

Megan

All righty, hi everybody thanks for tuning in today. My name is Megan, I am part of the marketing team here at PCS Edventures and today I am joined by Michelle Victor our Director of STEM Development. Hi Michele. How are you doing today?

Michelle

Good! How are you doing Megan?

Megan

I'm doing good! Really excited to be here really excited for part 2 of our out of the box STEM/STEAM programming. So I'm excited to jump in. First we want to thank everyone for really tuning in and watching the recording. This is a pre-recorded webinar as well.

As always a brief kind of rundown of our agenda and what we'll be talking about today so we'll start everything off as usual with a little bit about who PCS Edventures is and Then we'll really jump into why enrichment programs. So that's what this out of the box STEM/STEAM programming webinar is about. We'll talk about who they were developed for. We'll go into a little bit of the program organization and structure and then some of those standards and best practices.

We'll also give you kind of a look at our Enrichment Program pyramid that we developed We'll understand a little bit more about the tiers how they're structured and that'll kind of help you guide you through everything Enrichment Program related as well as the webinar and then we'll talk a little bit about those six Programs that we've selected today and then as always we'll wrap everything up and then close.

So a little bit about PCS Edventures, so we're a curriculum development company based in Boise, Idaho. We've been around since the 1980s and we originally started off as Pat's computer school PCS for short we started off as a computer program he started a After-school kind of program that eventually grew to a network of over 7,000 sites around the world. Our learners today, they're involved with hands-on projects and they really fuel that passion for learning STEM

Our products today so four distinct lines brick lab enrichment programs Which is what we'll talk about as well as discover series and drones These programs are turnkey kits, create makerspace materials and then our drones allow for career exploration as well. Typically, we always offer training and support for educators. If you ever need professional development we're always here for you guys and

Then our customers of course, so our programs are developed for K through 12 classrooms. They're involved in summer schools after-school programs and libraries and maker spaces. So kind of a good turn about for lots of environments.

Enrichment programs, today before we kind of jump into enrichment programs Michelle, why don't you give our viewers a little bit of background about what you do at PCS Edventures and a little bit about what enrichment programs are.

Michelle

Yeah, so I am officially the Director of STEM Development. So I get to work with our team of educators and then our creative team to develop all of the products and curriculum but then go out to all these sites that Megan was talking about earlier. So Enrichment programs are one of our favorite to develop because they span such a fun range of themes and for all of us that are former educators.

They really are a chance for us to apply everything that we learned and are still learning from the educators we work with to put together these really fun engaging easy-to-implement, experiences for students the sort of things that we wished we had gotten a chance to teach when we were still primarily out in the classroom.

So Enrichment programs like Megan talked about before are one of our most popular, especially in the summer school or out of school space. Often they're paired with something that has a really strong core academic focus like math curriculum or reading curriculum but we feel like we get to add the really fun engaging component, which we'll talk about more as we go through the webinar

Megan

Okay. I know we're really excited to hear all about these. I think I might have jumped a little bit and skipped what our Enrichment program pyramid was so I'm gonna backtrack through these slides just a bit to kind of see I know we briefly talked about it the enrichment program pyramid and I'm trying to figure out when it but we'll kind of roll with the punches as we normally do. You'll kind of see as we jump into our enrichment programs, and I'm sure they'll come up eventually

But before we dive into that, I'll kind of let you explain Michele program organization So tell me a little bit about the enrichment programs, right? They have all the included materials all that good stuff. I know lots of people are kind of curious like does it actually come with all the materials? Is it really that easy for me?

Michelle

Yes, so the answer to that is yes

It does come with everything down to the pencil sharpener and the pre-made photocopy in color of every single student page and so because enrichment programs do get used in a wide range of educational settings, I mean everything from a seasoned lifetime teacher in a stem lab to you know, a high school student who it's their very first job is working in this after-school program so for enrichment programs in particular we really emphasize everything needs to be really ready to go right out of the box

So it comes with twelve one hour lessons, written out to be accessible to any sort of educational background and then like Megan said literally everything you need to do those activities for up to 30 students.

Megan

Nice and when you kind of, I think that's a great point that you bring up right is You don't have to be a certified teacher. You don't have to have that certification or background these are really so easy to implement that it's as easy as opening the box of course depending on the program itself because there are a variety of them but they're as easy as opening the box and that's what that out-of-the-box programming really stems from right?

It's everything's there for you. The pencil sharpeners the glue, whatever it may be everything's really planned out for you and that kind of ties back into the lesson structure as well. Right, so like you were saying there are 12 one-hour lessons that can be adapted and whatnot the standards and best practices. Can you tell me a little bit about that and how they relate to enrichment

Michelle

Yeah, so we have a range of standards that we aligned to knowing that all those different educational settings are gonna have different focuses. So if you are in a classroom, obviously, you're gonna want to make sure what you're doing aligns to your core standards. So we do aligned to common core for math and English language arts. We align into next generation science standards for science obviously those vary depending on where you're at but hopefully at least gives you a starting place if you need to map to whatever local standards you use

But we also know for the out of school folks or someone may be at a YMCA. Of course you want it to be educationally relevant, but you probably have the freedom to focus

more on the 21st century skills or the habits of minds. So we also aligned to those two frameworks. Which really also connects us back to our roots like Megan was talking about learning centers of how do we develop really strong, Inspired thinkers that have these skills that they can apply to any field

Megan

beautiful beautiful and I think that's why these programs are so popular.

They cover such a vast background and there's a variety of programs that cover so many subjects so there's really a program for every one lesson structure

Tell me a little bit about if I were an educator or a parent whoever it may be if I were interested in you know, I want to know what I'm getting. What can I expect out of these twelve days? So tell me a little bit about that

Michelle

Yes, I think as educators. We all know that not all lesson plans are created equal

So our goal was to make everything really easy At a glance in a short period of time for someone to be able to find the information they need to then be able to go and teach that lesson so you can see on this first page here you've got a lot of information visually shown on one page so you can immediately see okay this is a lesson that's integrating technology engineering and math.

I need these three supplies, It's gonna take me an hour and maybe I don't have an hour but here's the breakdown in the schedule so here's how I could modify it to 30 minutes or 45 minutes and then you know one sentence. What are we doing today? Okay, here's my objectives for the lesson

Megan

Nice, so it really sounds like and I think as I've gotten to know the enrichment programs a lot better there's a lot of thought that goes behind these right is we try to make it as easy as possible for you to implement these programs regardless of who you're implementing for. Where you're implementing it, everything's really laid out for you so you kind of cover of course like on the screen, these are kind of things that you can expect in a typical lesson

Michelle

Yeah, absolutely. And this is obviously just the first page but the subsequent page once you get into that step-by-step directions and what is the some look like we didn't really think about how can we make sure it's a really high quality lesson, but that

doesn't require you to study for hours the night before to be prepared to teach it successfully right and I think.

Megan

The one thing that I loved was that you can really turn to any page right? You don't have to go in subsequent order

Michelle

Yes, absolutely. And so that's the nice thing, you know. Some people are doing one of these every single day. Some people do one a week or some people maybe even are going and doing outreach into schools so, no matter how low you have you could put four together for a four-hour block or if you only use one a month it would also work that way too.

Megan

All right, excellent, perfect our enrichment program pyramid! Here it is so a little bit about our programs today, right so we are going to be talking about six programs We pretty much developed the pyramid to kind of help guide you through the program's themselves and we based them on certain criteria of where they are in the program.

So tier one, these programs the materials that are reusable, they're extendable, so they can be used no matter what and then for these, primarily independent, right these are student-led activities and so students really get the chance to explore their options and dive into the materials.

As you move up the pyramid programs themselves will kind of vary.

So on tier two these programs a little bit of a restocking be required activities there are a little bit of a mix between instructor facilitation and then student independence. So there's that balance, right? It's some activities are more student-led, some will require a little bit more instructor interaction

And then of course as you move up the pyramid to the top tier these programs state-of-the-art extendable equipment. So at the top you can kind of see our drone program right these drones the Tello, they're great, they last a long time if you take care of them, they let you explore career exploration. And then this one instructor involved man is a little bit higher right maybe a little bit more front-loading is required on that end.

But still nonetheless our pyramid kind of helps you guide through those programs

So today as we start the webinar and kind of kick things off, we'll start with tier one and move through the tiers and we'll dive into each program themselves. So starting with tier 1 of course, these programs are gonna be reusable expendable and we'll kick this one off with our brick lab magic beans

So brick lab magic beans for grades 1 through 3 and those subject targets that it covers Engineering design, art and STEAM and then of course those English language arts connections. Michelle can you tell me a little bit about the program what educators can expect in terms of highlights? Kind of a brief overview of what bricklab magic beans really is

Michelle

Yes, so we really like bricklab because it's a great foundational product and once you have a bricklab there's so many different things you can do with it. You know, we have our whole curriculum line that all uses that common set of materials and then in terms of reusability, I mean, we have teachers on their tenth year of using their bricklabs still Innovating using their same lesson plans. So in that sense, it's a really long-lasting product.

Magic beans in particular is really fun because it integrates the theatre arts with Engineering which is kind of a fun combination. So every day you go and read a different theatrical folktale it's kind of the fractured fairy tale idea. So they're goofy and fun to read aloud. And then all of the builds go along with the story so you could do the whole extension and put on a whole theatric.

Some of the builds are either mass that are really adorable. Or you know, you could do the builds and then use that to inspire this engineering project. So again, very adaptable based on the time frame you're working with and then you're obviously integrating a lot of great ela along with the more traditional STEM engineering activities

Megan

Nice, and I think I you know, I love the fact that you point out the bricklab bricks, right? So Lego compatible, Extendable these bricks from really lasting long time. Like some of our educators are going there 10 years like they are great. So it's kind of nice because once you have the bricks you can kind of adapt those to other programs. Maybe you need them and it's nice because if you have them you can just get other curriculum, right?

Michelle

Yes, absolutely. And I'm glad you mention the bricklab too, there's also a custom set of bricks that's universal to all of our bricklab programs. And so it may seem like a small detail but one of the things we do here for people that their kids really respond to about the bricks is. They really love the full mix of colors that are available

So brick lab magic beans is one that really shows that you know. There's the teal the pink the purple the blue the red multiple shades of green so that one again, it's a detail But it does allow for a lot of creativity which makes it really fun right,

Megan

Exactly, and I think it's nice because that creativity right students can just grab bricks I think that's really nice too is because they can make their projects their own You don't necessarily have to follow a certain color It gives them the option to explore what they want these to look like. And I think that's really fun because their bricks come in two types of packs, correct?

So we have classic. Yes Vibrant, so it's kind of fun. You have a variety of colors to choose from bricklab beans itself. Can you give me maybe kind of an example of what they can expect in terms of a build or an example from the program itself?

Michelle

Yeah, so one of the things I really like about bricklab magic beans is each lesson follows a really similar structure. So for you and your students once you've gone through one, that routine is kind of established and then that can carry you into all the other lessons

So each day are gonna start by reading the folktale of the day. So you have multiple books. You can involve student voice actors make that really fun and then from there you have a set of student build books like you can see in the picture here and we always recommend that students work together in pairs.

So with the build buddy, so you get that collaboration. You have someone to support you, pairs are still a really nice small group. So everyone's lots of hands-on time and for every story there's one step-by-step build and then two bills that don't have step-by-step. So you have that support for the first one. So you're building all that great integrated math and spatial awareness you have that challenge of then trying to recreate something without the step-by-step and then of course the open-ended challenge at the end of every day is okay what would you like to build from the story and

just opening it up to that creative space which is always of course very popular with students

Megan

Nice. I know we've seen lots of great pictures who seem like educators send them in if they're really creative and I think it's fun too, I mean I worked at the YMCA and you know if we had something like this So it's great because you you see kids really take it to their own right? They really Use their creativity and it's fun to kind of see their creations come to life so something that they imagined in there that you give this colorful work of art and it's like this is really fun and then they display it there's that sense of ownership, which is really nice. And I think it's really fun

Michelle

No, it is really fun. And you're right. It's amazing. What students come up with And then from there, you know, it's really flexible. You could have the whole thing be open-ended Engineering or if you needed to loop that back like in a classroom setting, you know you could then use those to inspire a creative writing prompt and there are a bunch of those included in the curriculum. So it can circle back or just be completely freeform

Megan

Nice, nice.

Alrighty so our product #2, right so brain builders. So this one is also for grades 1 through 3. These subject targets cover a little bit more of life science engineering design and math connections, those English language arts connections and then social studies and histories connections

Michelle same thing. What can we kind of expect from brain builders? Give us an inside scoop on that.

Michelle

Yeah, so brain builders is a really great kind of survey course so like you mentioned you know it hits on a whole bunch of different subject areas and the cool thing about this one is it was developed by an educator first grade teacher who attended one of our bricklab training institutes, run here locally over the summer and she had her bricklab and she taught with it loved it so much that you know I can literally teach anything with my brick lab and then documented some of her most successful lessons in this curriculum.

So it's truly kind of the by educators for educators and she was also really intentional about making sure that this would be important to both boys and girls that all students would find something in here that was interesting to them would help inspire that interest in STEM.

So again having that huge range of topics and activities, I think it's really important so this one really does touch on everything from communication to social studies to computational thinking to English language arts

Megan

nice nice and you know, I love that it I love the fact that by teachers for teachers, right? And I think that's something that is really important. It's because It's it's it's something nice as well, right? It's like well as a teacher, you know the challenges and you know You know everything that goes on in the classroom and library wherever it may be, your learning environment is like you understand that fully and so for somebody to develop a program with those means in mind

It's great because it's like, you know a lot of this thinking has gone through like you've you've been in those shoes, you understand what those challenges what the success stories may be like and so to have a program itself that was developed by teachers Which a lot of them are developed by teachers for teachers and that's a big mentality, right?

And kind of nice seeing those come full circle. It's also great that you have a program that's meant for both boys and girls to kind of help you with that diversity and whatnot. So not just necessarily for boys or for girls, but both of them find something that they're passionate about. So it really dives into that collaboration efforts as well.

As with our lab magic beans, can you tell me a little bit about the example build that students or teachers might expect

Michelle

Yeah, so the one shown here is a really fun activity but as part of the communication series so you can see here, these are series of brick charades card, so students work together in teams, they pull a charade card, hide it from their partner and the rest of the team and they have to build what's shown on the card And then the other team has to guess what they're building so a fun way to incorporate Teamwork and communication also builds some building skills.

There's another fun activity in there where students do kind of a version of battleship, but with bricks so you have some communication again back and forth. Other builds definitely are more topical. So one that's really fun is focused on living things, which is you know a common life science topic the kids are really into and so it starts with the discussion about what's living, what's not living seeing where students are at connecting to what they know and then focus has been on plants and the parts of a plant so from there students have then that background knowledge to break like we talked about to kind of a more independent activity, work together in pairs to build a model of the flower and then the end come back together, discuss connect those concepts.

So this one does have a mix of kind of instructor facilitation, but then like we talked about students are building independently working on their own and then making sense of that off together at the end.

Megan

Exciting, exciting. Well, I know that the charade cards are really fun. Right because they have a variety of build and these are smaller builds, right?

Michelle

Yes, so you can see they're also mostly pretty flat and 2D so even down to the first graders very accessible, which I think like you said is one of the huge values of having these developed by people that have spent a lot of time with kids at this age to make sure that these really are at the level of where kids are at and what skills they're building at that stage.

Megan

Nice nice. Well, thanks for sharing your knowledge on bricklab brain builders. Our next product in our first tier is going to be simple machines. So this one caters a little bit more the higher end students so grades four through six and it covers those topics of technology and engineering design. Really excited to dive into this one.

Can you tell me a little bit about those program highlights, right and what can teachers and educators expect from this one?

Michelle

Yeah, so simple machines is one of our very most popular. Simple machines is a common standard topic for that grade level. It also is a great one to integrate

engineering design So those practices of solving a problem applying your knowledge to build something new?

so learning simple machines obviously gives kids strong foundations specifically in mechanical engineering. So things that move which is fun, but then from there they're able to go on and build complex machines so the final lesson of simple machines is to work together to build a Rube Goldberg machine

Which if you don't know what they are Google and they're really fun, it allows them to apply all of these different skills they have to build something that might be a little more complex than what they could have done at the beginning of the program.

So Yeah, there's a lot of great collaboration but also a lot of problem-solving you can see these do not use bricks so for older students who maybe have been working with bricks for a long time and are ready for a new challenge to level up fischertechnik system is really awesome and definitely provides that challenge and allows them to make a lot more complex builds.

Megan

I think it's great too, right, kind of tying back into the reusability factor. Just like the bricks these fischertechnik parts They will last for generations to come like students they can continuously use these and I think that's one thing that's really important right is what like as an educator what you're thinking of is like how far will my materials get me? Like how much use can they stand are they durable? Can they withstand really tough thinking hands? Can they withstand these projects? How many to they cater to?

I think these are a lot of questions and thoughts that run through somebody's mind and you know if I were an educator, I definitely think that reusability is a big thing and I don't want to have to consistently have to buy and buy Other parts and I think that's a great thing about some of these programs Is there is that reusability factor that that extendability as well

Michelle

Yeah, we when we had the PCS labs Close to the corporate office. We would have students coming in every day and They use these fischertechnik parts, and it was so rare for one to break, that whenever someone did manage to break apart. It was a tradition to like cheer and make it this big positive thing

But in the spirit of like so your awesome, but they are German made and yes nearly indestructible Which is obviously when you don't know when your funding is gonna be

renewed or you know If you're gonna make a big purchase you want to know you're gonna get mileage out of it

Megan

Exactly exactly

Um kind of fun little images here about some of the student builds some flexibility things Like that's kind of nice to see what students are capable of right you give to them all the pieces And then they get to kind of build this into life A sample build? We've got a couple of pictures up here. Can you kind of walk teachers, educators through what they might expect with their students kind of really expect

Michelle

Yeah, so simple machines will walk you through, you know, everything starting with first second third class levers, that'll get you to a wedge. They'll build a worm gear And then obviously you start to combine those to get there as you can see in some of the builds here, you're gonna have something maybe like a pulley or you can see and the student here has applied some of his knowledge to build a carnival ride that's cranked by a gear system. That's really cool

So it definitely starts with step by step builds that are really simple So every day here is also gonna follow a similar flow. So like magic beans it really has that structure built in So every day you have some background information. There's a video link for each one So you have an engaging way to introduce each simple machine There's a step by step build and then of course opening it up to you. Okay? Here's a challenge How could you make a pulley that can lift this much weight or how can you build a catapult that could launch a projectile this many feet? So you're getting that vertical thinking and the fun problem-solving

Megan

Nice, and I know that One thing that we really really love is that and we get a lot of feedback too, right those hands-on projects like students really get the chance to dive in first hand and they really are working with their hands to kind of figure that out that engineering Design process right? Like they work through it figure out what went wrong go back and what not And I think that's great is students love this. They love being able to dig through pieces to find something that gratification So I love that. I love the reusability factor of it and I think it's really fun!and lots of educators and students, we've gotten great feedback from these which is great

Michelle

Yes. Well, and just the pride too I mean these builds are not easy

And so I think for students to have that feeling of like I actually can do this

Megan

It's always really fun to see right, you know one of our one of our co-workers He actually he was in the office and he built one of those roller coasters Right and it's just a giant roller coaster with this fishertechnik parts. He's like, yeah, I mean This took me two hours, as an adult taking two hours to build this great machine, so you can just imagine this satisfaction, that pride when a student builds a pulley or a lever and they're like they're excited about it because they built them themselves You know what I mean? So we love that!

Michelle

Well, and that's a good point, too

Just like bricks, you know this particular set of parts focuses more on the mechanical pieces So you have a lot of gears and wheels But then there are other kits like the one you mentioned with the roller coasters that have really strong structural Components so you can definitely build out almost this complete makerspace of materials Which then students are free to use and innovate with you know way beyond those 12 initial lessons

Megan

Nice. All right, so tier 2 so that covers it for tier 1 so kind of a brief recap really quickly We talked about brick lab magic beans. We went over bricklab brain builders, and then we covered simple machines. So that was kind of our first tier where those programs had Reusability and extendability factors. A little bit of both teacher facilitation and student-led activities

Tier 2 programs moving up the pyramid a little bit more so we'll dive into two new programs as well and then we'll kick this one off with science of superpowers So this one is great. That's a really exciting This one is for grades 1 through 3, and then it covers those subject targets like physical science, life science Engineering design and then those math connections. So really excited for this Michele you kick us off and tell us what we can expect in terms of program highlights

Michelle

Yes, So science of superpowers is built around obviously exploring all of the different science and technology and engineering that goes into all of our favorite superheroes So this one is really great and that it integrates all the different areas of STEM

So you're gonna have science as the title, but there's also a bunch of engineering design, there's a bunch of math integrated you talk about technology and this is another really good example of developed by educators for educators

So if you watch any of our previous webinars you may have heard of pirate camp or survivor or unleash your wild side, these were all developed by one really awesome educator we work with who is not a classroom teacher but has worked extensively in environmental ed, after-school programs teaching in other countries and so I think she brings a really great perspective on what works best in that kind of out-of-school space where you have the freedom to spend a whole day talking about Batman and designing bat cars and what all STEM you can integrate into that

Megan

Nice nice, kind of fun because you can kind of see like and when the pictures on the slides here those little posters. Can tell me a little bit about those at the bottom Michelle, the little character cards

Michelle

Yeah, so these obviously we wanted to include as many different superheroes as possible. So if you're a kid and you're there and your favorite person is Aquaman We want there to be Aquaman if you're into spider-man you know you want to see that because that's the point of connection the other thing those we also wanted to recognize that not all kids may Necessarily know they're superheroes and so to have resources there

So if you're the one kid there that doesn't know who's spider-man is that you have a way to get that information And learn how awesome he is and then fully participate in the lesson

Megan

Nice, and I know that you know just like with the bricklab, those bricks, that reusability factor so that can still be seen here in this program The same kind of lesson structure and process that we follow through Example builds. Can you tell me a little bit about that? You can kind of see here the super shield I think this is one of the bigger projects and I think it's really fun We seen a lot of these on display and they're pretty good size and they're pretty um like thick

Michelle

They're pretty chunky. Yes because they have to obviously withstand the impact of a bounce ball that you then use to deflect and talk about angles and forces and then obviously defend yourself as Captain America would but Yes, like you said these for students, I mean this is on day seven.

So they've had a couple Simpler builds leading up to this and so to accomplish this build really is a big accomplishment So you can see in the pictures. It was definitely a lot of focused attention that went into building them And then when they hadn't completed it, it was a big accomplishment. So there's that teamwork, there's again all that great applied math and having to count out and be aware of the sizes

But like we talked about, you know this one moves and depended at tier two space and that in addition to this very kind of student-led Independent work through the build plan, build your shield. There are a lot of really awesome instructor Facilitated activities so to go from building that shield to taking that shield, deflecting balls with the shield, and then having a discussion about forces. It would really awesome way to integrate all these different areas But kind of moves it into that tier two space

Megan

Right, right, and I know that what can I go back and slide really quickly But you can see like the colors right is there's a variety of them. So students don't have to necessarily follow the exact images that's there. They can kind of customize them as their own choose. They're all colors things like that I think that's really fun. Because then that ties in that creative aspect, right they make it something of their own.

And then when you think about these students, working together and collaborating they're all following the same set of instructions, so it really teaches them that the value of teamwork and if somebody is going to be in charge of holding the actual project Someone's gonna be the one giving breaks, like you have to be sure like to communicate very clearly and I think that's great at this age too is like you're establishing those skills from an early on and as you move through the projects they get a little bit more complex may be and you kind of start off simple

So I think it's great how we've really led them up to a certain point and there's still that Creative ability for them to make it their own And these projects themselves, do you ever recommend that these students can do them on their own or do you

always kind of recommend in group settings is kind of the best

Michelle

These ones we definitely recommend groups partially because they are really big and so you want kind of multiple people working together. And it also allows for some really nice Differentiation so like you were talking about with the colors, you know If you have younger students, if you have first graders that are coming into this, you may not worry about the colors and they may have rainbow shields and you really just focus on the shape of the shield or You may have some really advanced builders and you may say hey I want you to come up with your own color scheme, and that definitely makes it more challenging

So I love that we think about that because with an age range of 1st through 3rd there's obviously a huge difference between a kid going into first grade and leaving a third grade and then after school you often have them all mixed together in the same class so that collaboration Really allows a lot of awesome interaction to happen here.

I mention go ahead!

Megan

I was gonna say I think it's great to the point that you bring up right is the grade bands I think that's a really big thing is because you do have a variety of thinking and Skill levels from a first grader to a third. You're a different level of development So I think it's great that these lessons can be adapted to your needs. It's not something that's set in stone And I think that's something that you know we've really thought of thoroughly through and as educators for educators both these it's like you think of all those moving parts

So these really are those out-of-the-box programs that can easily be implemented by any background and granted some of them may require a little bit more front loading maybe more student-led activities versus instructor, but they cover a very wide back breadth band of learning abilities and learning skills, which I think is great.

Michelle

Yes, yes, and you know, we're totally mind-melding there because the other thing that we also include with every lesson or the set of extensions So if you have a group that is just really powering three or if you have a bunch of extra time, you know You may go through three or four different activities or if you have a group that wants to spend the

whole day Building their shield and that's the time that's needed to be successful. Then it works that way too

So Another example, that's a little bit less step by step and has a little bit more of that open-ended One of the earlier builds is the Batmobile. It's a very simple Batmobile. It's really fun because it's a balloon powered mobile. So There's a lot of fun forces you can talk about It's like amazing every time when you blow it up and it actually works but then from there You know if you had time you can then modify the Batmobile so what if you make it heavier or bigger change the size of the wheels, how can you make it go farther?

Megan

Nice, nice

I think you know, I think that's what why the enrichment programs are so popular because of course, there's so many options, there's so many ways that you can do these. It's not just the one size fits all, like everyone learns at different speeds Everyone has different skills and so I think it's great that you cover all those topics you cover all of the Minor details that a lot of people don't really think about and it's just like wow like this is actually great

Alright so science of the superpowers. We were really excited about that one what's not to be excited about Summer camp classic so for our older students, right? So this one is for grades 6 through 8 Summer camp classics covers physical science engineering design and of course art and steam

As with our other programs Michelle, I'll kind of give you the floor in this one program highlights. What can we expect from this one?

Michelle

This one is a special favorite for me since this is one that I got to develop personally and so I'm a little bit biased but I really love this one because I feel like I got to take everything I had learned from Working in summer camps, you know even as someone that went to summer camps as a kid and just loved it I felt like it was so important to me growing up and exploring you know, what I was into and making friends and so I loved there's so much good stuff that happened at summer camps

It's all about collaboration and reflecting on your strengths and trying new things

And so I loved getting to package that so whether you're in a gym at the YMCA or at an after-school program I know it says summer camp in the name But the idea is really to bring that experience to any learning environment

So you'll see in this there's a lot of classic crafts, but also we tried to take a stem or a steam perspective and to really look at how creativity is obviously essential to arts but also to engineering and even to science and so how do those threads kind of weave together from making a friendship bracelet to Designing a solar cooker all kind of connect through that steam lens

Megan

Nice, and I know like kind of at the bottom of the screen here you can see like those projects and like the builds and there's a lot of materials here in this one, and I think that ties back as well like tier 2 programs like they may require a little bit more restocking but those materials like they are meant for around 30 or so students and those projects, you know, they're exciting in this one because it kind of combines stem with the arts It's steam right? so the arts within this science technology engineering and math and I think it's kind of fun to you because

As you kind of go through the projects you kind of see like what exactly you're expecting So the project themselves, can you kind of maybe explain a little bit about them and what an educator can expect out of this program?

Michelle

Yeah, so there's two you can see here The one on the left is the woven stars. The classic version of this is kind of the two popsicle sticks and some real chunky yarn and we felt for middle school We definitely needed something more challenging, so you can see it uses kind of a smaller bamboo stick and then multiple layers that there's a lot more room for Creativity.

We also include some examples from some really amazing craftsman, they develop these really complex versions to kind of show the full range of what's possible beyond just kind of a simple maybe lower grades craft And so this one is one where you definitely do need to plan ahead And think about what your color scheme is gonna be and be really precise and meticulous The one on the right is a set zentangle project Zentangles are part of you know The whole coloring as sort of a meditative practice that's gotten really popular and so the idea is you draw a different pattern into each section and It's kind of on the other extreme. You don't plan you kind of see where it goes and what it's created so even though the projects themselves on the surface are You know arts and crafts and I think that's valuable on its own

We also tried to layer in a reflection piece for students to think about, you know Which projects did I like do I gravitate towards projects that require a lot of planning or do I kind of like to innovate and you know as I go make things up and what does that tell me about my strengths and also maybe Areas where I might work to expand my strengths into new areas, so nothing too Complex, but a chance for students, you know as they do kind of more art focused projects like this, there are others in there that have a stronger science focus like the solar cooker where you have to think about the angle of your solar oven and the reflection or others have the stronger engineering focus.

So as you're working together as a team to solve a problem, so there's built-in reflections to kind of reflect on okay which of those areas where you most drawn to and what might that mean for what you want to do in the future, so That I think when we say, you know, the spirit of summer camps I feel like summer camps have always been built around kind of timeless activities, but it's all about the community and the relationships kind of self-reflection that comes from that

Megan

I think it's great to hear, you bring up a great point It gives them an ability to kind of Figure out if they really like more, they think about the process the design process before they actually complete something they explore it freehand And I know for me personally growing up. Like I was always somebody who liked to plan things and I think that reflects my style Very like I need to see the picture before I start something and it wasn't necessarily a perfectionist thing But it was I like to see the big picture as I start working

One of my greatest friends from summer camp She always just went gung-ho and just freely did it and it was funny because I always seemed to love her projects not that I didn't love mine. But her projects always seemed a little bit more abstract. They seemed more fun And so it kind of helped me break my shell and kind of dive into more of a free exploration and I think that's great too because It gives students the opportunity to come out of their shell maybe explore things they would never have thought about exploring before so kind of you know, get some thinking about those things, which is great And that's why we love summer camp classics. And so I know this one's one of your favorites

Michelle

It is!

Megan

Tier 3 programs, we're here, top of the pyramid. So you're tier 3 programs as a brief kind of reminder these programs, state-of-the-art extendable equipment right These ones will require a little bit more of that teacher Facilitation a little bit more help but the payoff and that's kind of what we will talk about in just a bit is the payoff For students is so great the student takeaways

So for Tier 3, we're going to be talking a little bit about Ready Set drone the second = edition This one is going to be for the upper student level So for grades 4 through 8, and then it covers those topics like physical science technology engineering design and the English language arts

So Michele, this one does have those mini drones I know a lot of people there, you know They get excited about drones and I know that when I kind of got to know these programs a little bit better It's amazing at what students can actually do with these kind of technologies So tell me a little bit about those program highlights and what someone can expect from this program

Michelle

So ready set drone we really see as the foundation of all of our drone Programs so drones are obviously highly engaging if you've ever given one to a student I mean, you know immediately it's fun to fly one It's kind of magic, but it's also this amazing platform for STEM.

So with Ready Set drone That was the idea is of course, you're gonna learn how to pilot a drone which is a skill and fun We're also gonna capture aerial photos and videos which brings in some creativity, which also is really great But within that you then have students that have the skills to fly drones Which allows you to explore the physics of flight and then to look at how are drones being used in the real world and to really focus in on UAV, Unmanned aerial vehicles that technology and how it's being used especially to do good in the world

So from there a lot of students come in kind of with the idea that drones are toys Which turns are really fun and we don't want to downplay that but they're also really valuable Tools and so to kind of open up their awareness of what they can be used to do.

Megan

Right, and now, you know, that's a great point too is like drones, they can be seen as really that hobby and that's tool and a lot of times that really that's kind of what students a fit Like initially they're like, oh my gosh, This is so exciting like look at this Look at this mini drone that we're gonna play with but in reality They kind of as it go through the program They kind of start to realize that drones can be used for good like they're more than just the toy and I think that's a great thing about our drone collection is students have the opportunity to see what drones can be used for their potential is so great

And so I think that's something really nice is where you set the foundation with Ready Set drone. Can you tell me a little bit, you know, I know we see a couple of the drones here what really like I know we talked about They learned the basics the foundations and they learn like the manual movements what kind of sets this program apart from others? Maybe not necessarily Some of them are more autonomous, but this one is all about that manual flight, right?

Michelle

Yeah, so it's amazing where drone technology has gone just in the last couple of years And so this is a really great Introductory platform if you or your students are flying drones for the first time you can within those 12 1-hour lessons, get students to the point where they're able to successfully piloted drone

So the final challenge and this one it does come with bricks students work together to construct these big obstacle course builds Which are a really fun kind of collaborative challenge, but then you can pilot through them I think we have them turn around Use that as a frame to take a group dronie like a selfie and then climb back

So to have that success in that time period is really important and really empowering But then also within those lessons you're gonna see lessons that focus more on Engineering design, they build their own launch and landing pads And it's hilarious. They always build extremely tiny ones. And so that leads to some reflection on You know how challenging was this with your expectations? Versus reality and then they can reflect on that as they build their skills throughout the program Others though are gonna really have a lot of video supports

So one of the really cool things about Ready Set drone is that it comes both with your print curriculum but also access to this series of Animated videos that we've created to break down some of that content obviously safety is really important They look really

small and they are really safe, we send safety glasses But you know if you stick your finger into a spinning propeller, it will hurt. So, how do you establish those safe? Practices from the beginning but then also, okay. How do drones work? What are the basic parts of the drone and then going into? Okay, how are drones used in the real world?

So those really break down some of that technical information and then our support in the curriculum with interactive notebooks or discussion questions So you can really integrate some elA or some science to the level that fits your environment

Megan

All right, and I want to ask you a question really quickly, right? So like for somebody who was fairly new to drones and UAV technology I knew nothing about it really until I kind of started working for PCS Edventures Educators who maybe feel like they their technical skills aren't where they should be you know, I know one big thing is my students. There are a lot more involved in technology than I am Like how do I lead them through a program? so it that's when I don't necessarily like It's intimidating and can be intimidating right as you dive into something brand-new You've never experienced but your students are so excited.

So can you kind of give some advice to maybe educators? Who are kind of interested in drones or maybe on the fence? They're not sure because there may be a little anxious nervous because it can be intimidating implementing such high technology

Michelle

Right absolutely, especially when you feel like you're responsible for making sure your students are safe or protecting this investment that your site has made in this technology, so That is it totally common I think feeling that everyone has and so that's part of the reason we did put these into Tier three So this isn't one that even though this is the out of the box Webinar that I wouldn't recommend just opening the box and then within 15 minutes you're teaching.

So with this one we really tried to structure in the materials kind of a step by step Here's how you can spend three hours to really invest in your own skills as an instructor With a bunch of support to kind of fast-track you through that process So, you know, yes, you are gonna have to install a couple apps to be able to control them

We highly recommend that you give yourself a little bit of time to play basically to explore in the same way that your students will so when they're going through that

process you have a little bit of first-hand knowledge about how to troubleshoot or what that experience might be like

So we do include in the instructor guide kind of a very thorough step-by-step list of exactly what to do And we do itemize out the time and say be sure you give yourself at least three hours to really go through all of this and then the other thing we do is we do provide live webinar training and so

It's kind of an old-school approach, but I think it's really nice to have that Face-to-face contact talk through answer any questions and then of course you have that ongoing support if anything happens

Megan

Perfect and kind of like we talked about briefly right is the state-of-the-art extendable equipment So there is some extendability here. So Kind of as we really touched upon earlier is you have this great drone that can be adapted towards other curriculums similar to the bricklab, in a sense, you start off with the Telo and then we have Curriculums that were kind of developed around this drone

Can you tell me a little bit about that kind of mentality of one great drone three curriculum options to choose from?

Michelle

Yes, so all of these use the same Telo mini drone and in Ready Set drone We really focus on manual piloting And then just learning the foundation parts pieces physics real-world Applications and ready set code kind of the next sequence We take advantage of all the autonomous capabilities So now students aren't just manually controlling it almost like a game controller now They're dragging and dropping on it to take off fly forwards around come back and land. They're programming all of it ahead of time and then just pushing launch and it's executing that autonomously

So that opens up all these great opportunities to explore computer science And then if you watched our last webinar, you know about drone designers We really see as an awesome capstone it brings all this together So your knowledge of how drones works your coding skills you then apply that to create these creative Performances, so you're creating costumes and choreography and putting together something that's really creative and unique

Megan

And I think you know that's really fun is you could really start anywhere in the series

So if I had already ready set code like I can always go to Ready Set drone because there's different Things like it's a different kind of setup Right and then drone designer Similarly is kind of just that capstone or it covers a little bit of the skill set that you gain from both So it's kind of a nice little collection where you have one drone. You don't need to necessarily keep buying the same drone It's the curriculum and activities and that's what's really great is, we try to think about at PCS

Michelle

Yes, right it is how far can we kind of help as an educator? So we know funding is a big thing. So, how do you get the biggest bang for your buck? And then when it comes to your students the payoff for this is so great.

Megan

Can you talk a little about that student perspective?

Michelle

Yes, so all of these have a really strong focus on real-world career exploration With especially at the middle school level is such an awesome time not to make any big decisions but just to explore all the different possibilities that are out there so You know and ready set drones students learn that you can actually be a drone pilot as a career And that certainly is a field in itself, but that drones are also relevant to so many other fields

So I remember working with a group of girls at a stem day that many of them were interested in being veterinarians so they were very interested in the example from the Ready Set drone curriculum of the Scientists that are using drones to give peanut butter pellets to prairie dogs Because they need medicine to protect them against a disease and so drones allow them to cover these big Landscapes and not expose the prairie dogs to any danger

So that's just one example, you know drones are being used in so many different fields So for students to think about okay how might this apply to me and that goes all the way through all three They're literally stepping into the shoes of these different roles and then getting to do the same Reflection like we talked about in summer camp classics. Okay, which of those did I like best? And what does that tell me about? What fields I might want to pursue?

Megan

Nice nice now, you know, I I love it. I think it's great that we always give students and educators The opportunity to explore those avenues and I think exploration is a really big thing. Right, especially at that age You want to have them not necessarily thinking about their future but in a sense you do want them to kind of start.

Michelle

Yeah, exactly

Megan

And so I think it's great that these programs Kind of help you get to that stepping stone and they give them options that they would have not necessarily thought of which is great

Michelle

Yes, so I know it is a little bit more work Absolutely, and we do want to be upfront about that but it is worth it. These are such engaging high-quality programs So that pay off for your students is absolutely there

Megan

Kind of a recap as we kind of wrap things up really quickly so our pyramid today, right? So we really talked about these six programs starting at the first-tier with our first three. We talked a little bit about bricklab magic beans We talked about bricklab brain builders, and then we talked a little bit about simple machines

Of course as a kind of general reminder Tier one programs, These programs are really kind of highlight and emanate the fact that materials are reusable. They can be extended Student-led activities and primarily independent

As you move up the pyramid and of course our tier two programs we talked about today's summer camp classics as well as our really fun science of Superpowers these programs of course categorized into your tier two of the enrichment program pyramid. These programs as mentioned may require some restocking of the materials, and activities found in these programs are a mix between student-led and instructor facilitation. So these programs have a balance of both types of activities.

As you move up the pyramid, we talked a bit about Ready Set drone in tier three. Again, these program have state-of-the-art extendable equipment, and will require a bit more teacher facilitation

...the pyramid, these are the things that we talked about. We categorized these six products and programs for a reason: But that doesn't necessarily mean that we don't have other programs Outside of this.

So I think you know if you are looking for other programs if you're Interested in specific subjects that you want to cover like there are programs available for different age Groups for different subjects and of course we've categorized all of them for you today All these programs so you can kind of see it in this little structure and slide here There's a variety of choices to choose from all of our enrichment programs are here in one great place and it gives you the option to kind of explore your needs

Michelle before we kind of wrap up today Do you have any advice for someone who is curious maybe on the fence about enrichment programs? And you know why these are such great tools in the classroom

Michelle

Yeah, I mean they're all great you can't go wrong it's all about figuring out what's best for your grade level subjects you want to explore and one awesome thing that we offer is we have a team of STEM support specialists that can work with you to make recommendations put together custom proposals

So we have a bunch of great curriculum Samples and resources so you can really get to know them and then a team kind of on standby to help make any special Recommendations

Megan

And you know, that's a great point that you do bring up those curriculum samples right today! We are going to be providing you curriculum samples from those six programs. We talked about today in the pyramid So you will kind of get an in-depth look at what you can expect a typical lesson to look like so you'll see those Subsequent pages

If you are interested in seeing curriculums for other programs that maybe weren't mentioned in this webinar You know, we do have a team available to help you with that. So Kind of have all of our information here in the slides for you folks

We want to thank you, of course for joining us listening in Michelle I want to thank you as well for really sharing your knowledge on enrichment programs Giving everyone an in-depth look and kind of an understanding because there are quite a bit of programs

and so it's a kind of Someone walk you through them is always really nice and to kind of give you and break them down really quickly It's really helpful

If you folks do have any questions, of course, feel free to contact us via phone or email We do have our website available for more information as well.

But of course Michelle, I think that'll wrap up Today's webinar

Michelle

Thank you so much. And thank you everyone for joining us