Daylene Long ([00:02](https://www.rev.com/transcript-editor/shared/4k-1psdf9AbOMfBJcuUyYOBhkIPcFLR7WVaRGuTSeiHlIUwVNDBkDfHS0LYR4mMGFWfk9fSbHSW7KAPRyqk4tOI5dc4?loadFrom=DocumentDeeplink&ts=2.46)):

Go for it.

Kimberly Herder ([00:03](https://www.rev.com/transcript-editor/shared/tJISVTWKncmt0UGSWywTK4RGriDs5jd5M39cpLCvGDBEFZuvGW7701jKAdSg4j1jdQDwzNmi0d0aQ_cei-JUjvwsZro?loadFrom=DocumentDeeplink&ts=3.57)):

Okay. We are meeting with Elliot Ke, I think K, we'll see how it goes. He says it. He's at Timber Creek High School in aerial, New Jersey. He's male, 50 years old, has been teaching between the 10 and 19 year mark, born 65 to 80. He is an environmental science teacher and he looks like he teaches in both the Steam Academy and in the regular mainstream biology as well. He is an adjunct professor at Rowan University, part-time where he teaches freshmen biodiversity. So I'm guessing it's a dual credit that that's how they can do dual credit.

Daylene Long ([01:01](https://www.rev.com/transcript-editor/shared/-rMQD8pFW62-noJ3w61ynjGeBEvx9d2ozaCEoFmqlCLhc0UlGaW-GYEwewro2mcZuUmuUYQ0xfNg0IBRcgzoGfWaloE?loadFrom=DocumentDeeplink&ts=61.92)):

Okay. He is coming in, but I need to pull up my questions.

Kimberly Herder ([01:08](https://www.rev.com/transcript-editor/shared/hduMhhrc_6nT4JhWr7135VTLu6vXtWlo9awoQeLOEDdwJ6Q59FEn3iUwDzLK62OAFqISYElQ1cD6-Vwl4w7duxJQVXM?loadFrom=DocumentDeeplink&ts=68.7)):

I think it's going to be fascinating. He's known for and has several papers written on social justice in STEM. That's good. That may tie really nicely into

Daylene Long ([01:20](https://www.rev.com/transcript-editor/shared/v1wf00l_ff6OHqcxx2Dqhul3ly7zOByl6ceIK35e2JUjkjIAqHYkjXKXr_kPXkwrugpj-w5ZGzoS-K0trZUWMm_ur9M?loadFrom=DocumentDeeplink&ts=80.94)):

Some HHMI work. Ready?

Kimberly Herder ([01:23](https://www.rev.com/transcript-editor/shared/3otMg_11dpcVNdK9bO-6-0TbBjnygQYt7NjAg2qacJH4kaCJyS9yAMW_jIvAILyL_AcB9cHDCBFoqxzQ8QJs-Q94jRs?loadFrom=DocumentDeeplink&ts=83.19)):

Yep. Elliot, Hi. Can you

Elliott Karetny ([01:42](https://www.rev.com/transcript-editor/shared/rvbJ_wKgrBO4u_gEkuLq6nvdqoyU2cmPkuDF53loGrKcAaxb5LDorcVOtcU7058eWpysI9lELM0rB-_EXN59v8_ptBw?loadFrom=DocumentDeeplink&ts=102.5699999)):

Hear me okay?

Kimberly Herder ([01:44](https://www.rev.com/transcript-editor/shared/sPZ4g_xsPOweGoblaoPlEA8MpA2wBhw9w11Ahbyy8lvTE9Gv02dX0eGHsQwAtphmKoLd89dTJ-z6lWXgxkN4Efqi7rY?loadFrom=DocumentDeeplink&ts=104.0699999)):

It's a little soft, but can you hear him Daylene?

Daylene Long ([01:50](https://www.rev.com/transcript-editor/shared/vbEE9bcNzQlBPcz4QWiflhJjfF_TAH5dorLJedkvvf2TWNlQCHOCFgHocods4OfzG8tfdrNmqqYhVLvZ8I2ojo4VveY?loadFrom=DocumentDeeplink&ts=110.52)):

I can hear him, but it is a little bit soft. I don't know if it's the input side.

Elliott Karetny ([01:55](https://www.rev.com/transcript-editor/shared/AqX9Jt84_kmobQyrXJZAUZ0sdwwT_pSPguK1ZYIg7LqZGPd_6FXA_Ob2-cyudBRrhL1AebyAr8X9LvwQV1bhDu8p2bM?loadFrom=DocumentDeeplink&ts=115.86)):

I just, oh, much Better. Is that better?

Kimberly Herder ([01:58](https://www.rev.com/transcript-editor/shared/ejUTnfks3IeUpH-ozasFwI9_T2xrn3qry0bzUN9Lt4cdY1g_jfAtbkJY7lpGwbRVYTrwghNMrn5radBbTfgOaG3xFDE?loadFrom=DocumentDeeplink&ts=118.245)):

Much better. Much better. How do you say your last name,

Elliott Karetny ([02:02](https://www.rev.com/transcript-editor/shared/0UTBG91N2HHaQqvfGVXtK7qFt9j964iZWW_JNlOn7i6ReYNdoJXliI1qBT8LefY04_AarJ8bIbhkxmouB2l3Bq_KoOY?loadFrom=DocumentDeeplink&ts=122.67)):

Correct?

Daylene Long ([02:03](https://www.rev.com/transcript-editor/shared/zdcESjXB1B6Thvtj8YgyyzNIgXd4kl6VkDtbnTnAOq4weKXKxly_QUB_DiGVzbRvRTEUDqktqNm36Bde9o2Z7BnLnRU?loadFrom=DocumentDeeplink&ts=123.9)):

Correct.

Kimberly Herder ([02:04](https://www.rev.com/transcript-editor/shared/suICSH9vYWLWFwkEweNmB4O586Sq6EjAnEVCDSQ5lBfX5z_v2-6cvnyq5w6u8bEInghKEQc2nge46hOnnJauoxudgLg?loadFrom=DocumentDeeplink&ts=124.77)):

Okay. I was trying to figure that out. And should I call you professor?

Elliott Karetny ([02:10](https://www.rev.com/transcript-editor/shared/d69Z68VAhg704sz8YpsVmnnUvcfj2o1--5B8DobL1NcN8qVkBCXtu_jQNJHodC70fUSMNRkoBioeYuV8gjfptgE0KqU?loadFrom=DocumentDeeplink&ts=130.755)):

No.

Kimberly Herder ([02:13](https://www.rev.com/transcript-editor/shared/tnHQNv_4sRf458acG3IqJvUh7o3ad175G-QE8oorZ5h-FAwWTSDqX9bE2rW4gSNfkaHB0oF2mcHsIlzPXMbYB_wf1Mo?loadFrom=DocumentDeeplink&ts=133.95)):

Okay. Well, I'm Kim Herder and I'm with Daylene Long. And Daylene is the senior researcher and co-founder of

Elliott Karetny ([02:21](https://www.rev.com/transcript-editor/shared/e9tQCY0a-5WARwayeTW_AxFKCo6-oNYS-dhKzNA0Ot-2CzUJwx1r2MoRuTZ4KD_UYQMBxZla3Zx-iaV_bstVHJOC7Eg?loadFrom=DocumentDeeplink&ts=141.48)):

Catapult. Has been cleared. Please resume normal activities. They just decided to test The emergency condition has been cleared. Please resume normal activities. They just decided to test our security measures.

Daylene Long ([02:36](https://www.rev.com/transcript-editor/shared/HZqirbyquwQDIMbWROvwxLaAiapHyYy8z7Z0UjkSbxUpZNEOLrUE7SwdiV7_bwrmn4LF294CUZDKMTVbAwWGTeqpKWw?loadFrom=DocumentDeeplink&ts=156.93)):

Well, it's good. They probably looked at your calendar and said, you know what?

Kimberly Herder ([02:44](https://www.rev.com/transcript-editor/shared/Cb--3DiMB3lQ2LIUbq41U0mugCpe8B0RlZI9udImpO5EwbHia2IXX-NOoa2soEjVA-3B2yF5-fvSqRqhfhbPEzLQIiQ?loadFrom=DocumentDeeplink&ts=164.1)):

This is the perfect time. So thank you very much for doing this with us, for participating. I'm going to step off screen shortly and I'll be in the background. So you'll be visiting with Daylene directly and then I'll come back on at the end. So thank you. Thank you very much. And we'll just get started.

Elliott Karetny ([03:07](https://www.rev.com/transcript-editor/shared/V2HbZc5JB9dbimJyd4yOM8htkpmyWdI7bZWn-hq9QkHUqcClNzyhqubSuPIrjnRacnAxvH0B000eqSCmMkWUmDVunMI?loadFrom=DocumentDeeplink&ts=187.54)):

Okay. So

Daylene Long ([03:09](https://www.rev.com/transcript-editor/shared/8Z9-0ISuRI47hjiby957gdxzOKc6W40ksxhG-dsLOphjdCWupRmz-a5vB16rbY4wRoY59yRO7QzwxMtg9xKWZZ0tFqw?loadFrom=DocumentDeeplink&ts=189.375)):

I have a little bit of a cold this morning, so I apologize if I sniffle and all that other kind of stuff. Hopefully I won't sneeze too much during our call, but I woke up and I was like, oh no, had all my vaccines up to date, but

Elliott Karetny ([03:26](https://www.rev.com/transcript-editor/shared/OGEZxO5S7MC1PqvbsBQDbUGTOu7WEsVOdwz2NcCtPkThQrMg9_YAcH6wgC1dwPxAJFGt1d0P7Vc8bfK4z02BckVxZW4?loadFrom=DocumentDeeplink&ts=206.26)):

The

Daylene Long ([03:27](https://www.rev.com/transcript-editor/shared/Yi84IG44xcKOeBnWCktDT7xEuzU-ccJIrztZ8o46H6GFEXvKxaBoDJyCmRzWG67zQn0VM2fXtfLZIalJadBXp4TBSZE?loadFrom=DocumentDeeplink&ts=207.31)):

Cold bug slipped right through.

Daylene Long ([03:30](https://www.rev.com/transcript-editor/shared/TQHjpcY3jr4l1XjFBtin8Q7HgwQVrZ0zj60iu6xfU_srBwPXcvfOSoCFcm6d-5ORV1vIvp64mTukmAQgl-5cocAteXQ?loadFrom=DocumentDeeplink&ts=210.19)):

Let me go over just kind of the basics of what we're going to talk about today and then we'll dive right in. We know that you've got a lot on your plate, so we want to make sure we're using the best of your time. We are recording today. It's just for note taking purposes. I promise you won't end up on YouTube, but I won't make you do a TikTok dance, nothing like that. It's just so I can go back and say, you know what? I remembered that he said this, but I don't remember exactly what he said.

Daylene Long ([04:01](https://www.rev.com/transcript-editor/shared/_FfzD1AMs48nUAoZX4v2bPq1FVFYD0jQqMxPMKUH0WM3sYB4Q4SbzT5LqiYIHCHbIm6_cZyMupYfktZ1_PiBV7oCUzc?loadFrom=DocumentDeeplink&ts=241.09)):

Our goal today really is to amplify educator voices with companies who are science and stems, but our client this time is particularly interested in life sciences and they're really interested in knowing how they can better support teachers, better support science education, better support students. So it's a platform for you to really speak directly to some of the companies out there that are making a difference in science education and say, Hey, things have changed, or we need this, or this has become more relevant. That's our goal. And you'll see that we ask a lot of what and why questions. It helps some people to think of Kim and I as filming like a documentary because we'll ask you a whole bunch of questions around things because we really want to understand the context of everything. So those are kind of the basics. Any questions about that?

Elliott Karetny ([05:06](https://www.rev.com/transcript-editor/shared/Eb8cyk8WLv0dhaqKZNm9fzIrUM95zKJclK1DMHMdd40sU3KYYqs7yOi-0ZvMPg6wuxCeWBEJM1Rb-CeSZ3gT4S7gviU?loadFrom=DocumentDeeplink&ts=306.76)):

Nope.

Daylene Long ([05:09](https://www.rev.com/transcript-editor/shared/YuhaaCJshOafeTmpCJrjL9QtgOzj9Jar3WkL8Y6INLpekRrGft3yu32EzDf7dPCKe9lJNuUFebapEyu5il54Vpx0LE0?loadFrom=DocumentDeeplink&ts=309.58)):

Kim told me a little bit about your background before coming in, but if you could give me an update on what you teach and what grade levels and that kind of stuff, it would be great.

Elliott Karetny ([05:19](https://www.rev.com/transcript-editor/shared/ycE6FE2KvHThl4ek581hxt4V8_lFYPOHj0OPLAz5P3wN55mSq7NEborPGF9_G1Ec_X7mQHCmUPomaUL0A-Z_j55vAoE?loadFrom=DocumentDeeplink&ts=319.57)):

Okay. Well, I do teach one section of 10th grade biology and four sections of environmental science for mostly juniors.

Daylene Long ([05:33](https://www.rev.com/transcript-editor/shared/U07eP57h5WiUCt0MK_xY7AP6AeWmqGi3U3maloXIVutLBcxMMLplH9D7Q4YOd2s0u7AnyFj_UeFUh1DoeUhD-pvnsBo?loadFrom=DocumentDeeplink&ts=333.25)):

And remind me, you've got a pen shirt on, but I can't necessarily assume you're in Pennsylvania, are you?

Elliott Karetny ([05:40](https://www.rev.com/transcript-editor/shared/c9dBl7nLhebUpZJ_Y8jr2c4kC0RFjp1FbfshP1APJrh8aq90yXy8hxyOtrGuIHEeIYZuohqp1zGMgftmup1vmKXMtmg?loadFrom=DocumentDeeplink&ts=340.8399999)):

No, I'm in New Jersey. It's a suburb about 20 minutes outside of Philly, my undergrad school.

Daylene Long ([05:48](https://www.rev.com/transcript-editor/shared/pV0fFdsAltqc-x6TBX0CHgqNpWOdom0hAXX0yHPk_EmrWawxETjjOq_HId9Q7PHceQMVu_l4LlxBVQXCVXHhaLMjDpg?loadFrom=DocumentDeeplink&ts=348.22)):

Okay. All right. And then she also mentioned, Kim mentioned that you do some adjunct teaching.

Elliott Karetny ([05:57](https://www.rev.com/transcript-editor/shared/ex-p1D2crepB_B3R70jieo9Kc5JVkD0_seTz1LgI00f4oSqQAuRLr594snRVRAv-Xp2pXEslsYLuhxem6xccESggpVI?loadFrom=DocumentDeeplink&ts=357.5899999)):

Tell

Daylene Long ([05:57](https://www.rev.com/transcript-editor/shared/KwlSbUH3cQniW-fHM3lbsWhMSfPRtfu8vTOQZTleNgS1IOhyIK9ojq3794su_024CoWFgCz0fsSWF_wIeu-2jvyyIbE?loadFrom=DocumentDeeplink&ts=357.77)):

Me a little bit about that as well.

Elliott Karetny ([06:00](https://www.rev.com/transcript-editor/shared/R0wDciHBmKfnq9-Zza1WNtleMEQ1fGmWwkvH5sOHjFBVKcqPF28YkaRAcc4amN01lf4gXpE-f71stb0q3aS6ALheb00?loadFrom=DocumentDeeplink&ts=360.1549999)):

Well, currently I teach a course called Teaching STEM and diverse settings at Rowan University, but I started in biology there after my doctorate, which is actually in education and just happened to land mixing and matching and I've taught a lot of biology there. And so in addition to the STEM ed class, I've taught educational leadership classes.

Daylene Long ([06:25](https://www.rev.com/transcript-editor/shared/ySC_qO_e1XBCYIRmRm0a8wTrD8i8QVJydfGw0wV-1THTz-2YA2FVb5YaeBpLl6mWdN8f2JlbPbHk809wmwW5TTlr0-M?loadFrom=DocumentDeeplink&ts=385.07)):

Great. That sounds really interesting. Thanks. So one of the things in the survey that you filled out was you talked about having bought products for life sciences in the last six months. And I kind of want to have you go back to the last time you made purchases for your courses and think about it a little bit and what kind of, start me from the beginning of what started the impetus to buy the need and walk me through how it works at your school, what you have to go through, what kind of budgets you're dealing with, that kind of thing, and who you selected.

Elliott Karetny ([07:08](https://www.rev.com/transcript-editor/shared/AH_OVh_LAaAnq0lijrJaI4roqlsTVAQWD_FdTLjtR7IRnnTwrDmpEnkUzgLrc-TAxyH7qrrHk7ysl3NMBQgvrXpmSNY?loadFrom=DocumentDeeplink&ts=428.195)):

Okay. Lemme see. Well, okay, so every year we do have a kind of budgeting, I'm pulling up my ED data if that's okay. I have brain fog. I've got long, so I remember so little about anything, so it's kind of shocking. So we have each spring, we each are given our budget for the courses we're primarily responsible for and we are able to, well, I mean I may have talked about it in earlier interviews, but it's just kind of odd because before we know what we're teaching or if we're revising our curricula, we select our materials and spend our budgets.

Daylene Long ([07:51](https://www.rev.com/transcript-editor/shared/IMubwKR6URk9PzhCohBba-1OhVR8G0Xvq7b-Aq-iaG4qZteWMfX508wPFiZ2qoW4Y1Ig0ViAFwY7wTR0Vs_hOcjvZko?loadFrom=DocumentDeeplink&ts=471.83)):

What Time of year?

Elliott Karetny ([07:53](https://www.rev.com/transcript-editor/shared/R32zSdggSx6v9QZJohmFvS5rbZgIBsTFuE2t9mNHi_S7IIqOi1LcB_a-dxsFvRdc7_1Qa649GGoZtPyOimLfIGVV4JU?loadFrom=DocumentDeeplink&ts=473.78)):

So we do this in the spring. In the

Daylene Long ([07:57](https://www.rev.com/transcript-editor/shared/7Rk8lYMuxGM2F3Exnc64ZKeVx5hg8VO8YhLNTQovOyR-kCF06logJJt9Blq9WPYRxO20XMWCsQFMafjiB_YZcWprSbQ?loadFrom=DocumentDeeplink&ts=477.08)):

Spring. So April, may, June kind of timeframe.

Elliott Karetny ([08:01](https://www.rev.com/transcript-editor/shared/NFrOrvW186PR7kZ-AhUEBKrktpUmPWXNSr2T8JXNTTn9bQ75j-RE0KfKt8qduUUxut7g8gwtpjqGGxdXaytaE1rIxOU?loadFrom=DocumentDeeplink&ts=481.37)):

Yeah, I want to say more so solid May. It's definitely after spring break, well before the school year ends. And we've got our budget spent. So we do have an opportunity that our supervisor asks earlier if there's any larger ticket items that we'd like. But by and large we're each given our course and the budget that she has applied for environmental sciences budget, I think this past year was about $2,000. Is that course

Daylene Long ([08:39](https://www.rev.com/transcript-editor/shared/WzJyMv1GQwF8bHTXMElt2E1DaMSuLHk0N4Tk85h4bh9nyHtzp4pM-7eVfqZ7CZOFQbCjYffFqHLx9r9mcLPgYyRPPcg?loadFrom=DocumentDeeplink&ts=519.14)):

Or per class? Per

Elliott Karetny ([08:41](https://www.rev.com/transcript-editor/shared/3Q2bLGv8mZNYdKwyeduGLadmnrDOvs9oG9Tvxo0IR0M8Xw33OE5IwdrUvD2MBBne--SS5n3EqPaAIX0WEk41NorOAGU?loadFrom=DocumentDeeplink&ts=521.33)):

Course. Which again, that's another tricky part to it because I've taught anywhere between four and six sections of it.

Daylene Long ([08:52](https://www.rev.com/transcript-editor/shared/Ve8QKKqs2qc_v2JdlZdV1vbCB_AS7eWV5hCaC2b0yGxHS_P2_vXk_UvRV5vAikckT7ZYe7zg58rVsaFNvsDzOAmX3Aw?loadFrom=DocumentDeeplink&ts=532.04)):

So I

Elliott Karetny ([08:52](https://www.rev.com/transcript-editor/shared/d-YunVMwuwOpwDJUBvhWAX9zc5kvXCM4T237wOk6MAkmA1ZJn3fV3FB6xIFeh8DaZsgz6OsaLFNzvblwq006o0kEWXA?loadFrom=DocumentDeeplink&ts=532.79)):

Get the same amount of money without knowing how many students budget for. So that's part of my strategizing is just saying, well, what can I use that'll stretch the farthest or fill in gaps in my supplies or this or that. That's

Daylene Long ([09:06](https://www.rev.com/transcript-editor/shared/RYZx-RACob7DgNiwHr0l8KwGUtlNG4cFfQaBTmsdFHlbFCCIMZm7KlUTRDMkO6BHMdFf5IwtOArUXdPFZl4yiUgE2V4?loadFrom=DocumentDeeplink&ts=546.6)):

Interesting. Okay. And so for the last order that you made in, I guess it would've been May of this year, what kinds of things did you buy for your courses?

Elliott Karetny ([09:21](https://www.rev.com/transcript-editor/shared/csLCmvQJBSAmTFkBDCgimZ9s1UeaEmQ9g5SQGQtbsfUwtG0FKnC5mVwnrD9Ph8t-yNr6UGb4BjJPfuq3KN58-frxC4E?loadFrom=DocumentDeeplink&ts=561.33)):

I buy a lot of art supplies. Just kind of keep that all fully stocked depending on, especially post pandemic. What kind of hands-on things can the kids actually make instead of just producing slides or just producing a paper and especially rather than just a poster that they're going to throw out. So I've always been a poster to this idea of go home, make a poster, bring it back. I'll throw it out. I have a lot of plants in the room, a lot of them are from home. I do a ton of gardening, but I do a lot of stuff that can, oh, and I have a garden outside, so I have a large rain garden outside.

Daylene Long ([10:06](https://www.rev.com/transcript-editor/shared/hPJc5a9Q1XooBgoPugflbnPAYLNWxLm924uxSF1_GkZDWpOQpd92Q8lkJexQSsYZUQBlmTJbUGuZOzWKsufB211Ru4c?loadFrom=DocumentDeeplink&ts=606.12)):

So

Elliott Karetny ([10:06](https://www.rev.com/transcript-editor/shared/zLC9LaDUsRpELvsfBhKBWHMqhik7JPHOKIC_uYcgSclfM-t1-vjuUldQM7hlThUiCWn8mSwQ6VxT2S2K35oPPqVxxa0?loadFrom=DocumentDeeplink&ts=606.33)):

I try to focus on anything I can buy that'll support, whether it's re-potting plants or stuff that needs to be in the garden or stuff that'll help us grow stuff in here. And then just trying to fill in gaps with hands-on stuff that would, environmental science is tough because the experiments aren't, as we would picture for chemistry biology. So it's not as much about exact things. I mean, the most exact thing I could think of off the top of my head would be water testing kits, chemicals for water testing. We've always had tons of glassware, we have tons of slides, we have tons of that kind of stuff that always supports biology as well. So in which case, that's another overlap. I try to say, well, my biology course got taken away from me years ago, so with all the stuff I built up in my biology supplies, what can I do that overlaps with environmental science to use those materials?

Daylene Long ([11:09](https://www.rev.com/transcript-editor/shared/ycAlGIZs3OWY3QZdDyUjGR_xKy5M10lE76E5pJkSRjNx6pEzbibbkWViK0N_Ew6xHKCyj7owl9tnfXfotKdmBGoqDjI?loadFrom=DocumentDeeplink&ts=669.6)):

So just thinking about the main vendors that come to mind when you're purchasing for both biology and for environmental science, who are your go-to places that you buy from?

Elliott Karetny ([11:23](https://www.rev.com/transcript-editor/shared/JW6_oJQ1ezGjHZmuXjj69oPhAAcMaVzgY5Z6vKsjodiam9A9mrHz5KQ-MUUdkm69pq4FxORX6gOyisEnlMweNr32tTA?loadFrom=DocumentDeeplink&ts=683.55)):

Looking to see if I have a catalog on the shelf, but I don't. But I would say Carolina Wards are the top two I can think of. And then depending on which catalog I get, honestly, I'd probably just sit down and I've always gone through page after page, put in sticky notes. And then now that it's more web-based, I can just look up each item and I'm not too concerned about which company has it, but as long as I can get that ordering done, to be honest of the time constraints of the job.

Daylene Long ([11:57](https://www.rev.com/transcript-editor/shared/ewJt6DcQsMVPnqJI1MDwoN2pOJYibnuduR9dimpCvs9huB05VsD6DRYA_T0imzAcbrUunEYhz0So_vVyK3ef9JoWt74?loadFrom=DocumentDeeplink&ts=717.3099999)):

So interesting. When do you typically get the big catalogs from providers

Elliott Karetny ([12:05](https://www.rev.com/transcript-editor/shared/_UMWz1WbSIUofQuTJ4IZlNQVVJPHpPMLZ0naC_AFBKfcOodAfJvzxq-yipDb7Gba7kqHvIoYLGPyU5j8mGGEPa7xCfc?loadFrom=DocumentDeeplink&ts=725.9349999)):

In the winter? In

Daylene Long ([12:07](https://www.rev.com/transcript-editor/shared/lXkcD8mtGQw7DOz0-CCJPwxhvcRytTqnBGnq_nMc8SIEIDLGBhCGUjEHaE0oI_LndjQPtWHkv76S53ik2mA17urEt5I?loadFrom=DocumentDeeplink&ts=727.275)):

The Winter,

Elliott Karetny ([12:07](https://www.rev.com/transcript-editor/shared/pqKSi56y-SgJBmUGa94OVbx1zuQ9z-Fo79PqHQ1t_OzmGs-sksuJpXMIKxeSqDrfTnD7pwpFKZqQCNZynVVKKEpJb4Q?loadFrom=DocumentDeeplink&ts=727.8099999)):

I haven't gotten any yet, so here we are, January. But yeah, I would say that well soon enough they'll start showing up in our mailboxes

Daylene Long ([12:15](https://www.rev.com/transcript-editor/shared/NTwtA7zxOZp9V9Ozi1YsP4ObIBXgXj5VzvtHTZtJdx1aq2k62LuAdgCOaCMIcxGLTskAeXcGjmTL0Ap6Bdb8Ca0Pr-A?loadFrom=DocumentDeeplink&ts=735.61)):

And you kind of keep those on your desk as reference First.

Elliott Karetny ([12:21](https://www.rev.com/transcript-editor/shared/9-kk8pdIxU2f21lOQBZTr-h1VM4RQfb1dEVJTQzvs4nWYyRDcNYgcngp-kGEoZk8x62MxfIOu5Blah8z8hdckLZ0EBw?loadFrom=DocumentDeeplink&ts=741.095)):

And then I tend to keep a paper in my supply room and if I have an idea or if I've used something up or broken something or this kind of thing, I just write it on that paper and then cross-reference it for when I'm ready to do the orders.

Daylene Long ([12:35](https://www.rev.com/transcript-editor/shared/AtrAD19hcmTx8Y5X4GtJ-xWgfowrWW53MxEQIymNaTMNqnBe_-VNQR-oDu5ck_peeYrxryJjcCnN-LYUF9rq4RnXsYs?loadFrom=DocumentDeeplink&ts=755.5)):

So how do you decide then whether, let's just talk about the first two. You mentioned Carolina and Wards. How do you decide which things you're going to get from which company?

Elliott Karetny ([12:48](https://www.rev.com/transcript-editor/shared/1XRxJSiyRR8k-M4snRmZAlmBACEdVGLR_4iHJR77TnPWxw2lPrDB9SsuuiR4AC_H6CKWOjnim_T9mW50ChvdFtJoyGE?loadFrom=DocumentDeeplink&ts=768.76)):

Well, I mean, yeah, since it's kind of organized almost by chapters, by course I'll go pretty much front to back and just look and think and ponder. And it is really through the year. This is my 19th is my 19th year, 18th year I think. But with so many years it's just like there's not much difference among the companies anymore.

Daylene Long ([13:16](https://www.rev.com/transcript-editor/shared/jkVvrNF9hfiIwgFd9z0vQ_NXqlyLE9eLqldXv2E_tcYhy7qGZTPsged_CwSGiVIfb4nSc4kEpkAaPAb3juE5Rf7N9mk?loadFrom=DocumentDeeplink&ts=796.48)):

Really. Did there used to be?

Elliott Karetny ([13:22](https://www.rev.com/transcript-editor/shared/EyTUU-cZWmC1lmR03FeVGC1cnC913e1VPDUYKBau8kC9pVlCuErLdsi7LKZ7d2ghB7jiGqao-sfTn_ENb5vFkYJsD4g?loadFrom=DocumentDeeplink&ts=802.6)):

Well, I don't know. I felt, well, I guess maybe I started off with just teaching biology that I was just more familiar with Carolina. And then as my teaching became more interdisciplinary, I just at least started to look for okay, some catalog stress, AP a little bit more maybe, or with STEM Robotics and just incredibly technological stuff has really filled up some of the catalogs versus others. So I try to shy away and I'd rather put together my own materials. That way if it's truly inquiry-based, we can come up with something more organic in the class. And if kids are running some kind of experiment or come up with an idea, I can just go get the materials myself rather than say, this is the kit we're using. Never taught like that. So

Daylene Long ([14:18](https://www.rev.com/transcript-editor/shared/df5j0FhyN5yciEzaCtyTLByvQs7XT_2uKoraq6vGonG7Jt9VJ8yNlHqOJsZUwcs3fY-CgkN8x_6nxbKu-AuYTKQnqgQ?loadFrom=DocumentDeeplink&ts=858.34)):

You're not a kit person sounds like. Okay.

Elliott Karetny ([14:21](https://www.rev.com/transcript-editor/shared/UcfyjooysnElnIg8BibQIVKYhZM0Ou2k_8DdjCQ0RnPqwxaBJ_Znog-gh4EWKhqjmiXqXZpf8gy55bKfoJA44zzCq_k?loadFrom=DocumentDeeplink&ts=861.61)):

Especially when you open up the kits and it's like paper cups and toothpicks and you've spent $60 of a district's budget on that and you're like, you feel really bad. Yeah.

Daylene Long ([14:33](https://www.rev.com/transcript-editor/shared/y6AMfPFeh2hgrhz1IXRwhMrxvTGJ5BhGfxfWsMduicJY-TwSvRugOtCl0qO93Wft_Ypj0-mG0MknBfqILZlJoHAYX2Q?loadFrom=DocumentDeeplink&ts=873.85)):

Yeah, I could understand that. So you mentioned that because you start out in biology that you work with Carolina a lot. What comes to mind when you think of Carolina?

Elliott Karetny ([14:51](https://www.rev.com/transcript-editor/shared/kaGLQHzFjJHSpbcfTvOvccDuopwoS1tdYqUOyokvoTbmCkdEMIY2Uh-110EK69pKvnbeHWdssiCn9W2aAlJtum68q80?loadFrom=DocumentDeeplink&ts=891.71)):

How

Daylene Long ([14:51](https://www.rev.com/transcript-editor/shared/s_bINnBTTb9Mt1SZlbW5whIt46Kz6wF6GwAUFCR0AcnG7E_R2mU31TEFEtt76WaMhFNEqJgh2skFA3H0NmEPBvzXbqg?loadFrom=DocumentDeeplink&ts=891.8)):

Would you describe 'em?

Elliott Karetny ([14:54](https://www.rev.com/transcript-editor/shared/J_54P8WyrTjitLFUbn6l8ynnQSECeRuFM-0RuE4bKfhYNY9-YsoBXkztSYTsPXDtmLkSIbFTCo4270C-cxad9I76AzM?loadFrom=DocumentDeeplink&ts=894.98)):

I guess there's just a familiarity. I mean, it must be what I kind of started with, but I gravitate towards feeling comfortable knowing that I can go to, I'm just familiar with their live specimen stuff, even the plants more so than the other stuff because I used to do a lot more invertebrate stuff and microscopic stuff. But yeah, so that vibe has, I guess, just stuck with me that I'm through the years building up my own bank of prepared slides or specimens on the shelf or that kind of thing. I just have always been in the rhythm of going back to 'em.

Daylene Long ([15:37](https://www.rev.com/transcript-editor/shared/AGaz_ixHX5g6SL9GD_gnesdCf73NEc6nqo3vBhgbBi9JxBZWW7AF0NZUxuprPuJadyzPeq1Ef0d2p83U4c9jMIvb5cQ?loadFrom=DocumentDeeplink&ts=937.04)):

Sounds good. And what kind of things do you typically get from wards?

Elliott Karetny ([15:44](https://www.rev.com/transcript-editor/shared/Yzxhu7h7SaT5TXIdvlvJhk4DDIhtHhcPHkBIzkMgkCpus1CzDbRGkf64RVCXn-MwivYOT-fhwt1AtjzKefnV-OrEcIM?loadFrom=DocumentDeeplink&ts=944.69)):

I guess kind of the similar stuff. I almost, if wards happens to be the one I got in the mail, I got to get the work done. So on a prep period or whatever time, if wards isn't closer to me, I'm just like, okay, I'm comfortable with wards as well. Okay. So

Daylene Long ([16:04](https://www.rev.com/transcript-editor/shared/b95u5efNaioC2VK7-9zbyUib-cVtaxzoHd76LEs2BY2RGXZTDK3f5_qvC_5FRrz1_E9b0hdN6vepRwtSmflt9jgdQz4?loadFrom=DocumentDeeplink&ts=964.37)):

Kind of sounds like I'm putting words in your mouth, so tell me if I'm wrong, that whoever ends up on your desk with relevance stays top of mind for you?

Elliott Karetny ([16:16](https://www.rev.com/transcript-editor/shared/y1tyFTrgG26CXnrxGH3IiIO-kCF5BfHGa1O0sxYPGTwhOGIBix-CxTIiwdgpgOkJ93dVT3QewnUBr-1JGIa3msiGgvA?loadFrom=DocumentDeeplink&ts=976.79)):

Yeah, definitely. Because there's also, we have a different requisition for the art and arts and craft supplies. So by the time I keep that in mind, it's easy to fill up the budget and with that unknown, that unpredictability of what or how many kids I'm going to teach, I just say, yeah, this is the stuff I'm buying and I'm not going to stress myself too bad over. I really wanted that kit. Or not necessarily just kit, but sometimes it's, I'm looking around to see if just a larger item, some things are a couple hundred dollars and I'm willing to splurge on it.

Daylene Long ([16:59](https://www.rev.com/transcript-editor/shared/ghhQfiUuroKGYSvuVOogDKyDFOFfbv2tMOqQ_s0njVkyUrrlUxdv4sOISU6z9oSfTXYlOTPVVT73u1M76pbJpTli3jI?loadFrom=DocumentDeeplink&ts=1019.57)):

Okay. What makes you willing to splurge on something where you're like, oh, I really need that and it's a little bit more, but

Elliott Karetny ([17:09](https://www.rev.com/transcript-editor/shared/edFLNavwAVCJEuThlCFBo3Ew9AjeS8S0I3pccUoQwsCrkrwCdU6h5GwLadRsa0o-eOrRqRy6LAYPSHGiCyN5XlAG5bQ?loadFrom=DocumentDeeplink&ts=1029.35)):

I think probably how prominently it's going to feature into my teaching, even if it's more of a teachable moment thing. I splurged on a whole spine as opposed to just a skeleton, just to teach kids about sitting in a chair all day and being on their phones and the implications of that. But I have a smaller skeleton that's about the size of the whole entire spine. So one year I'm like, yeah, this is the year I'm going for the skulls or this or that, just because I finally kind of seep into the teaching more.

Daylene Long ([17:47](https://www.rev.com/transcript-editor/shared/a9vIc2jX_tLem8DiX-MJJqDsd3_NAKF7RmuhOp8bDT9HhTgq23CMJyyWZ5JFUBxPwYYRfaqP1UkVxXp101C5iFDsRZo?loadFrom=DocumentDeeplink&ts=1067.63)):

Yeah, that's interesting. You are the first science educator, and I've talked to hundreds that has mentioned crafts and supplies as being part of what you do. How do you incorporate that into environmental science?

Elliott Karetny ([18:08](https://www.rev.com/transcript-editor/shared/xA0aY6vo7OzRcM95xszUWjTPCvCzQ1eu73yD6GkJlxXGoLgOlS4PKpqTSMcpypvvJbgbDOXJnRuS3a2yeAJt3m0R9Wg?loadFrom=DocumentDeeplink&ts=1088.28)):

Well, so environmental science really is my bread and butter and I really focus on it being a really transformative course, really transdisciplinary, not just interdisciplinary. So I'm an artist myself, maybe why there's that influence, but I usually use this saying that you can't spell earth without art. And so there's a lot of expression to be done that really does rely on the humanities, and that's why I've veered away from STEM so much in my environmental science teaching. And with backlash, I should mention that I'm well aware, especially teaching at the university level, that there's environmental studies as well as environmental science. So I really do push the envelope towards environmental studies rather than environmental science.

Daylene Long ([19:06](https://www.rev.com/transcript-editor/shared/p__dTCVoEHlsQziifovzpzCVu4_HWU_1YO8owUliUAbMkgA_3zkBnqsqNN1463g-qZnshp3OvD8XC_oH1M4HVuHT2z0?loadFrom=DocumentDeeplink&ts=1146.15)):

The backlash come from administration

Elliott Karetny ([19:08](https://www.rev.com/transcript-editor/shared/yiw6uENzPtMSQnbHYyeDZH4nmVND-zTbSEuezT9F56IWvZvFGVHx6Z9bn9lcpOJJoLagxj_b0-jG4S4jg8WvHyuRtKs?loadFrom=DocumentDeeplink&ts=1148.58)):

From my supervisor.

Daylene Long ([19:09](https://www.rev.com/transcript-editor/shared/CObNAFNlwF5xMln6G1XRDMXRwrn_6Ie-_72KaHQLxtKYPqirKhGrte9bvoTYYk0CgILFLyUG_il0v0y5UQd1BRJI1s4?loadFrom=DocumentDeeplink&ts=1149.93)):

Yeah, I think it's really interesting what you're doing though, and it lets students who might not be into science be expressive with what they're learning in the classroom. So I think that I personally applaud you for that. Thank

Elliott Karetny ([19:27](https://www.rev.com/transcript-editor/shared/Qa9jKWxdg34T5sHQGb6u-tnt8SYf5eBTboXsPjGCZBlkakaIVfbUtWLf1jkdofJy5OSHYwZqYym1Y-yWFOiJnG8QeNw?loadFrom=DocumentDeeplink&ts=1167.84)):

You.

Daylene Long ([19:28](https://www.rev.com/transcript-editor/shared/RSYOzwq2v2v3NRX_2Xh_KHMlqkysJi4_pl2gHmL2DkM7LMoOU8NonQxRvUTwPmm7MyLiIlx4cLZaEA8MZBSa9XmY-zw?loadFrom=DocumentDeeplink&ts=1168.68)):

If you need me to talk to your supervisor, I'm totally willing to do that. Cool.

Elliott Karetny ([19:32](https://www.rev.com/transcript-editor/shared/Qi6GCfLTqkLi9J2YSYHO63xe6j70uKJYbAUQpdxWXOLVYWOxKKfDK-ovxn_Y3oTcCaLmQpCbgKTCNiIDt8LW77nn0-Q?loadFrom=DocumentDeeplink&ts=1172.46)):

That's

Daylene Long ([19:32](https://www.rev.com/transcript-editor/shared/6PPCiUKFA5eNMYrO1XAkgFOP6OYY_deISYsWRZSCpidqHyxfPnUSJsI8yDEw4PsI9Fr-TzsKcOZp7bCMgsOYIpvyUJk?loadFrom=DocumentDeeplink&ts=1172.645)):

Kidding. Okay, so we talked about Carolina, we talked about wards. What does your typical budget tend to be for your courses? Or did we talk about that already?

Elliott Karetny ([19:47](https://www.rev.com/transcript-editor/shared/1nnj721qmw4toN-S7lpOuB0hZ5PAolwYHWNEJUmKqKDo2orKYgVIkv63VCBEh1adm9iRBcjpPKPWJsDACuH9F-FrUR8?loadFrom=DocumentDeeplink&ts=1187.67)):

Well, I think environmental science is usually about $2,000.

Daylene Long ([19:53](https://www.rev.com/transcript-editor/shared/EWNVlq4I7t9Gewk_3blqY-qLrItjMK9Aew8oRrK-FElSoPwDXS9tT4Znh_XVHytYc4cUtOp9NLuMzbA-E4Us8P9H2lg?loadFrom=DocumentDeeplink&ts=1193.43)):

Okay.

Elliott Karetny ([19:55](https://www.rev.com/transcript-editor/shared/t0EsXRLWodcNbTop7_ZmTShdVou-mHXeJIqq2SvW7u63ljRThXyXrt3sruEx5dVZNML-J0dDQF0AKZ7jY4zsVdPO5Q4?loadFrom=DocumentDeeplink&ts=1195.1099999)):

It's always been in at least a thousand, but I think the last time I remember it being 2000.

Daylene Long ([19:59](https://www.rev.com/transcript-editor/shared/cU2G0c7L6RUscsFijbUb54a7S9ZmAtomGbcNtDWKkhU5MFAWSX62F8lNjFfwZlIfLbSzEiPjS20CSvqgcB3Lpvrbhng?loadFrom=DocumentDeeplink&ts=1199.97)):

Okay. What about your biology courses?

Elliott Karetny ([20:03](https://www.rev.com/transcript-editor/shared/Ao39wtCWJbrmppAdp5teaIbd0JetVsFpLQE4CMuMCrWYyc3AsMNUWgVduPX3ko8rOoksCXaFsmQSmkidYDE2HMIauWU?loadFrom=DocumentDeeplink&ts=1203.09)):

Well, this year when I was told I was going to have one section of biology, I wasn't part of the purchasing process for that. So I am not even sure who or what does the ordering, but we're kind enough, we go down the hall and say, Hey, if you have any money left, I have some money left over if you need it. Or Hey, I could use this. If you're ordering 20 of them, could you get 30 of them? Kind of thing.

Daylene Long ([20:30](https://www.rev.com/transcript-editor/shared/GuQtj0DSMC3U_c0ycZEHl35RwydOq2364pnOZGdnEdgNnl-gIuXrId2eg0225SfQ07vqUoKNnGn4qyRCNRom4LT4nZo?loadFrom=DocumentDeeplink&ts=1230.45)):

Okay. It sounds like you've got a pretty collegial group that it's willing to work together. Lemme see. So you pretty much make the decisions on what you need for your courses yourself. You turn it into your supervisor and they're the ones that place the order or who places the order.

Elliott Karetny ([20:56](https://www.rev.com/transcript-editor/shared/pTeWeYX4xPsCqYSEHzwa-EUvEC2MW6Lk-Hu8npBvh_rXMO3rIRU9-YIHJGjNYFgEm-SSYToFg_qd0v9eSPqePoIjGwk?loadFrom=DocumentDeeplink&ts=1256.65)):

I guess technically she places it, we just submit it to her and there's rarely if ever any kind of, Hey, it says here you need 30 pairs of scissors, do you really need them? Kind of thing. There's almost never any kind of questioning of our choices.

Daylene Long ([21:15](https://www.rev.com/transcript-editor/shared/zBDcwC4KJwAMAu_U7O6W7IpYkcvkgtREu0Cca7AW5JV7CJJ1p-6lLpIY9UnL7PP7Wkp_y5Za3clU-h7OZ_ANhJYChBM?loadFrom=DocumentDeeplink&ts=1275.76)):

So I want to kind of shift gears a little bit and talk about maybe future insight kinds of things. What are some of the biggest challenges that you're working with in the classroom today?

Elliott Karetny ([21:34](https://www.rev.com/transcript-editor/shared/HsJDyOS73sx3mepXB_Jj5RDp0kTgs2hq253dBbphSc9qqNIfZsOSHIkF-lpuQ_K_MSWE71pbj6ZVgNm5iE4NEB5Dfqk?loadFrom=DocumentDeeplink&ts=1294.69)):

I'm just going to say the students themselves. It's not about administrative pressures, it's not about things like that, but whatever it is about, I mean, I guess I should say kids today, I think I've hit a point in my career where it's kids are amazingly different than they were when I started, and they're amazingly different than they were a couple of years ago. Can you talk a little bit more about that? Well, and some of it's festered. I mean, I pay a lot of attention to motivation because that's what my research was in, but the motivation to learn is really not there. And coupled with something better to do, such as being on a phone that's an instant replacement. It's one thing to go to sleep or sit and doodle, but now there's something entirely different to do. Okay.

Daylene Long ([22:34](https://www.rev.com/transcript-editor/shared/yCV-G7aR67raRd6t2UVEpbOUG-tQ4Z2o1FJa12goQUUMqY7ugN6dRD7nke6u-Ru8VcwiKJaZHC-bvHX0g8vyMYwjQHQ?loadFrom=DocumentDeeplink&ts=1354.3599999)):

So let's talk about the motivation first. Why do you think that has changed?

Elliott Karetny ([22:47](https://www.rev.com/transcript-editor/shared/C0H4uBZw-p83brQS2Gy2D1nfinTSc1o3iAKXkji3KrHIPS_EIWuCMQNGxzkUHyEgQAj9uSk8tN8P3rit2bKGE7AK-Q0?loadFrom=DocumentDeeplink&ts=1367.47)):

I think it's changed in general, and I don't know how much of it's changed rather than just become more kind of crystallized in terms of grades and points. And it's a very, I mean, I love Palo Free air and the idea of that it's just accounting and it's just numbers and it's just a work a day thing. And so with that in mind, the education really has no, doesn't have as much purpose either. And in my eyes as well as the kids' eyes, if they wanted to learn something, which a lot of them, they just do, cannot find something they want to learn about. So there's a real absence of curiosity of a spark. Creativity is really lacking. They just cannot draw something, they cannot use a ruler. So there's so much missing to their humanity. And I think that's a lot of it. And then throw in a course like environmental science, which focuses on things like climate change, which, and I love tracking it year after year that climate change has always been a difficult thing to teach and it changes how and why it's difficult. But yeah, it's a really rough world that they're trying to grow up in any way, but they can't articulate that unless I draw it out of

Daylene Long ([24:20](https://www.rev.com/transcript-editor/shared/4Gu_bdRM0VUKJfoDeuXwKMvsre4xAk5TzejsLapl7H0vKZT39lXKtHiratMqplrOLdgqjDpb1PgAFaOLiIw5IZ7frkk?loadFrom=DocumentDeeplink&ts=1460.9)):

So did you see these changes before Covid?

Elliott Karetny ([24:28](https://www.rev.com/transcript-editor/shared/8eD7zHvK_0YMfW_jlw_lQVoCrZUz43gfen--NkuSmGKsLKJV4kAFx9Eowi8VDdLQjPA9RWnGJbg3UkvR02lrPml2aNc?loadFrom=DocumentDeeplink&ts=1468.6099999)):

Yeah. Okay.

Daylene Long ([24:31](https://www.rev.com/transcript-editor/shared/KtPP3rPybXKkWlTnfrmpHcjvrBZtk1bXWHpquXAihbM4BkFuuBB7N0b_sbkEtT-JGr8E--p3D4ScFSRijaPJyilL-fA?loadFrom=DocumentDeeplink&ts=1471.16)):

Was it in any way intensified after covid or just about the same, you think a natural growth from that?

Elliott Karetny ([24:40](https://www.rev.com/transcript-editor/shared/01nipkrRGJVYFeoLJRLWTRPZ6j7EX54A2jO6akh9itRs8OZ4Y5sAC_wZ8m79owBk2Hfhju3HtztKwlVkRY_b-ILeYz0?loadFrom=DocumentDeeplink&ts=1480.88)):

And when you say covid, do you mean lockdown itself like 2020, the big

Daylene Long ([24:45](https://www.rev.com/transcript-editor/shared/jD6Jwcp-A9RWGPBRJga9kw9CJVcpQvf0LSTD4jnNXoL9CaDR6mY_rNNPW7UqQ0qhRjl09neyriTGZzJUKjMijKDYdxw?loadFrom=DocumentDeeplink&ts=1485.56)):

Being at a school, being remote, learning the world is kind of upside down. Yeah,

Elliott Karetny ([24:52](https://www.rev.com/transcript-editor/shared/xZh6gv4KCNuNKzqzgpWLRfVVKgE3WmM4C1K_RCdAEeG2Hainx7E1KCeph3OwnLfWmtoyG7B66CKfFC2vaBmCAEkrLN0?loadFrom=DocumentDeeplink&ts=1492.1)):

Definitely. It is definitely intensified. And just last period in which I think all of my students just failed a test, they talked, I hope it's alright to share it. Yeah, absolutely. I got to talking about how if they didn't watch it, I was going to just give them a take home test. That would be more than just clicking a Google form, which is what I've been assigned. It's a common assessment, so I have to give it. But they talked about how much they cheated to get through remote learning and they're laughing about it and I said, well, it really hasn't gotten you anywhere has it? They're like, yeah, it really hasn't. Oh, they acknowledge that. Yeah. So when they realize how much they shot themselves in the foot now, so these kids are 10th graders, so they must've been sixth or seventh graders during lockdown. I mean, it's baked in to their approach to education.

Daylene Long ([25:48](https://www.rev.com/transcript-editor/shared/glZSCG4CTQRUBb0H17LuMKEoF1Bq2cAC_UL6AQZMv6YrDkq_lEOOHhT4NkDMAIkETsKPhkrsSk_Sbn6FNlLRE8D0reo?loadFrom=DocumentDeeplink&ts=1548.2)):

So this ties into what you were talking about with phones too, and this has kind of come up with theme as a theme on the last part of these interviews that we're doing. Kids feel like they can Google anything and know whatever they need to know. And you mentioned kind of competing with the phone in the classroom for attention. So how big an issue is that for you from a day-to-day basis in the classroom?

Elliott Karetny ([26:25](https://www.rev.com/transcript-editor/shared/3ncWO7SEcw_dOEX6fXJXwI7rDjwXXRzP2YJ7ai_doe7MM5a6pbGCJc6UbKTkFUHCLfVZ_EXTwkht8QpHWb6ip16gQHU?loadFrom=DocumentDeeplink&ts=1585.28)):

It's constant. It's completely pervasive. I'm struggling since last spring with my post covid issues so that it is hard to communicate with someone who's not paying attention to me. And then it's hard to reiterate over and over again and all these things. There's so many ripples, so I'm a little more sensitive to it. But I always hated smartphones as they became more competing with me. And it's not like the ego thing. I don't use a smartphone myself just because I'm seeing the world changed like this.

Daylene Long ([27:03](https://www.rev.com/transcript-editor/shared/D8sSdLuO5XoigS-_x07922sm9smWCIBe6IwXqoxLkqB_CecYncQY9HY92RQtgGn2V_iUGRBL92km449LTBOD37wj7A0?loadFrom=DocumentDeeplink&ts=1623.3599999)):

Yeah, interesting. The other thing I wanted to talk about with you was you're teaching a topic that on the environmental science side of things, talk to me a little bit about what you think is missing in terms of supplies or activities or even big picture. And I bring this up because one, I know that environmental science courses are increasing across the US in terms of more people taking them. And I personally have a 21-year-old son who every time he comes home from college tells me exactly how my generation has ruined the earth and that his generation is going to have to clean it all up. So that's why they need to know about these things. So I'm a little biased I will say on that, but I'm also just kind of wondering, when you're looking five years, 10 years out, what kind of shifts need to happen in education for students?

Elliott Karetny ([28:15](https://www.rev.com/transcript-editor/shared/HeByXZEgeXVzFIiORkZf-3xa7eN0WlHeFYaG3YQROc3PuKERoXUFP_P33UrN7dRzha44Vxv_mfbFyySeaOKb2hOeNVA?loadFrom=DocumentDeeplink&ts=1695.09)):

It just has to get real. There are environmental science courses and students who are doing real things, whether it's activism and building awareness or that are making and doing things like building a community garden. We talked yesterday about, there's a golf course that butts up against our athletic fields, and I had seen a diagram where basically reclaiming a golf course, putting homes, light rail, maintaining 95% of the tree cover. And I switched gears and I just threw it into the lesson that was about fracking, and I was like, this is what we should be doing. I said, how much do you think it's going to, I talked about it with my green team because they were concerned that it's going to become a warehouse that a series of warehouses, And that's what's going to happen to this land now that it's been bought. But that's the kind of thing, I mean, my research and my work is really dedicated towards, I'm tired of the phrase empowerment, but it's really activating the kids. I don't want the kids to have to wait until they're old enough to vote once every four years. But the more people that get involved, the more people can change things. So that's what needs to change is there has to be this room and this flexibility and all kinds of things and all science too. I mean there has to be public health advocacy and biology and things like that.

Daylene Long ([29:54](https://www.rev.com/transcript-editor/shared/Ig1l47ls6NbTyuc6OL3lF01upQvZbiXbgFBlVnMeRW3AcGB36sJL4mQG7X1S0RITwN2sPPUYyYCIgRlh3xM8JCu0IZw?loadFrom=DocumentDeeplink&ts=1794.94)):

But

Elliott Karetny ([29:55](https://www.rev.com/transcript-editor/shared/5UZ6ZEctXpZNuXE5DOR7fx7FpQrmXtNpzNzHjtV0Jar9YKV4ryym7FRZSsefa2cZsvdvK9WznGTiAenkrBVMdAThTuU?loadFrom=DocumentDeeplink&ts=1795.065)):

Yes,

Daylene Long ([29:55](https://www.rev.com/transcript-editor/shared/2u-GeeYq967-OgcHGLq4EZ01b35CAwkGpMsc1aFrH-cHbammvacXkaxnMr4wRM0Qgp0ITrSqzKKH0-m6E8tibxgDHFw?loadFrom=DocumentDeeplink&ts=1795.78)):

There has to be the knowledge that's underpinning those so that they can make decisions when they vote and those types of things.

Elliott Karetny ([30:03](https://www.rev.com/transcript-editor/shared/NUQDDYuK-XkMz7jazo9YTe15flYXvqaYNpk9bGfg69OrKxwbKBpR2lJWAkxE-Fd4cAIUI-A2rpanOj1BwSbxavXWxLs?loadFrom=DocumentDeeplink&ts=1803.22)):

Sam Maya, please come to the main office. Sam Maya, please come to the main office.

Daylene Long ([30:10](https://www.rev.com/transcript-editor/shared/rWny8OLZxqVzWi_X1A0OXHV8tAtMBtiIaUX4NMygoc3f4m_dB1LvZxhV9ix5UPpwGZqUG1KHmmDyPiNf0t6lQkIDA_Q?loadFrom=DocumentDeeplink&ts=1810.06)):

So in terms of hands-on activities, in terms of things you would like to be able to teach either in biology or in environmental science, this is kind of an opportunity for you to speak directly to product developers that are out there that can make a difference. So what kinds of things do you think companies should be focusing on to better assist teachers to better help students learn?

Elliott Karetny ([30:51](https://www.rev.com/transcript-editor/shared/W_mR0lvOST55Xgb_mSCFicL6ftgM01FetMgMPQvJii6ZJofJiJhZEClLJFZDnOd6-vh4I-yp0iAgXE2NK0EYMMHU6ZA?loadFrom=DocumentDeeplink&ts=1851.88)):

This is the big, big question because in one of my grad schools, my now wife and I we're doing product reviews as part of our research. I mean, I guess it might kind of line up with what you do a little bit, but we were evaluating things like games and we were talking about since then, this is back to 2009, talking about what, it's hard to explain what we need rather than what we don't need because we don't need the same old labs. And there is research that supports that kids don't really learn anything by doing traditional labs. They're too busy focusing on the procedure and they don't even know why they're doing the research and they can't necessarily connect the concept to what they've done. And I don't know how so much of that must be the level of inquiry that it's at does

Daylene Long ([31:52](https://www.rev.com/transcript-editor/shared/hmOtEjGiKTrdf12L8DDs43X37kMnT_nH66Y9WA8X-KRG4Qosb_tE6l6V0wass7vDCtKAmsNcwzrLsg-VqaYkHxONBgc?loadFrom=DocumentDeeplink&ts=1912.75)):

Translate into something you said earlier where you said it has to be real, which kind of translates into it has to be relevant to that student. Right.

Elliott Karetny ([32:04](https://www.rev.com/transcript-editor/shared/iOMRqdtZyeGH9CDESKC4abMgtmF3tobyTZzZsmMpBf4yqs4jnJxOc22QWm0wEq8IcKMExxjTpf23NBW1Bz_wLLB5lEg?loadFrom=DocumentDeeplink&ts=1924.9)):

So the relevance is to me, the absolute key. When I was just redesigning an osmosis lab, just teaching osmosis this week to kids, there are so many relevant things, whether it's my mom's dialysis or a kid drinking juice that had chlorophyll in it, but everything kept popping up as relevant. But if I was to take out the dialysis tubing that I used my first year teaching and have them spend 20 minutes trying to open it apart and do the starch and the iodine, what is any of that for? I mean, it's hard for product development because a lot of the stuff should be like kitchen kind, science, what can you find in the garage and tinker with? So it's hard, I guess the product developers could make, and some of it could be a different kind of game or different kind of manipulatives that were more affordable. I guess a lot of it's about the manipulatives really, the individual hands-on things. I've got to set a lungs over there and I've got a foam virus that comes apart and things like that. I continue to fill the room with that is for as much demonstration physical models that can really be played with rather than every kid make a mess with stuff and they spend more time playing with their gloves. Of

Daylene Long ([33:36](https://www.rev.com/transcript-editor/shared/NZ51812dW5e5XG9xn3Q0BPkR221WHoKiNIUdxglF-6cOhs4odEjMDLhGdiZbNGSgg37GX372Ff7pMLbRn6SKVngAT8k?loadFrom=DocumentDeeplink&ts=2016.17)):

Course they do.

Elliott Karetny ([33:38](https://www.rev.com/transcript-editor/shared/uRVYc34jmT1sXMGwEyh7iq5O9WpIjkfj3K1wi3_gLOTr3HbWFiHm6_PznxpZBX-MQr8Yy8BSIh_wwaCrO7JWmWVYhck?loadFrom=DocumentDeeplink&ts=2018.105)):

There's that.

Daylene Long ([33:38](https://www.rev.com/transcript-editor/shared/Fhkm3hBT2YZY1IQCM7tlJjsOrFAIKwRpFWx_7vHifBxGYRl2Oi2HvMpEKRztCNdrdvIJxyZR0pJDhUTmF-1GG0pS8No?loadFrom=DocumentDeeplink&ts=2018.735)):

Are there any physical models out there that you've looked for over time and you haven't been able to find, you think, gosh, I really wish they did something with crispr. I really wish they did something with, I don't know, GMOs. Is there anything out there that you've looked for in the past that you think is missing?

Elliott Karetny ([34:05](https://www.rev.com/transcript-editor/shared/dApBe0tYD0qvh-Ry694aN7c571WTYOou2srGswPRLHG5wuM_HFvi29_SSn7uOO861p62XH35XvGZ8PwciGLmJlPD5b0?loadFrom=DocumentDeeplink&ts=2045.36)):

I'm trying to think. Environmental versus biology, but

Daylene Long ([34:12](https://www.rev.com/transcript-editor/shared/2InqeHtEFk82q-oVuy35z96btbeDBUpxkpj1ANfzwOv3RUTHkRZBefIgux5c_c0_Mfl9GVQSSVRReAyBrlBC_J-m70E?loadFrom=DocumentDeeplink&ts=2052.145)):

I'm interested in both. So either one Is great.

Elliott Karetny ([34:15](https://www.rev.com/transcript-editor/shared/MqPp7epQti5MP4xhL_a36sjb8Zl_xHUzuRFz8KNGY8G-mW3YvbD9pZO1b1aFgnrOITSTkPmmT9Qu7BbPfgIeDGwD-JA?loadFrom=DocumentDeeplink&ts=2055.68)):

I guess what I've really gravitated towards but not spent the money on is called, it's a company, I think it's called Origami Organelles or something like that.

Daylene Long ([34:26](https://www.rev.com/transcript-editor/shared/x_Z0JD1RZqbZ9fzRCWq8dOVlfv08S8DDgv5ZLikVCDP63kpgt7XMnF9NcCjVWso1HOFaGxZykvz5vAG7jy19vYl3wlg?loadFrom=DocumentDeeplink&ts=2066.36)):

And

Elliott Karetny ([34:26](https://www.rev.com/transcript-editor/shared/Ha74u6rYrqk0uhUUVlYWDxsenPVXQLh9E97n66EZ8gWaYx3SjE5xvF6spmBohilRXGG4LYLXiRY-5Sn3jWJvvf8dTJA?loadFrom=DocumentDeeplink&ts=2066.54)):

They've been building more and more sets of foldable. The origami isn't that hard, but here's a cell that you fold each piece and here's a water cycle and this kind of thing. And that kind of inspires me. So I guess, and I think they're just getting better at that idea. I'm trying to think of things like last year I had such a good time for the first time teaching about aquifers because it was so easy to make an aquifer in a shoebox size container, and then the kids could have that much more to do with it. So I'm trying to think of other concepts, but I think struggle with the greenhouse effect and having something that much more visual other than greenhouse with thermometers or an online simulation. Okay.

Daylene Long ([35:21](https://www.rev.com/transcript-editor/shared/zkibZD3Vk_R6miQ4cwYo_Buxq8akmhswHY_Gk933WuulzrcIjdudVHoDvf_x0RtvltwkMlDRBPaYrgsUzQNiyGtFpw4?loadFrom=DocumentDeeplink&ts=2121.38)):

That's an interesting one. I'm sorry. Yeah,

Elliott Karetny ([35:26](https://www.rev.com/transcript-editor/shared/sv_uGyLANLXXaGPg6ulWR4IfB7amyQnO7qBSznuFNrbm4Jh04FW352GBFLJD-wM3woYOQZHkDVTYpfEcnExdylYQwEE?loadFrom=DocumentDeeplink&ts=2126.395)):

And I would really, now it gets my juices flowing because I think so much about sea level rise and glacial retreat and all the phenomena that are so slow to see but have the most impact and are the most important to talk about. So again, it's one thing to have a cooler of ice and set something up on a table with ice and water and sand and structure. But if a company could put that together in an affordable way that could be put away and then taken back out. Kind like a not stream. Tables are gigantic and they need a hose, things like that. Or there's just got to be like a middle ground.

Daylene Long ([36:06](https://www.rev.com/transcript-editor/shared/i99ZAmiz-agAri073gztytYXeZr2mm9BxgFLrpq1-jpC-VqwdoXQqGEo2Vr8IUeZ37_fhV-uCu8ROfv4p53AZ22RpEU?loadFrom=DocumentDeeplink&ts=2166.75)):

But you're thinking something in terms of hands-on manipulatives as opposed to simulations or, okay, that's helpful. Just got a couple more questions and then I'll bring Kim in for some. Do you guys use Amazon to buy things?

Elliott Karetny ([36:28](https://www.rev.com/transcript-editor/shared/kJxzItGYeucPQSHyARZ0As7U8MIwaUFsT7wkXXTsXQfWXBuB-jIxa_mOJ4099OANi9dc3TKMKoeGjfUkdePYLW4l-AM?loadFrom=DocumentDeeplink&ts=2188.59)):

Can, I think there's a spreadsheet that we'll get around ordering time where if there's something that's not in the catalogs and it is from a store, I believe Amazon's on the list now. Okay.

Daylene Long ([36:42](https://www.rev.com/transcript-editor/shared/gIMMJibRKbCTAuv6U3CHX9ZAu5mqHAD5ic9JaPYpvg7Z3BfWCJ79wtA3IsCXEHOazphMrCcxAl_nZ5YzcUG3jB-0d3c?loadFrom=DocumentDeeplink&ts=2202.465)):

Do you know if your school has a business account with them or is it just you buy and get reimbursed or?

Elliott Karetny ([36:53](https://www.rev.com/transcript-editor/shared/YwOOEZBxbUW530iDEeJjM9Bm971g0pIV2DyVoaIYBisVKykbYwxhEKSrhj1set9K2m8r9-JWkU1-vebZZSOttnMhj30?loadFrom=DocumentDeeplink&ts=2213.045)):

I think it's trying to think, because for instance, some of us have used Home Depot or Lowe's to order stuff for all of our gardening or bigger things like that for tools. And I would imagine if something, I'm trying to remember if Amazon's on that list, but we would just write Amazon in that box and then our supervisor would take care of it. So I guess maybe the school does, I'm not sure.

Daylene Long ([37:21](https://www.rev.com/transcript-editor/shared/Nn2Gf-z5JowqwyhnqEqRczVhi4hygTynLr_DvgEqvJ79WZYawmdU3LRCjVqK1bjHjCbDuL4tri7PUw42cIzgUohxL1E?loadFrom=DocumentDeeplink&ts=2241.09)):

And then my last question before we bring Kim in is when you think about what makes vendors for your classes reliable, trustworthy, and building loyalty with you, what kind of things come to mind when you think about that?

Elliott Karetny ([37:42](https://www.rev.com/transcript-editor/shared/6PMaG_CV7K2qdHGIm90ymFmvMitIDJu9Fzg5VyegD--ynqeli7FG0HviswAz3O3s1LS_dn_YM-rRWoUuG60AR31xBMY?loadFrom=DocumentDeeplink&ts=2262.54)):

The very first thing is the customer service that I've appreciated with, I guess Carolina, because when I've had, since I never know, especially when it used to snow and things like that, when I'd need live specimens for certain lessons, we're able to call closer to when we need them. And so it was always convenient and they say, oh, we'll have it to you in two days or to know when they send it out. And so when we should call by, and then if you have any questions, there's someone to call. That's really helpful. But the other thing is also the reliability because when we go into our requisition program and they say, okay, I need such this company, and you go to order from a company and then they end up not having all that stuff.

Daylene Long ([38:43](https://www.rev.com/transcript-editor/shared/ZozplTa8bW4vuj_BwnMpfGegpezV0WDP2aduYNDC0689HjTmC54P2SQ0AFj2b1GtMSfZtgCmY1UXDFqe9Tx-X5BmyR8?loadFrom=DocumentDeeplink&ts=2323.06)):

You've already placed the order, right?

Elliott Karetny ([38:44](https://www.rev.com/transcript-editor/shared/U9lGdNdqHbn7D5JNCJ_eZa4XCYxuMFX6DkpLxREa-j5ZPKLVeCr2ifBRwkthhK8c0xlqSIrJ6Rfw91uxqW8Rc3vT3T8?loadFrom=DocumentDeeplink&ts=2324.53)):

Yeah. Or you went through the whole catalog and you're clicking and they're like, oh, we don't have it anymore. Why? It's not reliable if your calendar comes out a couple months earlier. And I know they publish it and have to

Daylene Long ([38:58](https://www.rev.com/transcript-editor/shared/U0KuGzrKnMCTESNLEH6zYPKu-7S6N4KN5mFtwLA3nP1znMTGUC_QzLH3AqhqbJbkuiLTapP-KMWk4tcOphhNIWlvEFY?loadFrom=DocumentDeeplink&ts=2338.565)):

Prepare

Elliott Karetny ([38:58](https://www.rev.com/transcript-editor/shared/OmjylzSP0_cxbWtNmE1W-kdVwaNT3kuNRxWZaoe7zf97Ftm22f0FV9-XfT5VTmBGYZKgm4D1c-OCS7B9KdMPtjFZFO4?loadFrom=DocumentDeeplink&ts=2338.885)):

It, but it just jams things up when you have to go back and look for someone else who has it anyway.

Daylene Long ([39:04](https://www.rev.com/transcript-editor/shared/pyBlT4466eA5NhVUaLcDB7R8E4jn-rtIxkWwf8RS8n2duGQHS1EnPs36QhRRgveukrHlNx8CWRtdDNUzKe-P0a86GbY?loadFrom=DocumentDeeplink&ts=2344.45)):

Okay, that makes sense. Are there any vendors out there just in general that you love? And it doesn't have to be, you've talked about a few, but it doesn't have to be those, but in general, if there are any ones that you're like, this is the role model.

Elliott Karetny ([39:22](https://www.rev.com/transcript-editor/shared/Dn48imWI3I_XrYx9OPA9ffWIvZ2yEx8l4rdNlYWnmoHbrLwe3ipAhdvnjciBOyADcgYmX6DJInO87lJWRXfOP9GAZOE?loadFrom=DocumentDeeplink&ts=2362.96)):

Probably, I mean, after all these years, I would say Carolina and Wards. If there was a new teacher, I'd be like, let's here use wards, use Carolina. Okay,

Daylene Long ([39:31](https://www.rev.com/transcript-editor/shared/JQAupGkqUKDZT7cZGDHD-thGd3uA5sS634leCteF5g_DawyaU92uq6N_C1n59NS5PylxgTIojTeKRsY220QjSdUv-p4?loadFrom=DocumentDeeplink&ts=2371.66)):

That sounds good. Kim's already joining us, Kim, what kind of follow up questions please?

Kimberly Herder ([39:40](https://www.rev.com/transcript-editor/shared/J0HNDHOowCBzY-o9zWrWwK4OFPg9aQW__Q5jzt5X557VZu9vt-wt0a6gAX15bozRwBL2yKi7Nag5p5tnaGh-SaUupuc?loadFrom=DocumentDeeplink&ts=2380.06)):

You've picked on a couple of 'em, and this has been incredibly informative and I've been motivated and really appreciate what you're doing and what things you've said. When you talked about distractions, that's not necessarily it. I was thinking about scaffolding and differentiation in your classroom. Where does that, how do you handle that or how does that come into play?

Elliott Karetny ([40:13](https://www.rev.com/transcript-editor/shared/ST2QszWQgMmQpVr5pOx6g8NhfjCGhU8M-kAUu-jS7ho4Ogby8mhkqWQu2PPABZG80DEfEV6wKx6OyRBL4PYvW4PtEZ8?loadFrom=DocumentDeeplink&ts=2413.57)):

As far as supplies or just in general?

Kimberly Herder ([40:15](https://www.rev.com/transcript-editor/shared/s_g4FU39NfG5FMSG_GUUudA9ko_1DtdASIjszaeqO6kMbe1_Ghs3k1maFGbRxU0EbcbIM0Du0IAPh94CB3ZaXh23Ed0?loadFrom=DocumentDeeplink&ts=2415.735)):

In general. General

Elliott Karetny ([40:19](https://www.rev.com/transcript-editor/shared/p-ZWtg9j0Iu9LnkzoBilP-2zMQCrJ7aQP5U8zNW_0-gTMM262POpLYmpQ2aSovElr-I_5T3Fu8ag_SI1cJzctoeMZBk?loadFrom=DocumentDeeplink&ts=2419.15)):

Scaffolding has gotten tougher since lockdown because of absences. So it's constant. A lot of times you really just don't know who's going to be in school that day, and your class could be 24 kids and you'd still be missing a quarter of the class for different reasons. So that does make scaffolding hard. So sometimes it's a matter of like, Hey, you kids work with these kids, catch them up and try to create collaborative situations like that. And I guess it's kind of similar with differentiate. I try to do a lot of peer to peer learning, I guess you would call it, just to keep kids involved and keep, because there's always a kid who's racing the head, there's always a kid who's days behind. So I do find that the kits and things are useful at that point because if a kid looks forward to tears, and even if it's some manipulative or some little thing, what was I having?

Elliott Karetny ([41:21](https://www.rev.com/transcript-editor/shared/8LHg_2igd5I6EQNRwLpkkv1g1QW4VyUiN9B8XhNnYsvgPZX-ZV5yG8JxSpyuWT51K4RXB283xd-Y782IY6pJ6Jr6pX4?loadFrom=DocumentDeeplink&ts=2481.07)):

It's having a kid put together some little solar kit that I don't have time to sit together and put together one solar kit. But if I keep them on the shelf and be like, Hey, we're doing solar energy, we're going to, or why don't you put this together? So that helps. And if I find when we're talking about kids' interests, I find differentiating based on interests as much as learner level, I find that to be as important too to the performing and visual arts kids. I have a different approach with them to motivate them and try to at least than the other kids.

Daylene Long ([42:03](https://www.rev.com/transcript-editor/shared/h7ZOUL8TPSP7xBxSVi9Gin5viegJ8lb2UV_Oio6C0F_pG6tUPmU8SBWIqZjW5-DUrYrPGvnP-BsKkRQZeYOWyRGlM_U?loadFrom=DocumentDeeplink&ts=2523.89)):

Sounds interesting. Kim, any other follow-up questions for you

Kimberly Herder ([42:08](https://www.rev.com/transcript-editor/shared/xpYzaTsIS-o9J2ZwQplhjyYZzgcvAKhll5PxQoR1TG6Dhm2-jelnEsOlb9-gOyvWAc7hNyHQJBlnyGfrqIZS03ipA1w?loadFrom=DocumentDeeplink&ts=2528.66)):

That generated a whole lot of other things, but I appreciate you doing that. And yes, the smart kid in the room or the one who's just not getting it and being able to do something else that's relative, but not, yeah. I appreciate you doing that.

Daylene Long ([42:25](https://www.rev.com/transcript-editor/shared/u4Zo8Ow7iPgmBbyX588JfZorf4VJntUBc9KAPKE66hRj6oMLA-SptDA0WQhSDxHYU6Qo7kwMeqbRE0J461loolCSvL4?loadFrom=DocumentDeeplink&ts=2545.825)):

And Elliot, hold on for just a second. I'm going to stop recording. I've got a couple.