's still far link, but he's working towards that standard.

And then, again, the performance, he's not determining the constant rate of change, but again, he's still working in that area. He's learning; he's making the steps up. Does this make sense? Can you see how this is working? And again, can you use manipulatives to do this? Yeah, a lot of times that's what you're going to do, you're going to use manipulatives so that the student can actually do this and make it more of a concrete process for them. They use the supports that they would need.

Now I don't have the video tape, which is unfortunate. Again, the video links are not working. But here, in this case, one of my colleagues who had been in the classroom, and this had been her student, was working on the relationship between variables. And she actually had him modeling, building a fence, building a fence pattern. And they were using a computer program to simulate that. It is mathematics, definitely. In this situation, the student is given a model and using manipulatives. They do create the pattern. And they use the table to record the variables. The student then has to determine what the rate of change is because they're not given the rule. They just said, okay, so now we've had another hour and they have a computer program that's set up to do it and they also do it with some -- they actually have some almost like Wikki Stix that they're using to build a fence. They're doing fence patterns.

That's the other thing that I'm just throwing out there because one of the things we need to do is make sure that we are using materials and activities that are motivating and engaging to students. So one of the things that they used for this student is he really liked horses and horse farms, so they were actually using a video, a component, that actually used building horse farm fences. And that's what he was building when he was using the Wikki Stix. So, horses were very motivating to this student. Yes?

AUDIENCE MEMBER: I guess in my previous -- I understand all this, I get this. I do this. But I am a regular education teacher, but ex-special ed, so you have that little -- sort of know where my background is. But I'm struggling with how I try to help my peers understand that this is the right thing to do because I'm going to tell you there is great resistance.

SARAH KENNEDY: Oh, I know.

AUDIENCE MEMBER: Across this state and across every place to understand that this is the right thing to do. And I -- you know, I don't know how to do more to have them understand that this is acceptable, that this is still making that standard. I mean, what are we doing in this to prepare?

AUDIENCE MEMBER: We were just talking, and I'm also a PaTTAN consult, about the trainings that we've been providing as far as math initiative and really focusing on using a lot of different representations for students demonstrating their knowledge. And we get a lot of work in algebra this year. And we're looking at some of the pieces and I'm just saying to my colleague, we really worked with teachers on using a lot of manipulatives. And a real big key piece is for teachers to analyze how students are learning and their assessing to understand their understanding of concepts and moving from there. So this goes very nicely with that kind of turning. But that is, and working through those workshops, that is a big jump, you know, for people kind of thinking about less like -- and a lot of the trainings that we had this week were kind of saying like modeling isn't demonstrating the "it's more interactive," but that

is a piece that needs a lot of change. And this does fit with it, but I do realize that that is something that really, you know, needs to be focused on and really stressed because it is not always there.

AUDIENCE MEMBER: I think it's easier to understand this than to have them -- to have a lot of my gears changed. I mean, and I'm on an elementary level. I am -- and I'm a mother of three and one of them has learning issues and I can tell you my high school people aren't going to do this. I'm just telling you because they don't do simple things to help modify.

SARAH KENNEDY: Well, I got to -- I mean, on a personal note, I got to say, I -- my nephew, who is now in his thirties, he had learning disabilities, dyslexia, severe dyslexia. And his mother would not put him in special education because they would not have taught him the content. So she had private tutors. They sent him to a private school. He ended up graduating with honors. He ended up going to college, getting a great degree, but the thing is, unfortunately, that's one of the things we really need. We do need to change. I don't know how. There's no magic pill you can give your -- you know, we can't do something like that. But I think that your state, I know from the conversations I've had, they are doing a lot of work and I'll let them -- I'll turn it over to them to kind of address.

FEMALE: Well, you know, one of the things we struggle with, we work -- we've been working on the area of inclusive practices and we're starting to shift and really focus in on kids with more complex needs. But, I mean, one of the things we struggle with is sometimes we make an assumption that the instruction that's happening in the classroom, in the general ed classroom for all kids, is effective instruction.

And so I kind of hear you, and that's what I'm getting from you, is, you know, it's challenging enough for us to help figure out how to modify curriculum for kids with complex needs when we have effective standards aligned instruction going on in the classroom, much less when perhaps we don't. So, you know, we have 4,000, almost 4,000 school buildings in Pennsylvania and I don't know how many teachers. But we are -- PaTTAN is working with a small number of schools that we started. We have about 25 schools right now where we started working with them focusing on including kids of the most complex needs.

And we do have some really powerful examples of a chemistry teacher, for example, who is working collaboratively with the -- a high school chemistry teacher working collaboratively with a special ed teacher to plan instruction that is designed to address the needs of all the kids in that classroom, including kids who are working at much more concrete levels. But we have a long way to go. There's no question about it. I think what we're also -- Pennsylvania has just entered into a consortium with a number of other states looking at redeveloping our alternate assessment aligned to the Common Core Standards. So, I mean, we're going to continue to see movement in this direction, but there is a lot of people that we need to impact.

And we also need be impacting our institutes of higher education that are preparing teachers to teach. But I think we have lots of pockets openings going on, but that may not directly impact your peers and your school. And we encourage you to, you know, again, follow up with us. We'd love to find some more schools to work with. We have -- we had a group of educators together in June, reading, math,

and science lessons that we worked together, content people and special people, to modify how we could take those lessons and provide access to grade level content and what would that lesson look like.

I think the work you're hearing here on universal design for learning is really the direction we need to head in. You know, we need to design effective instruction that is standards aligned that can address the needs of lots of learners. But we have a long way to go. So I don't know any of my other PaTTAN colleagues that would like to chime in here, please feel free. Or, who -- colleagues, doesn't have to be PaTTAN, please.

AUDIENCE MEMBER: I have two things that I'd like to say. One is just throughout this whole week I made an observation that one of the issues I think is people are not yet connecting the dots. You know, we have RtI, we have UDL, we have the Least Restrictive. You know, we're focusing on significantly challenged kids and people are still seeing it as this little pigeon hole and how can we do all of this? It is very difficult. They are not separate little boxes. And when we can see it as a big picture with UDL as the underpinning with consistent text support, with, you know, whatever, it's going to get a little better.

The other thing is you can feel it in this room. Some of us aren't going to be around long enough to see this actually happening. So think of yourself -- [laughing]. Really, look at this as being the pioneers and what is best and right for kids. And it is hard for us and it hurts sometimes, and we go home and cry and spend 24/7 going, "Well, how, how are going to do this?" But it will happen, and you have to kind of look at it as what's my piece? How can I do what's best for the child that I'm with right now so that, down the road, these pieces do all come together. For somebody else's kids, maybe, but it will, okay?

AUDIENCE MEMBER: I have a question.

SARAH KENNEDY: For me or for --

AUDIENCE MEMBER: For you in regards to vocab. You're presenting these case studies tonight, okay, and you're giving us the example of the far link and then a closer link and then near link and this progression [inaudible] from the standard, going from a lower level to a higher level. So I'm trying to think through this and I just want to make sure I understand. Are you saying -- would you say that -- are you going to give examples in that so that we can see the different levels? Or would you say that all students, if we were able to analyze the standards well enough, that we as educators and who are [inaudible] could have all students have near link assessments and near link lessons? Or are you saying that some students' performance will require you to have a far link and to -- so, that's one question. And then the other question is --

SARAH KENNEDY: Okay, so that first --

AUDIENCE MEMBER: The pacing of all that, because how do you get them to the near link in the time period that is given to get that area done? So they're doing this -- they're doing Shakespeare for two weeks and then they're done with it and that person has already only done like the far link, lowest far link one, and you haven't had time to get it to near link one.

SARAH KENNEDY: Okay, so they may be doing Shakespeare for two weeks. First question was, how do we get them -- are you saying that we do one versus the other? Do we take them from the far links to the near links? Or are you saying that if we analyze these, that we can actually work on getting to the near link? There's a couple of different ways to look at this. The first one is to say that we need to truly understand what the standard's all about. And I think part of that really looking at the differences. So we showed you the far links and the near links. We also showed you too that the students were answering questions, but in one it was a simpler level, it wasn't quite there. But in the other, it was a near link. So one was a far link, one was a near link. And it had to do with what was being -- instruction was being provided on. The use of something.

So when one, they were just asking, "What's the problem? What's the problem? What's the problem? What's the solution?" The next one they were looking at how does -- what kind of pacing does he use? And what does it do? You know, does he use a fast pace to provide -- to demonstrate tension or to create a problem? What kind of pacing was used? That kind of thing. So though we did -- they might both have been answering questions, so think about it. You want to think about embedding, whether they're working on IEP goals and objectives. They might be answering questions. And in doing that, you're thinking about, okay, how can I do this?

But you want to think about, when I'm looking at this standard and its analysis, in one instance I was doing some simple recall and some basic application. Well, the other one, I was actually nearer to that standard because I was actually working on what the standard was all about versus just a smaller component piece. So, I guess what we're saying is one, this is to really give you an idea of the difference, to make sure that you can have a tool to really analyze when are you truly linking and aligning? What is really aligned? And what's a far link? But you never want to stay at a far link.

The other piece of that was when you were talking about they only had two weeks to get to this point. You're going to work on a standard like analysis across -- I mean, in high school, they do that across multiple novels. My daughter may have been in AP literature, but she -- I mean, and granted, yes, they had like a ton more books than the advanced or the general class had, but they did those types of things across every single one of those novels. They worked on those same things across all of those novels.

So you don't have to spend, you know, a month on "Romeo and Juliet," but you're going to basically spend the year on looking at theme, character analysis, analysis of pacing, all of those things. Does that make sense?

AUDIENCE MEMBER: And that's what Wendy, what you were saying.

SARAH KENNEDY: Yeah, that's exactly what she was --

AUDIENCE MEMBER: Yeah.

SARAH KENNEDY: Yes?

AUDIENCE MEMBER: One of the things that we just did in our high school is we have a new communication art supervisor and the communication art supervisor took and looked at the skills that were necessary for [inaudible] English classes. And we're on block scheduling, so what is happening is the skill base is similar in like an English 9, English 10, English 11, all the teachers. But what novels and what literature and things like that that they're using could be different and could be different for the students? We actually, next year, are starting an intervention English 9 with students that have a low reading level of pulling into that English 9, a reading program like Read Naturally. They also have a choice of READ 180. So we've been exploring that.

But I'm working very hard as a supervisor of special ed with my English and my math department to work on skills and strategies for our students to access and where they're coming in, but they've been very open to that. So there is some resistance as IU person can say, who is sitting over on the far side, but we really making strides in the classroom for all students to be there, scaffolding this and moving them forward, but the skills are still the same. So I do see some movement on Ben White's part and each one is at a different place, but so are my special education teachers. They're at a different place with how they feel about it. But it definitely is a movement that I'm seeing. And we're working very hard with response to intervention at the high school and at the middle school so it doesn't just leave when they leave elementary school and just sharing all the data all the way up through. You know, so everybody can see where their students are. Kind of what you pointed out and Janine pointed out.

The Common Core is not being taught with fidelity. And that's got to be taught with fidelity first. That's your 80% to 90%. So we're -- we've been in RtII for five years at the elementary school and we're not doing it yet with fidelity. So we are working hard on that.

SARAH KENNEDY: And that's just it. I mean, I think that for some reason, we in the area of special education seem to think that we need to have all the answers right away, you know. I mean, the rest of the world does not operate like that. I don't know why we're like this. But we do need to make some headway. And yes, absolutely, we do need to start and we need to move forward. And again, in general ed, you do not have -- do you have every single student in general ed at the -- what are your levels?

AUDIENCE MEMBER: Below basic, basic --

SARAH KENNEDY: Below basic, basic, proficient, and advanced? Okay. Do you have every general ed student at advanced? Do you have every general ed student at proficient even? Absolutely not. So the thing is, that's what we're saying is that you want to give the same opportunity to every student. And that means you give them access to that instruction and you give them a method for demonstrating what they know, so. And they can't demonstrate what they haven't been taught. Yes.

AUDIENCE MEMBER: I just wanted to say I appreciated the various examples of far links and near links because it calls to attention that it sometimes is, as a teacher or consultant, my assessment team that didn't ask me for the right thing from the student. It's not the student's skill to always have to build up to and start at a low level. It's understanding that standard and knowing how I might ask to analyze versus identify. I don't always have to start with -- let them sequence the events. But that's also my kind

of [inaudible]. Maybe if I started an assessment measure, that would allow them to [inaudible]. They would surprise me.

SARAH KENNEDY: That -- how -- did everyone hear that comment? Because that's a very profound comment, and that's exactly what we're saying is sometimes it's our assessment measure that really does the disservice because we don't assume that they can actually do anything but, you know, sequence the events. But maybe if the assessment measure really was set up to analyze in a way that they could do that, demonstrate their analysis, maybe they would surprise you.

And what we're finding, the records -- I mean, we haven't got a lot. Again, this has been a short time that people have been really looking at teaching content. But what we're being reported back is that kids are surprising teachers. They are really surprising teachers. So it's one of those things where, you know, general educators don't ask the question, is it meaningful for students to learn this, general ed students. You know, they just know that that's what they're supposed to teach.

Although maybe you have run across a few that do think that, but typically they don't ask that question. And they don't walk into classroom and say, "Well, you know, looking at these kids, I don't think they're going to learn this, so I'm just not going to teach it." They don't really do that. So it's that whole we need to presume competence, we need to have high expectations, and we need to teach and instruct students to that same level.

Okay, so, unfortunately, the video that you're missing here is really a near link with Josh. He was, again, working on using models to determine the relationship between variables. It was a near link because he was working on the same content. He was modeling a given situation using manipulatives to create that pattern and record those variables. And, again, he did have to determine the rate of change. After they were actually doing that, they asked him, what is the rate of change? And he had to use that information to term that linear function.

And yes, he was the actual performance typical of a same age student. He was modeling the fence construction. He had to identify how many hours it would take to build ten sections. And, again, it was a positive rate of change. So it wasn't something. It may not have been at the same difficulty level, but it was still -- he was still doing that same application. So you can see this was actually his final worksheet. And the teacher sitting up there next to him is a colleague of mine. This was her student back in the day. And she -- her name is Jackie Norman. So she is the person who is actually working with him on this, and this is one of this work samples.

So then, we're going to look at different learning targets of a student with more significant support means. This was Leslie. And unfortunately, it's the same situation. Leslie actually has a head switch. And with Leslie, again, they're using manipulatives. She actually has a computer set up with a head switch and it sets to a rotary dial. It also sets to a scanning dial. It scans through numbers for her. It also sets up to her computer so that she can wait till it hits the section she hits it, and then it moves on. So she built patterns on her computer screen, but she used a simple head switch.

Now, with Leslie, when we showed the video of her -- I think was it this one that we showed? I think we showed one in January and then we showed the other one in June. The first one we showed, everybody thought -- was it that the one where they thought she was too high functioning? Because of her use of the head switch? It was one or the other. And we said we need to show the other video because we also showed a video where she was actually being instructed and she wasn't consistent with her use of the head switch. A lot of things that are -- you know what? Sometimes what we find out is people assume a lot based on a student's use of something.

Now, it look Leslie a while to get proficient with her head switch, showed very significant needs. But before she came into Jackie's class, she was considered to have absolutely no communication at all. She was -- they did not have -- they said she didn't respond to anything. She had not been taught content until she walked into Jackie's -- or until, excuse me, until she was enrolled into Jackie's classroom. Her only independent movement was to the left, which was where her head switch was, and she had started to round her mouth for -- I'm not sure if it was for a yes or a no. And then the smile was the yes, the rounding her mouth was for no. And that was how she was doing her communication for simple yes and no questions. But she had the head switch and she was actually answering questions using a scanning dial.

So, again, when--it's pretty interesting for us if we would have shown a video of her before she got the appropriate supports in place. Everyone would have said, "I know that student. I have that student in my classroom." But as soon as they saw her using that and actually answering content-specific questions, they were like, "She's too high functioning. She can't be my student." So a lot of times that -- we always run into that dilemma, do we show before and after, before a student has communication systems or after they have one? Because they oftentimes don't -- they look very different.

So, yes, Leslie actually did the same activity and, again, it was a near link for her as well. In her case, here you'll see that some of the assistant technology that was used, they actually had -- this was part of her computer screen that was set up to build a fence. She would click on it to build the fence. It would give her the numbers. Finally, it filled in her table for her. And then she had to estimate using that scanner up at the top. She had a scanner where it would actually would light up and then she'd hit her switch to stop it on the number that she needed to, okay.

So that was how Leslie worked on that same standard, basically the same activity. Notice they're both basically doing the same activity, but the supports were very different. The instruction was pretty much the same, the supports were different, and their performance looked a little different because she needed much more support. Are there any other questions about this at this point? I think we have -- what time do we have to finish?

AUDIENCE MEMBER: I would say like [inaudible] so you have about half an hour left.

SARAH KENNEDY: Okay. Do you want to move on to science? Did you have any additional questions? No? Okay. Moving on to science. Science happens to be one of my favorite areas. And, again, we have the same questions and we talked about that.

Now science, apparently there's -- I don't know when they're due, the Core curriculum content standards for science. I don't know when they're going to be out, but rumor is -- rumor on the street. So I'm just going to say this. Rumor on the street is that they're going to be very close, if not the National Science Education Standard. So that's what we're really using for this. And most states really have their state standards aligned very closely to the national standard, so they should be in pretty good shape.

So, again, we have a set of specific facts. When you look at this, what science is set up, you really see that it's broken into different domains. Again, we have your physical, you have your life science, you have your earth and space, then you have science and technology, as well as science and personal and social perspectives, history, and then we have the scientific inquiry, which is processes of acquiring scientific knowledge.

So, in science, you're really looking at utilizing skills that you've really gained oftentimes in other, you know, in other areas. And you're looking at the knowledge component, okay. So when we look at science, we're going to go through the same process. Is it a typical -- is it a task that's typical of the student in the same grade level content? Is it academic? Is the performance of the student typical? And is it meaningful? If it's being done, if it's something that's done in the general ed classroom, our answer to this question is what? Yes.

So that -- just from now on, our answer's going to be anytime somebody asks, is it meaningful, if it's done in the general ed classroom, it is, yes. Good. I think it's just the easiest way to say it. You know, if they're doing this in general ed, then yes, it's meaningful because if it's -- somebody thought it was meaningful. So if it's meaningful to that set of group of students, it's meaningful to all.

Physical science. In this standard, we're looking at physical science. As a result of the activities in grade K-4, all students should develop an understanding of properties of objects and materials, positions and motion of objects, light, heat, electricity, and magnetism. Grade level standard for the fourth grade, students will understand and describe the principles of magnetism. Now see, I'm one of those people that likes to highlight the verbs. And then I sometimes just underline the nouns. And when I reduce difficulty, I sometimes decrease the nouns, okay. So think about it that way.

Reducing difficulty, I reduce the nouns. Now I try to stay as close to the verbs as possible. So understand and describe what level are we at? Recall and simple application, pretty much. Yeah, application, describing, okay. Because you're describing that. Now I know that when we did some work this summer, we actually handed out a web. Did we have the webs wheel and the webs levels with the different verbs at the different levels? It's a cheat sheet that I like to personally use because, as a special educator, I like my little cheat sheets. They help me.

AUDIENCE MEMBER: [inaudible]

SARAH KENNEDY: Yeah, that would be great.

AUDIENCE MEMBER: On the website, you want the handouts, the web [inaudible].

SARAH KENNEDY: Yeah. And I know that, from what I understand, when they were doing the [inaudible] system when they were developing the lessons -- I can't remember the name of the woman who gave us that document, but she said they used that. Jean said that they had actually used that when they were looking at developing those standards-based instructional activities, those general education ones related. And that's what we use. We use those same lessons and we actually adapted them. Yeah. Okay, so they looked across.

So, understand and describe. So you're at that basic level. Here, the basic principles of magnetism. So they're going to understand magnetism and they're going to describe it, right? Here, is this what we think it is? Marnie is reaching across midline to a group of materials. Is that academic? No. No. She may have been doing it within a lesson. This is what we -- a lot of times this is what we'll see. We'll see people taking an instructional activity in the general ed classroom on magnetism, which is what they were doing in that lesson. The activity was actually a lesson based on the standard of magnetism, but she -- all they were doing was measuring her ability to cross midline because it was something that they were working on with her in her IEP. So is that typical? No. And most students in that grade level are not working on motor skills. And then, again, her performance is not based on academic content. So this is not aligned.

She's doing this -- I mean, this is -- a lot of times, how many of you start this way? I know this is how we used to start. This is how we used to tell people to start. We did. We said, "Okay, we get them in the classroom and we get them in there with hands-on activities so that we can demonstrate our IEP goals during that time, we can work on those IEP goals during those activities." But one of the things that we found out was, well, unfortunately, was kids were learning content, but they weren't getting it all. And some of the problem with that was because they were only in there when there was hands-on activities. So that's another problem. You want to make sure that a lot of -- and you know, sure, the hands-on activities may be easier to include the students in on, but if that's all they're in that general ed classroom for, they're not getting all of that background instruction that they need in order to actually participate fully in that hands-on activity. Question.

AUDIENCE MEMBER: My question is, is a child -- children with intellectual disabilities who are in the instruction part of the background knowledge, but they can't process or synthesize everything that is being said -- I'm a parent so I'm trying -- I'm working through this with my particular child. How -- if it's a 20-minute lecture on whatever, how do we engage that child through activity, provide pictures? And I think that's the -- I can see the process and we're showing what they learned, but how do you make sure they're learning what they're supposed to learn through the lecture, which is very challenging for them to begin with?

SARAH KENNEDY: Well, and we do -- actually, yeah, that's challenging for everyone. One, pure lecture in and of itself only really targets students with that specific learning style. Unfortunately, they're -- you know, and primarily auditory. Unless you use visuals, then you can get a visual student. But you have to think about it. How do you keep students, one, engaged, and make it meaningful? There are a lot of different strategies that teachers can use. I personally like to know what the lecture is ahead of time and I like to use objects if the student uses objects, if they use pictures.

And I'm just going to jump in here because this is what -- one of the things that a teacher in elementary school did that I used to know was that she would -- they had a unit. And basically she had all the pictures. Now again, you might want to break this up. She had all the pictures representing different concepts or different specific elements of the lectures relate to that. Like on almost like a bingo board. And so, when the student was listening, they had to highlight that piece of information that was being tested. So they're listening and they're taking their own notes. Now they had that same sheet for the entire unit and every day there were different concepts that were highlighted. But the student used that to actually study them for the test.

Now you might just have certain ones that you have pictures that are set up that they have to, once that's gone over, they might have a strip of Velcro and they just -- when they go over that component or that concept, they put that in order on their desks. So they're being engaged and kept involved in that lecture. It's keeping their attention. It's adding what they need to that. So there's different ways to do that. And I know that my colleagues up here probably have a ton of other things that they recommend for teachers as well. Does that make sense? Okay.

So again, that's the hard part. Yes, you do need to keep -- and again, I oftentimes have a problem with straight lecture. Because it can be -- and that's why I keep kind of trying to get people to be involved and just share because I think we learn so much from each other as a larger group. So I hope you don't mind that I keep asking you guys if you have questions or other things to add because that is going to make this make -- I need to make sure that you're getting what you need out of this and that I'm addressing your needs.

Okay, so this is typically -- the Marnie situation, unfortunately, is typically what -- and again, even to this day, this is a lot of what we see. Well, they're in that general ed classroom, they're working on something different, but they're still involved and they're still engaged. Well, it's -- they're not learning the content. This is not aligned, okay?

Now in this next component, we're saying that she's going to predict using a voice output device if an object will be attracted to a magnet or not. Is this academic? Yes. Is it typical of the same content students would be working on at that age? It's a far link kind of because she's working on properties. However, predicting itself is tied to a different standard, okay. So that's the other thing you want to think about. She's supposed to what? Understand and describe. Predication is really under inquiry. Not a bad thing. Not a bad thing. And you could be working on more than one standard. That's a good thing too. But remember, you want to make sure you're sticking with what it is that they're supposed to do. And, again, it is a near link because students are making predictions about different magnetic properties. So it is somewhat linked. And then here she's going to classify objects according to their magnetic properties and compare the classifications to her predictions. So this is academic, absolutely. It is a near link because she's acting upon what she observes during the experiment.

So she's developing and it's going to help her develop an understanding of the basic principles of magnetism. And typical students classify materials according to what is observed. That is how they look at that. Again, is this level? There's really no comparison at this point when we look at that. So we are

saying it's a far link. So again, we're kind of getting -- we're looking at what she's doing. So she may be doing things that other students typically aren't, but it's almost like a step to get her closer to that. So in one instance, yes, the content is the same, but maybe the performance, or how other students might do it -- maybe other students wouldn't demonstrate that piece. But we need to test that to see if she's actually there. Does that make sense? Okay.

Then we're going to look at linking to a middle school standard here. This one's physical science. As a result of different activities in fifth and eighth grade, students are going to develop personal health, populations, an understanding of personal health, populations, resources, and environments, natural hazards, risks and benefits, science, technology, and society -- in society. Specifically for the eighth grade standard, we have identify sources of environmental change and predict consequences of environmental changes. Upon populations, select or defend solutions to real-world problems. So our verbs are identify, which is recall. Predict, which would be under? If you're going to predict something, you're -- it might be at that level of application, analysis, you're going to predict. And then select or defend. If you're defending something, you're actually at that level again of actually having to probably analyze that, right? Okay.

So in this case, we have Lee is advancing a slide of a presentation using a toggle switch. So this is non-academic again. And it's not based on identifying, predicting, or selecting or defending. And it's not actually even content. So he may be doing a presentation about the environment, but he is not demonstrating content knowledge, he's simply just using a toggle switch to advance it. Now here he's going to have to identify sources of environmental change and explain the impact of each incident. He selected the pictures of environment from the table to demonstrate the impact on humans. So people want electricity and then we have the -- if it's bad for the environment. And copy the picture and paste it to the correct space. So he has the different pieces. It is academic. It is a near link to the same content because all students work on looking at environmental change. And it is a far link to typical performance because he's matching the impact to the source of the environmental change. He's not explaining it. He's just matching it. Okay. That make sense to everybody? Okay.

And then when we get to high school, we're talking about life science here. We have, again, understanding of the cell, molecular bases of heredity, biological evolution, interdependence of organisms, matter, energy, and organization of living systems, behavior of organisms. And specifically here we have a student will understand, analyze, and explain the role of meiosis in sexual reproduction.

Okay, here we have David is indicating by using his switch when to turn the page when a text is being read to him. Academic? Absolutely not. Typical of the same content? No. Level of performance of the student as typical peers working on the same content? No, it's not linked at all. So here we have that he's going to model and explain the process of meiosis. Now I've seen teachers do an awesome job with some of this stuff. And I just have to say that this piece -- this might sound like and look like a hard one to do, but I've seen some teachers -- I mean, not just this activity, but other ones as well. So you really need to talk to your content specialists about these kinds of standards and what they use.

In this case, the student is going to explain the process. The process is, as you can see in the diagrams, one, they set up the chromosomes, they show the crossovers. So they have to be able to demonstrate the crossover, which is the middle diagram. And then they have to illustrate the result, what that looks like after the fact. And explain what happened. So we had popsicles sticks and we had set it up so that we had colors for the different chromosomes. We didn't use the A-Bs, we used the different color swatches. And then we demonstrated the crossover where we showed how they crossed over and they exchanged material. And then we showed the final result. So that was the demonstration. They had the model to look at and they were able to show the crossover and the result. And then the student had to explain that. So is this academic? Absolutely. Did that look like that took a lot of time to set up? Absolutely not. I mean, and I know that a lot of people think, "Oh, this is going to take a lot of time." Sometimes it doesn't take that much time to actually set these up. Is the task typical of a student of the same age working on the same content? It's a near link because they do have to do that.

The only problem is is that if you've ever been in a science class at that age, a lot of times you have to draw that. And if you're not a good -- if you can't draw, like I can't draw, you know, mine looked horrible. Now had I been able to do the popsicle sticks, I would have been really good at that. Had I been able to use modeling clay, had I been able to do it almost any other way, I would have been much better off. But most students have to do that. Now we actually -- when they were doing this with the student in the general ed class, there were other students going, "Hey, can I do this some other way? Do I have to draw this?" So they had students coming up with a lot of different ways to do it. And they actually kind of got a kick out of it. It became more fun for the general ed students in that classroom. Okay.

So yes, near link. Is it typical performance? Is this a typical performance of students working on the same content? It's far link for performance because the student is following a series of steps to model a simplified process. But he didn't really have to explain all the different steps. He just had to demonstrate it. So, and how many of you have -- know that they use Rebops? It's a fictitious animal that they build using basic recessive and dominant traits. Here, they use this with this student. And again, here, what they were doing is they were comparing -- they were actually building a Rebop based on recessive and, you know, based on parent expectations. They actually had the parents, they have the models of the parents, and then they looked at what the outcomes could possibly be and then they looked at their actual -- what the traits of their child was.

So this was, yes, academic. It was a near link. All students were working on meiosis using recessive and dominant traits. They were all building Rebops. It was a far link because the student completed a Punnett square using a model. But much of the information was provided, so he didn't have to completely fill it in himself. He just had to complete -- he just had to finish it, what the traits would be. And then typical students would be doing that independently. He actually was having a lot of that supported for him.

So again, here, identifying the traits. They actually had the traits. They listed and they were selecting specific -- they had to actually look at specific traits. They had fewer traits than the typical Rebop as well. So it is academic. It was a near link because all students are working on the chromosomal indicators to gain an understanding of meiosis. It was a far link because students who are working on

meiosis, they were actually working on playing it out and then developing a model from that. Our student was matching the inherited traits to the indicators. So, he wasn't actually having to build that up. And he had fewer traits.

And then we have the students predict if his Rebop would be the same or different when comparing different chromosomal states, chromosomal indicators to another Rebop's indicators. So then he actually looked at the two and he was actually predicting whether or not his -- they would be the same or different, the traits, as his compared to another student's. And in doing that he was -- his simple explanation was, is it going to be the same or different? That was the simplistic piece of it, is explain this. Is it going to be the same or different? That was his explanation. So it can be something as simple as that. And in this case, yes, when he was doing this, it was yes, is this academic? It is a near link. He is explaining the difference in the traits of both the Rebops and it's a near link because other students are doing it based on chromosomal indicators that influence inherited traits, although the work was simplified and there were lower expectations in terms of difficulty and the amount.

But, again, if these students were working at that same level, they wouldn't be students with significant cognitive disabilities. So the difficulty was lesser, but he was still working on that aligned or matched level or near link level. There's several references and I think -- do we have CAST on here? We typically have CAST on here. Okay, they'll have that upstairs. You guys will have that. We work closely with CAST. A lot of the work that's been done with from my colleagues has been with CAST, so. Are there any questions as we get ready to finish up? Was it helpful? Okay, thank you.