



MARIETTA CITY SCHOOLS FOURTH GRADE SCIENCE PACING

Instructional Segment:	Weather and Moon Phases	Stars, Planets, and Moon	Forecasting the Weather	Role of Organisms and Flow of Energy	Light and Sound	Force and Motion
Estimated Time	4 week intro and then All Year	7 weeks	7 weeks	7 weeks	4 weeks	7 weeks
Crosscutting Concepts	<ul style="list-style-type: none"> Patterns Cause and Effect Systems and Systems Models 	<ul style="list-style-type: none"> Patterns Systems and System Models Scale, Proportion, and Quality 	<ul style="list-style-type: none"> Patterns Energy and Matter System and System Models 	<ul style="list-style-type: none"> Energy and Matter Structure and Function 	<ul style="list-style-type: none"> Energy and Matter 	<ul style="list-style-type: none"> Energy and Matter Cause and Effect
Anchoring Phenomenon	<ul style="list-style-type: none"> What is the International Space Station? International Space Station 	<ul style="list-style-type: none"> Where is the edge of the Solar System? SpaceX CRS-12 Launches to the ISS 	<ul style="list-style-type: none"> What is Weather like in Space? NOAA's GOES-16 Satellite Sends 1st Images from Space 	<ul style="list-style-type: none"> Eating on the Space Station Dessert in Space 	<ul style="list-style-type: none"> Gazing at Earth's Light Show Light Language – look at picture of a reflection in water 	<ul style="list-style-type: none"> Small Rube Goldberg Machines Dream of a world without machines - activity
Core Ideas	<ul style="list-style-type: none"> Cloud formation Weather Instruments Moon phases 	<ul style="list-style-type: none"> Technological advances for space Stars Planets Moon Phases Earth's orbit and tilt Light refraction 	<ul style="list-style-type: none"> States of water Water cycle Weather instruments Weather maps Cloud types Weather and climate 	<ul style="list-style-type: none"> Ecosystems Food chains/ webs Changes impacting ecosystems Scarcity, extinction, overabundance 	<ul style="list-style-type: none"> Opaque, transparent, translucent Reflection Refraction Strength and speed of sound vibration Communication device 	<ul style="list-style-type: none"> Balanced and unbalanced forces Gravitational force Simple machines
Science and Engineering Practices	<ul style="list-style-type: none"> Asking questions Analyzing and interpreting data Constructing explanations Obtaining, evaluating, and communicating Developing and using models 	<ul style="list-style-type: none"> Asking questions Developing and using models Constructing explanations Engaging in argument from evidence Obtaining, evaluating, and communicating 	<ul style="list-style-type: none"> Ask questions Analyzing and interpreting data Constructing explanations Obtaining, evaluating, and communicating Developing and using models Planning and carrying out investigations 	<ul style="list-style-type: none"> Asking questions and defining problems Developing and using models Constructing explanations and designing solutions Obtaining, evaluating, and communicating 	<ul style="list-style-type: none"> Asking questions Developing and using models Planning and carrying out investigations Designing solutions Obtaining, evaluating, and communicating 	<ul style="list-style-type: none"> Asking questions and defining problems Constructing an argument from evidence Developing and using models Analyzing and interpreting data Obtaining, evaluating, and communication
GSE	S4E2b; S4E4a, c	S4E1a, b, c, d; S4E2a, b, c; S4P1c	S4E3a, b; S4E4a, b, c, d	S4L1a, b, c, d	S4P1a, b, c; S4P2a, b	S4P3a, b, c