

Manheim Township School District - Science - "Big Ideas" Plan paired w/PBS Programming



			repeated programming
Please scroll down to locate grade level: K-12		WITFTV (TV Station channel) WITFKids (PBS24/7 channel) <a href="https://www.witf.org/programs/tv-schedules/">https://www.witf.org/programs/tv-schedules/</a>	also Math Curriculum
	<b>"Big Ideas"</b>	<b>June 8-June 12</b>	<b>June 15-June 19</b>
<b>Kindergarten</b>			
	<i>suggested programming:</i>		
	Monday	6/8, 7:30 a.m. (WITFTV) <b>Wild Kratts</b> ("A Bat in Brownies"—bats, ecology, predators and insects, echolocation)	6/15, 7:00 a.m. (WITFTV) <b>Curious George</b> ("Up, Up, and Away/Skunked"—hot air balloons and how they operate/skunks and how they defend themselves)
		6/8, 11:00 a.m. & 5:30 p.m. (WITFKids) <b>Nature Cat</b> ("Where have all the Butterflies Gone?/For the Birdies"—how humans can help both butterflies and birds; the importance of flowers for butterflies/birds need for food sources in winter)	6/15, 8:00 a.m. (WITFTV) and 8:00 p.m. (WITFKids) <b>Hero Elementary</b> ("Fair Weather/Home Sweet Home"-- Weather patterns -- including the interaction of sunlight, temperature, clouds, and wind -- help people predict what the weather is going to be/chipmunks and habitat) <i>*also on 6/19, 8:00 a.m. (WITFTV)</i>
		6/8, 8:00 a.m. (WITFTV) and 8:00 p.m. (WITFKids) <b>Hero Elementary</b> ("Where's There's Fur Blur?/The Blob"—exploring 5 senses and how humans use to solve problems/identify properties of materials or matter to get clues what it is) <i>*also on 6/12, 8:00 a.m. (WITFTV)</i>	6/15, 2:30 p.m. & 6:30 p.m. (WITFKids) <b>Wild Kratts</b> ("Mystery on the Prairie"—prairie habitat; spiked grasshoppers and beetles)
	Tuesday	6/9, 10:30 a.m. (WITFKids) <b>The Cat in the Hat Knows A Lot About That!</b> ("No Night Today/Fun in the Sun"—earth's rotation affects day and night/hippos, habitat and how they stay cool)	6/16, 8:00 a.m. (WITFTV) and 8:00 p.m. (WITFKids) <b>Hero Elementary</b> ("The Feed for Speed/An Uphill Task"—animal needs vary/simple machines—building a ramp so wheeled robot can go up levels)
		6/9, 12 p.m. (WITFKids) <b>Cyberchase</b> ("Soil Turmoil"—soil ecosystem—insects, worms, etc. and what is needed to make plants and other creatures live)	6/16, 10:30 a.m. (WITFKids) <b>The Cat in the Hat Knows A Lot About That!</b> ("Step This Way/Anything You Can Do"—how different animals use their feet, focus on lemur and geckos/mimic octopus)

<b>Kindergarten (con't)</b>		6/9, 11:00 a.m. & 5:30 p.m. (WITFKids) <b>Nature Cat</b> ( <i>"Backyard Bigfoot/Imperfect Produce"</i> —nocturnal animals and tracks/carrots—growing and types)	6/16, 3:00 p.m. (WITFKids) <b>Dinosaur Train</b> ( <i>"Nest Swap/The Herd is the Word"</i> —learn about two dinosaurs: Pterosaurs and habitat/Big-bodied herbivores lived in "herds," and do so as a strategy to detect and deter predators)
	Wednesday	6/10, 10:30 a.m. (WITFKids) <b>The Cat in the Hat Knows A Lot About That!</b> ( <i>"Thump/Squirreled Away"</i> —rabbit behaviors and useful survival skills/squirrel behaviors and skills)	6/17, 7:00 a.m. (WITFTV) <b>Curious George</b> ( <i>"Up A Tree/Curious George and the Trash"</i> —building a tree house, planning and constructing/trash and garbage system, where it goes)
		6/10, 3:00 p.m. (WITFKids) <b>Dinosaur Train</b> ( <i>"Rollin' on the Riverboat-Parts 1 &amp; 2"</i> —explores river ecosystem—diversity of habitats)	6/17, 10:30 a.m. (WITFKids) <b>The Cat in the Hat Knows A Lot About That!</b> ( <i>"Enough is Enough/Back on Track"</i> —how just 3 sticks can make/build/create different things/using tools to help problem-solve)
		6/10, 6:00 p.m. (WITFKids) <b>Wild Kratts</b> ( <i>"Voyage of the Butterflier XT"</i> —Monarch butterflies; life cycle; 2,000 mile migration)	6/17, 11:00 a.m. & 5:30 p.m. (WITFKids) <b>Nature Cat</b> ( <i>"Wild Batts/No Bird Left Behind!"</i> —Nature Cat and the Kratt Brothers team up to learn about bats and habitat/birds migrate to find food in winter)
	Thursday	6/11, 7:00 a.m. (WITFTV) <b>Curious George</b> ( <i>"We Otter Be Friends/Sir George and the Dragon"</i> —otters and how they swim)	6/18, 7:00 a.m. (WITFTV) <b>Curious George</b> ( <i>"Honey of a Monkey/Curious George's Egg Hunt"</i> —bees, how they make honey/bird's eggs and their characteristics)
		6/11, 7:30 a.m. (WITFTV) and 2:30 p.m. & 6:30 p.m. (WITFKids) <b>Wild Kratts</b> ( <i>"Rocket Jaw: Rescuer of the Reef"</i> —coral reefs and the need to protect this critical habitat)	6/18, 11:00 a.m. & 5:30 p.m. (WITFKids) <b>Nature Cat</b> ( <i>"Croak and Swagger/Puddle Pool Party"</i> —bullfrogs, pond habitat/water and concept of evaporation)
		6/11, 11:00 a.m. & 5:30 p.m. (WITFKids) <b>Nature Cat</b> ( <i>"Daisy's Wildflower Round-Up/A Party for Squeeks"</i> —wildflowers and how they grow)	6/18, 3:00 p.m. (WITFTV) <b>Dinosaur Train</b> ( <i>"Spooky Tree/Spinosaurus Super Model"</i> —concept of bioluminescence—how creatures glow, emit light/learn about largest dinosaur carnivore, Spinosaurus and its water habitat)
	Friday	6/12, 7:00 a.m. (WITFTV) <b>Curious George</b> ( <i>"Monkey Stagehand/Magic Garden"</i> —simple machines/plants: vegetables; what they need to grow; seed to plants)	6/19, 7:00 a.m. (WITFTV) <b>Curious George</b> ( <i>"The Big Picture/Juicy George"</i> —learn about endangered species bird, Cerulean Warbler, and how to protect/making juice from fruit; farmer's markets)
		6/12, 10:30 a.m. (WITFKids) <b>The Cat in the Hat Knows A Lot About That!</b> ( <i>"Take a Walk/Cotton Patch"</i> —how insects use many legs to move/cotton plants and how cotton becomes clothes)	6/19, 11:00 a.m. & 5:30 p.m. (WITFKids) <b>Nature Cat</b> ( <i>"Are You My Egg/S.O.S.—Save our Salad"</i> —lizards and birth from eggs/beetles harmful to plants, gardens, how other insects like spiders and ladybugs help, solutions)

			to protect plants from harmful predators)
<b>Kindergarten (con't)</b>		6/12, 3:00 p.m. (WITFKids) <b>Dinosaur Train</b> (“ <i>What’s at the Center of the Earth? Troglobites!/Minerals!</i> ”—caves; speleologist: someone who studies caves; troglobites: creatures that live in caves/ study of minerals, rocks and crystals in center of earth)	6/19, 6:00 a.m. (WITFTV) and 11:30 a.m. (WITFKids) <b>Ready Jet Go!</b> (“ <i>Beep and Boops Game/Constellation Prize</i> ”—satellite communication b/w Earth and Mars to help scientists gather data about Mars and its properties/constellations, astronomy, navigation)
<b>Grade 1</b>		<b>June 8-June 12</b>	<b>June 15-June 19</b>
	Weather vs Climate		6/15, 8:00 a.m. (WITFTV) and 8:00 p.m. (WITFKids) <b>Hero Elementary</b> (“ <i>Fair Weather/Home Sweet Home</i> ”—Weather patterns -- including the interaction of sunlight, temperature, clouds, and wind -- help people predict what the weather is going to be/chipmunks and habitat) <i>*also on 6/19, 8:00 a.m. (WITFTV)</i>
			6/18, 11:00 a.m. & 5:30 p.m. (WITFKids) <b>Nature Cat</b> (“ <i>Croak and Swagger/Puddle Pool Party</i> ”—bullfrogs, pond habitat/water and concept of evaporation)
	Types of precipitation		6/19, 10:30 (WITFKids) <b>Cat in the Hat Knows A Lot About That!</b> (“ <i>Mind to Change/Curious Minds</i> ”—gaining knowledge and facts can change your opinion/clouds: properties and changes of matter—liquids and solid) <i>*also on ELA Curriculum for writing prompt</i>
	Earth Science: Natural resources renewable vs nonrenewable	6/8, 6:00 a.m. (WITFTV) and 11:30 a.m. (WITFKids) <b>Ready Jet Go!</b> (“ <i>Sunday Drive Parts 1 &amp; 2</i> ”—comparing the desert on earth with Mars: life or lack of life, temperature, water, and soil)	6/18, 12 p.m. (WITFKids) <b>Cyberchase</b> (“ <i>A Reboot Eve to Remember</i> ”—energy/power sources and using wind and windmills to harness energy and electricity)
		6/8, 12 p.m. (WITFKids) <b>Cyberchase</b> (“ <i>A Murky Mystery in Mermaidos</i> ”—temperature—increasing to affect water habitats; thermal pollution.	6/18, 6:00 a.m. (WITFTV) and 11:30 a.m. (WITFKids) <b>Ready Jet Go!</b> (“ <i>Just the Right Distance from the Sun/Solar Power Rover</i> ”—earth’s position in solar system allows just right conditions for life/solar power—conversion of sunlight into electricity)
		6/9, 2:30 p.m. & 6:30 p.m. (WITFKids) <b>Wild Kratts</b> (“ <i>Rattlesnake Crystal</i> ”—Tellurium crystals found in earth’s crust, source of energy; Sonoran Desert habitat)	

		6/10, 12 p.m. (WITFKids) <b>Cyberchase</b> (“A <i>Camping Conundrum</i> ”—using solar power/energy when electricity is not available)	
<b>Grade 1 (con’t)</b>	Recycling		
	Life Science-genetics and heredity		
	Plant life-seed to adult plant	6/8, 11:00 a.m. & 5:30 p.m. (WITFKids) <b>Nature Cat</b> (“ <i>Where have all the Butterflies Gone?/For the Birdies</i> ”—how humans can help both butterflies and birds; the importance of flowers for butterflies/birds need for food sources (seeds) in winter)	6/15, 6:00 a.m. (WITFTV) and 11:30 a.m. (WITFKids) <b>Ready Jet Go!</b> (“ <i>Diggin’ Earth/Mindy’s Mystery</i> ”—earth’s structure/ moonflowers; moonlight) <i>*repeat on previous Science curriculum 4/20</i>
		6/9, 11:00 a.m. & 5:30 p.m. (WITFKids) <b>Nature Cat</b> (“ <i>Backyard Bigfoot/Imperfect Produce</i> ”—nocturnal animals and tracks/carrots—growing and types)	6/19, 11:00 a.m. & 5:30 p.m. (WITFKids) <b>Nature Cat</b> (“ <i>Are You My Egg/S.O.S.—Save our Salad</i> ”—lizards and birth from eggs/beetles harmful to plants, gardens, how other insects like spiders and ladybugs help, solutions to protect plans from harmful predators)
		6/9, 12 p.m. (WITFKids) <b>Cyberchase</b> (“ <i>Soil Turmoil</i> ”—soil ecosystem—insects, worms, etc. and what is needed to make plants and other creatures live)	
		6/10, 11:00 a.m. & 5:30 p.m. (WITFKids) <b>Nature Cat</b> (“ <i>Tally Ho! A Rainbow/Travel in Seeds</i> ”—rainstorm; rainbows/how seeds travel to help plants grow in different locations)	
		6/11, 11:00 a.m. & 5:30 p.m. (WITFKids) <b>Nature Cat</b> (“ <i>Daisy’s Wildflower Round-Up/A Party for Squeeks</i> ”—wildflowers and how they grow)	
		6/11, 8:00 p.m. (WITFKids) <b>Hero Elementary</b> (“ <i>The Lake Mistake/Plant Problem</i> ”—properties of matter and how temperature changes solids and liquids/plants: plant parts and what plants need to survive) <i>*repeat on previous Science curriculum 6/4</i>	
		6/12, 7:00 a.m. (WITFTV) <b>Curious George</b> (“ <i>Monkey Stagehand/Magic Garden</i> ”—simple machines/plants: vegetables; what they need to grow; seed to plants)	
		6/12, 10:30 a.m. (WITFKids) <b>The Cat in the Hat Knows A Lot About That!</b> (“ <i>Take a Walk/Cotton Patch</i> ”—how insects use many legs to move/cotton plants and how	

Grade 2		June 8-June 12	June 15-June 19
	<i>Life Science: Plants</i>	6/9, 11:00 a.m. & 5:30 p.m. (WITFKids) <b>Nature Cat</b> (“Backyard Bigfoot/Imperfect Produce”—nocturnal animals and tracks/carrots—growing and types)	6/15, 6:00 a.m. (WITFTV) and 11:30 a.m. (WITFKids) <b>Ready Jet Go!</b> (“Diggin’ Earth/Mindy’s Mystery”—earth’s structure/ moonflowers; moonlight) <i>*repeat on previous Science curriculum 4/20</i>
		6/9, 12 p.m. (WITFKids) <b>Cyberchase</b> (“Soil Turmoil”—soil ecosystem—insects, worms, etc. and what is needed to make plants and other creatures live)	
		6/10, 11:00 a.m. & 5:30 p.m. (WITFKids) <b>Nature Cat</b> (“Tally Ho! A Rainbow/Travel in Seeds”—rainstorm; rainbows/how seeds travel to help plants grow in different locations)	
		6/11, 11:00 a.m. & 5:30 p.m. (WITFKids) <b>Nature Cat</b> (“Daisy’s Wildflower Round-Up/A Party for Squeeks”—wildflowers and how they grow)	
		6/11, 8:00 p.m. (WITFKids) <b>Hero Elementary</b> (“The Lake Mistake/Plant Problem”—properties of matter and how temperature changes solids and liquids/plants: plant parts and what plants need to survive) <i>*repeat on previous Science curriculum 6/4</i>	
		6/12, 7:00 a.m. (WITFTV) <b>Curious George</b> (“Monkey Stagehand/Magic Garden”—simple machines/plants: vegetables; what they need to grow; seed to plants)	
		6/12, 10:30 a.m. (WITFKids) <b>The Cat in the Hat Knows A Lot About That!</b> (“Take a Walk/Cotton Patch”—how insects use many legs to move/cotton plants and how cotton becomes clothes)	
	Animals (habitats)	6/8, 7:30 a.m. (WITFTV) <b>Wild Kratts</b> (“A Bat in Brownies”—bats, ecology, predators and insects, echolocation)	6/15, 7:30 a.m. (WITFTV) <b>Wild Kratts</b> (“Birds of a Feather”—birds of paradise in New Guinea forest habitat)
		6/8, 10:30 a.m. (WITFKids) <b>The Cat in the Hat Knows A Lot About That!</b> (“Incredible Journey/Bamboozled”—salmon and their life cycle/panda, habitat, food: bamboo)	6/15, 8:00 a.m. (WITFTV) and 8:00 p.m. (WITFKids) <b>Hero Elementary</b> (“Fair Weather/Home Sweet Home”— Weather patterns; prediction /chipmunks and habitat)

<b>Grade 2 (con't)</b>	<b>Animals (habitats) (con't)</b>	6/8, 11:00 a.m. & 5:30 p.m. (WITFKids) <b>Nature Cat</b> (“Where have all the Butterflies Gone?/For the Birdies”—how humans can help both butterflies and birds; the importance of flowers for butterflies/birds need for food sources in winter)	6/15, 2:30 p.m. & 6:30 p.m. (WITFKids) <b>Wild Kratts</b> (“Mystery on the Prairie”—prairie habitat; spiked grasshoppers and beetles)
		6/8, 12 p.m. (WITFKids) <b>Cyberchase</b> (“A Murky Mystery in Mermaids”—temperature—increasing to affect water habitats; thermal pollution.	6/16, 7:30 a.m. (WITFTV) and 6/18, 6:00 p.m. (WITFKids) <b>Wild Kratts</b> (“Skunked”—skunks, defense mechanism; habitat)
		6/9, 7:30 a.m. (WITFTV) <b>Wild Kratts</b> (“Journey to the Subnivean Zone”—meadow vole, snowy field habitat”	6/16, 8:00 a.m. (WITFTV) and 8:00 p.m. (WITFKids) <b>Hero Elementary</b> (“The Feed for Speed/An Uphill Task”—animal needs vary/simple machines—building a ramp so wheeled robot can go up levels)
		6/9, 10:30 a.m. (WITFKids) <b>The Cat in the Hat Knows A Lot About That!</b> (“No Night Today/Fun in the Sun”—earth’s rotation affects day and night/hippos, habitat and how they stay cool)	6/16, 10:30 a.m. (WITFKids) <b>The Cat in the Hat Knows A Lot About That!</b> (“Step This Way/Anything You Can Do”—how different animals use their feet, focus on lemur and geckos/mimic octopus)
		6/9, 6:00 p.m. (WITFKids) <b>Wild Kratts</b> (“Lemur Stink Fight”—Ringtailed lemurs and habitat)	6/16, 2:30 p.m. & 6:30 p.m. (WITFKids) <b>Wild Kratts</b> (“Fire Salamander”—salamanders, life cycle, habitat: Black Forest in Germany)
		6/10, 7:30 a.m. (WITFTV) <b>Wild Kratts</b> (“Quillber’s Birthday Present”—African Crested Porcupine, quills for defense and other uses, habitat)	6/16, 6:00 p.m. (WITFKids) <b>Wild Kratts</b> (“The Desert Elves”—elf owl and desert habitat)
		6/10, 10:30 a.m. (WITFKids) <b>The Cat in the Hat Knows A Lot About That!</b> (“Thump/Squirreled Away”—rabbit behaviors and useful survival skills/squirrel behaviors and skills)	6/17, 7:30 a.m. (WITFTV) <b>Wild Kratts</b> (“Ground Hog Wake Up Call”—ground hogs, habitat and concept of hibernation)
		6/10, 2:30 p.m. & 6:30 p.m. (WITFKids) <b>Wild Kratts</b> (“Stars of the Tides”—rocky intertidal habitats; adaptation; life finds a way to survive even in harshest environments)	6/17, 11:00 a.m. & 5:30 p.m. (WITFKids) <b>Nature Cat</b> (“Wild Batts/No Bird Left Behind!”— Nature Cat and the Kratt Brothers team up to learn about bats and habitat/birds migrate to find food in winter)
		6/10, 3:00 p.m. (WITFKids) <b>Dinosaur Train</b> (“Rollin’ on the Riverboat-Parts 1 & 2”—explores river ecosystem—diversity of habitats)	6/17, 2:30 p.m. & 6:30 p.m. (WITFKids) <b>Wild Kratts</b> (“Back in Creature Time—Tasmanian Tiger, Part 2”—learn about the extinct Tasmanian tiger)
		6/10, 6:00 p.m. (WITFKids) <b>Wild Kratts</b> (“Voyage of the Butterfliier XT”—Monarch butterflies; life cycle; 2,000 mile migration)	6/17, 6:00 p.m. (WITFKids) <b>Wild Kratts</b> (“Bass Class”— Bass fish, habitat and species differentiation)
		6/11, 7:30 a.m. (WITFTV) and 2:30 p.m. & 6:30 p.m. (WITFKids) <b>Wild Kratts</b> (“Rocket Jaw: Rescuer of the Reef”—coral reefs and the need to protect this critical	6/18, 10:30 a.m. (WITFKids) <b>The Cat in the Hat Knows A Lot About That!</b> (“Gorillas in the Nest/Tale of a Dragon”—gorillas, habitat, build nests for

		habitat)	sleeping/lizards: green Iguana and Komodo Dragon)
<b>Grade 2 (con't)</b>	<b>Animals (habitats) (con't)</b>	6/11, 6:00 p.m. (WITFKids) <b>Wild Kratts</b> (“ <i>Lemur Legs</i> ”—sifaka lemurs; habitat: spiny desert of Madagascar)	6/18, 11:00 a.m. & 5:30 p.m. (WITFKids) <b>Nature Cat</b> (“ <i>Croak and Swagger/Puddle Pool Party</i> ”—bullfrogs, pond habitat/water and concept of evaporation)
		6/12, 7:30 a.m. (WITFTV) <b>Wild Kratts</b> (“ <i>Spots in the Desert</i> ”—Sonoran desert habitat; ocelot)	6/18, 2:30 p.m. & 6:30 p.m. (WITFKids) <b>Wild Kratts</b> (“ <i>Cobra King</i> ”—cobras, habitat, use of venom for defense)
		6/12, 8:30 a.m. (WITFTV) <b>Molly of Denali</b> (“ <i>The Worm Turns/Little Dog Lost</i> ”— ice worms and their habitat) <i>*repeat on previous ELA Curriculum 5/19</i>	6/18, 3:00 p.m. (WITFKids) <b>Dinosaur Train</b> (“ <i>Spooky Tree/Spinosaurus Super Model</i> ”—concept of bio-luminescence—how creatures glow, emit light/learn about largest dinosaur carnivore, Spinosaurus and its water habitat)
		6/12, 11:00 a.m. & 5:30 p.m. (WITFKids), <b>Nature Cat</b> (“ <i>The Deal with Eels/Skip It</i> ”—eels and habitat/skipping rocks)	6/19, 7:00 a.m. (WITFTV) <b>Curious George</b> (“ <i>The Big Picture/Juicy George</i> ”—learn about endangered species bird, Cerulean Warbler, and how to protect/making juice from fruit; farmer’s markets)
		6/12, 2:30 p.m. (WITFKids) <b>Wild Kratts</b> (“ <i>Attack of the Tree Eating Aliens</i> ”—investigate insects that harm trees in North America)	6/19, 7:30 a.m. (WITFTV) <b>Wild Kratts</b> (“ <i>Dear Buckaroo</i> ”—deer, their society, habitat and purpose of antlers)
	<b>Wild Kratts Movie Marathon</b>	6/12, 6:00 p.m. (WITFKids) <b>Wild Kratts Alaska: Hero's Journey</b> (Sockeye salmon; life cycles and ecosystems)	6/19, 11:00 a.m. & 5:30 p.m. (WITFKids) <b>Nature Cat</b> (“ <i>Are You My Egg/S.O.S.—Save our Salad</i> ”—lizards and birth from eggs/beetles harmful to plants, gardens, how other insects like spiders and ladybugs help, solutions to protect plans from harmful predators)
		6/12, 7:00 p.m. (WITFKids) <b>Wild Kratts: Amazin' Amazon Adventure</b> (Amazon rainforest habitat)	6/19, 2:30 p.m. & 6:30 p.m. (WITFKids) <b>Wild Kratts</b> (“ <i>Back in Creature Time—Go Dodo Go, Part 1</i> ”—learn about the extinct Dodo bird)
		6/12, 8:00 p.m. (WITFKids) <b>Wild Kratts: Back In Creature Time</b> (concept of extinction and reasons)	6/19, 6:00 p.m. (WITFKids) <b>Wild Kratts</b> (“ <i>Golden Bamboo Lemur</i> ”—Lemurs, habitat in Madagascar)
		6/12, 9:00 p.m. (WITFKids) <b>Wild Kratts: Creatures of the Deep Sea</b> (how life survives in the deep sea)	
	Animals that benefit Humans (i.e. bees)		6/18, 7:00 a.m. (WITFTV) <b>Curious George</b> (“ <i>Honey of a Monkey/Curious George's Egg Hunt</i> ”—bees, how they make honey/bird's eggs and their characteristics)

Grade 3		June 8-June 12	June 15-June 19
	<i>Earth Science:</i> Earth and Moon Matter	6/8, 6:00 a.m. (WITFTV) and 11:30 a.m. (WITFKids) <b>Ready Jet Go!</b> (“ <i>Sunday Drive Parts 1 &amp; 2</i> ”—comparing the desert on earth with Mars: life or lack of life, temperature, water, and soil)	6/15, 6:00 a.m. (WITFTV) and 11:30 a.m. (WITFKids) <b>Ready Jet Go!</b> (“ <i>Diggin’ Earth/Mindy’s Mystery</i> ”—earth’s structure: molten nickle-iron core, magna mantel, crust/ moonflowers; moonlight) <i>*repeat on previous Science curriculum 4/20</i>
		6/8, 8:00 a.m. (WITFTV) and 8:00 p.m. (WITFKids) <b>Hero Elementary</b> (“ <i>Where’s There’s Fur Blur?/The Blob</i> ”—exploring 5 senses and how humans use to solve problems/identify properties of materials or matter to get clues what it is) <i>*also on 6/12, 8:00 a.m. (WITFTV)</i>	6/17, 6:00 a.m. (WITFTV) and 11:30 a.m. (WITFKids) <b>Ready Jet Go!</b> (“ <i>Total Eclipse of the Sun Spot/Sean’s Year in Space</i> ”—solar eclipse, how they occur; difference b/w partial and total/International Space station; concept of gravity) <i>*repeat on previous Science Curriculum 4/17</i>
		6/8, 12 p.m. (WITFKids) <b>Cyberchase</b> (“ <i>A Murky Mystery in Mermaidos</i> ”—temperature—increasing to affect water habitats; thermal pollution.	6/18, 8:00 a.m. (WITFTV) <b>Hero Elementary</b> (“ <i>Tail of One Kitty/Movie Theater Meltdown</i> ”—observe, describe and compare how animals use their tails/how heating and cooling changes matter) <i>*repeat on previous Science Curriculum 6/3</i>
		6/9, 6:00 a.m. (WITFTV) and 11:30 a.m. (WITFKids), <b>Ready Jet Go!</b> (“ <i>You can Call Me Albedo/The Tide Is Hig</i> ”—asteroids, concept of "albedo"-brightness/ocean tides) <i>*repeat on previous Science curriculum 5/5</i>	6/18, 6:00 a.m. (WITFTV) and 11:30 a.m. (WITFKids) <b>Ready Jet Go!</b> (“ <i>Just the Right Distance from the Sun/Solar Power Rover</i> ”—earth’s position in solar system allows just right conditions for life/solar power—conversion of sunlight into electricity)
		6/9, 10:30 a.m. (WITFKids) <b>The Cat in the Hat Knows A Lot About That!</b> (“ <i>No Night Today/Fun in the Sun</i> ”—earth’s rotation affects day and night/hippos, habitat and how they stay cool)	6/19, 6:00 a.m. (WITFTV) and 11:30 a.m. (WITFKids) <b>Ready Jet Go!</b> (“ <i>Beep and Boops Game/Constellation Prize</i> ”—satellite communication b/w Earth and Mars to help scientists gather data about Mars and its properties/constellations, astronomy, navigation)
		6/9, 2:30 p.m. & 6:30 p.m. (WITFKids) <b>Wild Kratts</b> (“ <i>Rattlesnake Crystal</i> ”—Tellurium crystals found in earth’s crust, source of energy; Sonoran Desert habitat)	
		6/10, 12 p.m. (WITFKids) <b>Cyberchase</b> (“ <i>A Camping Conundrum</i> ”—using solar power/energy when electricity is not available)	
		6/10, 8:00 a.m. (WITFTV) and 8:00 p.m. (WITFKids) <b>Hero Elementary</b> (“ <i>All Over the Map/Lights Go Down in City Town</i> ”—mapping/how electricity and lights affect viewing the night sky)	

		<i>*also on 6/18, 8:00 p.m. (WITFKids)</i>	
<b>Grade 3 (con't)</b>		6/12, 3:00 p.m. (WITFKids) <b>Dinosaur Train</b> (“ <i>What's at the Center of the Earth? Troglobites!/Minerals!</i> ”—caves; speleologist: someone who studies caves; troglobites: creatures that live in caves/ study of minerals, rocks and crystals in center of earth)	
	Simple & Compound machines	6/9, 8:00 a.m. (WITFTV) and 8:00 p.m. (WITFKids) <b>Hero Elementary</b> (“ <i>Toadal Confusion/Hero Hideaway</i> ”—different properties of materials suited for different purposes/STEM--building a structure stable to stay upright—factors: size, shape and placement.	6/15, 7:00 a.m. (WITFTV) <b>Curious George</b> (“ <i>Up, Up, and Away/Skunked</i> ”—hot air balloons and how they operate/skunks)
		6/12, 7:00 a.m. (WITFTV) <b>Curious George</b> (“ <i>Monkey Stagehand/Magic Garden</i> ”—simple machines/plants: vegetables; what they need to grow; seed to plants)	6/15, 10:30 a.m. (WITFKids) <b>The Cat in the Hat Knows A Lot About That!</b> (“ <i>The Smart Move/ Simply Simple</i> ”—using simple machines to remove heavy log that disrupts soccer game/paper airplanes, dynamics of flight)
			6/15, 1:00 p.m. & 8:30 p.m. (WITFKids) <b>Odd Squad</b> (“ <i>Odd Beginnings, Part 1</i> ”—measurement, simple machines) 6/16, 1:00 p.m. & 8:30 p.m. (WITFKids) <b>Odd Squad</b> (“ <i>Odd Beginnings, Part 2</i> ”—measurement, simple machines)
			6/15, 12 p.m. (WITFKids) <b>Cyberchase</b> (“ <i>A Crinkle in Time</i> ”—time; gears: how size and number of teeth affects the speed at which each turns)
			6/16, 8:00 a.m. (WITFTV) and 8:00 p.m. (WITFKids) <b>Hero Elementary</b> (“ <i>The Feed for Speed/An Uphill Task</i> ”—animal needs vary/simple machines—building a ramp so wheeled robot can go up levels)
			6/16, 1:00 p.m. & 8:30 p.m. (WITFKids) <b>Odd Squad</b> (“ <i>Odd Beginnings, Part 2</i> ”—measurement, simple machines)
			6/17, 10:30 a.m. (WITFKids) <b>The Cat in the Hat Knows A Lot About That!</b> (“ <i>Enough is Enough/Back on Track</i> ”—how just 3 sticks can make/build/create different things/using tools to help problem-solve)
			6/17, 12 p.m. (WITFKids) <b>Cyberchase</b> (“ <i>Escape from Merlin's Maze</i> ”—levers; proportional rule: multiply the length of lever and multiply the weight to lift.)

			6/19, 12 p.m. (WITFKids) <b>Cyberchase</b> (“Echohaven Ooze”—simple machines: Build a working model of your invention to communicate and test your ideas, & make necessary improvements so the invention works the way you want it to)
<b>Grade 4</b>		<b>June 8-June 12</b>	<b>June 15-June 19</b>
	<i>Earth Science:</i> Properties of Matter	6/8, 6:00 a.m. (WITFTV) and 11:30 a.m. (WITFKids) <b>Ready Jet Go!</b> (“ <i>Sunday Drive Parts 1 &amp; 2</i> ”—comparing the desert on earth with Mars: life or lack of life, temperature, water, and soil)	6/15, 6:00 a.m. (WITFTV) and 11:30 a.m. (WITFKids) <b>Ready Jet Go!</b> (“ <i>Diggin’ Earth/Mindy’s Mystery</i> ”—earth’s structure: molten nickle-iron core, magna mantel, crust/ moonflowers; moonlight) <i>*repeat on previous Science curriculum 4/20</i>
		6/8, 8:00 a.m. (WITFTV) and 8:00 p.m. (WITFKids) <b>Hero Elementary</b> (“ <i>Where’s There’s Fur Blur?/The Blob</i> ”—exploring 5 senses and how humans use to solve problems/identify properties of materials or matter to get clues what it is) <i>*also on 6/12, 8:00 a.m. (WITFTV)</i>	6/17, 6:00 a.m. (WITFTV) and 11:30 a.m. (WITFKids) <b>Ready Jet Go!</b> (“ <i>Total Eclipse of the Sun Spot/Sean’s Year in Space</i> ”—solar eclipse, how they occur; difference b/w partial and total/International Space station; concept of gravity) <i>*repeat on previous Science Curriculum 4/17</i>
		6/9, 6:00 a.m. (WITFTV) and 11:30 a.m. (WITFKids) <b>Ready Jet Go!</b> (“ <i>You can Call Me Albedo/The Tide Is Hig</i> ”—asteroids, concept of "albedo"-brightness/ocean tides) <i>*repeat on previous Science curriculum 5/5</i>	6/18, 8:00 a.m. (WITFTV) <b>Hero Elementary</b> (“ <i>Tail of One Kitty/Movie Theater Meltdown</i> ”—observe, describe and compare how animals use their tails/how heating and cooling changes matter) <i>*repeat on previous Science Curriculum 6/3</i>
		6/9, 8:00 a.m. (WITFTV) and 8:00 p.m. (WITFKids) <b>Hero Elementary</b> (“ <i>Toadal Confusion/Hero Hideaway</i> ”—different properties of materials suited for different purposes/STEM--building a structure stable to stay upright—factors: size, shape and placement.	6/19, 10:30 (WITFKids) <b>Cat in the Hat Knows A Lot About That!</b> (“ <i>Mind to Change/Curious Minds</i> ”—gaining knowledge and facts can change your opinion/clouds: properties and changes of matter—liquids and solid) <i>*also on ELA Curriculum for writing prompt</i>
		6/12, 3:00 p.m. (WITFKids) <b>Dinosaur Train</b> (“ <i>What’s at the Center of the Earth? Troglobites!/Minerals!</i> ”—caves; speleologist: someone who studies caves; troglobites: creatures that live in caves/ study of minerals, rocks and crystals in center of earth)	6/19, 6:00 a.m. (WITFTV) and 11:30 a.m. (WITFKids) <b>Ready Jet Go!</b> (“ <i>Beep and Boops Game/Constellation Prize</i> ”—satellite communication b/w Earth and Mars to help scientists gather data about Mars and its properties/constellations, astronomy, navigation)
	Changes of matter	6/8, 12 p.m. (WITFKids) <b>Cyberchase</b> (“ <i>A Murky Mystery in Mermaidos</i> ”—temperature—increasing to affect water habitats; thermal pollution.	

<b>Grade 4 (con't)</b>	Energy	6/9, 2:30 p.m. & 6:30 p.m. (WITFKids) <b>Wild Kratts</b> ("Rattlesnake Crystal"—Tellurium crystals found in earth's crust, source of energy; Sonoran Desert habitat)	6/18, 12 p.m. (WITFKids) <b>Cyberchase</b> ("A Reboot Eve to Remember"—energy/power sources and using wind and windmills to harness energy and electricity)
		6/10, 12 p.m. (WITFKids) <b>Cyberchase</b> ("A Camping Conundrum"—using solar power/energy when electricity is not available)	
	Electricity	6/10, 8:00 a.m. (WITFTV) and 8:00 p.m. (WITFKids) <b>Hero Elementary</b> ("All Over the Map/Lights Go Down in City Town"—mapping/how electricity and lights affect viewing the night sky) <i>*also on 6/18, 8:00 p.m. (WITFKids)</i>	6/18, 6:00 a.m. (WITFTV) and 11:30 a.m. (WITFKids) <b>Ready Jet Go!</b> ("Just the Right Distance from the Sun/Solar Power Rover"—earth's position in solar system allows just right conditions for life/solar power—conversion of sunlight into electricity)
<b>Grade 5</b>		<b>June 8-June 12</b>	<b>June 15-June 19</b>
	Earth Science	6/8, 6:00 a.m. (WITFTV) and 11:30 a.m. (WITFKids) <b>Ready Jet Go!</b> ("Sunday Drive Parts 1 & 2"—comparing the desert on earth with Mars: life or lack of life, temperature, water, and soil)	6/15, 6:00 a.m. (WITFTV) and 11:30 a.m. (WITFKids) <b>Ready Jet Go!</b> ("Diggin' Earth/Mindy's Mystery"—earth's structure: molten nickle-iron core, magna mantel, crust/ moonflowers; moonlight) <i>*repeat on previous Science curriculum 4/20</i>
		6/8, 8:00 a.m. (WITFTV) and 8:00 p.m. (WITFKids) <b>Hero Elementary</b> ("Where's There's Fur Blur?/The Blob"—exploring 5 senses and how humans use to solve problems/identify properties of materials or matter to get clues what it is) <i>*also on 6/12, 8:00 a.m. (WITFTV)</i>	6/17, 6:00 a.m. (WITFTV) and 11:30 a.m. (WITFKids) <b>Ready Jet Go!</b> ("Total Eclipse of the Sun Spot/Sean's Year in Space"—solar eclipse, how they occur; difference b/w partial and total/International Space station; concept of gravity) <i>*repeat on previous Science Curriculum 4/17</i>
		6/8, 12 p.m. (WITFKids) <b>Cyberchase</b> ("A Murky Mystery in Mermaids"—temperature—increasing to affect water habitats; thermal pollution.	6/18, 6:00 a.m. (WITFTV) and 11:30 a.m. (WITFKids) <b>Ready Jet Go!</b> ("Just the Right Distance from the Sun/Solar Power Rover"—earth's position in solar system allows just right conditions for life/solar power—conversion of sunlight into electricity)
		6/9, 6:00 a.m. (WITFTV) and 11:30 a.m. (WITFKids), <b>Ready Jet Go!</b> ("You can Call Me Albedo/The Tide Is Hig"—asteroids, concept of "albedo"-brightness/ocean tides) <i>*repeat on</i>	6/19, 6:00 a.m. (WITFTV) and 11:30 a.m. (WITFKids) <b>Ready Jet Go!</b> ("Beep and Boops Game/Constellation Prize"—satellite communication b/w Earth and Mars to help scientists gather data about Mars and its

		<i>previous Science curriculum 5/5</i>	properties/constellations, astronomy, navigation)
<b>Grade 5 (con't)</b>	Earth Science ( <i>con't</i> )	6/9, 2:30 p.m. & 6:30 p.m. (WITFKids) <b>Wild Kratts</b> ( <i>"Rattlesnake Crystal"</i> —Tellurium crystals found in earth's crust, source of energy; Sonoran Desert habitat)	
		6/10, 12 p.m. (WITFKids) <b>Cyberchase</b> ( <i>"A Camping Conundrum"</i> —using solar power/energy when electricity is not available)	
		6/10, 8:00 a.m. (WITFTV) and 8:00 p.m. (WITFKids) <b>Hero Elementary</b> ( <i>"All Over the Map/Lights Go Down in City Town"</i> —mapping/how electricity and lights affect viewing the night sky) <i>*also on 6/18, 8:00 p.m. (WITFKids)</i>	
		6/12, 3:00 p.m. (WITFKids) <b>Dinosaur Train</b> ( <i>"What's at the Center of the Earth? Troglobites!/Minerals!"</i> —caves; speleologist: someone who studies caves; troglobites: creatures that live in caves/ study of minerals, rocks and crystals in center of earth)	
	Forces and Motion		6/15, 12 p.m. (WITFKids) <b>Cyberchase</b> ( <i>"A Crinkle in Time"</i> —time; gears: how size and number of teeth affects the speed at which each turns)
			6/17, 8:00 a.m. (WITFTV) and 8:00 p.m. (WITFKids) <b>Hero Elementary</b> ( <i>"With A Little Push/Track That Pack"</i> —forces and motion: pushing objects can start or stop movement/navigation of waterways)

Grade 6		June 8-June 12	June 15-June 19
		<b><u>Afternoon Science Programming for middle school students</u></b>	<b><u>Afternoon Science Programming for middle school students</u></b>
		6/9, 2 p.m. (WITFTV) <b>NOVA-- The Planets: Inner Worlds</b> (Planets are explored. Is there somewhere else in the solar system where life might flourish?)	6/15, 2 p.m. (WITFTV) <b>Nova—The Planets: Jupiter</b> (Jupiter shaped life on Earth, delivering comets laden with water and perhaps even a fateful asteroid.)
		6/9, 3 p.m. (WITFTV) <b>When Whales Walked: Journeys In Deep Time</b> (Scientists follow clues from the fossil record and use technology to make exciting new discoveries.) <i>*2 hours</i>	6/15, 3 p.m. (WITFTV) <b>Sealab: American Experience</b> (Discover the mostly forgotten story of the U.S. Navy's daring and groundbreaking Sealab program.) <i>*also Social Sciences curriculum</i>
		6/10, 2 p.m. (WITFTV) <b>NOVA-- The Planets: Mars</b> (Mars was once a blue water world studded with active volcanoes. Did life ever form on the planet?)	6/16, 2 p.m. (WITFTV) <b>Nova—The Planets: Saturn</b> (NASA's Cassini explores Saturn for 13 years, looping through its icy rings and flying by its moons.)
		6/11, 2 p.m. (WITFTV) <b>Climate Change - The Facts</b> (Scientists explore the impact of climate change and what could happen if temperatures rise.)	6/17, 2 p.m. (WITFTV) <b>Nova—The Planets: Ice Worlds</b> (In the far reaches of the solar system, Uranus and Neptune dazzle with unexpected rings and moons.)
		6/12, 3 p.m. (WITFTV) <b>Secrets of the Dead-- Scanning The Pyramids</b> (Scientists use non-invasive technologies to explore what lies within the Great Pyramid at Giza.)	6/18, 2 p.m. (WITFTV) <b>Big Pacific-- Mysterious</b> (The mysterious Pacific Ocean, whose depths we are just beginning to explore, is highlighted.)
		6/13, 2 p.m. (WITFTV) <b>Penn's Woods: Cradle of Conservation</b> (Follow the chronology of PA's Environmental History highlighting the accomplishments and challenges we have faced along the way.)	6/18, 3 p.m. (WITFTV) <b>Navajo Math Circles</b> (Navajo students use a model called math circles to study mathematics in Tsaile, Arizona.) <i>*also Math curriculum</i>
		6/12, 3 p.m. (WITFTV) <b>Rachel Carson: Voice of Nature</b> (Focus on Rachel Carson's connection to Pennsylvania and the impact her work has had on PA environmental and conservation policy)	6/19, 2 p.m. (WITFTV) <b>Big Pacific--Violent</b> (Discover how the Pacific, surrounded by the Ring of Fire, is the epicenter of natural mayhem.)
	Also Math Curriculum	STEM Programming	STEM Programming
	Physics Simple Machines Electricity Magnetism	6/11, 5:00 p.m. (WITFTV) <b>The Robot Doctor</b> (Episode 105: "Robot Motion: How can I move?"—How a robot can move around using legs, wheels, or other methods. Also, using math to predict where a robot will be in the future—given a model of the robot and the equations of motion.) <i>*Episode 104 will repeat followed by Episode 105, each</i>	6/18, 5:00 p.m. (WITFTV) <b>The Robot Doctor</b> (Episode 106: "Robot Vision: How do I see?"—How a robot can sense the world around it by using cameras, including how to tell the distance to objects seen by two cameras.) <i>*Episode 105 will repeat followed by Episode 106, each episode runs 14 minutes</i>

		<i>episode runs 14 minutes</i>	
	<i>Online Resource for Middle School Sciences</i>	PBS Learning Media <a href="https://witf.pbslearningmedia.org/">https://witf.pbslearningmedia.org/</a>	PBS Learning Media <a href="https://witf.pbslearningmedia.org/">https://witf.pbslearningmedia.org/</a>
<b>Grade 7</b>		<b>June 8-June 12</b>	<b>June 15-June 19</b>
		<b><u>Afternoon Science Programming for middle school students</u></b>	<b><u>Afternoon Science Programming for middle school students</u></b>
		6/9, 2 p.m. (WITFTV) <b>NOVA-- The Planets: Inner Worlds</b> (Planets are explored. Is there somewhere else in the solar system where life might flourish?)	6/15, 2 p.m. (WITFTV) <b>Nova—The Planets: Jupiter</b> (Jupiter shaped life on Earth, delivering comets laden with water and perhaps even a fateful asteroid.)
		6/9, 3 p.m. (WITFTV) <b>When Whales Walked: Journeys In Deep Time</b> (Scientists follow clues from the fossil record and use technology to make exciting new discoveries.) <i>*2 hours</i>	6/15, 3 p.m. (WITFTV) <b>Sealab: American Experience</b> (Discover the mostly forgotten story of the U.S. Navy's daring and groundbreaking Sealab program.) <i>*also Social Sciences curriculum</i>
		6/10, 2 p.m. (WITFTV) <b>NOVA-- The Planets: Mars</b> (Mars was once a blue water world studded with active volcanoes. Did life ever form on the planet?)	6/16, 2 p.m. (WITFTV) <b>Nova—The Planets: Saturn</b> (NASA's Cassini explores Saturn for 13 years, looping through its icy rings and flying by its moons.)
		6/11, 2 p.m. (WITFTV) <b>Climate Change - The Facts</b> (Scientists explore the impact of climate change and what could happen if temperatures rise.)	6/17, 2 p.m. (WITFTV) <b>Nova—The Planets: Ice Worlds</b> (In the far reaches of the solar system, Uranus and Neptune dazzle with unexpected rings and moons.)
		6/12, 3 p.m. (WITFTV) <b>Secrets of the Dead-- Scanning The Pyramids</b> (Scientists use non-invasive technologies to explore what lies within the Great Pyramid at Giza.)	6/18, 2 p.m. (WITFTV) <b>Big Pacific-- Mysterious</b> (The mysterious Pacific Ocean, whose depths we are just beginning to explore, is highlighted.)
		6/13, 2 p.m. (WITFTV) <b>Penn's Woods: Cradle of Conservation</b> (Follow the chronology of PA's Environmental History highlighting the accomplishments and challenges we have faced along the way.)	6/18, 3 p.m. (WITFTV) <b>Navajo Math Circles</b> (Navajo students use a model called math circles to study mathematics in Tsaile, Arizona.) <i>*also Math curriculum</i>
		6/12, 3 p.m. (WITFTV) <b>Rachel Carson: Voice of Nature</b> (Focus on Rachel Carson's connection to Pennsylvania and the impact her work has had on PA environmental and conservation policy)	6/19, 2 p.m. (WITFTV) <b>Big Pacific--Violent</b> (Discover how the Pacific, surrounded by the Ring of Fire, is the epicenter of natural mayhem.)

	Life Science: Ecology Ecosystems	6/10, 8:00 p.m. (WITFTV) <b>Troubled Waters: A Turtle's Tale</b> (The effects of global warming and other human-made problems endangering sea turtles are examined.)	6/17, 8:00 p.m. (WITFTV) <b>Spy in the Wild, A Nature Miniseries: Love</b> (The rarely seen emotions of animals are explored. Wild Dogs, elephants and monkeys are featured.)
		6/11, 9:30 p.m. <b>National Parks: America's Best Idea</b> The Scripture of Nature (1851-1890) (In 1872, Congress acts to protect land that will become America's first national park, Yellowstone.) <i>*2 hours</i>	6/18, 9:30 p.m. <b>National Parks: America's Best Idea</b> The Last Refuge (1890-1915) (At the end of the 19th century a conservation movement takes shape to protect America's wilderness.)
	<i>Online Resource for Middle School Sciences</i>	PBS Learning Media <a href="https://witf.pbslearningmedia.org/">https://witf.pbslearningmedia.org/</a>	PBS Learning Media <a href="https://witf.pbslearningmedia.org/">https://witf.pbslearningmedia.org/</a>
<b>Grade 8</b>		<b>June 8-June 12</b>	<b>June 15-June 19</b>
		<u>Afternoon Science Programming for middle school students</u>	<u>Afternoon Science Programming for middle school students</u>
		6/9, 2 p.m. (WITFTV) <b>NOVA-- The Planets: Inner Worlds</b> (Planets are explored. Is there somewhere else in the solar system where life might flourish?)	6/15, 2 p.m. (WITFTV) <b>Nova—The Planets: Jupiter</b> (Jupiter shaped life on Earth, delivering comets laden with water and perhaps even a fateful asteroid.)
		6/9, 3 p.m. (WITFTV) <b>When Whales Walked: Journeys In Deep Time</b> (Scientists follow clues from the fossil record and use technology to make exciting new discoveries.) <i>*2 hours</i>	6/15, 3 p.m. (WITFTV) <b>Sealab: American Experience</b> (Discover the mostly forgotten story of the U.S. Navy's daring and groundbreaking Sealab program.) <i>*also Social Sciences curriculum</i>
		6/10, 2 p.m. (WITFTV) <b>NOVA-- The Planets: Mars</b> (Mars was once a blue water world studded with active volcanoes. Did life ever form on the planet?)	6/16, 2 p.m. (WITFTV) <b>Nova—The Planets: Saturn</b> (NASA's Cassini explores Saturn for 13 years, looping through its icy rings and flying by its moons.)
		6/11, 2 p.m. (WITFTV) <b>Climate Change - The Facts</b> (Scientists explore the impact of climate change and what could happen if temperatures rise.)	6/17, 2 p.m. (WITFTV) <b>Nova—The Planets: Ice Worlds</b> (In the far reaches of the solar system, Uranus and Neptune dazzle with unexpected rings and moons.)
		6/12, 3 p.m. (WITFTV) <b>Secrets of the Dead-- Scanning The Pyramids</b> (Scientists use non-invasive technologies to explore what lies within the Great Pyramid at Giza.)	6/18, 2 p.m. (WITFTV) <b>Big Pacific-- Mysterious</b> (The mysterious Pacific Ocean, whose depths we are just beginning to explore, is highlighted.)
		6/13, 2 p.m. (WITFTV) <b>Penn's Woods: Cradle of Conservation</b>	6/18, 3 p.m. (WITFTV) <b>Navajo Math Circles</b> (Navajo students use a model called math circles to study mathematics in Tsaile, Arizona.)

		(Follow the chronology of PA's Environmental History highlighting the accomplishments and challenges we have faced along the way.)	<i>*also Math curriculum</i>
		6/12, 3 p.m. (WITFTV) <b>Rachel Carson: Voice of Nature</b> (Focus on Rachel Carson's connection to Pennsylvania and the impact her work has had on PA environmental and conservation policy)	6/19, 2 p.m. (WITFTV) <b>Big Pacific--Violent</b> (Discover how the Pacific, surrounded by the Ring of Fire, is the epicenter of natural mayhem.)
	Climate Science: Human Impact	6/10, 8:00 p.m. (WITFTV) <b>Troubled Waters: A Turtle's Tale</b> (The effects of global warming and other human-made problems endangering sea turtles are examined.)	
	<i>Online Resource for Middle School Sciences</i>	PBS Learning Media <a href="https://witf.pbslearningmedia.org/">https://witf.pbslearningmedia.org/</a>	PBS Learning Media <a href="https://witf.pbslearningmedia.org/">https://witf.pbslearningmedia.org/</a>
<b>High School 9-12</b>		<b>June 8-June 12</b>	<b>June 15-June 19</b>
		<u><b>Afternoon Science Programming for high school students</b></u>	<u><b>Afternoon Science Programming for high school students</b></u>
		6/9, 2 p.m. (WITFTV) <b>NOVA-- The Planets: Inner Worlds</b> (Planets are explored. Is there somewhere else in the solar system where life might flourish?)	6/15, 2 p.m. (WITFTV) <b>Nova—The Planets: Jupiter</b> (Jupiter shaped life on Earth, delivering comets laden with water and perhaps even a fateful asteroid.)
		6/9, 3 p.m. (WITFTV) <b>When Whales Walked: Journeys In Deep Time</b> (Scientists follow clues from the fossil record and use technology to make exciting new discoveries.) <i>*2 hours</i>	6/15, 3 p.m. (WITFTV) <b>Sealab: American Experience</b> (Discover the mostly forgotten story of the U.S. Navy's daring and groundbreaking Sealab program.) <i>*also Social Sciences curriculum</i>
		6/10, 2 p.m. (WITFTV) <b>NOVA-- The Planets: Mars</b> (Mars was once a blue water world studded with active volcanoes. Did life ever form on the planet?)	6/16, 2 p.m. (WITFTV) <b>Nova—The Planets: Saturn</b> (NASA's Cassini explores Saturn for 13 years, looping through its icy rings and flying by its moons.)
		6/11, 2 p.m. (WITFTV) <b>Climate Change - The Facts</b> (Scientists explore the impact of climate change and what could happen if temperatures rise.)	6/17, 2 p.m. (WITFTV) <b>Nova—The Planets: Ice Worlds</b> (In the far reaches of the solar system, Uranus and Neptune dazzle with unexpected rings and moons.)
		6/12, 3 p.m. (WITFTV) <b>Secrets of the Dead-- Scanning The Pyramids</b> (Scientists use non-invasive technologies to explore what lies within the Great Pyramid at Giza.)	6/18, 2 p.m. (WITFTV) <b>Big Pacific-- Mysterious</b> (The mysterious Pacific Ocean, whose depths we are just beginning to explore, is highlighted.)

		6/13, 2 p.m. (WITFTV) <b>Penn's Woods: Cradle of Conservation</b> (Follow the chronology of PA's Environmental History highlighting the accomplishments and challenges we have faced along the way.)	6/18, 3 p.m. (WITFTV) <b>Navajo Math Circles</b> (Navajo students use a model called math circles to study mathematics in Tsaile, Arizona.) <i>*also Math curriculum</i>
		6/12, 3 p.m. (WITFTV) <b>Rachel Carson: Voice of Nature</b> (Focus on Rachel Carson's connection to Pennsylvania and the impact her work has had on PA environmental and conservation policy)	6/19, 2 p.m. (WITFTV) <b>Big Pacific--Violent</b> (Discover how the Pacific, surrounded by the Ring of Fire, is the epicenter of natural mayhem.)
	Also Math Curriculum	<b>STEM Programming</b>	<b>STEM Programming</b>
		6/11, 5:00 p.m. (WITFTV) <b>The Robot Doctor</b> (Episode 105: "Robot Motion: How can I move?"—How a robot can move around using legs, wheels, or other methods. Also, using math to predict where a robot will be in the future—given a model of the robot and the equations of motion.) <i>*Episode 104 will repeat followed by Episode 105, each episode runs 14 minutes</i>	6/18, 5:00 p.m. (WITFTV) <b>The Robot Doctor</b> (Episode 106: "Robot Vision: How do I see?"—How a robot can sense the world around it by using cameras, including how to tell the distance to objects seen by two cameras.) <i>*Episode 105 will repeat followed by Episode 106, each episode runs 14 minutes</i>
	<b>WITF Radio (FM 89.5) Listening Programs</b>	Fridays, 2-4 p.m. Ideas Exchange (WITF Radio FM 89.5) <b>Science Friday</b> (two 1- hour segments) <a href="https://www.sciencefriday.com/">https://www.sciencefriday.com/</a> Covering the outer reaches of space to the tiniest microbes in our bodies, Science. Friday is the source for entertaining and educational stories about science, technology, and other cool stuff.	Fridays, 2-4 p.m. Ideas Exchange (WITF Radio FM 89.5) <b>Science Friday</b> (two 1- hour segments) <a href="https://www.sciencefriday.com/">https://www.sciencefriday.com/</a> Covering the outer reaches of space to the tiniest microbes in our bodies, Science. Friday is the source for entertaining and educational stories about science, technology, and other cool stuff.
	<i>Online Resource for High School Sciences</i>	PBS Learning Media <a href="https://witf.pbslearningmedia.org/">https://witf.pbslearningmedia.org/</a>	PBS Learning Media <a href="https://witf.pbslearningmedia.org/">https://witf.pbslearningmedia.org/</a>
<b>Biology</b>	Photosynthesis Cellular Respiration Cell Division Meiosis/Mitosis		6/16, 9:30 p.m. (WITFTV) <b>Frontline--The Virus: What Went Wrong?</b> (A look at why America was caught so unprepared even as COVID-19 spread from Asia to Europe.) <i>*1.5 hours</i>
	Genetics/DNA		

	Evolution		
	Ecology	6/10, 8:00 p.m. (WITFTV) <b>Troubled Waters: A Turtle's Tale</b> (The effects of global warming and other human-made problems endangering sea turtles are examined.)	6/17, 8:00 p.m. (WITFTV) <b>Spy in the Wild, A Nature Miniseries--Love</b> (The rarely seen emotions of animals are explored. Wild Dogs, elephants and monkeys are featured.)
		6/11, 9:30 p.m. <b>National Parks: America's Best Idea</b> The Scripture of Nature (1851-1890) (In 1872, Congress acts to protect land that will become America's first national park, Yellowstone.) <i>*2 hours</i>	
<b>Earth Science</b>			6/17, 9:00 p.m. (WITFTV) <b>Nova—Australia's First 4 Billion Years: Awakening</b> (Experts explore bacterial slime, the earliest forms of life, in the red hills of Australia).
			6/17, 10:00 p.m. (WITFTV) <b>Prehistoric Road Trip--Welcome to Fossil Country</b> (Emily embarks on a journey through billions of years of Earth history and meets early lifeforms).
<b>Chemistry</b>	Stoichiometry		
	Acids/Bases		
	Chemical Reactions		
	Gases		
	Solutions		
<b>Physics</b>			
	Newton's Law Projectile Motion		
	Forces Momentum and Energy		
	Magnets		
	Waves		
	Sound Light		
	Electromagnetic Spectrum		