



“XPLORATION EARTH 2050”

SEASON V - 2018/2019

FCC FRIENDLY EPISODE WRITE-UPS

FIRST QUARTER

Week of December 31, 2018 through week of March 25, 2019

Week of December 31, 2018 (Episode #118)

Robots are no longer science fiction, they are a fact of science. Through events like the FIRST Robotics Competition kids are designing and building working robots. Host Chuck Pell also pays a visit to a shop that builds customized robots. We’ll stop by a lab that University of Pennsylvania that is trying to harness the power of bacteria to make microscopic robots move. And what about evolving robots? Chuck gets to the bottom of what they are and how they work.

Week of January 7, 2019 (Episode #119)

Nature is inspiring all sorts of futuristic designs. And some of those designs are having real benefits for the animal kingdom. Host Chuck Pell goes to abandoned areas of Detroit where dog lovers are tracking thousands of strays...with drones. He’ll visit a crippled dog that’s now walking—all thanks to 3D printing. And a fish inspires a robot that’s transforming how environmentalists study oceans.

Week of January 14, 2019 (Episode #120)

As society advances new technologies are applied to what we learn and the ways we learn it. What will learning look like in 2050? Host Chuck Pell shows us a place that’s taking a hands-on approach to learning with robotic creatures. Can video games teach us anything? You bet they can. Specialty schools help kids learn things they are passionate about. And after school programs and camps are introducing students to some cool and exciting technology.

Week of January 21, 2019 (Episode #121)

We don’t often think about what things are made of, but the materials that go into our vehicles, homes, and appliances are undergoing a revolution. Host Chuck Pell will see how industrial diamonds are transforming manufacturing. He will experiment with a type of metal that gives new meaning to ‘waterproof.’ And he’ll get in the lab with a brand of concrete that heals itself—just like human skin.

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Week of January 28, 2019 (Episode #122)

Sound—you don’t think much about it, but futurists and entrepreneurs do. Host Chuck Pell catches up with two college-age inventors who’ve created a fire extinguisher that puts out fires---with sound waves. Another inventor has created a ‘sound cloaking’ device that could make submarines invisible to sonar. And sound waves can also be used to defy gravity---provided you can generate enough noise.

Week of February 4, 2019 (Episode #123)

High tech is revolutionizing the way kids learn AND the way teachers teach. Join host Chuck Pell as he gets elbow deep in the ‘sandbox of the future’---and 3D topographical sandbox that allows young students to test earth science theories with their own hands---in real time. 3D printing is also helping students create historical artifacts that they used to see only in photographs or behind glass cases. And nationwide math competitions aren’t for geeks any more.

Week of February 11, 2019 (Episode #124)

Humans have always used their best technology to save lives, and new tech---and even some OLD tech---is now being employed by doctors the world over. Host Chuck Pell meets a designer who uses old car parts to help 3rd world doctors keep babies from getting jaundice. He takes a stroll in a wheelchair that’s built to work like an All-Terrain-Vehicle. And doctors and botanists join forces to GROW medicines.

Week of February 18, 2019 (Episode #125)

Green technology is radically changing the way people get around. Host Chuck Pell will take to the road in a hybrid between a solar powered car and an old fashioned tricycle--that has no carbon footprint. He’ll visit the factory where electric powered buses are changing the daily commute for millions. And trains that float just inches above the ground will get you from one major city to the next as fast as an airplane.



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Week of February 25, 2019 (Episode #126)

If you want to see some of the world’s most famous treasures, you often have to travel thousands of miles. Now, as host Chuck Pell saw for himself, high tech is bringing fossils, artwork and historical artifacts to classrooms around the world. And virtual reality is changing the way teachers learn to do their job. Chuck goes to the virtual classroom to test himself in front of students of the future.

Week of March 4, 2019 (Episode #127)

Solar power is the fastest growing power source in the world; in fact, it’s a new industry creating tens of thousands of jobs. Host Chuck Pell learns how the eyes of moths are being used to create more efficient solar energy. And he visits a giant ‘farm,’ where thousands of solar panels produce the ultimate form of cheap, and renewable, energy.

Week of March 11, 2019 (Episode #128)

Future tech is bringing the past alive. Join host Chuck Pell as Virtual Reality technology recreates ancient cities. And laser scanning and video animation give new life to old fossils.

Week of March 18, 2019 (Episode #129)

Inventors are up to some crazy things. We’ll see a mirror that records your reflection — from all sorts of angles--- and downloads all those images to your cell phone. Host Chuck Pell will demonstrate a bulletproof material made of a new kind of foam. And a New York City hotel has a new employee: a two-ton robot that loves to handle visitors’ luggage.

Week of March 25, 2019 (Episode #130)

Doctors and botanists have come together to GROW medicine. Host Chuck Pell visits a lab where vaccines are developed inside of plants and then processed into pills---a development that could save millions of lives in the developing world. Drones are being used to deliver medicine not only across town---but across your living room. And virtual reality is giving doctors a view of the human body they’ve never had before.