FORCES IN NATURE

While delving into the FORCES OF NATURE which shape our environment, students:

- Engage in gravity and friction experimentation while using our four line mock zipline.
- Explore gases and pressure by launching student-designed air rockets.
- Hike into nature to observe the rock cycle and the effects of weathering agents, erosion, and deposition on the landscape.
- Watch landforms, such as canyons and deltas, take shape as we make it "rain."



Forces in Nature TEKS Blueprint

	TEKS	Student Expectation	NT	SR	RG	MR	Readiness Supporting	Verb(s)	Level of Complexity
	3.7 B	Investigate rapid changes in Earth's surface such as volcanic eruptions, earthquakes, and landslides.				-	Supporting	Investigate	High (analyze)
	4.7 A	Examine properties of soils, including color and texture, capacity to retain water, and ability to support the growth of plants.				A R	Supporting	Examine	High (evaluate)
	4.7 B	Observe and identify slow changes to Earth's surface caused by weathering, erosion, and deposition from water, wind, and ice.			A S		S. I. and R.O	LOCCollect, Observe	High (analyze)
	4.7 C	Identify and classify Earth's renewable resources, including air, plants, water, animals, and nonrenewable resources, including coal, oil, and natural gas, and the importance of conservation.					Supporting	Indentify, Classify	Low (understand)
	5.1 A	Demonstrate safe practices and the use of safety equipment as outlined in Texas Education Agency-approved safety standards during classroom and outdoor investigations using safety equipment, including safety goggles or chemical splash goggles, as appropriate, and gloves, as appropriate.		A			S. I. and R.	Demonstrate	Low (understand)
	5.2 A	Describe, plan, and implement simple experimental investigations testing one variable.				-	S. I. and R.	Describe, Plan, Implement	High (create)
	5.2 C	Collect and record information using detailed observations and accurate measuring.	-		A CONTRACTOR		S. I. and R.	Collect, Observe, Measuring	High (analyze)
	5.2 D	Analyze and interpret information to construct reasonable explan- ations from direct (observable) and indirect (inferred) evidence.		A Contraction			S. I. and R.	Analyze, Interpret, Construct	High (create)
	5.2 F	Communicate valid conclusions in (both) written (and verbal) form(s).	Å	1			S. I. and R.	Communicate	High (create)
	5.3 A	Analyze, evaluate, and critique scientific explanations by using evidence, logical reasoning, and experimental and observational testing.				4	S. I. and R.	Analyze, Evaluate, Critique	High (evaluate)
	5.4	Collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, prisms, mirrors, balances, spring scales, graduated cylinders, beakers, hot plates, meter sticks, magnets, collecting nets, and notebooks; timing devices; and materials to support observations of habitats or organisms such as terrariums and aquariums.					S. I. and R.	Collect, Record, Analyze	High (analyze)
	5.6 A	Explore the uses of energy, including mechanical, light, thermal, electrical, and sound energy.	A REAL				Readiness	Explore	Low (understand)
	5.6 D	Design a simple experimental investigation that tests the effect of force on an object.		3			Supporting	Design	High (create)
	5.7 A	Explore the processes that lead to the formation of sedimentary rocks and fossil fuels.			4		Readiness	Explore	High (apply)
	5.7 B	Recognize how landforms such as deltas, canyons, and sand dunes are the result of changes to Earth's surface by wind, water, or ice.	-		- *		Readiness	Recognize	Low (remember)
	5.9 D	Identify fossils as evidence of past living organisms and the nature of the environments at the time using models.			3 - Y		Supporting	Identify	High (analyze)

NT	
SR	
RG	
MR	

Newton's Tower (Ziplines)

Sky R.A.D. (Rockets)

Rock Garden (Millennium Forest Part 1)

Make it Rain! (Millennium Forest Part 2)

Forces in Nature



Newton's Tower (Ziplines) Sky R.A.D. (Rockets)

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4.7 C	Identify and classify Earth's renewable resources, including air, plants, water, animals, and nonrenewable resources, including coal, oil, and natural gas, and the importance of conservation.				2	Supporting	Indentify, Classify	Low (understand)
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5.2 A	Describe, plan, and implement simple experimental investigations testing one variable.	-				S. I. and R.	Describe, Plan, Implement	High (create)
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