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Creative THERAPIES

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Learning Science through Art

By: Kristin Rivers

As the elementary art teacher at YOU Inc., the Wetzel Center, I have discovered that using art as a teaching tool to educate students about other core subjects such as science can help and give them a greater understanding of what they are learning. During my 2016-2017 school years I have been team teaching with my co-teacher Tyler Reynolds about different core subjects, such as science. Art is a great way to re- enforces visually what students are learning in other subject areas. Art helps students with all different learning styles, not only does it re-enforce what students are being taught but it is a great way to use sensory integration, fine and gross motor skills, and kinetic movement.

One of the projects we did with the students where they learned science through art is a project about the northern lights or Aurora Borealis. Students first watched a video about the Aurora Borealis, and how the northern and southern lights occur. We then went over vocabulary and had a group discussion about the many working that make the northern lights happen. I asked students to show me with their bodies or arms the different movements the lights make as then move across the sky, this was a great way for students to practice their gross motor skills. While making the art project we used may different materials such as watercolors where students got to experiment and learn a new watercolor technique called “wet on wet”, this is where students take wet paper and apply wet watercolor to paper. Using this watercolor technique the students can see the movement of the paint in the water, it makes really cool effect on the paper and is a great example of how sensory integration can be used as a learning tool. Students also used chalk pastels to create the sky in their northern lights project; this was a way for student to practice a fine motor skill. Students would make different colored wavy lines with their chalk and then use a tissue or q-tip to smudge the lines. Students would then tear watercolor paper and glue to the bottom of the page making the bottom of their paper look like polar ice caps. By the students tearing the watercolor paper and gluing it, this was a great way for students to use kinetic movement. By students using all the different materials and techniques to make this project students are learning about how to do the project using sensory integration.

It is my hope that through the processes of making this project that students had a better understanding of a new subject matter had fun making the project, hopefully built a little self-confidence upon the completion of the project and maybe made them realize that teachers can teach science and other subject areas differently to help each students learning style.

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In this STEM Edition…

STEM Science, Technology, Engineering, Mathematics

Engineering, Legos, and Counseling

By: David Polidi

As we work to connect with our youth and help them successfully navigate counseling goals, we at the YOU, Inc. James Street site, have some very innovative strategies and activities at our disposal. One activity that is used by some is building projects out of Lego's. As one of our seasoned mentors Joe Forson has said, "I like to start with a negative space, and have the youth add things to this space. I have the youth plan out what will be constructed, and what will be needed for this project." In this way, Joe is able to connect with the youth in a deep way, while engaging in a fun and meaningful collaboration.

This is also a great example of how a mentor (or any counselor) could use STEM in his or her work with children. Building with Lego's is a great way to explore basic concepts of engineering and structural design. Tiffany Tseng, a graduate researcher at MIT, is quoted on MIT's website saying, "Legos are a good introduction to communicating ideas with physical objects. Putting things together and taking them apart got me interested in how things work, and by the time I was an undergraduate, I knew I wanted to be an engineer." https://engineering.mit.edu/engage/ask-an-engineer/what-do-legos-have-to-do-with-engineering/

There seem to be many clinical benefits of playing with Lego's as well. Whether it is helping youth identify prosocial activities to engage in, or giving them alternative things to do when they are angry, building with Lego's seems to fit the bill.

While gaining a new knowledge and potential appreciation for engineering, youth are learning to deal with frustration and (hopefully) learning the art of patience. More subtle skills are also learned when playing with Lego's, such as being able to see a project through and being able to focus.

Joe shares that, "I sometimes work with plans, sometimes we just build something that is in the youth's mind. Then, when we are done, we sometimes play with the Lego's." This could take the counseling session to a new level, as it enters into the realm of "Play therapy" (instead of playing with dolls and doll house, some of the younger boys might be more inclined to play with the Lego's). However they are used, Lego's can be educational, and can be a great activity to explore with some of our youth. Who knows, maybe one day these youth will be writing about their experience on the MIT website as well!

Using STEM and OT to Create a Therapeutic Space

By: Angelina Natal

My name is Angelina, and I would like to tell you some stuff about the group we did this fall. At Cottage Hill Academy we do lots of fun stuff. There is this young lady that comes every Tuesday to Cottage Hill with her therapy dog. Her name is Jess, and his name is Trot. They do occupational therapy with us.

She is very respectful to our feelings and our coping skills. She teaches us new ways/coping skills to handle hard situations we are having. I am so glad that she is here to help me and my peers.

So like 3 weeks ago there was a group that I liked doing and also my peers. It was very exciting. It was a group where we had to clean the basement and take all the old and broken stuff, such as couches and old tables. After we were done with all of that a week later we started designing our basement to look very neat and fun to play games like pool, and ping pong.

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There was a time and day that we started picking areas in the basement to put a dance floor, a swing, a pool table, and a ping pong table. We also made an area where if you wanted to be alone in silent you can read a book or do arts and crafts.

There was a group before this group a while back, and we did a fundraiser to earn the money for our basement. We made stuff rice socks and body wash to sell. We earned up to about 200 dollars, and Jess, you know, she made sure we had enough money to get what we needed for our basement.

In our basement my group we taped off 12x12 square and painted it white. We measured and taped 12 squares on the large white painted square and painted every other one black. We taped one row at a time to make all corners line up. After that we took off the tape and let it dry.

The next Tuesday after that we went back down to the basement, and we noticed that Trot had stepped in the wet paint and left his foot print!. Every one said that Trot messed it up, but I thought that if he left at least we had a memory of all the fun stuff Trot and Jess had done with us. It was very fun I hope we can do something like this again!

Learning Zones of Regulation with a Pumpkin Volcano!

By: Hope Rideout

This year, a neighbor asked if she could use my jack-o-lantern pumpkin after Halloween to feed her pigs. While this is a great option for putting a rotting pumpkin to good use, I had to decline her request as I had a different purpose in mind: a pumpkin volcano. This is my favorite activity to teach youth about the concepts from the Zones of Regulation, involving a visually captivating exploration of the chemical reactions between vinegar and baking soda that produces fizzing (carbon dioxide gas), a classic S.T.E.M. (Science, Technology, Engineering, Math) activity.

The idea with S.T.E.M. is that youth are given opportunities to actively learn and problem-solve in a self-directed, hands-on fashion. Many popular therapeutic activities, such as making slime, marshmallow towers, or glitter bottles may be considered S.T.E.M. activities. In these examples, it is easy to see that in addition to promoting academic learning and skills, S.T.E.M. activities can also provide a context for helping youth develop self-awareness and self-regulation. In this way, the purpose of this newsletter is to encourage you to consider additional ways you might use S.T.E.M. to improve therapeutic services at Y.O.U. Inc. One way this can be done is by using S.T.E.M. activities as a vehicle for teaching about concepts from the Zones of Regulation.

Zones of Regulation is a model to help people understand their feelings and behaviors and learn to maintain and adjust their level of arousal for what they *want and need to do*. In this model, the spectrum of human experience is represented by

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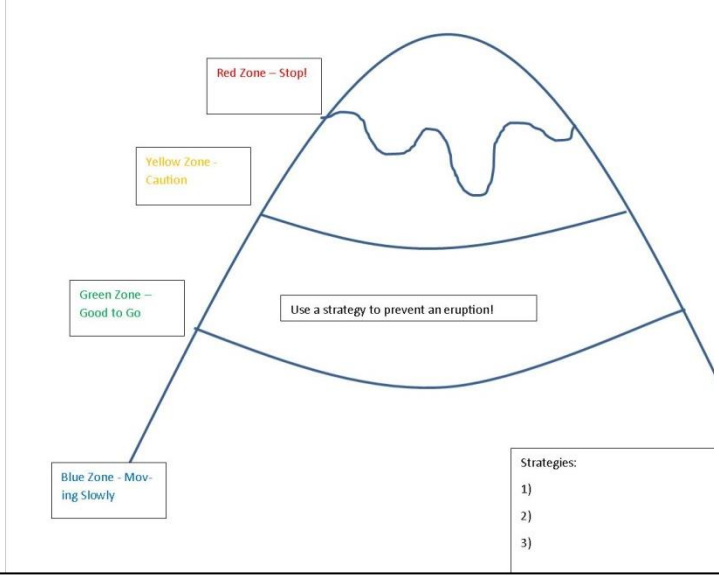
four colors: (1) **BLUE**: slow moving/low level of alertness (2) **GREEN**: calm/focused/alert (3) **YELLOW**: hyper/anxious/worried/starting to lose control and (4) **RED**: terrified/elated/out of control. The colors of the Zones of Regulations help to facilitate dialogue about inner experience. The Zones of Regulation can provide a backdrop for S.T.E.M. activities such that thoughts, feelings, and behaviors can be explored in a meaningful way through engagement in a purposeful, motivating activity.

So, let me revisit the pumpkin volcano example. In this activity, I use a carved out pumpkin, baking soda, vinegar. To start, I tell participants that there is baking soda inside the pumpkin and ask them what will happen if we add vinegar. Then they take turns adding the vinegar and we watch the eruption. They usually want to do it again. So before we repeat the activity, I ask them what the difference is between the Yellow and the Red Zones. I ask each participant to write down an example of something that puts them into the Yellow/Red Zones on a scrap piece of paper, crumple it up and put it into the pumpkin. Then we discuss strategies that can be used to prevent going into the Red Zone and I ask them to each write a strategy on the outside of the pumpkin with Sharpie. This time around, I give them the opportunity to vary the experiment by adding food coloring, glitter, and a couple drops of dish soap. We repeat the activity, usually until we run out of supplies. *



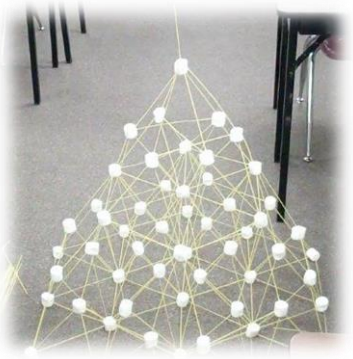
You can find this Zones Volcano Worksheet on the S drive:
S:\Occupational Therapy\Zones of Regulation

S.T.E.M. activities are great for all ages, but I have found them especially helpful in appealing to the interests of adolescent youth. Like creative play, S.T.E.M. activities are fun and intrinsically motivating. S.T.E.M. activities are not only educationally aligned; they complement social-emotional learning and skills practice in real-time and help to develop the therapeutic relationship.

*[There are many fun ways to modify this activity, such as making a paper-mache volcano rather than using a pumpkin. This incorporates two S.T.E.M. activities into one!]

STEM-focused College Access Event

By: Angel Rosario



The Bruce Wells Scholars Upward Bound Program and Dynamy Youth Academy fall under the College Access Programs for YOU, Inc. Over the years, both programs have come together for bonding experiences, team building activities, college tours and many other things. One thing that our students always have in common is the desire to attend college immediately after high school. As a result, administrators from these programs try to expose these students to as many experiences as possible. Since we are exposing our students to career and educational opportunities, we often challenge them in activities that help them problem-solve on their own.

Just recently in November, both programs came together to begin the school year right away working together. On this day, we began outside working on name games and ACE activities to get all 140 students there acquainted with one another. Once the students were warmed up after an hour of activities outside, we settled back in and began our activity. The main focus on the article is to focus on the idea of STEM and how youth are given opportunities to actively learn and problem solve in a self-dedicated, hands on way.

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Our students were placed in random groups and they were tasked to build towers out of marshmallows and boxes of spaghetti. It was an amazing day because students were working on their problem solving, team building and presentation skills.

We had around 10 groups of students from both programs mixed in each of them. Within each group they had to build a tower, name the tower and explain why how they got to that point. Spread across a big auditorium, each group went right to work. Groups were assigning roles, students stuck out as vocal leaders and each group had to deal with challenges. When all was said and done and we had all of the towers up towards the front of the auditorium. It was great to see all of the unique designs and creative ideas for all of the towers. Most of all, all of the students were learning how to work together to make a design that would be strong enough for presentation. Throughout the time allotted for each group, everyone had to communicate with one another, as well as problem solve when the tower was not staying up. The activity was teaching students how to set realistic goals and expectations for themselves and others around them. Seeing the scholars remind one another to stick to the plan they made was one of the main reasons they were all successful at the end. We selected a few of our part time staff to be judges and we judged each tower on its presentation, creativity, sturdiness and teamwork. Each group went one by one and chose a representative to come up to speak out loud to the entire group.

We have our students reflect after every activity we do in YOU, Inc College Access. All of the students believed doing this activity helped them build on their soft skills. All of the students love when both programs have a chance to come together since the only times they meet throughout the year, it is for the big events planned. This day was an overall success and we are glad to see that students learned how to set goals for themselves in all sorts of levels.

Slime Making and More

By Kathryn Dwan and Bethany VanEmburgh

Slime making has been an exciting STEM activity used at many YOU Inc. sites. Kids at the Latency Group Home look forward each week to groups that let them explore, play and get their hands dirty. One of our kids' favorite S.T.E.M. activities is also one of the simplest – Flubber Slime!

Flubber Slime is made by combining glue and liquid starch. Kids get the chance to create their mixture and feel how these simple ingredients create something totally new. They can individualize their Slime with glitter or food coloring, too. The end result is a thick, bouncy and slimy concoction that our kids love to play with. Once it's been mixed, Flubber Slime is both a great lesson in science (Non-Newtonian Fluids and polymers, to be exact!), but is also a great sensory tool. Several of the kids used their flubber throughout the week, and one of the girls shared the project with her family during a visit so that her sister could use it, too!

The CSA recently held a hands-on STEM and OT day making glitter bottles, ice-cold rice sensory bins, and winter slime! One mother commented, ""My son, Joey, enjoyed and greatly benefited from the OT day. The activities planned were fun, creative, and very well planned out. When Joey first arrived he was very overstimulated as this was a completely new setting and a disruption to his typical routine. Once settled, he LOVED picking the colors for his sensory bottle and watching as the glitter sparkled and swirled around inside. The slime was awesome! Joey was still a little hyper at this point but the mixing really started to calm him and he was able to focus and move on to the next activity. The scented rice bins was

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Joey's favorite. He enjoyed picking all the 'treasures' to put in his bin. The mint smell was so relaxing. Joey has continued to use his bin on a daily basis. He takes it in the car and will also just sit on the couch with his hands submerged in the bin."

Whether it's being used as a fidget toy or a science lesson, sensory crafts are an awesome way to introduce kids to S.T.E.M. learning!

Our Favorite SLIME Recipe

Ingredients:

- ½ cup white Elmer's All Purpose glue
- ¼ cup liquid starch
- 1 – 2 drops food coloring

Directions

1. Pour glue into bowl
2. Gradually add liquid starch, stirring while adding
3. Let putty sit for 5 minutes
4. Knead putty
5. Repeat steps 3 and 4 several times to reach desired consistency

Technology for Coping

List of **FREE** Apps

Breathe, Think, Do With Sesame Street
Young children can help the monster to take deep breaths, think of a plan, and execute the plan

Settle Your Glitter
Shake your phone to scramble the glitter, then follow a visual cue to practice breathing while the glitter settles

Stop, Breathe, and Think
Check in physically, mentally, and emotionally to receive tailored guided meditations and yoga videos

Colorfy: Coloring Book
Keep calm and start coloring!

Daily Yoga – Yoga Fitness Plan
Provides a multitude of series and workshops in yoga, mindfulness and meditation, focusing on fitness, wellness, and mental health and clarity

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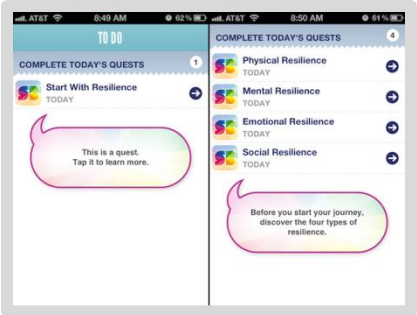
Relax Melodies
Mix and listen to a variety of sounds to quiet the mind and help with restful sleep

SuperBetter
Teaches self-care and post-traumatic growth through game play



Pinterest
Look here for creative, DIY, and therapeutic activities. Follow us at ctYOUinc for suggestions

Inspired by these STEM practices?

Click on the article title for more on this important evidence-based practice:

"Full STEAM Ahead"

Taking a Digital Detox

By Peggy Langley

As wonderful and helpful as technology can be, taking some time away from your screens -phone, tablet, computer or TV - can be very beneficial to reduce stress and increase personal interaction!! Call it a "Tech Timeout" or a "Digital Detox"! There have been many studies already outlining the benefits to the body and the brain when taking a break from devices. One study in particular where a group of participants took off 3 days from their screens noted these differences:

- People's posture changed to more upright, looking more forward into people's eyes
- People's energy "opened up" more per this posture and appeared much more approachable
- Better eye contact
- Increased conversation and cognitive processing
- Improved memories on details (more noticing in the moment)
- People felt more rejuvenated after sleep (blue light may suppress melatonin in the body)
- Possibly more open to new ideas and/or change

Here are a few ideas to give yourself, your children or your family some screen-free time:

- Get an "old-fashioned" alarm clock; plug in your phone to recharge overnight in a different room all together.
- Turn off screens two hours before bedtime
- Put phones in a basket before you or your family sits down for dinner or any other meal
- Set a "maximum daily time" to spend on your devices
- Keep your phone out of sight when you're driving
- Eat your lunch away from your desk and your phone
- Take a walk outside or in the building for 10 mins without your phone
- Work out without your earbuds/phone
- Find a detox buddy
- Tell friends/coworkers what you're doing!

For further ideas and/or interest check out:

www.overyondr.com
www.mindbodygreen.com
www.strong4life.com