

Marine Aquarium Curator Task List

Collection, Classification, Preservation, and Documentation of Marine Specimen

1. Classifies marine life, including birds, crustacea, fish, echinoderms, and cnidarians, by visually examining the specimen to identify specific features or characteristics and catalogs them in accordance with the Linnaeus taxonomy, and museum and scientific standards in order to ensure that they are properly stored, cared for, and displayed in the appropriate exhibit.
2. Maintains living specimens, including marine invertebrates and fish, by feeding them using methods, such as target feeding or broadcast feeding, keeping their habitat clean, and placing them in the appropriate environment, such as aquaria, sea water tables, or simulated tide pools, depending on their classification and based on research obtained from the internet, books, and/or other knowledgeable sources in order to ensure they are properly cared for and available for study, display, and/or educational activities.
3. Preserves non-living specimens with soft tissues, such as fish and sea slugs, by immersing them in formaldehyde for approximately two weeks, draining off the formaldehyde, and replacing it with alcohol or other non-toxic liquid in order to ensure they are properly cared for and available for study, display, and/or educational activities.
4. Preserves hard specimens, such as shells and bones, by coating them with preservative material, such as shellac, packing fragile parts with cotton or other protective material, or placing them in boxes to prevent crushing in order to ensure they are properly cared for and available for study, display, and/or educational activities.
5. Preserves dry specimens, such as taxidermy birds or exoskeletons, by dusting, vacuuming, cleaning with water, or treating with pesticides or other preservative chemicals in order to ensure they are properly cared for and available for study, display, and/or educational activities.
6. Fills out and completes forms, such as loan or collection forms, and/or inputs information regarding specimens into a computer database catalog, including information related to the specimens' classification, where they are currently located in the aquarium, where they were collected, the date they were acquired, their condition, when they were donated, the name of the collector, and information about the donor, and keeps permits for collection up to date in order to efficiently and effectively retrieve data, locate specimen in the aquarium, keep track of inventory, secure additional specimens of the same type, and comply with federal and state regulations defined by the California Department of Fish and Wildlife.

7. Collects specimens from tide pools, the ocean, and other locations for exhibits, displays, or academic classes using methods and equipment, such as boats, nets or by hand, in order to have them available for research purposes, display, or educational programs.
8. Photographs and videotapes marine creatures, plants, and their environments using a normal or underwater digital camera by positioning the camera for best light on the subject, framing the subject, steadying the camera, panning slowly, and placing the camera in a waterproof case for underwater recording in order to provide quality visual materials for use in exhibits or classrooms.
9. Cares for laboratory equipment, such as microscopes, flasks, scales, beakers, and water testing equipment, by cleaning the equipment with microfiber cloths and/or calibrating equipment in accordance with manufacturer instructions and laboratory procedures, scheduling annual maintenance with contracted certified repair professionals, and storing the equipment in cabinets in order to ensure that it remains in good working condition for use by the public and aquarium staff.

Communication and Public Interaction

10. Communicates with the public, prospective volunteers, schools, universities, and other aquariums in writing, by phone, or in-person in order to answer questions, provide advice, or provide information regarding topics, such as marine biology, aquarium programs, computer database catalogs, aquarium exhibits, safety, volunteer opportunities and educational activities.
11. Communicates with marine biologists, professional exhibit designers, teachers, and other knowledgeable individuals and reads scientific journals in order to remain informed regarding new discoveries in marine biology, techniques for preserving and using specimens, successful educational programs, and effective exhibit formats for purposes, such as using new techniques or materials and planning exhibits or displays.
12. Leads tours for the public and visitors with special interests relating to the aquarium, such as City Council Members, Department administration, senior staff of other aquariums, professors from colleges and universities, and donors who have supported special projects, by walking them through the aquarium while providing information specific to displays and exhibits, and answering questions related to aquarium programs and marine biology in order to disseminate information and promote the aquarium.

13. Serves on City interdepartmental committees, public environmental committees, and professional organization committees for civic and professional groups in order to provide input regarding ecology and conservation of Southern California marine life, review grant applications, make recommendations about environmental policies affecting marine biology, or to select scientific papers for publication.
14. Communicates with institutions, such as the Los Angeles County Natural History Museum, the Smithsonian, marine research facilities, public aquaria, university marine biology departments, other museums, or private contractors, through e-mail, telephone, or direct contact in order to facilitate the donation, purchase, loan, or exchange of materials, such as audiovisuals, written information, photographs, or specimens, in order to assist other institutions and secure these materials and specimens for display or research at the Cabrillo Marine Aquarium.
15. Communicates with employees, aquarium management, and department management in order to request or provide information, direction, or guidance regarding work assignments, problems encountered, personnel matters, project requirements, project timeline, visitor engagement, appropriate work methods and procedures, City and department policies and how to comply with them, policy changes, department objectives, interpretations of City policies or Memorandums of Understanding (MOUs), updated safety information, and training and promotional opportunities.
16. Communicates with outside contractors by phone, e-mail and/or in-person in order to negotiate line items in the contract pertaining to costs and timeline for custom materials to maintain current exhibits and develop new exhibits, such as refurbishing the Jelly Lab (jellyfish research display) for public interaction, using procedures required by the source of the funding.
17. Writes grant proposals for student research and special programs or projects, such as collaborations with local schools and new exhibits, with the assistance of the Marine Aquarium Program or Exhibit Directors and in compliance with the formats required by the prospective grantors in order to request funding for programs and projects.
18. Writes explanatory and/or descriptive reports and narratives for use in exhibits, classrooms, newspapers, magazines, leaflets, flyers, online publications, and newsletters regarding topics, such as marine plants and animals, currents and tides, tidepool ecology, or effects of pollution on marine life, in order to disseminate information to students, researchers, and the general public and to promote the aquarium and its events and programs.

19. Writes reports for management containing information specific to work performed, problems encountered and/or recommendations for improvement, including revising class curricula and/or redesigning or updating exhibits based on evaluations from patrons and students and information obtained from scientific research, other aquariums, professional exhibits designers, institutions, and teachers, in order to keep management informed regarding aquarium operations and improve the aquarium's educational programs and activities.

Exhibit Construction and Installation

20. Discusses proposed exhibits with the Marine Aquarium Program or Exhibit Directors through phone, email or direct contact by providing information regarding the subject of the exhibit, the types of materials which will be required, space allocated, and timeline in order to seek approval to proceed with the exhibit including securing materials, staff, and equipment.

21. Mounts non-living specimen and models manually from ceilings or on walls using materials, such as glue, tape, or wires, and arranging them in lifelike positions, in positions where particular features are clearly visible, or in configurations for easy comparison and installs LED light bulbs in order to illuminate exhibits and effectively display the models and non-living specimens.

22. Constructs and/or installs display cases for specimen exhibits by cutting and/or shaping materials, such as wood, plexiglass, and PVC pipe using hand and power tools, such as screwdrivers, pliers, hammers, wrenches, portable power saws, drills, routers, circular saws, or hand saws, in order to support exhibit elements and protect specimens on display while making them easily visible to aquarium patrons.

23. Preserves models of whales, dolphins, and other large marine life forms by directing staff or contractors to rebuild the model for greater accuracy and/or repair, clean, sand, and/or repaint the model in order to have accurate representations of these animals available for aquarium patrons and to ensure that they are in good condition.

Educational Programs

24. Teaches classes and conducts laboratory sessions at schools, recreation centers, the Cabrillo Marine Aquarium and/or other field sites regarding topics, such as marine life forms in various environments and habitats and the effects of pollution on individual life forms and food chains, by planning curricula while considering the intended audience and the purpose of the class or laboratory session and using techniques and materials for imparting information, such as use of audiovisuals, graphics, displays, specimens from the aquarium, models, other reference materials, and hands on learning experiences ranging from simple touch to laboratory dissection, in order to effectively communicate concepts of marine biology and ecology.
25. Evaluates materials used for educational purposes and disseminating information, such as educational curricula, posters, photographs, books, publications, and audiovisual materials based on factors, such as scientific accuracy, quality, relevancy, and suitability for the intended purpose, in order to determine if the curricula and materials are appropriate and to make recommendations to management for their use in educational programs, displays, and/or exhibits.

Safety

26. Inspects exhibit areas for hazardous conditions, such as wet floors or slippery rocks and takes necessary corrective measures, including performing, contacting or directing appropriate staff to place appropriate signage, secure the perimeter, or use the appropriate equipment to remedy the issue, in order to ensure safety of staff and the public.
27. Disposes of hazardous and/or toxic wastes, such as formaldehyde or alcohol used when preserving or decommissioning specimen by storing the waste in a waste holding shed, contacting the City contracted company that is responsible for picking up such material, and wears personal protective equipment, such as goggles, rubber gloves, respirator and a lab coat, in order to ensure safety of oneself and to comply with City, State, and federal rules and regulations.

Supervision

28. Orients new employees by explaining job requirements and providing written materials related to safety and performance standards, personnel rules, policies, and procedures, benefits, and the aquarium's mission, strategic goals, and organization in order to ensure new staff members are prepared to complete their job duties successfully and in accordance with Department standards.

29. Observes, evaluates, documents, and discusses performance of staff based on job related factors, such as completion of assignments, timeliness, and consistency of quality and quantity with standards, in order to identify developmental needs, provide feedback, prepare employees for career advancement opportunities, and improve work quality or performance for future assignments.
30. Applies the principles of Equal Employment Opportunity (EEO) by taking the necessary steps to prepare employees for promotion, including providing training and information regarding EEO policies, and promoting a positive work environment by commending outstanding job performance, including giving public recognition or issuing notices of commendation, and monitoring employees' behavior regarding cultural diversity, sensory inclusivity, sexual harassment, discrimination, and retaliation and taking appropriate corrective action when necessary, in order to increase employee productivity, ensure better acceptance and working relationships among various groups of employees and to comply with City and department policies and procedures.
31. Schedules employee time at work, including adjusting work schedules when staff is on vacation, telecommuting, or absent and approves or disapproves employee requests for time off by considering factors, such as workload and project timelines, in order to ensure necessary levels of staffing and timely completion of work.
32. Makes recommendations to higher level management regarding the initiation of the disciplinary process for employees who have violated a personnel policy or acted inappropriately and after receiving approval, follows and documents departmental progressive disciplinary steps, including written or oral warning, suspension, and discharge, in order to perform personnel policy functions.
33. Interviews job candidates for positions, such as Museum Guide, Aquarium Educator, Administrative Clerks, Administrative Interns, and Aquarists, in order to make hiring recommendations and/or decisions based on the candidate's demonstrated knowledge, skills, and abilities and overall suitability for the position.
34. Supervises employees including Graphic Designers, Museum Guides, Aquarium Educators, Administrative Clerks, Administrative Interns, Aquarists, Photographers, and volunteers engaged in acquiring, preparing, and caring for specimens, constructing and drawing illustrations for exhibits, repairing aquarium facilities, teaching classes, conducting laboratory sessions, and/or leading field trips by directing, delegating, coordinating, assigning, and organizing the work of staff based on factors, such as difficulty and priority of assignments and employee workload, and by providing instruction through email, telephone, and direct contact in order to facilitate the operation of the aquarium.

35. Trains docents, volunteers, and staff engaged in teaching classes, leading tours, constructing exhibits, and preserving, classifying and collecting specimen by explaining and demonstrating work procedures on a one-to-one basis, conducting training classes, or sending staff to trade shows, conferences, or workshops related to marine biology and then observing employee performance to ensure employees are properly trained to successfully perform the job duties of the position.
36. Inspects inventory by visually accounting for materials and/or referring to an inventory database and orders necessary supplies and/or educational items from scientific companies or teacher supply outlets to fulfill requests by staff and/or replenish supplies to have them available when needed for use in classrooms, exhibits, and/or during laboratory sessions.
37. Reviews, evaluates and requests revisions to the work of staff, including drawings, exhibit layouts, and classroom curricula based on factors, such as scientific accuracy, suitability for the intended purpose, and best practices, in order to ensure quality work is produced and department standards are met.

Other Related Tasks

38. Drives personal or City vehicles to and from job sites, such as field sites, schools, other institutions, and special events, in order to transport personnel, materials, and tools, such as microscopes and nets.
39. Reads materials, such as the Association of Zoos and Aquariums accreditation guidelines, other museum and aquarium regulations, department procedure manuals, and other resource materials in order to comply with guidelines and procedures, remain informed, and determine the best practices and procedures for disseminating information and ensuring the safety and security of staff and aquarium visitors.