

Episode 66

Welcome back to our summer of systems. And today we're going to talk about something that happens to pretty much every teacher. And if you are an incoming teacher or you are just switching into a new content area, You're going to be prepared to know this feeling. That one unit that you just... aren't that excited about. The unit that kind of you wish you could skip, you wish you could glaze over it. You wish that your kids could get all the information just by dreaming it and you didn't have to really worry about it. The information that, you know, it's harder to make that interesting because maybe you're not interested in it.

Just this last week. I guess episode I did of the Secondary Science Simplified podcast with Rebecca Joyner of it's not rocket science came out and we had spent months talking about this on Instagram, and the units that we just don't really like to teach. We came up with, I think about eight or so units that between the two of us who have pretty much taught or Rebecca has written a curriculum for a majority of the high school sciences. And there's units that definitely stand out to us. So over on the secondary science simplified podcast, we came up with the ones that we didn't really like. And ways that we try to make them more interesting. And they were specific to each of the different units that we discussed.

I will put the link to that episode in the show notes if you're interested in checking it out. I love Rebecca. I love her podcast. It was so much fun to be there. But today I decided we're going to kind of take it another step further because on our Instagram stories right now, we've actually decided to do like a March madness style bracket, tournament of everybody's least favorite units. And they're all over the place. There's a couple of things that I've taken away from all of this. First is that if you are a life science person, none of the life science units really feel that bad. You have one or two. But the physical science ones definitely stand out as, oh my gosh. I don't like this one, this one, this one. Or if you're a physical science person, you look at life science and go, Ooh, I have to only choose one. There's something that maybe we don't align with as an educator. Well today, I will have to give you five ways that you can make these units, the ones that you just aren't that excited for either a little bit easier or a little bit more interesting for you to go through as a teacher. So let's jump into it.

The first tip for surviving your least favorite units. Is to take the information that you were going to present to your students and turn it into self guided stations for your students to complete. Don't worry about having to go through

all the information through all the different classes over and over again, set up a note station where maybe they have to unscramble pieces of the slides, put it together, copy down the notes. Or maybe they watch a video and answer some questions on it.

Then maybe there's a hands on activity or mini lab that they can do based off of that topic. And you can even have a station called, like, I like to call, connect the ideas. Where you give them different vocab words or different main topic ideas, and they have to try to puzzle them together. With connecting ideas.

And one of my favorites is actually for them to either go find a podcast or a current event based around the subject that you're teaching them. And this is a little bit more open-ended, but it allows them to find something that they are very interested in related to the topic and they can kind of point their own passion that way.

And I have templates for both a podcast review and a current event review. I will leave those also in the show notes. But I love the idea of a self guided station because it allows students to not only learn at their own pace, but they feel more free to ask questions that really are intriguing to them. And then it allows you as the teacher to take a step back from the content that may not be your favorite.

But see what actually sparks in them and that can allow you to either create a different focus for the unit the next time you teach it. Or decide if you want to change up a station to include some of the things that your students are most interested in. Number two, and this is another one. Um, that is really putting it into the students' hands by like to divide them into groups and then break up the unit into big concepts and make them become the experts they are going to take over and become the teacher for an entire unit. So you would have curated resources that discuss those topics, maybe their articles that they get to do an analysis on.

Maybe you have data tables, you could have your own note presentations that are put up for them. And then they need to in turn, teach the class about that topic and you can have them create note pages that they need to provide to their classmates. Slides that they need to present. And then also an assignment to review the things that they've learned. What's nice about this is you can see what they really value in their learning because they are going to put forth effort into the things that they find the most interesting from the topic that you gave them. And maybe you'll see how much effort they put into different assignments based on assignment types you've given them. And if they choose to mimic one

of your assignment types, then you know, that that's something that either, they really connect with or they think is really easy. One of those two things. But it's nice because then you have everybody participating actively in the unit. And you get to simply just guide them along the way.

Number three. This is one that I have. Started attempting to use just the summer. So I have not put this idea directly into play before. But use chat GPT or some sort of AI platform to curate ideas for you on how to make the most of these units.

So thinking of my fall semester of a freshman science class, chemical bonding, I feel like is one of those where I lose a lot of my freshmen. It's hard for them to really visualize and understand and see what's going on. We're not quite to reactions. But they really need to have that core concept so that they can take that into biology. And then if they choose chemistry.

So I asked chat GPT, the following two phrases. The first one is what are some phenomena to make chemical bonding, an interesting topic for high school, freshmen learning physical science. This might not be the most specific prompt I could've asked for. Five prompts relating to something a little bit more detailed, or I can go back and refine that search.

But let me go ahead and pull up. What it came back with. For the phenomena, it suggested, it said the formation of ionic crystals, and you can build crystals and do crystal ornaments, which is kind of fun. Um, chemical reactions with color changes. That's one that I might not put into the bonding unit, but it's a fun and interesting one. Can do it an electrolysis demo, or also just show them videos of electrolysis, where you're breaking apart, water into hydrogen and oxygen. Properties of polymers. Says highlight the fascinating properties of polymers and their role in everyday life. Engage students with hands on activities like making slime or exploring the properties of different types of plastics.

And emphasize how the arrangement and bonding of molecules affects their physical properties, such as flexibility, strength, and elasticity. That one's pretty interesting. It would take some deep diving. So I might go back and ask chat GBT to clarify this number four prompt for me. So it came up with some really great baseline phenomena that I could use to make it more interesting. And that I'm actually interested in

seeing how they respond to. The other prompt that I use are what are some simple hands on activities to teach chemical bonding to high school, freshmen learning physical science. Again, I could get more specific with this prompt and

get probably more tailored answers. But they came up with ionic bonding with Gumdrop ions, which is fun building molecular models, which is just using kits, same idea as a Gumdrop ion, pretty much, covalent bonding with Play-Doh, which is also fun. I have tons of Play-Doh.

Investigating polarity with oil and water, which is true. I actually really liked to do that in density towers as well. Conducting electrical tests, which is a really interesting one because I liked the idea of teaching them about. Ions in Gatorade and all these different drinks that they do for sports. And so being able to conduct electrical test and show them. How it generates electricity through these ionized drinks? I think that would be really fun.

And then do you composition reactions, which is really something that we would do in the next unit. But out of those six, I could see myself using three of those activities to really add to my unit. And that's with only one prompt and I'm not even getting too specific. So Chad GPT has already sparked my curiosity and interest on how I can kind of pick up my game in my chemical bonding unit. And then next for number four, I would highly encourage that what you do for units, you do not really enjoy is give your students a project over a test. I love doing projects that relate to either them creating a video. Or a pamphlet or something that can be postered and put out in the hallway. So other students can enjoy it and look at it.

And I think that there's a lot to be said about giving them some creativity on these projects and allowing them a little bit of free reign. As long as you give them specific details of things, you have to have them include. If you don't feel the information, is that important? And that's probably why you don't really like teaching it.

Then it might be a unit where you throw a little bit of fun and creativity into it. It's still going to have them learning and recognizing the content for what it's worth, but it's also just going to engage them in a different way and allow you to see where their creativity takes them.

The last one is going to sound. Um, almost like I threw it in there. But I really think that this is one of the most powerful ones out there. Find somebody who loves that topic and get excited from them. So I was talking with Rebecca on her podcast about one of my least favorite units. I'm so thankful I don't teach it anymore. And I don't think I ever real come back to it, but rocks and minerals. I am not a fan of the rock cycle. I'm not a fan of identifying minerals or identifying any of it. I'm not a fan of that unit. But you know what? Becca from science lessons that rock. She is definitely a rock person.

And so I could go to her to get some inspiration. If I needed some inspiration on something anatomy, which is not something either that I would really enjoy. I can go to right now, I can think of three different people who love anatomy and can give me some great ideas and give me some inspiration. And when I was teaching chemistry, I actually went ahead and got an audio book about the cool history of the periodic table, just so I could kind of psych myself up for chemistry.

So there's so many options out there, but there's a unit for everybody that we don't like, that somebody else loves and that person's passion can kind of transform how you feel about the unit as well. And there's probably somebody in your department or in your local area that is so passionate about it, that they are willing to carry that torch and help get you to where they feel about that topic. So reach out and find somebody else and see what they do or see if you can pick up on some of their enthusiasm to get you through your unit as well. And like I said before, I always want you to take notes during all of these things so that you know what worked, no, it didn't work. And you can always refine because the goal is that this is not a unit that you struggle with year after year after year. In fact, if you use some of these ideas, you should be able to find something that makes you excited about, maybe not the content of the unit, but how you're presenting it so that's somebody can get the same excitement that you give them during your absolute favorite unit. They may never know that it's not your favorite and that's kind of the goal. So I hope you can take one of these five tips and put them into practice on either a unit that you're unsure about, and you're not quite sure how to make it any better or a unit that, you know, you're already dreading coming up the next year. And we're going to take this and these ideas into our unit planning series, which we're going to start in July. So hold on to any of these ideas that you get, write them down somewhere.

And I will see you then. Until next time.