Live Lab	Curricula connections	Ocean Literacy principles	Description
Advanced Invertebrates Live Lab	BC Bio 11: Processes of Science A3, Taxonomy B1 (in part), Animal Biology G1 (in part), G2, G4	Principles: 4 (in part), 5 (in part), and 6 (in part)	An introduction to taxonomy and nomenclature, with a focus on marine invertebrates. Learn why scientists classify marine invertebrates the way they do, and compare how the members of different phyla carry out their life functions. Phyla of interest include: Porifera, Cnidaria, Mollusca, Arthropoda, and Echinodermata.
Kelp Forest Ecology Live Lab	AB Sci 7: Interactions and Ecosystems Unit A; AB Sci 8: Freshwater and Saltwater Systems Unit E (in part); AB Sci 9: Biological Diversity Unit A (in part).	Principles: 1 (in part), 3 (in part), 4, 5 (in part), 6 (in part), 7 (in part).	Students will be introduced to the world of kelp forests. By comparing food webs in terrestrial and marine ecosystems, students will explore the structure and function of kelp, explore trophic links from kelp right through to species at risk. In an interactive look at kelp forest productivity and global distribution in connection with human impacts, students will learn about personal and societal connections to oceans and how students can help protect kelp forests.
Populations and Communities Live Lab	AB Bio 20 Unit B: 20-B1.1k, 20-B1.2k 20-B1.3k, 20-B1.4k, 20-B1.3s; AB Bio 30 Unit D: 30-D2.1k, 30-D2.2k, 30-D2.2s, 30-D2.3s	Principle: 5 (in part)	Students will get an introduction to intertidal ecology. By discussing abiotic factors and by looking at examples of biotic factors, such as competition, symbioses and predator-prey interactions, students will gain an understanding of the forces that structure communities and determine where organisms are found.
Physical Oceanography Live Lab	BC Sci 8 PLOs: C1 (in part), C7 (in part), D1, D2 (in part)	Principles: 1 (in part), 3 (in part), 6 (in part), 7 (in part)	Students will learn how physical properties of the ocean lead to oceanic phenomena such as stratification and currents, and how this effects world climate.
Invasive Species Live Lab	AB Sci 9: Biological Diversity (Unit A), especially outcome 4	Principles: 5 (in part), 6 (in part)	What are invasive species? How do they move around the planet? What are their impacts on native ecosystems? How do these impacts occur? How can we stop the spread of invasive species? Students will answer these questions by examining the introduction of European green crabs to native eelgrass habitats.
Back to Base-ics: Climate Change and Ocean Acidification Live Lab	AB Sci 7: Interactions and Ecosystems (Unit A); AB Sci 9: Enviromental chemistry (Unit C)	Principles: 1, 3, 6, 7	Learn about the chemistry and biology behind our world's changing oceans. See how increased carbon dioxide levels are changing ocean chemistry, and link chemistry to biology by examining the impacts of ocean acidification on marine organisms. Discuss ways you can help lessen the impact of ocean acidification in your day to day activities.

Live Lab	Curricula connections	Ocean Literacy principles	Description
Marine Invertebrate Diversity Live Lab	BC Sci 7: Life Science; Ecosystems A1, A2 (in part), B1, B3, C2; AB Sci 7: Unit A: Interactions and Ecosystems A1 (in part), A2 (in part)	Principles: 4 (in part), 5 (in part), and 6 (in part)	The spineless wonders of our oceans. Explore the amazing diversity of marine invertebrates found in Barkley Sound. Students will learn about morphology, physiology and evolution through virtual hands-on exploration of live animals.
Back from the Brink: Recovery of Marine Species at Risk Live Lab	BC Bio 11: Processes of Science A2 (in part), A3, Ecology D1 (in part), Animal Biology G4 (in part); BC Sci 10: Processes of Science A2 (in part), A3, A4, A5, A6, A7, Life Science B1 (in part), B3.	Principles: 5, 6	Examine threatened marine species and what is being done to help recovery of populations. Case studies could include northern abalone, marbled murrelets, humpback whales and sea otters.
Be a Marine Biologist Live Lab	BC Bio 11: Processes of Science A2 (in part), A3, Ecology D1 (in part), Animal Biology G4 (in part); BC Sci 10: Processes of Science A2 (in part), A3, A4, A5, A6, A7, Life Science B1 (in part), B3.	Principles: 5, 6	Students will get a glimpse into the life of a marine biologist. During this interactive Live Lab, students will develop questions, write out hypotheses, and brainstorm experimental designs. Then the excitement begins as students direct the instructor to carry out an experiment involving live animals over the internet!
Virtual Visit Live Lab	For any age group		Visit BMSC without leaving your classroom. Learn about our public education program, current research going on, and abalone recovery program. Explore the Whale lab where we house live marine animals, and marine mammal skeletons strung from the ceiling!
Live Dive			
Coastal Critter Communities Gr.7 Live Dive	BC Sci 7: Life Science; Ecosystems A1, A2 (in part), B1, B3, C2; AB Sci 7: Unit A: Interactions and Ecosystems A1 (in part), A2 (in part)	Principles: 5 (in part), 6 (in part)	Students will learn to identify biotic and abiotic components of marine ecosystems and the role those components may play in an organism's niche. Students will understand ecosystem dynamics using simplified food webs, as well as identify interactions between producers, consumers and decomposers within a food web.
Coastal Critter Communities Gr.10 Live Dive	BC Sci 10: Life Science; Sustainability of Ecosystems B1, B2 (in part), B3 (in part); AB Biol 10: Ecosystems and Population Change B1	Principles: 5 (in part), 6 (in part)	Students will learn to identify biotic and abiotic components of marine ecosystems and the role those components may play in an organism's niche. Students will understand food webs and identify interactions between producers, consumers and decomposers. You will identify trophic levels for organisms found while SCUBA diving in a variety of exciting habitats!

Live Dive	Curricula connections	Ocean Literacy principles	Description
Species at Risk - Abalone Live Dive	BC Bio 11: Processes of Science A2 (in part), A3, Ecology D1 (in part), Animal Biology G4 (in part); BC Sci 10: Processes of Science A2 (in part), A3, A4, A5, A6, A7, Life Science B1 (in part), B3.	Principles: 5, 6	Go along on an underwater scavenger hunt in search of wild abalone and help scientists at the Bamfield Marine Sciences Centre learn about their dwindling population. You will get a chance to learn more about the biology of these unique mollusks, and put the scientific method to use by performing behavioral experiments on abalone in their natural habitats.
Physics of Diving Live Dive	BC Sci 8 PLOs: A3, C1 (in part), C2 (in part), C5, C6 (in part), C7(in part), C8.	Principles: 6, 7	Explore the physics and physiology involved when humans SCUBA dive in the ocean. See how physical factors change as divers move deeper under the ocean's surface. Students will witness changes in light underwater and the relationship between pressure, density and volume.
Acid Waves Live Dive	AB Sci 7: Interactions and Ecosystems (Unit A); AB Sci 9: Enviromental chemistry (Unit C)	Principles: 1, 3, 6, 7	Learn about the chemistry and biology behind our world’s changing oceans, how humans are affecting our oceans, and what we can do to change it. See how increased carbon dioxide levels are changing ocean chemistry, and link chemistry to biology by examining the impacts of ocean acidification on marine organisms.
Subtidal Safari Live Dive	Can tailor program to any age level	Principles: 5 (in part), 6 (in part)	Dive into the subtidal environment to explore the wild and wacky organisms that live there. Witness the interactions between predators and their prey, how organisms feed, and how they appear in their native habitat! Direct underwater biologists to organisms of interest. Don't forget to ask lots of questions!
Rock on Rockfish Live Dive	Can tailor program to any age level	Principles: 5, 6	See endangered BC rockfish in their natural habitat. Learn about monitoring their abundance and what is being done to protect them. Learn about kelp forests and why they are so important for the protection and safety of rockfish.
Currents, plankton, and tides...oh my! Live Dive	BC Sci 8 PLOs: C1 (in part), C7 (in part), D1, D2 (in part)	Principles: 1 (in part), 3 (in part), 6 (in part), 7 (in part)	Teaching oceanography in the ocean! During this live dive students will learn about currents and subtidal planktonic organisms from instructors in the water. Divers will take students on a trip to the ocean floor to examine the effects of light attenuation and look at adaptations to a wet and wondrous world.