

off the fence.

Engineered

10 x 60'

EPISODIC BREAKDOWN

1. Tennis Ball / Pencil / Hot Dog / Fireworks

How does a tennis ball achieve its signature bounce? Can you really get lead poisoning from a number two pencil? If a hot dog isn't made from dog meat, what's actually inside one of America's favorite foods? And just how does a firework burst into multiple colors and patterns at exactly the right time? Find out the answers to these questions and more in this episode of "Engineered." Take a fast-paced and fact-filled adventure into the world of product design, manufacturing and testing as we go behind-the-scenes to find out how people and machines create some of life's most fascinating things.

2. Money / Plywood / Cheese / Taser

Why is plywood stronger and more durable than actual wood? If it doesn't grow on trees, where does money actually come from? What do curds and whey have to do with making cheese? And what does it actually feel like to be on the receiving end of a Taser? Find out the answers to these questions and more in this episode of "Engineered." Take a fast-paced and fact-filled adventure into the world of product design, manufacturing and testing as we go behind-the-scenes to find out how people and machines create some of life's most fascinating things.

3. Light Bulb / Beer / Escalator / Fire Extinguisher

Why is the glass of a fluorescent light bulb white, and not clear? What's the secret ingredient that gives Budweiser beer its distinctive light taste? Why are there grooves on every step of an escalator? And just how does a top of the line fire extinguisher put out a fire using only dry chemicals? Find out the answers to these questions and more in this episode of "Who Knew? With Marshall Brain." Take a fast-paced and fact-filled adventure into the world of product design, manufacturing and testing as we go behind-the-scenes to find out how people and machines create some of life's most fascinating things.

4. Glass Bottle / Potato Chips / Speedboat / Exercise Machine

Why is the main ingredient in making glass bottles... glass bottles? How many potatoes does it take to make a bag's worth of potato chips? What's the force at work providing an arc trainer's characteristic resistance? And how do you build a boat that's fast enough to cut through the waves at 55 miles an hour and large enough to hold 12 of your closest friends? Find out the

answers to these questions and more in this episode of “Engineered With Marshall Brain.” Take a fast-paced and fact-filled adventure into the world of product design, manufacturing and testing as we go behind-the-scenes to find out how people and machines create some of life’s most fascinating things.

5. Car / Pasta / Snow Blower / Compound Bow

How does a 44,000-pound coil of steel become the frame and parts for dozens of new sedans and SUVs? What is semolina and why is it used to make dry pasta? How does a snow blower pick up and throw over a ton of snow a minute? And just what makes a compound bow so much easier to operate than a traditional one? Find out the answers to these questions and more in this episode of “Engineered With Marshall Brain.” Take a fast-paced and fact-filled adventure into the world of product design, manufacturing and testing as we go behind-the-scenes to find out how people and machines create some of life’s most fascinating things.

6. Bread / Tires / Electric Guitar / Golf Balls

How does something called a “sponge” give us the greatest thing since sliced bread? How does fabric move thrill-seeking ATV riders through the toughest terrain? What part does a magnet play in bringing the sounds of rock and roll to the masses? And just how can dimples help improve your golf game? Find out the answers to these questions and more in this episode of “Engineered With Marshall Brain.” Take a fast-paced and fact-filled adventure into the world of product design, manufacturing and testing as we go behind-the-scenes to find out how people and machines create some of life’s most fascinating things.

7. Learjets

Why is the skin of a Learjet 45 XR made from an aluminum sheet that’s only 1/10th of an inch thick? How is NASA responsible for the overall design of the Learjet’s wing? And just what makes the Learjet 45XR capable of flying 535 mph at 51,000 feet – high above airline traffic and most weather? Find out the answers to these questions and more in this episode of “Engineered With Marshall Brain.” Take a fast-paced and fact-filled adventure into the world of product design, manufacturing and testing as we go behind-the-scenes to find out how people and machines create some of life’s most fascinating things.

8. Gun / Ice Cream / Mattress / Matches

How do you build a revolver that can shoot the largest caliber bullet legally allowed in a handgun? What’s a stabilizer and what’s it doing in your ice cream? Why is Kevlar thread used to sew a mattress? And why do safety matches only light up when you strike them on the box? Find out the answers to these questions and more in this episode of “Engineered With Marshall Brain.” Take a fast-paced and fact-filled adventure into the world of product design, manufacturing and testing as we go behind-the-scenes to find out how people and machines create some of life’s most fascinating things.

9. Toilet Paper / Chocolate / Batteries / Bikes

What is “creping” and how is it responsible for the softness of toilet paper? Why is it important to temper chocolate before you mold it? Why do D batteries last longer than AAA? And how do you

build one of the fastest road bikes in the world? Find out the answers to these questions and more in this episode of “Who Knew? With Marshall Brain.” Take a fast-paced and fact-filled adventure into the world of product design, manufacturing and testing as we go behind-the-scenes to find out how people and machines create some of life’s most fascinating things.

10. Frozen Pizza / Multi-tool / Wool / Airbags

Why is it necessary to roll out pizza dough over and over again? What makes a Leatherman’s saw more durable than an ordinary one? Why does simply spinning yarn make it stronger? And how do you ensure that an airbag deploys within milliseconds of an accident? Find out the answers to these questions and more in this episode of “Engineered With Marshall Brain.” Take a fast-paced and fact-filled adventure into the world of product design, manufacturing and testing as we go behind-the-scenes to find out how people and machines create some of life’s most fascinating things.