



K-2 Science Enrichment

Introducing Coastal Exploration, Habitats, and Conservation

These mixed-grade primary enrichment classes for grades K-2 introduce students to Southern California coastal habitats through guided observation, simple data collection, drawing, movement, games, and art. Over 12 weeks, students explore La Jolla, Mission Beach and Mission Bay, and Torrey Pines to notice living things, compare habitats, test water with teacher support, and practice age-appropriate conservation habits.

The 12-week course is broken into three 4-week sessions that may be taken independently or as one connected course. Each session emphasizes observation, safe field behavior, and communication through pictures, oral language, and beginning informational writing.

Course Rationale

Young learners build science understanding best through repeated firsthand experiences. Across beaches, tidepools, bay habitats, bluffs, and lagoon-connected shorelines, students learn to observe carefully, distinguish living and nonliving parts of environments, and explain simple relationships between land, water, and living things.

Field journals, structured talk, games, and conservation art help students communicate what they notice and why special coastal places should be protected.

Fieldwork and Lab-Style Learning

Because the course includes repeated field observations, simple measuring tools used with teacher guidance, field notebooks, picture and data records, and tangible conservation projects, it supports early science investigation and documentation in an enrichment format.

Instructor Value

Team teaching pairs a marine scientist with 20 years of experience, and an experienced educator with a M.Ed. in Learning and Instruction. This structure keeps the field experiences scientifically accurate while ensuring activities, vocabulary, writing, and expectations are developmentally appropriate for grades K–2.

Mixed-Grade Differentiation

This is early elementary science enrichment with integrated literacy, speaking/listening, drawing, and visual arts. All students will have hands-on field experiences that build routines for safe observation, care for living things, and beginning use of science tools.

Kindergarten students focus on noticing patterns, naming observations, drawing evidence, and communicating ideas orally or through labeled pictures. Grades 1-2 add more independent journaling, simple comparisons between habitats, and learn about evidence-based explanations, and supported use of tallies, maps, and simple data.

Essential Questions

1. How can we observe the coast carefully and safely like field scientists?
2. How are beaches, tidepools, bays, lagoons, and cliffs different places for living things?
3. How do land, water, and people affect where plants and animals can live?
4. How can drawings, models, and art help us share what we learned about protecting the ocean?

Key Learning Targets

1. Tell the difference between living and nonliving things in coastal environments.
2. Observe and compare animals, algae, plants, landforms, and water in different habitats.
3. Use drawings, labels, counts, and simple notes in a field journal.
4. Practice conservation behaviors such as looking without disturbing, recycling, and respecting wildlife protection rules.
5. Use simple tools with support to notice water properties and habitat differences.
6. Share observations and explain ideas using pictures, words, and oral presentation.
7. Course Outcomes
8. Identify basic coastal habitats and describe at least one feature of each.
9. Use observations to compare the diversity of living things across more than one habitat.
10. Communicate simple solutions for reducing human impact on local land and water.
11. Create visual products such as recycled paper, habitat models, or paintings that reflect accurate field observations.
12. Participate in group discussions and brief presentations using evidence from journals and field experiences.

Key Course Learning Goals

1. Coastal observation and habitats
2. Recognize beaches, tidepools, bays, lagoons, bluffs, and cliffs as places that support different living things.
3. Field science routines
4. Practice safe observation, journal drawing, counting, and teacher-supported use of simple tools such as refractometers and water kits.
5. Conservation understanding
6. Explain that people can help protect habitats by following rules, reducing waste, and respecting wildlife.
7. Communication through art and talk
8. Use pictures, models, and short presentations to share learning from field experiences.

Primary California Standards Alignment

Area	Code	Short Description	Relevance to 12-Week Course
CA NGSS	K-ESS3-3	Communicate solutions that reduce human impact on land, water, air, and living things.	Supports recycling, wildlife protection rules, and conservation art across all three sessions.
CA NGSS	K-ESS2-2	Construct an argument for how plants, animals, and people can change environments to meet needs.	Connects to animal habitats, shoreline change, and how people shape or protect coastal places.
CA NGSS	2-LS4-1	Make observations of plants and animals to compare diversity in different habitats.	Aligns to repeated habitat comparisons at beaches, tidepools, bays, lagoons, and bluffs.
CA NGSS	K-2-ETS1-1	Ask questions, make observations, and gather information to define a simple problem.	Supports noticing pollution, habitat disturbance, and simple stewardship problems.
EP&Cs	Principles I-II	Human communities depend on healthy natural systems; coastal and marine ecosystems are shaped by relationships with people.	Frames the course emphasis on stewardship, protection, and responsible use of coastal spaces.
ELA	W.K.2 / W.1.2 / W.2.2	Compose informative texts using drawing, dictating, and writing.	Used in journals, labels, simple explanations, and end-of-session sharing.
ELA	SL.K.4 / SL.1.4 / SL.2.4	Describe familiar things and report on a topic with appropriate facts and details.	Supports group discussion, reporting observations, and brief presentations.
Arts	K-2 VA:Cr2 / VA:Pr6	Use materials safely to create art and share artwork in meaningful ways.	Supports paper making, simple models, habitat paintings, and conservation communication.

12-Week Sequence Overview

4-Week Sessions	Focus	Primary Sites	Main Science Lens	Culminating Product
Session 1	La Jolla coastal habitats and wildlife protection	La Jolla Shores, Dike Rock, Ellen Browning Scripps Park, Children's Pool	Living vs. nonliving, habitat comparison, MPAs, wildlife care	Field journal + recycled ocean paper + simple sharing about protected places
Session 2	Mission Beach and Mission Bay comparison	South Mission Beach, Mission Point Park, Crown Point, De Anza Cove	Water movement, beach vs. bay habitats, human impact	Water-observation notes + 3D habitat model + group comparison talk
Session 3	Torrey Pines landforms and habitat zones	Torrey Pines lagoon, beach, bluff, and cliff areas	Watershed to ocean, erosion, habitat placement	Coastal painting + final habitat matching game + oral reflection

Assessment and Evidence of Learning

Assessment	Description	Standards Emphasis
Field journal	Drawings, labels, tallies, simple notes, and reflections collected across all three sessions.	SEP 3, 4, 8; ELA writing
Observation records	Teacher-supported counts, habitat comparisons, and simple water observations.	2-LS4-1; K-2-ETS1-1
Creative projects	Recycled paper, habitat model, and coastal painting tied to field evidence.	Arts + EP&Cs
Sharing and presentations	Short oral explanations and end-of-session reporting using journal evidence.	K-ESS3-3; ELA speaking/listening