WEBVTT

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00:00:00.000 --> 00:00:01.440

We might. We know

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00:00:01.910 --> 00:00:28.540

Raegan Davenport: that folks are joining slowly. But surely. But we definitely wanna make sure that we leave time for our presentation today. Super excited about that. So Hello, everyone, and thank you for coming to our December installment of the Amazon biotech experience teacher Round Table series my name is Regan Davenport, and I work as the community of practice liaison

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Raegan Davenport: for the Abe Program office. So this is a new role for me. I just started in June, but I have thoroughly enjoyed this experience of immersing myself into all things, Abe, and I'm super excited to host this roundtable today. So please in the chat.

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Raegan Davenport: Welcome, you say hello to please introduce yourself, and where you're from, if you don't mind. In the chat.

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00:00:53.690 --> 00:00:55.170

Raegan Davenport: I.

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00:00:55.890 --> 00:01:01.190

We have some more folks trickling in, but it's just great to see everyone we know. Everyone is

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00:01:01.230 --> 00:01:05.590

Raegan Davenport: tired and so definitely appreciate you making time

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00:01:05.930 --> 00:01:10.919

Raegan Davenport: to spend with us right now for this roundtable series.

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Raegan Davenport: and so a little bit of background in case you don't know abt, teacher round. Excuse me, Abe teacher. Roundtables are designed for our incredible Abe teacher community from around the world. And so we like to use the roundtable series as a chance to learn from experts and from each other about topics of specific interest to science and biotechnology teachers.

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Raegan Davenport: We hope you find this series valuable. Please feel free to tag us in social media. If you want to share your thoughts using the tag at Abe Probe office, I will put that in the chat.

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00:01:47.880 --> 00:01:51.370

Raegan Davenport: But we're just really excited to have you in this space.

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Raegan Davenport: And so today's roundtable focuses on accessing high quality, science, education, resources and learning experience through lab exchange. You may be familiar with lab exchange. But if you are not, a global science platform designed to bring students a science to students around the globe. And so this Round Table will be recorded

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00:02:14.930 --> 00:02:26.460

Raegan Davenport: and post it on our website. And since you are a registered participant today, you will also receive a transcript of the discussion and a copy of the materials that will be shared today.

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00:02:26.680 --> 00:02:29.090

Raegan Davenport: We will have some time built in

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00:02:29.320 --> 00:02:38.289

Raegan Davenport: to this roundtable for questions from you. Our audience at the end of the presentation. So please, we encourage you to put your questions in the chat

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00:02:38.310 --> 00:02:45.530

Raegan Davenport: box at any time during this discussion, and we will be sure to watch for those and ask your questions at the end.

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Raegan Davenport: So I am going to jump right in by introducing, introducing our panelists.

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Raegan Davenport: Jenny Conklin, Frank Jennifer Conklin, Frank. Excuse me, who is the head of educator programming and engagement at Harvard University's Lab Exchange, as she supports science educators globally through customized training and professional learning experiences.

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00:03:08.510 --> 00:03:25.939

Raegan Davenport: Jenny is going to share her science journey with us, but her broad experience with her broad experience. She brings a wealth of knowledge and expertise to this space. So, Jenny, thank you for taking the time to join us today. We appreciate you being here.

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00:03:27.350 --> 00:03:29.139

Jenny Frank: Thank you so much.

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00:03:29.160 --> 00:03:45.199

Raegan Davenport: Thank you. Thank you. I'm so excited. So we're gonna begin by getting to know a little bit more about you and the work that you do at Lab Exchange. So could you please tell us about your pathway into science, education and your current role at Lab Exchange?

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Jenny Frank: Absolutely. Ii always tell people that I am an example of a not straight path

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Jenny Frank: to science, education, and you know, I'd like to think of it because I am an opportunity seeker, and I've been incredibly fortunate to find a lot of opportunities. So obviously, the majority of my career has been in education.

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00:04:09.540 --> 00:04:34.360

Jenny Frank: But getting to education. Science, education was definitely a strange path. After graduating at at first I was planning to be a wildlife biologist. I'm from Sue St. Marie Ontario in Canada. So if there's anyone from Canon no, okay, usually not. But that is where I grew up. And we had an incredible

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Jenny Frank: program. Through the Federal forestry, and so I got an opportunity to do that work. And you know, all my life I had been in dancing, and I taught dancing, and I just really discovered that not only did I have a passion for science, but I also had a passion for teaching, which is how I ended up in Teachers College which brought me to the buffalo area where I still am and and reside now.

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Jenny Frank: When I first started after my teaching degree, I actually ended up in informal education at the Buffalo Zoo. And I provided education programming there. And I think you know what I really learned from. There is the value of creating

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00:05:19.320 --> 00:05:21.380

Jenny Frank: creating passion

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00:05:21.410 --> 00:05:39.680

Jenny Frank: and appreciation for the sciences. You know, having animals as your sidekick is obviously pretty cool. I was cool in association with the lemurs and the gorillas and the tigers, but but again it was experiencing the passion

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00:05:39.830 --> 00:06:09.269

Jenny Frank: that students had because they had a connection and a love for animals, and through that passion and that connection I was able to kind of open up their awareness, open up their experience to talk more about the idea of supporting, you know, wildlife about extinction, all of these different topics. Because I was able to access that passion and appreciation. So you'll notice that I talk a lot about that. And I

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Jenny Frank: why, I believe that lab exchange is such an incredible program.

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00:06:13.270 --> 00:06:25.360

Jenny Frank: And a platform, I should say. And why? I think the Abe program is so incredible. Again, I think that it's it's hands-on science, its authentic and relevant science

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00:06:25.360 --> 00:06:47.950

Jenny Frank: erez agmoni that students can experience, and that that those are the kinds of fundamental things that you have to have in place. I think, in order to not only build knowledge and skills, but again, appreciation. And and hopefully, you know science, literacy, and and appreciating science as part of their lives. Whether or not they're in a stem career or not. 125

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Jenny Frank: After that II did middle school and high school teaching in New York State, biology and general sciences. And again, I feel like II took those strategies and and those experience of hands on learning and really getting kids excited about science. And and I just really feel strongly that that is really important. I was fortunate enough to be able to teach

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in pretty much all types II taught in Charter School public school I've taught in inner city places I've taught in first rings, suburb suburban schools. I've taught in rural schools, and I can tell you that in all of those spaces and places.

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Jenny Frank: when you get kids hooked

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00:07:33.990 --> 00:07:49.499

Jenny Frank: you got them forever right? And so I think that that's the other kind of piece I wanted. Just bring up today is the power of engagement, you know, and and you can get kids to do hard stuff, difficult stuff, abstract stuff.

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00:07:49.600 --> 00:07:55.750

Jenny Frank: When they're engaged. And they're excited. Because they're it's meaningful to them.

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00:07:57.670 --> 00:08:01.079

Raegan Davenport: I love that, and I love you, having that

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00:08:01.240 --> 00:08:25.530

Raegan Davenport: overarching idea of student engagement, right like that, is so important. And it's so important to remember that in all of the different spaces in all of the different places. And so your journey sounds amazing, and thank you for sharing that with us. We may have some new folks in our audience, and I will be completely transparent. I am one of those folks. Who are, who's not entirely familiar

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Raegan Davenport: up with Lab Exchange. It's mission and it's goals. And so I'm hearing you talk about the student engagement piece. I'm hearing you talk about that

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Raegan Davenport: places and spaces. Would you mind giving us an overview of lab exchange before you show us all of the assets that lab exchange offers to students in all of the spaces in all of the places.

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Jenny Frank: Absolutely so in my current role at Lab Exchange, I'm the head of educator engagement and programming. And so what we've been doing with with this program is trying to discover ways that we can help support educators with their jobs to be done right. Being an educator myself. First, I'll just take a moment a pause, and say, Thank you.

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00:09:15.450 --> 00:09:22.580

Jenny Frank: Right, educators, that is, this is a profession that we know is difficult.

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Jenny Frank: I think it's difficult not only, you know, taxing on our time and our efforts, and so forth. But it's it's a it's a. It's a passion job, right? That sometimes never turns off and you're accountable and feel responsible for every learner in your care. So you know, I think at Lab Exchange, we so value the educator. What can we do as a platform to help educators to save time.

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Jenny Frank: to make them more efficient to to help them to be the best that they want to be.

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Jenny Frank: And so with that, you know some of the ways that we think we can tackle these jobs to be done is, you know, save time when it comes to finding high quality, science and stem resources.

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Jenny Frank: I can only tell you how much wasted time. I, personally have spent right Googling and going down that big path where you come up with something at the end of the day. That is okay, but not exactly what you're looking for. So in addition to this library and this collection of high quality resources that we have on the live exchange platform.

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Jenny Frank: We also have tools that allow educators to customize those resources, and we always call that the the last mile challenge right? If we respect what educators do we respect educators and their expertise not only in curriculum and instruction, but understanding their students right there, the students in their care. And so what we have to do is not only give

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00:10:59.870 --> 00:11:21.319

Jenny Frank: these resources, but provide opportunities and tools to be able to customize them, personalize them so that they can really fit the situation and the individual needs of learners in the classroom. So today, when I do show you some of the things that live exchange has to offer which I will warn you. Now there is absolutely not enough time.

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Jenny Frank: Okay, there are so many things. It is an overview. I put my information and I'll put it again at the end. You're always welcome to reach out for more conversation and support. And and and to just, you know, learn. But there are so many tools there to help teachers again.

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00:11:37.400 --> 00:11:48.150

Jenny Frank: just with the jobs to be done. And that is just lab exchanges a whole. That's not even getting into all of the ways that we support Abe programming. So

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00:11:50.300 --> 00:12:18.820

Raegan Davenport: wow, Jenny, I am super excited. You said some things that already have my wheels turning specifically about the customization that teachers will experience in the lab Exchange and and all of the things. And I know there's not enough time. And so my heart is hurt a little bit. But I'm so excited to see what you are. Gonna show us in the time that we have, because we always like to have practical practical examples and resources

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00:12:18.820 --> 00:12:46.950

Raegan Davenport: for participants. In our audience. And Jenny has said, you know, reach out to her if you have any questions, please feel free to put any questions. In the chat. But I know as a former educator, I want to see the resources and be able to use them as soon as possible. So with that. So we don't waste any time. With our live exchange tour. I'm going to hand it over to you, so you can share the actual lab exchange platform with us

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Jenny Frank: and give us an idea of what we could expect to see in Lab Exchange as well as what students could expect to see. So Jenny over. So everyone, what I'm gonna do today is I'm going to instead of going to our platform lab exchange.org, which I encourage you to do. I'm actually going to go into the platform using our Abe site.

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Jenny Frank: So I felt like that would give some good context. And as I throw II show you and walk you through those Ab e resources. I'm gonna talk more about our library. I'm gonna talk more about learning pathways and curriculum clusters. So those are ways that we organize curriculum. And they're also tools that educators can use to customize

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Jenny Frank: lessons, Abe. Lessons

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Jenny Frank: and tailor them to their class. Okay, I think you're gonna be very pleasantly surprised if you've never had an opportunity yet. So here we go.

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Jenny Frank: So I'm going to place in the link here, I mean in the chat, a link to this particular page. And this is our Abe Page, that really talks a lot about how Lab exchange supports the Ab E program. So

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00:14:06.230 --> 00:14:30.299

Jenny Frank: if you come to this page. What you'll first discover is obviously an introduction to the Abe program. This in addition to obviously the Abe website. Which is a fountain of knowledge that II honestly go to quite often. When working with different ab sites to do co presentations. Throughout. You know,

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Jenny Frank: what I, when I'm doing professional learning? But this place right here is kind of a great way to start, because it introduces you to how Lab Exchange has taken this Abe program and created a parallel in support of curriculum space. And you know, one of the things that people ask is W. What was the purpose. What's the idea behind this?

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00:14:54.980 --> 00:14:59.580

Jenny Frank: And the idea behind this is that online learning is

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Jenny Frank: equity and access. Right? So in spaces and places where people might not have access to resources. Financial resources spaces, right laboratory equipment, reagents. Even, maybe sometimes technical expertise. Right? Like as a biology teacher, I have to be honest. I never taught biotechnology.

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00:15:26.770 --> 00:15:36.280

Jenny Frank: So in in, in responding to those needs and and all of those things that we see all over the country and all over the world.

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00:15:36.370 --> 00:16:06.289

Jenny Frank: Virtual learning is an incredibly fantastic solution. It levels the playing field and ensures that everyone, no matter the circumstance, has equitable access to high quality and and really engaging laboratory experiences around the field of biotechnology as well as precision. Medicine, which we know is the future right. There are so many opportunities, jobs

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00:16:06.290 --> 00:16:24.130

Jenny Frank: and and not just jobs, but like careers where where people will have a great quality of life. So how can we build awareness for high schoolers, middle schoolers to understand that there is this whole entire sector of opportunity in workforce.

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00:16:24.350 --> 00:16:45.439

Jenny Frank: And and how can we do it in a way that's engaging, and that will be memorable right? And hopefully inspire that appreciation for this type of science. So in our cluster a cluster is like a curriculum. So think about it as A. A. A collection of lessons.

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Jenny Frank: And right now lab exchange supports 2 clusters that have been published. The first one is called foundational concepts and techniques and biotechnology. And if you look through here, if anyone's familiar with the Abe kits, you can see right? Right first glance that this is exactly in support of those face to face experiences.

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00:17:10.099 --> 00:17:29.139

Jenny Frank: Now, we're really lucky we have gotten an opportunity. As a matter of fact, last month I was just working with Abe program in Netherlands, and I got to co-present with the team over there, and one of the things we were talking about in that session were, you know. What if you are using the kits.

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Jenny Frank: can you still use lab exchanges lab exchange? Still, you know something that's useful. And yes, that's why I keep saying it's in parallel and and I think it's a great way at for me as an educator to preview

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00:17:44.710 --> 00:17:54.479

Jenny Frank: certain kinds of laboratories and skills. I will say that I have used micropipetting in my class and

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00:17:54.950 --> 00:18:15.670

Jenny Frank: it. Let's just put it this way. The generally the first time. We don't get a lot of successful gels. But what if I had had this opportunity to use lab exchange and really support learners to understand how to use a micropipette how to use the equipment. II

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00:18:15.670 --> 00:18:25.900

Jenny Frank: absolutely no. And I talked to teachers about this all the time it increases that face to face experience. Right? Because the students have the knowledge

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00:18:25.960 --> 00:18:40.609

Jenny Frank: and they have the skill, although virtual. But when they get to the experience, they know what to do. And I think in, in, in the laboratory, especially, an advanced laboratory that is just really essential

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00:18:40.690 --> 00:19:06.270

Jenny Frank: other things that some of our Abe teachers have been talking about is, you know, when we talk about equitable access is giving students who might be absent or learning in different se situations like home, right home bound students, they still get the exact same quality and experience in these lessons. So that's another fantastic thing. And then, lastly, you know some.

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00:19:06.270 --> 00:19:35.470

Jenny Frank: I've been talking with so many educators who are looking for enrichment opportunities before and after school clubs. What a great cluster of curriculum right here to run a biotech experience right after school program, where students who are exploring where they're going to. You know where they could go pre-college pathways right and run a club like this and look at you've already got your curriculum laid out and set out in front of you

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00:19:35.520 --> 00:19:38.129

Jenny Frank: so again. This is a cluster

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Jenny Frank: I love how the cluster is set up. If you noticed it is not linear, so we're not telling you. You must start in this particular way. It has all of these different entry points. You can pick and choose again. That's that idea that educators are the experts. But what we did do is create this idea of a tour. So let's say, you just wanted to focus on lessons that included genetic engineering

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00:20:02.600 --> 00:20:07.760

Jenny Frank: simply click on the tour, and as you can see, it provides you a suggestion.

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00:20:07.970 --> 00:20:27.239

Jenny Frank: So let's dig in a little bit. Each one of these tiles is something called a learning pathway. And my analogy for educators is a learning pathway to me as a lesson. Is it a one day lesson? Not necessarily. It's a lesson in the sense that it has a beginning, a middle, and an end.

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00:20:27.240 --> 00:20:38.419

Jenny Frank: So when you start to dive in here, so I'm just going to go to micropipetting. Since I've been talking a lot about that, you can see that this lesson is a collection

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00:20:38.420 --> 00:20:43.420

Jenny Frank: of individual resources, and when students click on them.

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00:20:43.520 --> 00:21:02.839

Jenny Frank: It guides them through this learning pathway. It's a self, directed learning pathway filled with multimedia digital content. So the first thing that we can do and these are 2 of our teachers in residence. This is Dave Welty and Mary Lou, both Abe teachers

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00:21:03.110 --> 00:21:24.540

Jenny Frank: talking about pipette micropipetting and understanding the you know that abstract concept of measuring very, very, very minuscule liquids and volumes of liquids. You move on to a question set where teachers can engage students, background knowledge or or preview what they already know.

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00:21:24.540 --> 00:21:38.610

Jenny Frank: Again, best practices right using questions to probe and understand. Then we've got these incredible content pieces. This is one of the pieces that Lab Exchange has built in support of the Abe program.

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Jenny Frank: Graham. And remember, I talked about the importance of engagement. This is exactly it. So students again, self directed, get to go through this learning experience. Where it's

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00:21:49.900 --> 00:22:14.509

Jenny Frank: it's building. It's an introduction and building an understanding background around concepts. In this case different kinds of micropipettes, and, as you can see, very interacting it very interactive, very appealing, visually appealing as well as screen accessible. So any student using screen reader, support all of these assets.

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00:22:14.630 --> 00:22:39.830

Jenny Frank: We take that very serious at Lab Exchange. That we we work very hard to make sure that our assets are very much accessible. So this is an interactive. And again, it's called a scrollable. It's a special kind of interactive. And you can see that I am in control as the learner. I'm scrolling through at the pace that I want to scroll through, and I have the opportunity to go back.

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00:22:39.830 --> 00:22:47.579

Jenny Frank: and I can even you know, go back again by clicking these little pieces. So that's an interactive.

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00:22:48.570 --> 00:22:50.140

Jenny Frank: Another video.

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00:22:51.470 --> 00:23:07.150

Jenny Frank: Great text. Look at the quality of the text with visuals. This is exactly what they're gonna see in the classroom, as well as just really thoughtful text that helps to scaffold and build on students knowledge base

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00:23:07.310 --> 00:23:23.230

Jenny Frank: and and again, more question sets to prepare students. But here is the thing that I think that lab exchange is most proud of, and this is the work that we've done with our Abe partners. And and

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00:23:23.590 --> 00:23:32.059

Jenny Frank: it's just something that we're very proud of. So this is the virtual lab experience it. Think of it as a game

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00:23:32.300 --> 00:23:59.469

Jenny Frank: kind of a game based experience. But students are actually interacting in a real virtual lab space, and it is very much aligned to the scientific process. So if you notice here, I have all of my scientific process starting with context, right building background knowledge helping students to understand. What is this lab going to be about? What is this exploration going to be about?

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00:23:59.830 --> 00:24:24.650

Jenny Frank: We have materials where students can understand the different terminology. As well as see visual representations again, multi modal right? Supporting students. Might one of my favorites engaging in active interactive predictions. So in this case, it's going to ask students in this particular lab to blot

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00:24:24.660 --> 00:24:26.680

Jenny Frank: based on what they think.

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00:24:27.000 --> 00:24:40.559

Jenny Frank: Each, you know, measurement volume represents. And then, once they've done that, and again so simple, so intuitive, they move on to that next section. And this is the simulation and the protocol.

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00:24:40.670 --> 00:24:46.149

Jenny Frank: I'm just going to widen my screen a little bit. You can see they have their virtual lab space.

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00:24:46.470 --> 00:24:59.330

Jenny Frank: They have access to all of these things. I'm clicking on them. I'm exploring them. I'm moving them around. This is my space, just as if I was in a class in a in a real face to face lap.

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00:24:59.610 --> 00:25:12.440

Jenny Frank: and once I'm finished with my exploration. On the right hand side is my protocol, and if you notice here each one is a discrete step that supports learners in completing the tasks.

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00:25:12.440 --> 00:25:34.470

Jenny Frank: If you noticed at the beginning, I chose level one. You can have students choose level 1, 2, or 3, the higher they choose the level, the the less supports that they get. And what I mean by supports would be hints, that come up across the top. They can also have opportunities to restart or retry a step.

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00:25:34.640 --> 00:25:59.239

Jenny Frank: But all of this goes back to the nature of experimentation right? And in experimentation. It's all about. you know, exploring, experimenting, and sometimes making mistakes, and then learning for the from them. So again, just capturing authentic experience, and in a sophisticated virtual laboratory way.

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00:25:59.550 --> 00:26:08.999

Jenny Frank: Once students have gone through and and I'll show you really quickly select the micropipette. So if you notice when I selected it.

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00:26:09.120 --> 00:26:20.869

Jenny Frank: that grade out, and then the yellow box move through. So that's how it moves students through the protocol. There's even a little note box where they can add their observation in each step if if they wanted to.

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00:26:20.930 --> 00:26:31.999

Jenny Frank: So once I get through the protocol, they end up at the results. I obviously didn't go through the protocol, but you can see here I can. These were the predictions I made at the beginning.

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00:26:32.250 --> 00:26:36.370

Jenny Frank: I can compare them to my actual results, which may

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00:26:36.470 --> 00:26:49.689

Jenny Frank: or may not be my ideal results. Again, representative of real science experiences. And then, lastly, that ideal space. These would be the ideal results.

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00:26:49.710 --> 00:27:14.960

Jenny Frank: feedback opportunities for reflection where students are asking, you know, to a check for understanding again best practices and education. And then, lastly, big takeaways, a summary. What are the things to take away from this experience, and all written in a way that I feel is incredibly accessible for learners. Right? And think about this. These are some

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00:27:15.110 --> 00:27:37.799

Jenny Frank: complicated concepts. Right? I'm positive. You know, even myself, I never had these opportunities in school. And so you know, how do we take something that is, that's complex and might be abstract. And how do we create an experience where students take the lead?

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00:27:37.800 --> 00:27:48.500

Jenny Frank: And at the end they've had a real experience, even if they don't have access to that real live space and time. So that is a simulation

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00:27:49.540 --> 00:28:05.250

Jenny Frank: and and that again, that's just one of the things that we are just incredibly proud of at Lab Exchange. So I'm sorry I'm clicking back through. II just wanted to go back to the Abe Page, and say that there are all of these different lessons.

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00:28:05.640 --> 00:28:19.460

Jenny Frank: But I'm also encouraging you to explore the precision medicine curriculum. It is such a fun curriculum. One of the first parts of this curriculum starts with this medical mystery again.

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00:28:19.460 --> 00:28:44.239

Jenny Frank: Right? Best practices talking about anchoring phenomena right? When we talk about aligning, and what new instruction, what sense making looks like in science? Instruction? What better way to start with a medical mystery? And then, followed by, you know, understanding. Using what kids already know, they do this great thing where they rate the bitterness of foods. Right? How many people think dark chocolate

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00:28:44.240 --> 00:29:00.429

Jenny Frank: is bitter! How many people think broccoli is bitter. And we did this as a an entire staff, and it was so much fun. But then, to really help right with that engagement, because that's something you can relate to. Then to start to go into this idea of

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00:29:00.460 --> 00:29:29.240

Jenny Frank: taste receptors and the importance of you know, understanding gene expression. It is a fabulous cluster. Kids just really enjoy this. And it's something that is relatable. Right? Middle school kids,

high school kids can really appreciate to, you know, understand how their body works? And and so forth. So that's how I wanted to kind of start our entry point

Jenny Frank: in addition to the Abe program, you know, if you were to click on our library

Jenny Frank: we have more than just those resources. As a matter of fact, at this point we're up to almost 23,000

Jenny Frank: high quality resources. And it's not just from lab exchange. So what we do and this is a question I know that Regan's gonna ask me in a second. So I'm not gonna talk too much about it until she asked. But what we do do is we make

Jenny Frank: a lot of content. Probably 10% of the content in this library. But the other 90% of the content is through collaborations with other organizations as well. So I'm gonna stop there. I'm gonna turn it back over to Regan. I'm gonna check the chat to see if there's any immediate questions, too, and I'll make sure to answer those in the next piece.

Raegan Davenport: Thank you so much, Jenny. That was amazing. The resources that are there that are built in the support Ab, E, and the types of pathways that you've built to support the Abe experience. They are. They're amazing. I went to the Lab technician meeting in LA. In September, and I did the micropipette. I just was like I should have logged on to the lab Exchange

120

00:30:47.750 --> 00:30:57.919

Jenny Frank: before in la, so I cannot tell you how many kids they'll get nervous like kids.

121

00:30:57.970 --> 00:31:05.920

Jenny Frank: and they're they're shaking, and they're so it's the strangest thing. So could you imagine having that experience to practice ahead of time?

122

00:31:06.010 --> 00:31:34.089

Raegan Davenport: That would have been amazing. I am definitely not a child, but that was me. I was nervous. I was nervous about how to hold it, and if I was going to break it. But I had a wonderful wonderful group of lab master lab technicians that were phenomenal, that walked me through it and and put me at ease. But really, truly amazing, from the customization to the organization of the clusters and the pathways. It's just it. There's so many opportunities

123

00:31:34.090 --> 00:31:49.590

Raegan Davenport: available for educators. So thank you so much. I am going to ask you the question. I know exactly what question you're talking about. So I'm gonna lead with that one, because I would actually like to know? I've been looking in the chat, and I'm not seeing anyone

124

00:31:49.640 --> 00:32:04.269

Raegan Davenport: ask like a a question. I don't think or pose a question for you yet, but I would like to hear from some of the educators that are actually on this round table about how they have used lab exchange if they have used it.

125

00:32:04.290 --> 00:32:15.870

Raegan Davenport: So I'm gonna start with my folks. My most favorite question, because really now, after you just went through that whole step by step. Explanation my favorite question that I wanted to ask you today was.

126

00:32:15.930 --> 00:32:21.980

Raegan Davenport: How do you maintain the resources? And keep up with the constant

127

00:32:21.980 --> 00:32:47.110

Raegan Davenport: changes that we see you know, not only in science, education, but in society. How are you choosing these high a quality, science, education, resources? I know you said you create them. But then you said, there's 23,000 in there, and my brain kind of went like, you know. So that is what I just wondering like, how do you keep up with that ever changing evolution of of science and science education?

128

00:32:47.290 --> 00:33:01.929

Jenny Frank: Well, I think a couple of things. So I just added a special link in here as well. It's it's lab exchange.org slash collaborators. And you know, one of the things that I think that we're all starting to recognize right is that we can't do this alone.

129

00:33:02.410 --> 00:33:15.199

Jenny Frank: and that when we try to go it alone. It's definitely a lot of work. And and again at Lab Exchange, we're really in support of a stem educator. Right? So more than just

130

00:33:15.200 --> 00:33:38.889

Jenny Frank: that biology or or teacher who's looking for a biotech experience. We want to engage every kind of stem teacher. And so, as we kind of started to collect these resources to support the Abe program. We kept running into these incredible collaborators, who also had amazing content and who had the same vision that we did.

131

00:33:38.890 --> 00:34:01.470

Jenny Frank: Free high quality, stem education resources. And so I just wanted to share with you. Right now, I think we're up to 150 different collaborators. This is called our collaborator dashboard. And, as you can see here, our sponsor is Amgen. We're strategic allies with Unesco. So all that work around Sdgs.

132

00:34:01.470 --> 00:34:14.490

Jenny Frank: you know, you'll see that throughout Lab exchange, right? Those big, thoughtful, global things that we can do. For you know, science citizens. And again going back to building awareness.

133

00:34:14.840 --> 00:34:28.789

Jenny Frank: creating appreciation and hopefully igniting that passion that students learners anywhere can make a difference and help to be. You know, the solvers of these great

134

00:34:28.800 --> 00:34:47.439

Jenny Frank: issues that we're facing today and tomorrow. So as I go through these content collaborators, I'm positive you're going to see a a ton of names with Amgen scholars program and the Amgen biotech experience actually have their own dashboards. So when you click on these.

135

00:34:47.540 --> 00:35:09.689

Jenny Frank: they bring you just to that collaborators resource. So you can see here there are 316 different content pieces from the Amgen biotech experience. If you look closely, you can see that the kinds. So there's a cluster. That's that curriculum right? A whole bunch of lessons with a common theme. You can see that we've got text.

136

00:35:10.000 --> 00:35:33.170

Jenny Frank: We've got images. And as I scroll through 42 pages. Goodness gracious, we've got more images that you can use, and you probably recognize already. From a lot of the print. support resources that we have. It's just incredible. So you can access. There's 13 different clusters. And the reason for this is it's translated

137

00:35:33.170 --> 00:35:55.399

Jenny Frank: it right now, we're translated up to 14, we have 1 15 in the background. Hopefully, in the next year we'll have another 15 more languages. That these clusters are translated in. And again, we're not just supporting us educators. We're trying to support our global educators. And again, it's it's all about access to free high quality.

138

00:35:55.400 --> 00:36:17.550

Jenny Frank: Content. That is, either gonna support your instruction right by helping you to convey abstract, complex concepts or to give learners an experience online where they are the leaders of their learning self directed learning and having real experiential learning where they're doing real science.

139

00:36:17.780 --> 00:36:41.509

Jenny Frank: I'm gonna click back here again. Just to kind of go back through that list. Everybody always kind of finds sticks out right? One of those collaborators mine was, and I was completely surprised. Mine's always been FET I love, and they are just an incredible collaborator with us. Khan Academy is also another very, you know, global. But again.

140

00:36:41.510 --> 00:36:49.170

Jenny Frank: these are organizations. That have the same belief systems as we do, that they're never going to charge.

141

00:36:49.420 --> 00:36:55.660

Jenny Frank: There is no subscription required but that they're just going to make access to high quality.

142

00:36:55.660 --> 00:37:20.169

Jenny Frank: education, resources. And so you can know. And that's one of the ways that we that's one of the ways we define quality is that free right? And think about how many people came out of Covid, where they were using all these free things and those free things went away. That is not what we're trying to do here at Lab Exchange, data in our W, our world and data is really fantastic as well.

143

00:37:20.170 --> 00:37:40.419

I I'm I love looking at math. So remember, I've embraced my geek. Okay? But I love that one particular site we've got peer investigation. This is an educator. Teaching guide space. There's just so many fantastic things. Science. Friday, one of my favorite spaces.

144

00:37:40.420 --> 00:37:59.929

Jenny Frank: Just really great articles. And again bringing it down all the way down to middle level, right at this point. And and our hope is is that eventually we've got elementary level as well. Right. There's it's just we just wanna support as many teachers in stem as we possibly can. So that's how we do it.

145

00:38:00.130 --> 00:38:23.230

Jenny Frank: We collaborate with these individuals. We vet them, we partner with them. We give them access. So in fact, they are the ones who are contributing to our library. So when you asked a question about, you know, like FET, for example, fed is always coming up with new interactives, and simulations. And so we empower FET

146

00:38:23.230 --> 00:38:38.030

Jenny Frank: to be able to upload and update and add to our library. So that number there is always changing. There is always new content on here. And we've got some great resources, right? You can use a search bar

147

00:38:38.320 --> 00:38:54.860

Jenny Frank: to look for keywords. You can search and kind of like break down this list by types. I know for myself, right in my mind, I might say I'm looking for a video of so you can even narrow down by the content type or the asset type.

148

00:38:54.860 --> 00:39:18.100

Jenny Frank: We've got all of these subject areas represented. And remember, we're global, right? So you might not necessarily see next generation science standards here. But you're gonna see global themes that we think are instrumental in helping students to be science and data literate, which we think is in essential right to citizenship.

149

00:39:18.160 --> 00:39:33.280

Jenny Frank: So those pieces there you can search by sources, popular tags. And like, I said earlier, some of this content is in different languages, and the platform actually supports these same languages as well.

150

00:39:34.420 --> 00:40:01.149

Raegan Davenport: I love that this accessibility piece is so huge. And I love the accessibility I love. How you are really thinking about the equity pieces there, everyone being able to access. You've got some of the resources available in different languages like that is so important, especially in the virtual world. That is something that even you know we

151

00:40:01.210 --> 00:40:25.650

Raegan Davenport: have to trouble through. Sometimes, like, you know, we have this great resource. But we wanna offer it to everybody. And you know, how do we get it in these languages? And it's just it's it's amazing. It's truly, truly amazing. And I hear you keep talking about the high quality science, education resources. You've shown us the high quality science, education resources. You've shown us some amazing collaborators and partners that you work with.

152

00:40:25.920 --> 00:40:48.559

Raegan Davenport: But you said something in the beginning that I always keep top of mind, and that is that you want to, you know, sort of design everything with the educator in mind and the student in mind. And so I'm just looking through the chat and keeping that sort of at the forefront. I believe Salvatore give you all a great, you know, a a great

153

00:40:48.560 --> 00:41:00.269

Raegan Davenport: compliment, saying the Abe exploring precision. Medicine curriculum is very interesting and exciting, so you've got somebody exploring it already. So, Latour, I don't know if you would like to unmute yourself

154

00:41:00.270 --> 00:41:03.820

Raegan Davenport: and share with us your experience

155

00:41:04.000 --> 00:41:06.349

Raegan Davenport: doing the exploring precision medicine?

156

00:41:15.850 --> 00:41:21.320

Raegan Davenport: Maybe not, is he? Still, I have so many screens open. I'm like is Salvador still there?

157

00:41:21.680 --> 00:41:46.999

Raegan Davenport: I would love to show you how you can personalize. Oh, no, he's still there. Maybe he can't hear me. Yes, I would like for you to show us that as well before you do that. Okay, maybe he'll maybe he'll happen in any moment and share that with us. But Deb also had a question. She had a compliment as well, saying that live exchange is so easily searchable. You don't have to wait through jump to find the gems.

158

00:41:47.000 --> 00:42:06.730

Raegan Davenport: I love it. The tags are useful for teachers. I know, Jenny, I love to hear it so, Jenny. I know that you love to hear it, but she also had a question about an offering in Lab exchange. So she said, does Lab exchange have any interactive on what DNA subway is and how to use it to analyze. Barg.

159

00:42:07.720 --> 00:42:35.800

Jenny Frank: Oh, my goodness, I I don't know but what I would encourage you to do. And that's embarrassing to say it's like the catch 22. Because people always ask me about individual assets, and when you have 20 I have worked here for over a year, I can probably tell you without a doubt I haven't even gone through 50 right and again you had to understand.

160

00:42:35.810 --> 00:42:43.929

Jenny Frank: I I've got like blinders on, because I'm always looking for biology content. But what's really cool

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00:42:44.230 --> 00:42:53.799

Jenny Frank: is that if Lab Exchange doesn't have something. So I'm gonna kind of like not answer your question on purpose to show you

162

00:42:54.570 --> 00:43:22.830

Jenny Frank: our lab exchange has tools to support you, even when the library can't. Okay. And this is something that I think people don't realize about the power of Lab Exchange, because when you go to the site and when you are connected with Abe, you're really just seeing these resources in play. So I wanna show you a couple of things. The first one is is that app? I'm again. I'm back on our Abe Page. I'm gonna go into our cluster around precision medicine.

163

00:43:23.380 --> 00:43:30.150

Jenny Frank: And I just wanna share with you, like, maybe this one here. Okay. So let's say, we're in here.

164

00:43:32.150 --> 00:43:40.089

Jenny Frank: And we're thinking to ourselves, wow! There's a couple of things that I would like to include here that I would like to customize this.

165

00:43:40.160 --> 00:43:52.519

Jenny Frank: So the first thing I would encourage all of you to do. If you haven't done it yet is sign up for a free educator account. It honestly takes just a couple of seconds. It's gonna ask for your name and your email and your birth date.

166

00:43:52.740 --> 00:44:12.760

Jenny Frank: and the email is just gonna verify that you are, in fact, right, a real person and verify, verify your account. And that's all the information that you need to have. But what people don't realize is that once you do have that free account. You have an incredible selection of tools at your disposal. So the first one is

167

00:44:13.190 --> 00:44:16.580

Jenny Frank: is that I can clon this.

168

00:44:17.220 --> 00:44:25.420

Jenny Frank: so I can take this curriculum. This is an you know, precision, medicine, curriculum, the Abe curriculum. And I can clone this.

169

00:44:26.000 --> 00:44:31.329

Jenny Frank: And so now not only do I have access to this public library.

170

00:44:31.340 --> 00:44:53.259

Jenny Frank: But now I'm actually have my own personal private library. So, as you can see here, this kind of like unlocked it. And now it's in this template mode. Do you see that I can actually change all of these things? I can rewrite the pathway name. I can even flip the videos.

171

00:44:53.450 --> 00:45:23.449

Jenny Frank: I don't know about you. I always find the hour and 25 min video. And I only want 3 min right in the center every time like it never fails. There's like this, perfect 3 min. Look at that. We've got a clipping tool. You can add notes, give kids directions. Right? Watch this video. And at the end of the video, I want you to think about A B and C, right? So now you're creating this interactive experience. And again.

172

00:45:23.450 --> 00:45:47.629

Jenny Frank: They're using the asset, and you've given them the purpose. I used to always talk about reading text with a purpose. Right? So like today, I want you to read this text, and your purpose for reading this text is to summarize, and I always found that was just such a great way to support kids because they didn't know how to read something right like, you know, or read this text. And at the end I want you to pick an argument and persuade me and use evidence from this text.

173

00:45:47.630 --> 00:45:58.519

Jenny Frank: It like transforms how kids interact with the content. So that's something you can do here. You can also just delete things. Maybe I don't want this

174

00:45:59.110 --> 00:46:01.680

Jenny Frank: I can easily remove it.

175

00:46:01.920 --> 00:46:08.380

Jenny Frank: and then I have the ability to add my own content. So I'm going to click plus.

176

00:46:08.410 --> 00:46:20.179

Jenny Frank: I can go back into our public library. and I can search just like all the search tools that you had. I can add more I can customize this learning experience.

177

00:46:20.200 --> 00:46:21.710

Jenny Frank: Look at how? Simply.

178

00:46:21.810 --> 00:46:27.390

Jenny Frank: just plus. Okay. But remember, I told you you have a private library.

179

00:46:27.880 --> 00:46:45.969

Jenny Frank: You can go in and add your own content. I just made a text recently exploring ph acids and bases and indicators. I wrote this. It's it's appropriate to my learners. It uses my vocabulary. And I can add that as well. And look how easy it is

180

00:46:46.250 --> 00:46:52.880

Jenny Frank: the template, the tool again. It's it's meant to be intuitive, efficient. Save you time.

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00:46:52.960 --> 00:46:56.330

Jenny Frank: and then it's all drag and drop from there

182

00:46:56.830 --> 00:46:58.720

Jenny Frank: so as you can see

183

00:46:58.880 --> 00:47:24.890

Jenny Frank: if the if you can't find something on Lab exchange. But you know a great resource is already out there. You have a tool to be able to create that resource. And you know, where does this get housed, it gets it gets housed in your private dashboard. So this is that private library space. Again, there's lab exchange the public library, right with Abe. Curriculum clusters, pathways.

184

00:47:24.970 --> 00:47:41.829

Jenny Frank: all of this digital content. But you also have all of these tools to upload and create your own private library, that you can mix together and create these very personalized learning experience for all kids, for a few kids.

185

00:47:41.900 --> 00:47:46.810

Jenny Frank: for one kid, right? And it's so simple.

186

00:47:46.810 --> 00:47:53.820

Jenny Frank: Look at all these different things you can create. You can create your own question sets a question. You can upload an audio.

187

00:47:53.820 --> 00:48:18.669

Jenny Frank: you can upload an image, a model. I do this all the time. Remember all those whiteboard models that I spend hours trying to do. I could just take a picture one time, and year after year that image is stored, and I can recall it in my personal library. A video. Look how easy this is. You copy and paste the Youtube piece you've it's it. Everything that loads in there for you. You don't even have

188

00:48:18.670 --> 00:48:33.749

Jenny Frank: have to do any of the work. And now you can even bring in videos from outside sources like Vimeo and Youtube. But there is a wealth of information. Ia lot of times record my own videos and upload them, and again all of it

189

00:48:33.770 --> 00:48:55.109

Jenny Frank: stored in my public library accessible to me. I'm I'm able to make learning pathways. which again is just like I showed you before. With those lessons. I can organize it in any way I see fit using public resources, private resources, and at the end of the day do you want to know how easy it is to share? It's ridiculous.

190

00:48:56.110 --> 00:49:04.369

Jenny Frank: It's so simple. You just go to your library, and on any asset you can click the share button and copy the link.

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00:49:04.660 --> 00:49:09.469

Jenny Frank: I'm even more lazy. I just go right up here to the URL,

192

00:49:09.570 --> 00:49:43.640

Jenny Frank: copy it and share it. And what will happen is that public stuff kids will come to this space. They'll interact with it on Lab exchange. And then they can go back to your learning. Ma management system, your moodle, your I don't know why I said moodle, because nobody uses moodle anymore but your canvas. That kind of aged me out there. Your Google classroom email it? Whatever it is. They don't

need an account. If it is private content, they do need an account. So same thing. We just talked about a name first name

193

00:49:43.680 --> 00:49:44.750

Jenny Frank: email

194

00:49:44.970 --> 00:49:48.770

Jenny Frank: pretty much it. And and that's pretty much all of it

195

00:49:50.300 --> 00:50:13.370

Raegan Davenport: that is like, it's so exciting. It's so amazing. There's so much there. It's it's just it's it's great, it is great. And so I would like to thank you for taking the time to share this overview with us. Provide all the rich examples. And how the

196

00:50:13.400 --> 00:50:38.180

Raegan Davenport: sort of relationship between the Abe is there that educators can go to that cluster. And it's specific to Ab, E, and just explore. It's it's it's it's great, it's great. And so I'm hoping if you are already not a part of the Lab Exchange. I'm encouraging you, everyone listening, please. If you haven't done so visit lab exchange register for your account.

197

00:50:38.180 --> 00:50:44.590

Jenny Frank: I'm going to put that Abe Link back in there again. Jenny, but

198

00:50:44.590 --> 00:51:03.950

Raegan Davenport: I mean it's so. It's almost like, why wouldn't you use it right? It's just it's it's it's all of the things. It's the special sauce. It's the meat and potatoes. It's it's everything. It is everything I love it. And so as we come to the end of our time, together today again, I'd like to say a huge and final thank you to you, Jenny.

199

00:51:03.950 --> 00:51:27.570

Raegan Davenport: You were amazing. This was amazing. Yeah, it's it's great. I'm going to. I am not teaching biotechnology, and I'm going to register for an account, so that I can go in there and look at all of the resources and and learn some things myself, right? Because it's self guided. So I'm looking forward to that. We hope that this roundtable gave you some ideas for your own classrooms

200

00:51:27.970 --> 00:51:52.540

Raegan Davenport: and for things that you can do with your students. So again, Jenny, thank you so much. Just an FYI to everyone that our A. Be Teacher roundtable series will continue in January 2024. We always want to make sure that these roundtables are designed with you, the educator in mind, and so we are always looking for topics that Abe teachers care about.

201

00:51:52.540 --> 00:52:00.649

Raegan Davenport: You have an idea for a roundtable topic, or something that you have tried in your classroom that you would like to share with others.

202

00:52:00.680 --> 00:52:22.770

Raegan Davenport: Please. Let us know. I'm going to put our email there in the chat. Send us a message. Let us know, want to thank you all for being here for everything you do for students all over the world. And of course I would like to wrap up by giving a huge thanks to the Amgen for supporting the Amgen biotech experience. So

203

00:52:22.770 --> 00:52:35.019

Raegan Davenport: thank you all again. I'm not sure if there's any more chat. Just wanna do one quick look in the chat just getting all the compliments. Wonderful pro, you know, it's a wonderful product. My most favorite is that it's free.

204

00:52:35.020 --> 00:52:59.749

Raegan Davenport: I love this, Jenny. I see you put your contact information in the chat as well. Jenny, encourage you to reach out if you have any questions, or concerns, or or anything so really offer. Sorry to interrupt. But, Jenny, any opportunity that you want training? We offer in addition to free resources. We also offer free training. So we're always looking

205

00:52:59.750 --> 00:53:24.489

Jenny Frank: to spread the word. We're willing to have conversations with anyone you would like to connect with to talk about other collaborations and and co-development of resources. That is always something we can learn from. And we're we're just a very collaborative and an opportunity driven space in place. So if you're as passionate about stem as we are, we wanna work with you.

206

00:53:24.670 --> 00:53:46.580

Raegan Davenport: I love that. So you heard it here. First, folks definitely reach out to Jenny, reach out to the Abe office if you have any questions or concerns, and besides that, I hope you all have a wonderful, wonderful holiday, full of rest and relaxation, and thank you for joining this Abe teacher roundtable

207

00:53:47.830 --> 00:53:49.180

Raegan Davenport: bye, everyone.