# 'INNOVATE!

Issue 6: Summer, 2020 -





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## **Innovate and Create!**

We welcome you to the sixth issue of *Innovate!* and hope that you will find within its pages some practical ideas and guidance during this most challenging time.

Parents have always been a child's first teachers, but none of us imagined that they would become full-time teachers or that their homes would need to assume the functions of a school. Suddenly, families have had not just e-learning to contend with, but scheduling, pacing, enrichment, and outdoor activities as well. In response, we have seen a great burgeoning of creative ideas shared through websites, blogs, and social media platforms on almost any topic related to the challenges of living with Covid-19. At this time, as stay-at-home orders begin to relax, parents are looking for any creative learning opportunities that would allow their children to safely explore new interests outside their homes.

Children live very much in the present. For a child, a week can feel like a year sometimes. A month is endless. Sensitive to the world around them, gifted children may wonder, Will they ever be free to do the things they love with their friends and classmates? What will school look like in the fall? Interacting online and exploring Internet sources are second nature to them as with most young people. But e-learning can quickly become tired for many young people, and social media has its limits as the only mode of engagement with friends and peers.

The articles included in this issue respond to the emotional and creative needs of active, curious gifted children as communities carefully resume an appropriate level of normal activity. Some authors attend to the *importance of hope* for the future through problem solving and scenario writing, for example, or through discovering new interests, or

analyzing the realities of a technology-centered society as engineers and planners. Other authors respond more to the need for immersive creative projects where children can design, sketch, write, invent, fashion, and improvise with materials and ideas. Projects described range widely from creating games, staging performances, shooting movies, or exploring math-related puzzlers, to creating sketches, writing stories, or inventing a circus event!

We hope that you will stay in touch with us as our summer and fall plans evolve. Currently, the Center for Gifted will be offering online learning opportunities as well as appropriately safe in-person workshops in some locations. We hope you explore these new creative options for your child!

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# **Number One...Keep Learning Fun**

by Janette M. Forman, J.D

With so many students learning remotely at the moment, it is important to make sure that a child's love of learning is encouraged amidst the required work. There is no avoiding the fact that some types of learning are required. Classes have standards, curricula, and tests. Great creativity is required to keep students' interest in education positive. There has to be something fun for them amidst the required work, or complementary to the required work.

Think about some of the pursuits that you enjoy. They may require a lot of work, but they are recreation - unless someone *made* you do them. As school winds down, and as some regular summer activities may not be available, foster a love of learning by empowering your children with fun learning of their choice.

Help to keep your kids' interest in learning by giving them some control over what they learn and/or how they learn it, and define education broadly. If they are doing something they enjoy, it won't necessarily feel like education. It is still education even if it doesn't fall squarely into the category of a class at school. Ultimately, the list of choices depends on your child's interests. Some children know that they want to learn more about black holes, or horses, or engineering. If your child doesn't know what they'd like to learn more about, then act like a waiter, showing them many tantalizing opportunities for their learning pleasure. It is fair to tell your kids that they can choose what they want, but that they MUST choose something. Even learning in an unconventional venue uses brain skills, and the most important thing is for them to enjoy the process of learning something.

# Here are some suggestions and categories of things that are fun-yet-still-using-kids'-brains:

- 1) Create a game. It can be made using whatever resources interest your child: artwork on paper, cardboard and duct tape, dice and written-out rules, or learn-to-code computer resources online. Parents, you get to beta-test the game!
- 2) Write and/or perform a play or a song. Parents, you may be recruited to play one or many roles, or sing in the chorus.
- 3) Make a stop-motion movie using an app. The material can be with Legos, clay, dolls, fruit, paper cut-outs, or whatever imagination can dream up. Time-lapse movies could be fun, too.
- 4) Learn some magic tricks. Many tricks are explained online as well as in books, and although some require special props, others need nothing more than a deck of cards.
- 5) Write and/or tell a story on any topic and in any style. It can be a graphic novel, with or without words. It can be science fiction inspired by artwork that they or a sibling drew. Just have them tell a story, even if it is entirely out loud without a word written down.
- 6) Learn to cook something. Recipes can be fun or practical, mainstream or exotic, contemporary or historic. Cooking can connect to so many different areas of learning.... What did Presidents eat? Are there family recipes that have been handed down? Why do similar recipes with minor changes (such as different recipes for chocolate chip cookies) turn out flatter, or chewier, or crispier?
- 7) Make a family tree. This can be a simple one done on paper or an elaborate one done online. It is a great topic of conversation between children and relatives, and can be done on the phone or video calls. It can even segue into cooking recipes from your different ancestral backgrounds or historic family recipes, too.
- 8) Do a puzzle, crosswords, sudoku, or other brain-stretching activities.
- 9) Learn to dance. There are so many dance styles to choose from, and dancing is a fun form of exercise. Go ahead and make up your own dance steps, too.
- 10) Even if your child is watching videos online, they may still be learning. There are very educational videos on science, optical illusions, riddles, and more. Ask your child to tell you something interesting he or she learned from a video not a written report on it, just normal conversation at the dinner table. They shouldn't be on devices all day, of course, but if it is going to occur you can try to turn it into a force for good.

There are many more things that children might enjoy doing, and one area of learning may easily lead into another. For instance, learning that George Washington died of a throat infection may make a child more interested in other historical figures and how they lived and died, or about medicine in the past and present, or about Colonial times in general. You and your children know best what may spark their interest. As with many things in life, the most important step is to start. Have fun with your educational endeavors this summer!

**Janette M. Forman, J.D.** is an attorney, mother, educator, and butterfly gardener.

## I'm BORED!!!

by Carol Fisher

The new mantra of our times seems to be "I'm bored." That irritating mantra combined with confinement by social distancing is in danger of becoming an unrelenting war cry. We are used to helping our children feel creative and challenged - just not 24/7. E-learning aside, how often has the mantra of "I'm bored" been uttered? "I'm bored" has become an all-encompassing term that can include "I'm not interested," "I hate e-learning," "You're not paying any (or enough) attention to me," "I'm mad, sad, scared, frustrated, anxious...," "everything is always the same," "I miss my friends," "I hate my siblings," "I'm all alone," "I'm tired," "I want a challenge," and so on.

There are many creative and challenging ideas that do not require purchasing materials. Consider some of the following options.

#### Create a maze or marble run.

Children simply draw on paper – then send to a friend to solve. Use a shoe box top and strips of cardboard (formed into a "T" and glued down) to create a maze for a marble or ball bearing, use cardboard tubes, swim noodles, boxes, and other materials to create a vertical marble run (there are also marble run kits you can purchase – try *Mindware*). Don't forget to take a video to share.





# Origami doesn't require fancy paper and elaborate instructions.

Copy paper, notebook paper, gift wrap, construction paper, can all be cut into squares -6" is standard. Just use the same 'weight' paper throughout a project. Try polyhedral origami also known as modular origami. You can make multiple simple shapes such as cubes or tetrahedron and build enormous structures. You can find instructions online at sites such as http://www.origami-instructions.com/easy-origami-cube. html, https://mathcraft.wonderhowto.com/how-to/modular-origami-make-cube-octahedron-icosahedron-from-sonobe-units-0131460/ and https://www.youtube.com/watch?v= bShvpV\_O1o. You can also purchase instruction books online (as well as origami paper).

#### Make your own tangrams and pentominoes.

Tangrams and pentominoes are two of my favorite classroom manipulatives, but you can make them at home out of paper or cardstock (old file folders work well). Tangrams are a Chinese geometric puzzle consisting of a square cut into 7 pieces that can be arranged to make various other shapes. One site for a pattern:

- http://www.makinglearningfun.com/t.asp?b=m&t=http://www.makinglearningfun.com/Activities/MathIdeas/MathTangrams/Tangrams-1.gif

#### Online tangram puzzles:

- https://www.mathsisfun.com/games/tangrams.html and https://www.tangram-channel.com/tangrams-pages/tangram-cube-easy-11/

Pentominoes are 12 shapes consisting of 5 squares touching edge to edge. You can print out 1" square paper (https://www.scholastic.com/content/dam/teachers/lesson-plans/migrated-files-in-body/pentominoes.pdf) and either challenge children to discover the 12 shapes on their own (watch out for rotations and flips that are actually the same shape) or follow the guidelines on the site. Unless you want to focus on teaching perimeter and area, these are the most fun for solving puzzles. Can you make a rectangle of various sizes, like a 5x5 square? Children can explore more pentomino puzzles at https://www.coolmagnetman.com/pent.htm . A real challenge: find the 35 hexominoes.

#### Explore cryptography (codes and ciphers).

This can be simple: A=1, B=2, C=3 ...Z=26, or quite complex. Have you ever heard of \$1.00 words? Using the A=1 cent, B=2 cents and so on, can you find words that equal \$1.00. Start with how much is your name worth. https://mathlair. allfunandgames.ca/onedollarwords.php. You can get a fun book using riddles with \$1.00 words: The \$1.00 Word Riddle Book (Burns). Morse code and Braille are also codes. You can make code wheels —

https://dabblesandbabbles.com/wp-content/uploads/2015/10/Secret-Decoder-printable.jpg or https://www.brent.gov.uk/media/387164/Take%20One%20 Letter%20spy%20code%20resource.pdf and other cryptography tools.

PigPen cipher is the most popular in history with a wide range of uses. The code needs to be drawn out and can be tricky for some kids in the beginning. https://www.mykidstime.com/things-to-do/how-to-write-a-secret-message-using-the-pigpen-cipher/

There are also oral codes. There's Pig Latin where MATH becomes "athmay." The PBS TV show Zoom popularized "Ubbi Dubbi:" place "ub" before each vowel. MATH becomes "mubath." How about "Op Talk?" Op goes after every consonant. MATH becomes "mopatophop."

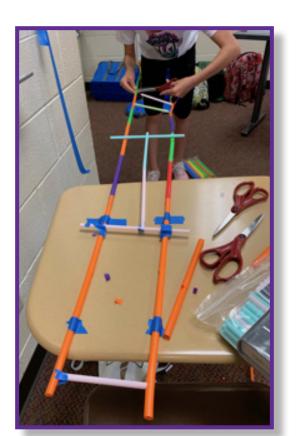
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#### The weather is pulling us outdoors!

We can't let social distancing shove us back in. Think a walk is BORING? Our neighborhood has a weekly theme where participating neighbors place something in their windows or on their lawns for walkers to see. We've done teddy bears, hearts, zoo animals, Star Wars, and emojis so far. We've added a bucket of sidewalk chalk so walkers can draw or write something related to a theme, not just for little kids as all ages love to use sidewalk chalk! Have a purpose for your walk. Walk in tandem using FaceTime or other platforms. Describe your walk, what you see, what you're thinking (be careful – don't trip). A walk can provide the genesis for myriad architectural concepts. Bring a notebook or a sketch pad. Look at doors, roofs, or simply shapes. What are your favorites? How do they differ, how are they the same? If you were designing a house, what shapes would you use? Draw that house, write a story about that house, build that house. Use cardboard, Legos, toothpicks, craft sticks – whatever you have. Look for arches, columns, domes or cantilevers.

#### Have fun building a cantilever.

You may not see a cantilever on your walk, but explore these cantilever challenges. Using straws and only one meter of tape, figure out the longest cantilever you can build that remains a certain distance off the floor. If you're using a table for the base, 20-24 inches is a good height to aim for. Children can work together (if they have siblings) or challenge a friend through FaceTime or some other platform where they can work together throughout the challenge or simply compare at the end of the build.





**Challenge:** Using sheets of copy paper (no tape or glue), figure out how tall of a structure you can build. Again, work together at home or challenge a friend.

#### Using Legos or Duplos, create a cantilever:

How far can you make it extend?

**Super challenge:** Use pennies or washers (see https://www.fincher.org/Misc/Pennies/, http://www.learningismessy.com/change/stem-cantilever-spans/). How are towers (water towers, cell towers) built?

**Explore how you could design your own room** – drawing free hand or using graph paper and scale. Write about your new room. How about a "tiny house"?

#### Re-visit familiar books.

Many children love to read. Try re-reading a book from an earlier time. What do you see/feel about it now? Could you write a more advanced version of this story? Try The Very Hungry Caterpillar (Carle): What would a caterpillar actually eat to prepare for turning into a butterfly? Bat Jamboree (Appelt): Can you figure out the formula for adding consecutive numbers? Write book reviews for friends. Using books like If I Ran the Zoo (Seuss) or A Giraffe and a Half (Silverstein) to inspire you, create your own animals, drawing or constructing them with tissue paper, gift wrap, feathers, buttons, and so forth. Make up book parodies, song or poem parodies; stage a performance and dress in costumes.

# Check out your local library for e-books resources. Here are some math-related recommended authors and some popular titles:

- Marcie Aboff If You Were an Inch or a Centimeter
- David Adler How Tall, How Short, How Far Away
- Mitsumasa Anno The Mysterious Multiplying Jar; Anno's Magic Seeds
- Marilyn Burns The Greedy Triangle; Spaghetti and Meatballs for All
- Lois Ehlert Fish Eyes; Color Zoo
- Steve Jenkins Biggest, Strongest, Fastest; What Do You Do When Something Wants to Eat You?
- David Macaulay Pyramid; Cathedral
- Suse Macdonald Sea Shapes; Puzzlers
- Cindy Neuschwander Sir Cumference and the First Round Table; Sir Cumference and the Sword in the Cone
- Jerry Pallotta The Icky Bug Counting Book; Ocean Counting Odd Numbers
- Theoni Pappas Fractals, Googols, and other Mathematical Tales; Math Talk Mathematical Ideas in Poems for Two Voices
- David Schwartz G is for Googol; If You Hopped Like a Frog
- Jon Scieszka Math Curse; Hey Kid, Want to Buy a Bridge?
- Robert Wells *Is a Blue Whale the Biggest Thing There Is?, Can You Count to a Googol?*

Its not too late......

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#### Take advantage of the resurgence in board games.

Renewed interest in old standards such as Chutes and Ladders, Scrabble, Stratego, Monopoly, Clue and more can spark ideas for creating your own board game or making a newer version. How about "Social Distancing Chutes and Ladders" or "Quarantine Clue?" Some other challenging board games children might enjoy include: 24 Games, Dr. Eureka, Enchanted Forest, Gravity Maze, Labyrinth, Newton, Oh! Snap, Otrio, Quiddler, Rock Me, Archimedes, Sector 18, Set, Suspend.

#### A to Z journals are a way to organize your journey.

Journals can include writing and illustrating as well as 3-D entries. Try "Algebra to Zero," "Aardvarks to Zebras," "Angel Food Cake to Zucchini Bread," "Africa to Zimbabwe," "Auntie Anna to Zaide Zane," "Antman to Zor-El, Kara." The possibilities are endless.

As our new lifestyle evolves, we will need to expand our repertoire. A plethora of amazing websites offer everything from virtual tours of the Smithsonian to readalouds by famous people, from craft tutorials to TikTok dance videos. It's what we do **with and after** these offerings that can keep the dreaded mantra "I'm bored" at bay. Don't just tour the National Zoo. Talking about the tour is always a good start. They can talk about the animals they saw, which were their favorites, why. Were there any animals they saw for the first time? How can they extend that? How about creating their own zoo with their stuffed animals, or with cardboard boxes, paper towel tubes, straws, and craft sticks? Have them draw out the zoo. The children can write a story about the zoo – anything from a simple recounting of the journey to an expose' on animal treatment or ways zoos can conserve endangered animals.

#### Crafts.

You don't have to be crafty to have fun with crafts. Warning: Make sure you check the whole thing out before starting if possible. You don't want to be caught halfway through with something you don't have or something you can't do. Is the finished product worth the effort? Does the craft tie in with anything else you've been doing? Can the craft be done without adult supervision? Do you enjoy crafts? Can you deal with the mess?

#### Tik Tok dances.

I have watched my three, a 12-year old girl and two 10-year old boys, having a great time duplicating these dances. They may not want any input or enjoy your comments or your participation. Be wary of trying to turn it into a math lesson of patterning...which did NOT go over well.

#### Facebook.

I must admit, I have found Facebook to be my access to a whole world of ideas. I skim through everything, but I have some go-to pages: *Museum of Science and Industry, Field Museum*, other area museums, *A Mighty Girl, Morton Grove Public Library* (I'm sure other towns libraries have similar pages), *SENG – Supporting Emotional Needs of the Gifted, Edutopia, Mindware, Reading Rainbow, Scholastic Book Clubs, Crayola, The Jim Henson Company/Jim Henson's Family Hub, JoAnn Fabric and Craft Stores*, and *Muppet Mindset*.

Many topics can be easily researched online to enrich opportunities for creativity and challenges. Try quilling, fractals, anamorphic art, quilting, coordinate art, Escher-like tessellations, curve stitching, magic squares, flexagons, Pascal's Triangle, Fibonacci sequence, xyloexplosives, optical illusions, op art, kites, and catapults.

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I want to thank the three gifted children sitting around my kitchen table for their invaluable input. They recommend starting the day outside and having a schedule. This has been consistent throughout and although it is malleable, it has really helped. They have enjoyed FaceTime or Google Meet with their friends, reading, jigsaw puzzles, Legos, board games, building things, arts and crafts, Fancy Breakfast Fridays, and taking walks with an adult because it is relaxing ("takes your mind off e-learning"), and gives them someone to talk to.



Carol Fisher has been involved with gifted children for more than 40 years while teaching, coordinating, and creating curriculum in mathematics for the Chicago Public Schools. An author in education and recipient of the Golden Apple Award for Excellence in Teaching, she has worked with the Center for Gifted in Glenview, Illinois, creating innovative math experiences for summer and weekend programs.

# **Bad is Good: The Gift of Time and Creativity**

by Richard Shade and Patti Garrett Shade

In 2008, the authors of the book *Disrupting Class* predicted that by 2019, half of all high school courses would be online. All the numerous benefits were highlighted; however, by 2019 the disruption had not happened. Then in February 2020, it arrived unannounced on the "doorsteps" of every parent of school-aged children. All classes from Kindergarten through Graduate School went online and every student and every parent became homeschool participants. *Instantly!* The pandemic created an unforeseen disruption in the way we do school . . . and home.

The bad news! For years, teachers have repeated a common refrain, "I love doing creative activities, but I can't find the time. I know creativity is very important, but unfortunately there is little time in the day, in my classroom, or in the standardized curriculum for creativity."

The good news! For children staying at home and taught by their parents, school has become more flexible. Learners are released from the constraints of the school clock. Time now exists for children to discover their interests, use their imaginations, and explore their creativity. In a recent Facetime talk with our grandchildren, ten-year-old Ella shared her drawings of animals as well as a memory quilt she was creating with family members to remember their family pandemic activities. Eight-year-old Bruce showed us how to animate online conversations! They were overly excited to share that their "schoolwork days" are now three days a week. Even more excitedly, they shared they could wake up early and be done with schoolwork by 10:00 a.m. - eagerly anticipating what they might do with the extra time. This reminds us that empowered learners are happily engaged learners.

Parents and children experiencing the novelty and exasperation of compulsory e-learning are seeking alternatives. As our son Caleb shared, "This is definitely not sustainable." Yet still, there is that little voice whispering in most parents' ears, "If I don't ensure that my children are completing all the work correctly, I fear they will somehow lose out or fall behind." Let's take a look at some more reassuring research:

- Plucker (2016) stated that four colleagues' research studies found very large percentages of students (between 15 and 45 percent) were performing above grade level. These percentages represent staggeringly large numbers of students. In California this group comprises more than 1.4 million pupils. The U.S. likely wastes tens of billions of dollars each year in efforts to teach students content they already know.
- Rogers (2002) cited studies reporting 75-85% of average and above average elementary school students passed subject pretests with 92-93% accuracy.
- The United States Department of Education's National Excellence Report (1993) found gifted and talented elementary school students knew 35-50% of the entire curriculum in the five major subject areas at the beginning of the school year.
- Renzulli and Reis (1992) reported elementary teachers could eliminate 40-50% of the regular curriculum for the top 10-15% of students with no negative effects on their achievement.

Can you imagine how much more they know today? Freely exploring the wonders of the world limitlessly on the world-wide web!

There are no seven wonders of the world in the eyes of a child.

There are seven million.

- Walt Streightiff

Curriculum Compacting, an educational practice for the last 30+ years, offers an alternative learning pathway for teaching gifted children. Its premise is that gifted children have already assimilated much of the material presented to them within standardized curricula. Teachers just need to sort out what they know, fill in any blanks, and let them have the freedom to explore topics of their choice in depth or breadth. This can begin by asking, "If you could study anything you wanted to, what would you study?" Children themselves often have ideas of what they would like to do, how they would like to do it, and what they want to produce to demonstrate their learning. All need encouragers to look beyond the obvious (dinosaurs or spaceships) to more intriguing areas of study.

When participating in a self-chosen trek, children discover interests, hobbies, and passions. Self-directed learning works for all ages. Emotional involvement and active participation can lead to life-changing ideas and success. Stories of great inventions, businesses, or ideas often begin at home in someone's bedroom, basement, or garage. Think back to a time when you took control of your learning. Share with your child how learning became an engaging journey.

It's been tough and it's not over. But let this be a time when parents become the learners and children become the teachers through shared passion explorations!

Here are a few ways to begin:

- **ABC Board** Have your child put the alphabet letters in a column down the left-hand side of a page. Ask her to list something of interest for each letter of the alphabet. She can work on this for several days and put more than one thing in each letter. Have her circle her top three areas of interest.
- Tic-Tac-Toe Once a child chooses a specific topic, he can begin to think about creating products to help share the cool new stuff he's discovered. A tool that provides both "voice and choice" is the Tic-Tac-Toe. Parents and children can both contribute to designing the Tic-Tac-Toe board of products.

Here is an example:

Create a Guidebook	Perform a Humorous Skit	Write a Newspaper Article
Create a Photo Essay	Your Choice Here	Create a Children's Book
Create a Puppet Show	Design A Game Board	Write a Song

• Famous Person Investigation – Have your child create another ABC board of interesting professions (drone designer, dog walker, dinosaur digger, etc.). Have her create a table with these headings: 1) Successes; 2) Failures; 3) "I bet you didn't know this!" Now challenge her to find ten interesting facts for each of the three headings about three persons of interest and finish by completing a Tic-Tac-Toe product or two. The resulting educational benefits include the skills of concentration, problem solving, language, math, memory, persistence, imagination, critical and creative thinking, and self-esteem. And, way more fun than writing a paper or taking a test!

The goal of teachers and parents alike is to discover children's interests and passions. Beginning with the first day of school both parents and teachers can get bogged down with ritualistic and institutional constraints- blocking the pathways to children's interests, passions, imagination, and curiosity. Discovery, problem-solving, questioning, and choice go by the wayside, quickly closing doorways.

When this crisis subsides, children will go back to school buildings and classrooms. But will they engage in relevant and meaningful "hands on, minds on" work? There will be a natural tendency to go quickly back to the way things were. But there is hope! We discussed this with our niece Amanda, a middle school math teacher in southern Indiana.

This has been an opportunity for students to recognize that they don't need a teacher in the front of the traditional classroom; rather, they are capable of overcoming their fear of math and working out problems in collaboration with their friends and other support systems. As a teacher, this frees me up to create more pathways while monitoring their success and challenges. It has been so refreshing to engage with students in a non-traditional format.

It was delightful to hear her share ideas springing up (in conversations with her colleagues) about how teachers can take this experience of home e-learning and make positive changes in classroom learning environments. She shared that now that their lessons were all sussed out and posted, there could be some exciting new opportunities:

- Lessons are immediately available for remediation and/or missed days.
- Instant flipped classrooms! More time to explore student-centered products.
- Gifted students compacting their own time by proceeding through the online work independently at their own pace.

#### All Versions of Instant Curriculum Compacting

When students return to the place called school, and they undoubtedly will, there can be many promising conversations between students, parents, and teachers. Lessons learned from this pandemic can become a wedge between the traditional way of teaching and new transformational ways of learning.

- For the last 100 years, children have attended school for much of the day, in classes of 25-30 students, and been taught a standardized curriculum by certified teachers who move them through their day on a pre-determined schedule.
- We know that children are learning all the time. They learn best about what they are most interested in and what matters most to them. And they learn quickly to be creative with both resources and time.

We would like to leave you with some reflections and thoughts from a newsletter passage by our mentor Jeffrey Davis of *Tracking Wonder* as he reflected on his experience as a parent and teacher during the pandemic.

How we're learning across the globe is changing. Our 10-year-old girl has blossomed in some ways these past several weeks in lockdown. We loaned her a Chromebook, gave her more autonomy to keep up with her Zoom school assignments and extra online tutorials, and gave her flexibility in how she shaped her days.

The result - an explosion within her of more autonomy, rapid digital learning that has inspired her creative intelligence and rapid iterative craft-making, and overall an increased desire to learn. Much of what I thought I knew about human learning I'm having to reassess . . . it's taught me how to be even more patient, open, and flexible.

Patti and I have a saying we are reminded of nearly every day: Bad is good! In other words, when something unexpected, negative, or bad happens, we begin to look at how we might create something positive from it. Parent and teachers can do this together and create a new learning revolution in their classrooms, schools, and districts.

Get ready! With your guidance for a brief period of time, children had a chance to take some control of their learning. It's not about what is stored in their brains, but what's stored on computers and what they can learn to do with it creatively.

Children are going to expect something different! How could they not? They've been given the freedom to think and the time to explore their passions.

**Dr. Rick Shade,** co-founder of Curiosita Teaching and professor with Outstanding Educator awards at two universities, is an internationally known author and speaker.

**Patti Garrett Shade**, co-founder of Curiosita Teaching and award-winning author, has a diverse background in K-12 international teaching and leadership experiences.

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## The Future Is Yours to Create!

by Jerry Flack

**Hope is the pillar that holds up the world.**-Pliny the Elder, A.D. 23-79

We are living in a time of great stress—our news saturated with words of despair. The current views of today and tomorrow are dystopian. It is essential for today's children to have opportunities to contemplate, examine, and explore their own positive or utopian images of the future. It is important for them to imagine the future positively. This is not a new idea. George Bernard Shaw wrote, "Some men see things as they are and ask why. Others dream things that never were and ask why not."

More recently, the father of creative education, Dr. E. Paul Torrance, wrote, "The genius of the future will be the creative mind adapting itself to the shape of things to come."

In the late 1970s, Dr. Torrance founded The Future Problem Solving (FPS) Program. The primary focus of the K-12 competition was group problem solving. However, a vital stand-alone component of the FPS Program was the individual scenario writing competition. Scenario writing is an important tool of futurists, people who present alternative views of our collective futures.

A scenario is a forecast of future events and conditions. The writer first envisions and then describes everyday life as it may be in some future time. The point of view is that of a person living in the future. That is, a scenario written from the time perspective of 2050 is written in the present tense with all events leading up to 2050 referred to in the past tense. The following scenario introduction written by a primary-level student illustrates this point of view as he introduces his invention of a gravity-free playground of the future, which serves not only as an innovative recreational space for children but doubles as a tool to train future astronauts. "We will practice exercising, playing, eating, and learning in our little piece of outer space," wrote Jason, the eight-year-old author. Jason even built a prototype of his zero-gravity playground.

#### Playground of the Future

by Jason Oraker

Rrrrrring! Recess time. Oh, boy, the new playground equipment has arrived, compliments of myself, the inventor, and NASA's Youth Experiment sponsorship. My friend Jose and I have been chosen to be the first children to try out the new PROJECT ZERO non-gravitational playground area. It is the year 2050 and the brand new PROJECT ZERO playground enclosure is an excellent way for future astronauts to experience weightlessness of worlds to come.

A scenario can depict a broad picture of the future or focus upon the effect of a singular technology, issue, or event. While it is acceptable to display plenty of technological inventions in a scenario, the writing should never lose sight of human factors. Technology does not exist in a vacuum. The lives of ordinary people are affected significantly by inventions.

Scenarios differ from science fiction in that they are less concerned with plot, characterization, or the fantastic, and deal more with the typical and commonplace. Scenarios are often set no more than 20y to 50 years into the future, and they attempt to portray daily happenings in the lives of ordinary people. Scenarios describe human behaviors that are physically possible. Unlike Super Hero comics, the characters or people in a scenario cannot burst into unaided flight or leap (uninjured) from tall buildings.

For five years, the author worked with a city newspaper in Colorado Springs to sponsor an annual scenario-writing project. Children in four grade-level divisions—K-3, 4-6, 7-9, and 10-12—wrote scenarios of 1,000 words to address topics as these: Welcome to the Future: It Is Going to Be a Great Place to Be; Hope + Courage = Great Futures; and Invention: The Heartbeat of the Future.

Students discovered ways to think about their futures imaginatively, constructively, and positively. It has been written that what one person can envision, another can invent. It may seem unrealistic to believe that today's children should be revolutionizing the world with their current (2020) inventions. Yet, it is never too soon to ask young people to become visionaries, to use imagination and creativity to predict the marvels that may be commonplace in, say, 30 to 50 years from today. Yes, Leonardo da Vinci, Einstein, Edison, Alexander Graham

Bell, and the Wright Brothers were doers, but they first were dreamers. Only when today's children are helped to dream and envision positive futures can such possibilities become probabilities.

When a scenario theme centered on the use of inventions to forge positive futures, one seven-year-old girl "invented" and described organic shoes. In Amy's future world, no one would ever have to worry about having comfortable, serviceable shoes. Children would be fitted at birth with special shoes made of organic material that would keep pace with each person's growth throughout life.

One of the secondary students described a typical day in the life of a future surgeon who invented and utilized a "lazermold" medical technique that could soften the molecular structure of damaged bones, reshape them, and then harden them back to a healthy condition.

There are many values to scenario writing that accentuate hopeful future images. Scenario writing

- encourages children to think positively about the future
- prompts children to use both creative and critical thinking skills
- introduces children to a new writing model or format
- engages students to utilize prewriting and editing strategies
- causes students to examine thoughtfully their own future-focused roles
- · activates interdisciplinary learning; and
- encourages active family involvement in student learning.

When parents share scenario writing with their children, they focus their attention not just on the past and present, but on the future. One of the Colorado Springs students who participated in the city's annual scenario writing celebration, wrote the following testimony. "I am impressed with the effort and enthusiasm displayed every year when scenario writing season rolls around. You've got a whole city of kids thinking hard about the future rather than watching television, and that is an accomplishment!"

Families can be directly involved in scenario writing. Students of winning entries in the scenario writing project often indicated that they obtained some of their best ideas from family dinner-table discussions prompted by the scenario themes.

Of course, the greatest benefit of scenario writing is the promotion of hopeful, healthy, and positive future images among today's youth. That is a significant gain. In the age of the COVID-19 pandemic, children are bombarded with a continuous chronicling of all that is wrong with the world. Helen Keller wisely wrote that "No pessimist ever discovered the secrets of the stars, or sailed to an uncharted land, or opened a new heaven to the human spirit." Additionally, they are exposed to a worrisome chronicle of negative images of the future such as threats of global warming, terrorism, the growing population of homeless families, and the ever-present threat of nuclear war. The cumulative effect of all such nay-saying may well be more pernicious than adults realize.

Today's children must be given messages of hope and not words of despair.

#### It is better to light one candle than to curse the darkness.

- Eleanor Roosevelt

In addition to the positive scenario themes already cited, other themes may include these:

#### **Building Better Tomorrows**;

Come to the Chicago World's Fair, June through August, 2050: Witness the Greatest Futures Ever Imagined;

#### Greater Tomorrows Are Closer than You May Think;

#### The 2060 Genius Grant Has Been Awarded to the World's Greatest Inventor.

Scenario writing is only one small pillar of hope, but it is a beginning. Parents and educators should be conscientious in sharing dreams of hopeful future possibilities with their children.

Scenarios are typically written, but many alternative formats exist. Various art media may be used by children who wish to display imagined futures. The resulting products may be as diverse as watercolors, collages, and cartoons. Musically talented children may want to compose pieces evocative of positive future themes. Students can imagine, draw blueprints, and then build three-dimensional structures of bright future constructions such as homes of the future. Ask children to brainstorm all of the primary functions performed in today's homes (see Notes). Such purposes include preparing and eating food, bathing and personal hygiene, learning, entertainment, sleeping, waste disposal, sheltering, and clothes maintenance. Ask students to name inventions that have facilitated these and other household functions: refrigerators, bath tubs, clothes dryers, student desks, entertainment centers, and electronic communication devices. Some of the following questions may further aid children in imagining homes of the future, circa 2050 to 2060.

- What will future homes look like, inside and out?
- What kinds of construction materials will be used in future home building?
- Will future homes have yards and other exterior features common today?
- What will a typical residential area or community look like?
- What new inventions will be found in each room? Describe each room in a home built in 2050.
- How will a future home be heated or cooled?

How will residents of brand new homes in 2050 shop for key furniture and appliances for a brand new home in the year 2050? Could brand new catalogs, circa 2050-2060, be made available? Encourage creative children to create such a catalog.

How will residents of brand new homes in 2050 shop for key furniture and appliances for a brand new home in the year 2050? Could brand new catalogs, circa 2050-2060, be made available? Encourage creative children to create such a catalog.

Buildings of the future need not be limited to single-family dwellings. Creative architects of the future may choose to design and build models of multiple-family units such as new types of condo and apartment complexes or housing constructions that do not even exist today. They may also choose to imagine and create models of public facilities including spaceports and underwater habitats such as Hydropolis, an underwater hotel and resort conceived to be built near Dubai in the United Arab Emirates.

Children can build their ideal and fantastic future structures using everything from LOGOS to Lincoln Logs to empty boxes (just unpacked and sterilized) from Amazon.

Whether scenarios are written or built, they encourage children to dream about and imagine hopeful tomorrows. Thomas Jefferson did not own a computer or sign up for membership on Facebook, but this cannot stop today's children from appreciating the words of one of America's greatest ever architects: "I like the dreams of the future better than the history of the past."

Encourage today's youth to believe in their own gifts and talents and abilities to make their hopeful dreams of the future come true.

Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has.

- Margaret Mead

#### **Author Notes**

Brainstorming is a wonderful creative thinking tool that has just four simple "rules."

- 1. Criticism is ruled out.
- 2. Wild ideas are welcome.
- 3. Many ideas are sought.
- 4. Combinations and improvements should be embraced.

Information about future problem solving and scenario writing may be found online on the website of the Future Problem Solving Program International. Addition information about scenarios of alternative futures may also be discovered at the website of The World Future Society.

**Jerry D. Flack is** Professor Emeritus and President's Teaching Scholar Emeritus at the University of Colorado, and winner of the 2003 E. Paul Torrance Creativity Award.

# **Be Futuristic and Challenge Those Creative Minds**

by Harry T. Roman

Want to engage those young gifted and talented minds at home? Here is a futuristic way to unleash creative minds. Since your children are working from home and perhaps doing some distance dialoguing with teachers and friends, how about a broad based, critical thinking exercise? Here is the premise for my suggestion: As folks continue more or less confined to their homes because of the Corona virus, think about what would happen if people became used to working from home, and many companies decided they liked the idea?

That's right, contemplate the what-if possibilities of a wholesale change in popular lifestyles, and explore the consequences of those changes. As a former research and development project manager, I can attest to this what-if method of looking at the future—changing one's viewpoint and then assessing impacts of such shifts in thinking. This is a powerful skill to have in the workplace when solving multi-faceted problems with many potential constraints.

Start with this consideration: What do we do with all the office buildings in cities and working centers when people communicate remotely from their homes? What would these big buildings transform into? How does this stay-athome philosophy impact traffic patterns and air pollution because of car travel? Does working from home increase pollution in residential areas where folks must now heat and cool their homes, condos, or apartments during most of the day? What of all those stores and services in the city center that serviced the big buildings? What about city police forces and fire departments? Can your child identify other city-based things that could be affected?

How might workers feel about not seeing their co-workers as often as they do now? Your children may miss their school friends as well. Does this loss of communication with friends affect older workers too? Many times, great ideas for new products result from workers practicing teamwork in the workplace,

exchanging ideas, improving and refining techniques, and constantly and closely interacting with colleagues. Is it possible, working at home could delay the development of new products?

Here is something close to your children's world: How does this change affect schools and all the buildings and people involved in educating them? What does this mean for routine tests, project design challenges, art and dance related classes, gym, and so forth? How do you address these issues and what might your child's suggestions be? Project what a typical school day would be like when being taught at home? How would this impact the entire educational system from kindergarten through college?

# Society will certainly be driving cars less. Think about how less car travel affects the social and economic aspects of life:

- Car accidents and death decline with many less miles traveled. What might this lead to? Impacts on car insurance?
- •There might be no need for business air travel as people would hold the meetings electronically. What would be the impact on airlines and cost of air travel?
- Fewer road repairs would be needed and fewer car tolls collected. What might be the impact on state revenue?
- More home delivery and ordering via cell phones would increase. How would this affect traffic congestion in residential areas?

Can your child make some projections about the "quantitative" impacts of these items? Search the Internet for others thinking about this scenario happening in the future. What are the pros and cons? What might be imaginative solutions to the consequences of these changes?

If communications electronics replaces physical travel, might families want to move further away from heavily populated areas to a more rural life? How might this affect our world? Where can students find information about possible impacts?

How does all the use of computers and telecommuting electronics affect the electrical energy usage in residential areas? What about natural gas use for heating homes? Does a denser use of telecommunications affect the telecommunications capability in your area, slowing down transfer speeds of real-time communications and videos? Is 5G capability sufficiently available everywhere---what about in inner city areas? Would we need to go to 6G telecommunications?

See how simply working from home can cause massive changes and concerns that need to be addressed, and the ones mentioned above are just obvious examples that come to mind. Challenge your children to envision other possible impacts and a new kind of world that could emerge. Encourage them to think critically and learn how society operates now and possibly in the future.

And most of all, comb the Internet for similar thinking by others!

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## **How to Help Your Child Explore New Interests**

by Kathryn P. Haydon

While sudden school cancellations may have been a shock to you and to your gifted child, they also present a silver lining of opportunity. Kids' normal schedules had become frenetic. With after-school activities, school, and homework, there was little time for much else. Yet, gifted children are unique and often gravitate toward unique interests—if they have space in their lives to discover and pursue them.

When you ask a child, "What are your interests?" the response is often fairly standard. Recess, video games, or maybe math or soccer. Kids learn to respond to fit in, rather than to stand out. So how does your child discover that she has a proclivity for rock formations from the Cretaceous age?

Now that weeks and perhaps months of time stretch before you, use the following resources to help your child discover new interests or revisit prior ones. The self-driven exploration that I suggest counts as learning and may even set your child off on a deep dive into a new topic.

# 1. The Kid Should See This https://thekidshouldseethis.com

Perhaps my favorite resource to recommend, this website curates thousands of videos in an array of categories. You can sign up for their weekly email or just hop on the website and let your child drive. Watch videos together. Notice which categories, topics, or styles he or she gravitates toward.

For example, from an early age my son specifically loved to watch the time lapse videos. This provided an insight that he likes understanding how things are designed and built, leading to watching the show How It's Made [https://www.youtube.com/channel/UCBSQUmg-XTkIDKodoYunWTw] and now, in his teen years, listening to the How I Built This [https://www.npr.org/podcasts/510313/how-i-built-this] business podcast.

Watching videos together, you'll observe common threads and can build off these with additional resources to share with your child.

#### 2. Byrdseed.TV https://byrdseed.tv/students/

Ian Byrd, the creator of Byrdseed.TV, was one of those stand-out teachers of gifted kids when he taught fifth and sixth graders in Orange County, California. Since then, he's created a membership site with self-paced, hands-on lessons geared toward gifted third through sixth graders. Right now, student video lessons are offered for free at the above link.

Use a similar approach with this resource. Let your child choose the lessons to do, observe the choices, and find additional resources to build on new interests or curiosities.

#### 3. Interest Inventories

I've long been a fan of giving interest inventories to students to help them learn with specificity what motivates and intrigues them. One of the most effective interest inventories I've used is a list of courses taught by the Center for Gifted in Glenview, Illinois. The courses are always multi-dimensional and the course names are intriguing to kids. Take a look at the checklist of classes included in this newsletter and share it with your child. Let him circle all the classes that would interest him and cross out the classes that would not. Though these classes aren't necessarily offered at the moment, it will give you topic ideas. As with numbers one and two above, use your child's choices as a guide to find more resources on the topics of intrigue.

Note that I have encouraged you to help your children find their interests, not passions. Passion is a weighted word and connotes a more permanent commitment than young children should be asked to make. Interests change and evolve over time, as they should.

The business books on my shelves have titles like Stand Out, Rebel Talent, The Disruption Mindset, The End of Average, and Non-Obvious Megatrends. Thriving in the business world is all about differentiation, about not fitting in. Giving your children the opportunity to explore their interests now will help them become comfortable pursuing what makes them unique and will help them live a more meaningful life. In the meantime, these interests will drive deeper, broader learning while time is abundant.

#### **Course Titles**

Slime, Flubber, and Other Fun Polymers

Cell-e-Bration: Journey to the Microscopic World

Bugs and Other Creepy Crawlies

The Science of Star Wars Lego Mindstorms Robotics

Lego WeDo Robotics

Create Lego Stop Motion Movies

Maker's Mania

**Lost Civilizations** 

Crime and Puzzlement

Escher Illusions and Tricks of the Eye

Dynamic da Vinci: Calling All Mad Scientists and Artists

Alike

Design Studio

Coding With Scratch

STEAM Week

Build It, Write It, Do It!

Creative Writing

Science Fiction Writing

Readers Theater

Improv and Theater Games

**Homemade Musical Instruments** 

**Kathryn P. Haydon, MSc,** is a creative thinking strategist, speaker, and award-winning educator who helps develop the thinking and leadership needed to break through the inertia of no and into possibility. She is the author of *The Non-Obvious Guide to Being More Creative, No Matter Where You Work*, several chapters in edited volumes, and hundreds of articles. You can download her free Leading for Possibility self-assessment.



Zayn Nawaz Khan Age 11 Manama, Bahrain "Horse" 2019 International Torrance Award Winner





# Innovation—Can Be Child's Play!

by Carol Sandberg-Howe

During these days of "shelter-in-place," and the emphasis on hours and hours of academic "e-learning, children AND adults *badly need a break*:

The almost universal urgency to accelerate children's academic achievement to keep pace with the demands of global competition tends to lead many parents and pressured educators to view playtime as an irritating intrusion—as nothing more than valuable time lost to academic pursuits that they view as more essential to our children's learning and growth.

On the contrary, play is paramount to allow children of all ages to interact with other children and the wealth of materials around them just waiting to be discovered!

Play supports the development of essential skills and competencies in cognitive, social, emotional, language, and physical development of the whole child.

Most important of all, PLAY IS INNOVATION!

Now, "Dramatic Play" is one of my favorite types of play. It incorporates all aspects of innovation and imagination.

So, after their daily e-learning sessions, I asked myself, "What theme of dramatic play would be a daily escape for both children and their parents—something that has the potential adaptability and universal engagement *for children of all ages?*"

Then it came to me---Who doesn't love the circus?!

Dramatic play is innovation and imagination in action.

Children can create exciting innovation projects after watching parts of the circus movies or reading the circus books, and discussing their choices with the family (see resource list at the end of this article).

#### General Plan for Daily Break:

For one to two weeks, initiate time slots of one to two hours a day so that children can choose projects individually or collaborate with siblings, and create their plan for circus events. Allow ample time to practice skills and performances, and culminate with a final show of any and all parades and performances. (Note that younger children will need extra time, support, and guidance).

#### Step 1:

Set the stage each day by showing one of the suggested circus movies and circus books for the whole family to enjoy and discuss:

After watching a clown act, a trapeze act, a ring master, a trained animal act, a juggling act, a tightrope walker, a magician, and so forth, children will be motivated to invent their own acts, create their own costumes, and make their own props out of the materials you provide from the list that follows.

#### Step 2:

Provide a general "toolbox" of materials to get their creative juices flowing.

#### **General Construction Materials**

**Note:** There are many materials available right in your home that can readily be assembled for children's use in inventing articles for their circus acts.

Cardboard boxes, tubes, shoeboxes, crayons, markers, paints, paint brushes, drawing paper, scotch tape, scissors, glue, rubber bands, tissue paper, paper bags, strings, clothesline, folders, Kleenex tissue, pipe cleaners, paper clips, sequins, glitter, ribbons, playdough, paper cups, straws, colored cloth, needles and thread, yarn, and so forth.

#### **Props for Clowns**

Note: Watch some clown performances for ideas and techniques.

Large adult shoes, honking horns or kazoos, large shirts, baggy pants, colorful wigs made out of yarn, red noses, large silly hats, rubber balls or balloons for juggling, large gloves, small tricycle to ride, face paint, dowel rods and balloons for fake dumbbells taped on the floor and a small umbrella for simulated tightrope walking, an empty leash and collar for invisible dog walking, a bucket to step in and pretend you can't get your foot out or filled with paper scraps or confetti to throw at the audience, small "kiddie" car to drive, lessons on how to do "mime or other clown acts. Watch a circus movie for ideas.

#### General Circus Props to Make:

Create microphones, whistles, a ringmaster hat and fake moustache, hula hoops for your pets to jump through during animal acts, play money, fake ears and tails and animal masks for acting out lion tamers or other animal acts. Make puppets out of socks or paper bags; decorate dance tights and bathing suits or t-shirts for acrobats and tightrope walkers; create costumes for being magicians, ballerinas, superheroes, and circus animals for wearing during a parade. Use tape recorders or CDs for playing recordings of circus music; make tents for performances under the Big Top; make concession stands out of cardboard for selling popcorn, candy, drinks or hand-made souvenirs; decorate wagons and bicycles for circus parades.

#### **Outdoor Circus Acts**

For those highly athletic children who have chosen simulated or modified performances of tumbling, tightrope walking, trapeze acts, and so on, encourage and praise their practice and persistence using outdoor swings, monkey bars, low to the ground balance beams as safe adaptations. **Caution:** Only with parental supervision!

#### Parades and Performances

Everyone loves a parade.

As a culmination, be certain to have your children take a well-earned bow to you, their grandparents, and neighbors, by parading around the yard or around the

block, to display their innovative projects, costumes, decorated wagons, bicycles, music, and so forth.

Through these creative, innovative experiences, you will notice how much your children have grown in patience, persistence, peer collaboration, and the self-confidence to believe that *anything* is possible!

#### **Resources for Innovation**

#### **Books**

ABC is for Circus, by Patrick Hruby

Circus Performer, by Lisa Regan

Discover the Circus, by Amanda Trane

DIY Circus Lab for Kids-Family Friendly Guide to Juggling, Balancing, Clowning, and Showmaking, by Jackie Leigh Davis

If I Ran the Circus, by Dr. Seuss

Silly Circus Tricks, by Nick Hunter

Tents, Tigers, and the Ringling Brothers, by Jerry Apps

The Great and Only Barnum: The Tremendous, Stupendous, Life of Showman P.T. Barnum, by Candace Fleming

The Circus Clowns: A Children's Story About Friendly Merry Makers For Ages 3 to 6, by Jasmin Hill

#### Movies

Bozo: the World's Most Famous Clown 4 DVDs – A WGN-TV Chicago-based children's program (young children)

Dumbo, DVD -- Animated classic movie by Walt Disney (all ages)

*Jumbo*, DVD -- A delightful 1962 MGM movie musical starring Doris Day, Stephen Boyd, Martha Raye, Jimmy Durante (a classic for all ages)

Kidsongs: A Day at the Circus, DVD -- Music video (all ages)

Pinocchio, DVD -- Animated classic by Walt Disney (all ages)

Toby Tyler, DVD -- A 1960 Walt Disney movie classic (based on the famous book of the same name) is a delightful story of a boy who runs away to join the circus (all ages)

The Greatest Show on Earth, DVD -- Cecil B. De Mille's 1952 epic Oscar-winning masterpiece showcasing the Ringling Brothers, Barnum and Bailey Circus performances (older grades and adults)

The Greatest Showman, DVD – A 2017 Broadway musical starring Hugh Jackman that celebrates "celebrates diversity and the importance of embracing all kinds" (middle grades to adults)

Carol Sandberg-Howe is a classroom teacher who specializes in gifted education, differentiation, common core, music, writing, and science instruction in Chicago and suburban schools. In addition, she has also participated in gifted programs at National-Louis University, Northeastern Illinois University, and the Center for Gifted – Midwest Torrance Center for Creativity. Ms. Howe has also held several educational programming positions at WTTW-Channel 11, Public Broadcasting, and has served as editor of a number of notable magazines. s, and hundreds of articles. You can download her free Leading for Possibility self-assessment.



Reem Khalid Zayied Almansory Age 15 Sanad, Bahrain "Amazing Animals" 2019 International Torrance Award Winner