



MSI Programs
to support
your science
teaching

**Disciplinary Core
Ideas (DCI's)**

K - 1st Grade
2nd - 3rd Grade
4th - 5th Grade
6th - 8th Grade

		Life Science (LS)													Earth & Space Science (ESS)								Physical Science (PS)								Engineering, Technology and the Application of Science (ETS)						
		LS1.A	LS1.B	LS1.C	LS1.D	LS2.A	LS2.B	LS2.C	LS2.D	LS3.A	LS3.B	LS4.A	LS4.B	LS4.C	LS4.D	ESS1.A	ESS1.C	ESS2.A	ESS2.C	ESS2.D	ESS2.E	ESS3.A	ESS3.B	ESS3.C	ESS3.D	PS1.A	PS2.A	PS2.B	PS3.A	PS3.B	PS3.D	PS4.A	ETS1.A	ETS1.B	ETS1.C		
		Structure and Function	Growth and development of organisms	Organization for matter & flow in organisms	Information Processing	Interdependent relationships in ecosystems	Cycles of matter and energy transfer ecosystems	Ecosystem dynamics, functioning, and resilience	Social interactions and group behavior	Inheritance of traits	Variation of traits	Evidence of common ancestry and diversity	Natural selection	Adaptation	Biodiversity and humans	The universe and its stars	The history of planet Earth	Earth materials and systems	The roles of water in Earth's surface processes	Weather and climate	Biogeography	Natural resources	Natural Hazards	Human impacts on Earth systems	Global climate change	Structure and properties of matter	Forces and motion	Types of interactions	Definitions of energy	Conservation of energy & energy transfer	Energy in chemical processes & everyday life	Wave properties	Defining and delimiting engineering problems	Developing possible solutions	Optimizing the design solution		
Shoreside <i>(Pre-K & up)</i>	Shoreside	1, 4	1, 3, 6	K, 5, 7	1, 4, 6	5, 7	5	7	3	3	1	2, 3	3	3, 8	2, 3, 7			2, 6	K	K	K		K, 5, 6	5	K			K	5, 7		K, 1, 2						
	Themes																																				
	Human Impact					5, 7		7						3	3, 7			6		K	K			K, 5, 6							5						
	Food Web	4		K, 5		5, 7	5	7		3		2	3	3	3, 7																						
Discovery Voyage <i>(4th & up)</i>	Discovery Voyage	4	6	5, 7	4, 6	5, 7	5, 7	7						8			4, 7	6, 7		4				5, 6, 8	5						5, 7						
	Themes																																				
	Human Impact					5		7									4	6, 7		4				5, 6, 8							5						
	Food Web	4		5		5, 7	5, 7								7																						
Canoes in Sloughs <i>(6th & up)</i>	Canoes in Sloughs		6			7	7	7							7			6	6					6, 8	6	7	7, 8		6	6					6		
	Themes																																				
	Human Impact					5		7																													
	Food Web	4		5		5, 7	5, 7																														
Tidepool Expedition <i>(3rd & up)</i>	Tidepool Expedition	4	3, 6	5	4	5, 7	5	3, 7	3	3	3		3	3	3, 7									5, 6, 8	6			5						4			
	Themes																																				
	Human Impact					5		7							3	3, 7									5, 8												
	Food Web	4		5		5, 7	5			3																											
Marsh & Beach Exploration <i>(3rd & up)</i>	Marsh & Beach Exploration	4	3, 6	5	4	5, 7	5, 7	7	3	3	3		3	3	3, 7			6				3	5, 6, 8				5										
	Themes																																				
	Human Impact					5		7							3	3							3	5, 8													
	Food Web	4		5		5	5, 7	7	3	3	3		3	3																							
Scientific Method Combo <i>(4th & up)</i>	Scientific Method Combo	4			4	5, 7	5	7							7									5, 8			5										
	Field Options																																				
	Discovery Voyage					7		7																8											5, 6, 7, 8	5, 6, 7, 8	5, 6, 7, 8
Wonders of Watersheds <i>(6th & up)</i>	Wonders of Watersheds		6			7	7	7							7			6	6					6, 8	6	7	8		6	6					6		
	Field Options																																				
	Discovery Voyage					7		7							7																						
Classroom Biomimicry <i>(3rd & up)</i>	Classroom Biomimicry					7		7						8										5, 8											5, 6, 7, 8	5, 6, 7, 8	5, 6, 7, 8
	Field Options																																				
	Discovery Voyage					7		7						8																							
Inland Voyage <i>(Pre-K & up)</i>	Inland Voyage	4, 6	6	5	4	5, 7	5, 7	7			8	8			8									5			5						4				
	Program Options																																				
	Fish	1, 4	1, 3, 6	K, 5	1, 4	5	5			3	3	1		3	3	2, 3			2			K			K, 5										K, 1, 2		
	Rocky Shore	1, 4	1, 3, 6	K, 5	1, 4	5	5			3	3	1		3	3	2, 3	1	2	2	K	K	K			K, 5			5		K		4			K, 1, 2		
	Invertebrates	4	1, 3, 6	5	4	5, 7	5, 7	7		3	3			3	3, 8	2, 3, 7		2	2						5, 8			5							2		
	Kelp Forest	4	3	5	4	2, 5	5			3	3			3	3	2, 3		2	2						5						5	4	2		2		
	Marine Mammals	1, 4	1, 3	K, 5	1, 4	5				3	1			3	3	2, 3						K													K, 1		
	Marsh and Mudflats	4	3	5	4	5	5			3	3			3	3	3												5									
Sandy Beach	1, 4	1, 3	K, 5	1, 4	5	5			3	3	1		3	3	2, 3	1	2	2	K	K	K			K, 5			5				4			K, 1, 2			

Programs at MSI
Redwood City, CA

- Discovery Voyage
- Shoreside
- Canoes in Sloughs
- Ocean Lab

Programs Off-Site

- Tidepool Expedition at Pillar Point, Half Moon Bay
- Marsh & Beach Exploration at Pescadero State Beach

Programs at Your School

- Inland Voyage
- Ocean Lab
- Classroom Biomimicry

Marine Science Institute Education Programs engage students in science, using the range of Next Generation Science Standards (NGSS):

- Disciplinary Core Ideas
- Cross Cutting Concepts
- Science and Engineering Practices

Go to www.sfbaymsi.org to download NGSS-MSI connections by grade and school program

Book Your Program TODAY!

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Multiple Exposure Programs

*Combines in-class visits with off-site field surveys

- Biomimicry: Combines a classroom visit with a Discovery Voyage
- Scientific Method Combo: Combines two classroom visits and a field study
- Wonders of Watersheds: Includes a classroom visit, creek study, and canoes field study