



FirstWorks Arts Learning

Presents **Cirque Mechanics'**
Pedal Punk

The American circus reinvented in timber, steel, & ingenuity.

October 29, 2016
7:30 pm @ The Vets
1 Avenue of the Arts
Providence, RI 02903

Student Guide



About FirstWorks Arts Learning

FirstWorks has built deep, ongoing relationships with over 30 public and charter schools across Rhode Island to provide access to artists and help fill the gap left from severe public spending cuts.

The program features workshops taught by leading artists who provide rich experiential learning in a classroom setting, allows students and their families to attend world-class performances, and provides professional development and lesson plans for teachers.

“FirstWorks is clearly becoming a cultural beacon in its community and state. It’s very exciting to see how they’ve mobilized a community.” - National Endowment for the Arts

Please visit us online at www.first-works.org for further information about Arts Learning programming and season offerings.





2 Inspiration Behind *Pedal Punk*

Pedal Punk: a rowdy circus where the mischief is on wheels.

Enter the world of Pedal Punk, a Steampunk inspired place where cycling is the way to escape the technology obsessed society. In Pedal Punk we experience the excitement, artistry and thrill that occurs when a wacky bike shop mechanic interacts with cyclists and bikes, he repairs more than broken pieces. He creates wondrous machines and inspires the cyclist in all of us to become a Pedal Punk

Creative Director, Chris Lashua, spent most of his career on a BMX bike or inside a German Wheel. His fascination with bicycles and passion for cycling are evidenced in this new production. The synergy between man and machine, the hallmark of Cirque Mechanics, is exposed in a magnificent way in Pedal Punk. It is that synergy that The New York Times called 'exceptional, evocative, eye-catching and grossly entertaining...in a word, excellent.'

Cast: Lindsey Covarrubias, Jan Damm, Nick Harden, Wendy Harden, Wes Hatfield, Blake Hicks, Nata Ibragimov, Kevin Rogers, Windu Sayles, Lauren Stark



Like so many great ideas, every Cirque Mechanics production begins on the back of a napkin. Lashua starts by sketching an elaborate machine—a boiler-trolley, a trampoline-cart, a pedal-driven gantry—and a new show is born.

What exactly do you draw on the backs of napkins? Yes, this really does happen, although we also draw on backs of receipts and business cards, too! Since inspiration can strike at any time, it really is important to capture ideas and concepts right away. I actually have several airline napkins with marker sketches of the first Gantry and our Trike Rover!

What was the inspiration for Pedal Punk? We built the Gantry for an outdoor festival and knew right away we wanted to base our new show around it. We have always focused on showing off the relationships between our mechanical devices and the acrobats, and this device is our most ambitious apparatus so far.

What's your favorite part of developing a new show? Oh, that's a tough one! Creation is the best. Sharing those napkin drawings with my design partner, Sean Riley, and brainstorming which elements to build is great. I also enjoy the fabrication. Prepping the materials at the fabrication shop, cutting and painting; and then introducing a new machine to an artist and watching them discover it and use it—that's fantastic.

What makes the Cirque Mechanics ensemble special? Our creative team is what makes it all work. This is our fourth production together and we have a range of opinions and approaches. My job is to distill the sometimes opposing views and find the right balance of ideas for the show. Having people on the team who approach the process differently is very important. We get much better results by having a team of individuals that are talented and who respect the other contributors' opinions.

What about Pedal Punk are you most proud of? I started doing tricks on a BMX bicycle when I was twelve years old, and I haven't stopped. Bicycles have always been a huge part of my life, so to combine that love with my passion for circus and machines is extremely rewarding.

Why should I see Pedal Punk? If you love circus or like watching amazing feats of daring; if you are a builder, a maker, a gadget guru; or if you just like to laugh, we think this Pedal Punk is for you! We are having a blast and hope to meet you after the show!

3 Circus Facts

1. The word “circus” comes from the Latin for circle or ring. Large public entertainment events, like chariot races, would take place at Rome’s Circus Maximus, which could fit an audience of over 150,000 Romans!



The ruins of the Circus Maximus in Rome

2. A traditional circus is a traveling company of acrobats and performers, including trained animals and clowns. Nouveau Cirque combines art forms like juggling, trapeze, acting and music without a ringleader, animals or “big top” tent.
3. In order to execute tricks safely, circus performers have to work as an ensemble—a group of equals without a single star. Balancing and airborne acts often require three performers: a flyer who performs skills mid-air, a second performer acting as a base to lift or catch the flyer and a third—a spotter—to assist and safeguard the flyer.
4. Performers let us know their acts are done with their own signature style—maybe a wink, a hand gesture or a “Ta-dah!”
5. Clowning is highly physical theater, often without words, that draws on the traditions of Commedia dell’Arte and pantomime.
6. Contortionism is a circus genre in which a performer displays unusually flexible muscles and mobile joints.

7. Funambulism (or tightrope-walking) is the art of walking along a thin wire or rope, usually at a great height.
8. The simplest form of juggling using three objects is called a three ball cascade. Give it a try! Legendary screen star Cary Grant started his performance career working as an acrobat and juggler.
9. Sousa's famous march, "The Stars and Stripes Forever," was traditionally played to quickly signal an emergency to all circus personnel.
10. Alongside circus traditions, performers have developed many circus superstitions. For instance, whistling backstage is considered bad luck.
11. One circus superstition is that performers must enter the ring on their right foot to avoid bad luck.
12. Trapeze artists develop their skills over years of training.
13. A free pass is sometimes called an Annie Oakley—the small hole punched in the ticket resembles sharpshooter Oakley's bullet holes, and Oakley is rumored to have given bullet-perforated playing cards to kids to use as free passes!
14. Did you know that popcorn, a popular circus and theater snack, has been around since 400 BC?
15. In keeping with yet another circus superstition, performers never eat peanuts backstage.
16. The modern circus—equestrian acts, clowning and feats of strength and agility—was created by Philip Astley in 1770 in England.
17. John Bill Ricketts presented the first circus in America on April 3, 1793 in Philadelphia. President George Washington attended!



18. Italian equestrian Giuseppe Chiarini led the most well-traveled early circus, visiting fifteen countries on five continents during the late 19th century.

19. After living in the London Zoo for sixteen years, Jumbo the Elephant was sold to P.T. Barnum and came to the U.S. in 1882. Jumbo inspired “Jumbomania”, and jumbo soon became a synonym for large.

In image at right, Jumbo is featured in an ad from the late 19th century for baby laxative.



20. Did you know that circus is over 2,000 years old? Chinese circus dates back to the Qin Dynasty of 225–207 BC.

21. “Happy Cooks” is a traditional Chinese circus act that involves plate spinning and juggling food or kitchen utensils.

22. Enterology is the practice of squeezing one’s body into a very small box or container. Cats and kittens possess this talent.

23. A rola bola, or bongo board, is a flat piece of wood balanced on a wooden cylinder. Circus performers balance on one (or many stacked) bola boards for all sorts of acts, from juggling to acrobatics.

24. The world record for the most balls juggled is held by Alex Barron for completing twenty-five cascades of eleven juggling balls at once!



4 The Bicycle

The first version of the bicycle, invented by a German baron, was called the Drasine. It had two wheels but no pedals and moved by feet pushing against the ground. the penny-farthing was invented by englishman James Starley. With its large front wheel and small rear wheel, this bicycle had increased speed, more comfort and the ability to go farther with one rotation of the pedals. the unicycle was inspired by the penny-farthing, because when cyclists stopped abruptly, the bicycle would often rise up on the front wheel and the rear wheel would leave the ground. Some cyclists began experimenting to see how far they could travel on just the front wheel. the pennyfarthing gets its name from old British penny and farthing coins which represent the large and small wheels.



Drasine



Penny-farthing Bicycle



Farthing coin

5 What is Steampunk?

A genre of science fiction that typically features steam-powered machinery rather than advanced technology. Steampunk is a made-up, fantasy period of history (or the future). Steampunk imagines what it would be like if the Victorians had used steam power and clockwork to make gadgets like we have today. Steampunk also imagines a unique style in dress and attitude. In Pedal Punk the steam is human power!

Steampunk is an inspired movement of creativity and imagination. With a backdrop of either Victorian England or America's Wild West at hand, modern technologies are re-imagined and realized as elaborate works of art, fashion, and mechanics. If Jules Verne or H.G. Wells were writing their science fiction today, it would be considered "steampunk".

One of the most prevalent Steampunk character types is the Mad Scientist or, if the scientist is a good character, the Quirky Inventor. In Pedal Punk, the Bike Mechanic is like the Quirky Inventor.

The "punk" in Steampunk comes from going against convention; creativity and the declaration of individuality through style, gadgets, or attitude, is what sets one apart.

The designers of the machines in Pedal Punk were inspired by the Steampunk animated movie "The Mysterious Geographic Explorations of Jasper Morello" by Anthony Lucas.



Image from "The Mysterious Geographic Explorations of Jasper Morello".

6 What is a Gantry Bike?

One of the apparatus you'll see in Pedal Punk is the gantry bike. The word gantry refers to a framed structure created to go across and support something; one example of a gantry is the structure that holds a rocket in place before it launches into space. In this case, the gantry is a huge vertical structure that rotates around the stage when performers pedal the two large wheels on either side. The gantry also becomes a place for performers to do acrobatics of all

kinds. The gantry bike weighs 3,000 lbs and has a top speed of five miles an hour, using sprockets and chains to propel it. It takes a team of four people 1 ½ hours to put it together but only one hour to take it apart.

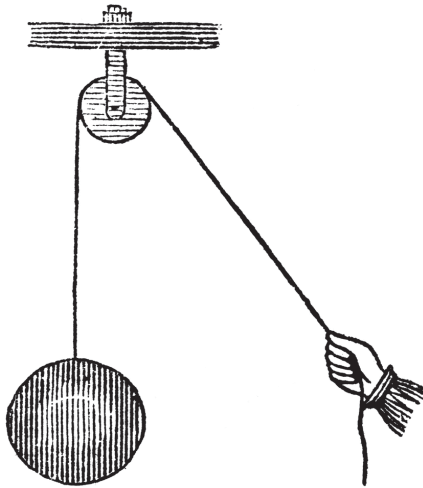


7 Simple Machines

Simple machines are machines that have few or no moving parts that are powered by energy. There are five simple machines that are used in Pedal Punk:

Pulley

Made up of a grooved wheel and a rope that fits in the groove, one end of the rope is attached to a load, then the other end is pulled to lift the load, turning the pulley.



Wheel and Axle

The axle is a rod that goes through the center of the wheel allowing it to turn.



Inclined Plane

often called a ramp, an inclined plane is a flat surface that is higher on one end. It is used to easily move objects from higher to lower or lower to higher.



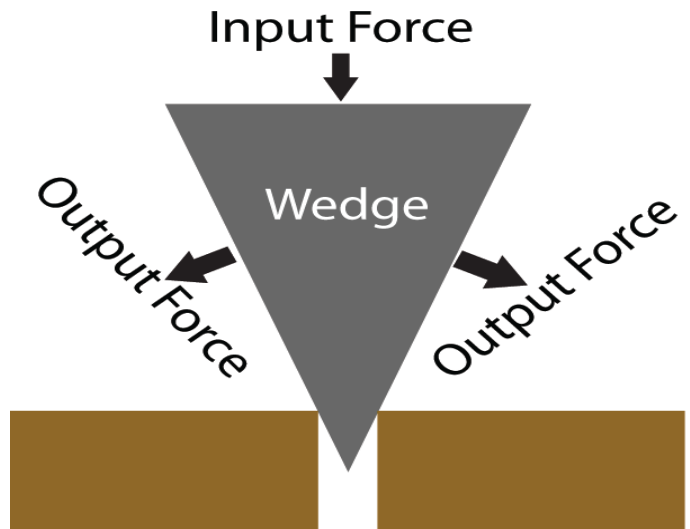
Screw

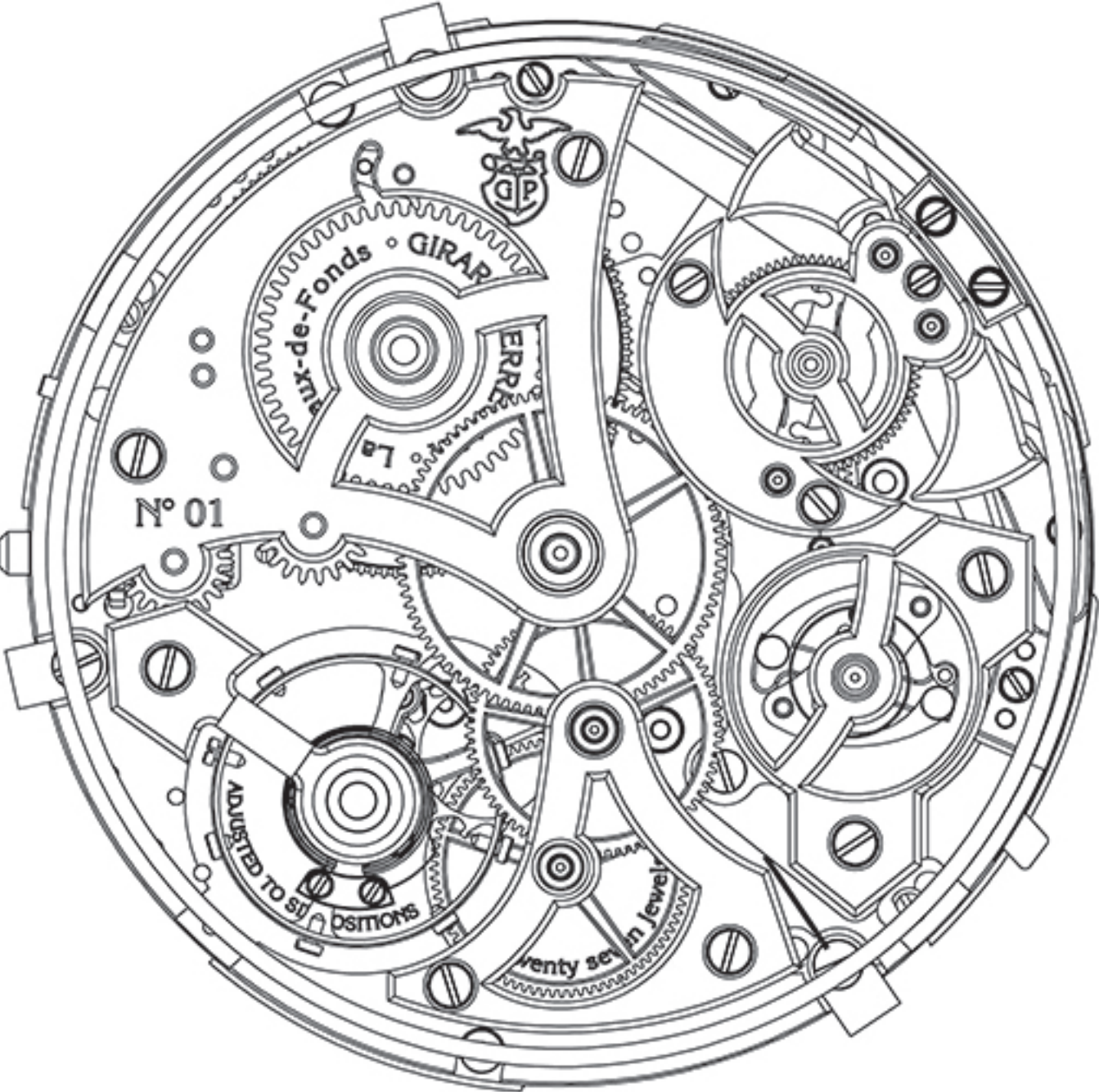
A screw is an inclined plane that winds around itself. Screws are used to lower and raise things and also to hold things together.

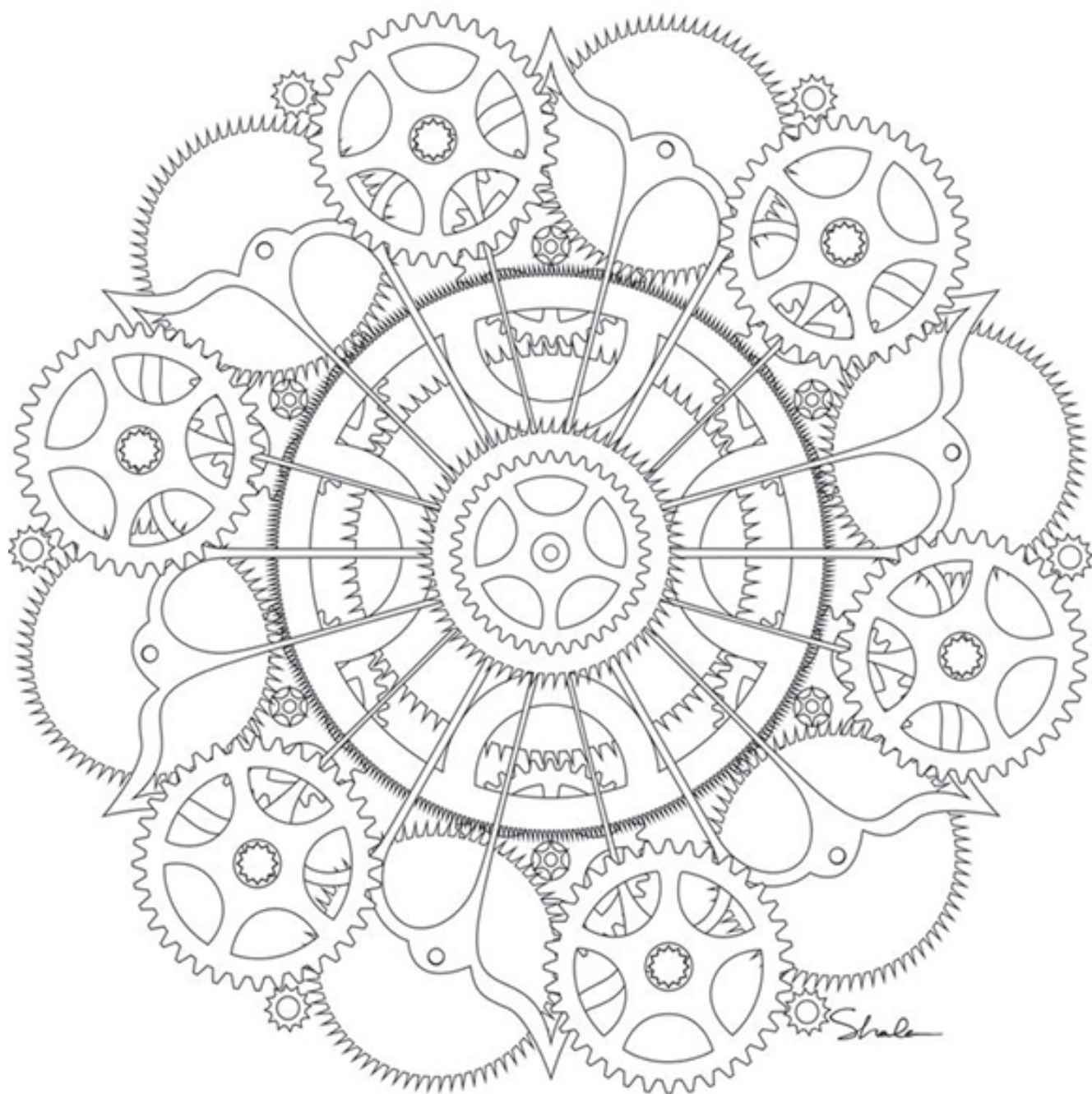


Wedge

A wedge is made of two inclined planes. these two planes meet and form a sharp edge which is used to push two things apart.







10 Fun Facts

There are approximately 90 wheels on stage in Pedal Punk. Can you find 50?

The aerial Penny Farthing in Pedal Punk can also be used to ride on the ground. It is a real bike!

Many of the bikes in the show were built from parts found in scrap yards. A great way to recycle and repurpose parts.

The Gantry Bike in Pedal Punk is an original Cirque Mechanics apparatus. It weighs 3,000 pounds! By using sprockets and chains it can be pedaled by just two people. It has a top speed of 5 miles per hour and it steers like a bulldozer.

The cast of Pedal Punk is made up of 10 artists: dancers, trampolinists, aerialists, a BMX rider, a juggler and clown, a rhythmic gymnast, a contortionist, and a stilt-walking stuntman.

There are over 25 bicycles in Pedal Punk including a BMX, and old beach cruiser, a miniature bike, two unicycles, and a never seen before bike that climbs when it is pedalled. This bike lifts aerialists high above the stage. There is even a bike with square wheels that can be ridden!



11 Something to Think About...

PRE PERFORMANCE DISCUSSION QUESTIONS:

- When you think of circus, what images come to mind? How do you think Pedal Punk might be the same or different from those images?
- How do you think someone decides to be a circus performer? What do you think they should study in school to prepare?
- Where do you see simple machines in your everyday life? What kinds of things do they do? How would life be different if we did not have these machines to help us out?

POST PERFORMANCE DISCUSSION QUESTIONS:

- How did Cirque Mechanics incorporate wheels and bicycles into the performance?
- Discuss the ways you saw circus being used to tell this story. How is it different from film or theatre or other forms of entertainment? What do you think happens next in the story?
- Name all the simple machines you saw in the show.
- If you were training to be a circus performer, what type of apparatus or acrobatic would you want to train for?



Additional Resources:

Cirque Mechanics: www.cirquemechanics.com

Gantry Bike video: www.cirquemechanics.com/pedal-punk/video/

Radio interview with Chris Lashua: www.cirquemechanics.com/pedal-punk/video/

Circus Physics: Newton's Laws of Motion: www.pbs.org/video/1607925512/

Bicycle Physics: www.real-world-physics-problems.com/bicycle-physics.html

Make a Rola Bola Balance Board: makezine.com/projects/rola-bola-balance-board/

Steampunk World's Fair: <http://steampunkworldsfair.com/>

Springfield, MA Steampunk Festival: <http://springfieldvtsteampunkfest.com/>

The Barnum Museum, Bridgeport, CT: www.barnum-museum.org/

The Ringling Circus Museum, Sarasota, FL: www.ringling.org/circus-museum

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FirstWorks Arts Learning programs help K-12 students build connections between art, their academic subjects, and their lives.

These school-based **Arts Learning** programs meet grade-level standards and model pathways to the future through exposure to cultural firsts.

FirstWorks Arts Learning enables K-12 youth to interact directly with some of the most inventive, creative minds of our time; bolstering student achievement and broadening career possibilities.