Requisite Competencies for Conservation Technicians and Collections Care Specialists

Collections Care Task Force
of the American Institute for Conservation
of Historic and Artistic Works

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Executive Summary

In 1994, in recognition of the importance of the role that technicians play in the field of conservation, the American Institute for Conservation (AIC) Board established the Collections Care Task Force (CCTF) under the direction of Carolyn Rose. The task force was asked to define and clarify the role of technicians in conservation practice and in the institutional setting.

CCTF members were chosen for their representation of different conservation specializations and for their experience in working with technicians and collections care specialists. First, the task force completed a literature search and consulted with conservators working with technicians and collection care specialists in other countries. It then examined the range and diversity of conservation technician activity and discussed the knowledge and skills required to perform conservation technician tasks.

During the early phase of work, the task force began to understand the important differences and similarities between conservation specializations and between venues where conservation technicians work. For example, paper conservation practice in a private art collection was contrasted with paper conservation in a public archives. The discussions were not always easy, due to the complex nature of collecting institutions, collections, and collections care.

The task force made two key observations: While technicians as a group perform a wide variety of tasks throughout the field, individual technicians tend to be focused on a small number of activities or, in some cases, a single activity; technicians are relied upon to exhibit a variety of skill sets for each activity, ranging from very basic to more advanced levels.

CCTF discussion resulted in the selection of 19 task areas of technician activity. All the tasks specified require supervision, training, and oversight by a conservator or conservation scientist who makes the ultimate decisions about methods, materials, and techniques. A conservation technician, by the AIC definition, reports to a conservator. The CCTF recognizes that not all institutions have a conservator or a conservator with a specific material specialty on staff. In such cases, it is most appropriate for a consulting conservator to provide oversight of conservation technician work.

Each task was described at three levels of competency: basic (Level 1), intermediate (Level 2), and advanced (Level 3). To clarify the significant difference between a conservator and a technician in performing the same tasks, the CCTF added a "conservator level" for each task. The descriptions for the conservator level are not intended to be comprehensive in defining a "conservator" and only serve to help distinguish the highest level of an "advanced level technician" from that of a conservator.

After selecting the task areas, the CCTF determined a set of knowledge sets (20) and skill sets (21) for each of the 19 tasks. The following document outlines the skills and knowledge required for each of the 19 tasks at three levels of competency. Although levels of competency are delineated, there is no implied, progressive, or linear path from the basic level to the advanced.

More than 50 reviewers, including the AIC board, curators, technicians, representatives of related professional organizations, scientists, and conservation education professionals from around the world, have reviewed the accompanying lists, definitions, and charts. The CCTF hopes that this material will be useful in many ways: as an aid in hiring, as a tool to define or plan training, as a guide for curricula development, as a discussion of the roles and relationships between technicians and conservators, and, most importantly, to highlight and strengthen the role that conservation technicians and collections care specialists play in conservation and the preservation of collections.

Introduction

Conservation technicians and collections care specialists are a valued part of the practice of conservation. The role they play can be essential to the preservation and conservation of cultural property. For example, in the treatment of outdoor sculpture, technicians often perform the cleaning activities specified by the object conservator overseeing the project. They may also be involved in steps designed to reintegrate the cosmetic appearance or the patination of the outdoor sculpture as specified in the treatment protocol. In libraries, technicians are commonly employed in the repair and housing of collections. In museums, technicians are used to move objects, assist in the installation of pieces in exhibits, and often to monitor and maintain art works on exhibition.

In 1994, in recognition of the importance of the role that technicians play in the field of conservation, the American Institute for Conservation (AIC) Board established the Collections Care Task Force under the direction of Chairperson, Carolyn Rose. The task force was asked to define and clarify the role of conservation technicians in conservation practice and in the institutional setting.

The members of the task force were chosen both for their representation of different specializations of conservation practice and for their strong interest and experience in technician and collections care training.

The first activity of the task force involved compiling a bibliography of articles and related works addressing technicians and the work they perform in the United States and other countries and in other disciplines for background and comparative reference. Several employee management matrices from the United States and abroad were examined for ideas about how to organize specific task categories and how to rank and evaluate educational and training factors.

The task force decided that the first thing it needed to do was to specify what types of work conservation technicians perform. After this step, the task force needed to specify the knowledge and skills that are required to perform each of the conservation technician tasks.

Most significantly during this phase of the task force's work, the members of the task force had to take the time to share with each other and to understand the important differences and similarities between the conservation specializations and the differences and similarities between the venues where conservation is practiced. For example, nuances of object conservation in an art museum were compared to those of object conservation at an historic site museum. The details surrounding paper conservation practice in a private art collection were contrasted with the practice of paper conservation in a public archives. The discussions were not always easy because the differences in conservation practice are very complex and not always evident when viewed from a single perspective. For example, it was easier for a task force member from a library background to concede that technicians perform interventive treatment activities than it was for

a member from a paintings lab in an art museum. It was a challenge for the task force member from a small, private, art conservation lab to comprehend the sheer number of technicians generally employed in large library conservation labs. It was also a challenge to understand the range and diversity of the tasks routinely performed by technicians in conservation. Some do monitoring and maintenance work; some do "piece work" or repetitive treatments; some work independently, providing auxiliary services like matting or packing.

Conservation Technician Tasks

The task force made two key observations: While technicians as a group perform a wide variety of tasks throughout the field, individual technician tasks tend to be focused on a small number of tasks or in some cases, a single task; and technicians are relied upon for a variety of skill sets ranging from very basic to extremely advanced. An individual technician's training may be narrow and specialized or broad-based in response to the specifics of a job's requirements.

Likewise, a technician's work may never call for more than a basic skill level, may require advanced skills, or may dictate something in between. Given these factors, the task force did not believe it was useful or appropriate to define a set core curriculum for technicians. Instead, the task force explored the full range of tasks performed by conservation technicians and then specified the knowledge and skills required to perform each. In the end, nineteen tasks were identified:

Collection Housing

Condition Survey

Conservation Assessment

Documentation

Emergency Preparedness and Disaster Recovery

Environmental Monitoring

Examination

Exhibition Preparation

Housekeeping

Labeling

Laboratory and Studio Maintenance

Outreach

Packing/Moving/Transport

Pest Management

Research

Sample Preparation

Site Protection

Training

Treatment

The understanding is that a technician could perform one or several of the nineteen tasks listed in the scope of their work, but would be unlikely to perform all of them. A technician focusing on a single task in the treatment category—such as leaf casting fills in paper objects under the direction of a conservator—might do

only this one task and may do it for so long that they would gain such experience that they become advanced in their knowledge and skills in this task. On the other hand, a different technician might do five or ten different tasks at a very basic level and thus never attain the advanced level in any one task.

It became clear that there were, in fact, different levels of activity or responsibility at which each task could be accomplished. The task force settled on delineating three levels of responsibility or competence for each task as follows :

Level I: a beginning or basic level in which the steps of the task are provided

Level II: an intermediate level requiring knowledge of the theoretical underpinnings of the task, finer skills, and hands-on experience

Level III: an advanced level at which the technician is able to independently carry out a task after instruction

Ideally, all of the tasks listed for conservation technicians would require direct supervision, training, and oversight by a conservator or conservation scientist who makes the ultimate decisions about methods, materials, and techniques. In fact, a conservation technician, by the AIC definition, reports to a conservator. However, the task force recognizes that many small and mid-sized institutions do not have professional conservation staff. Not infrequently, these institutions have members on staff who devote all or part of their time to preservation activities ranging from preventive conservation to treatment (the latter is especially true in libraries where non-conservation staff routinely repair general collection library materials). In such cases where there is no staff conservator it is most appropriate for a consulting conservator to provide oversight through periodic checks.

AIC recognizes there is a difference between being a conservator and a conservation technician or collections care specialist. One of the main differences is the level of responsibility expected of a conservator versus a technician. A technician would be expected to perform simple to advanced skills in hands-on work, laboratory preparation and the many other categories described in this document. While a technician or collections care specialists may be a good problem solver, the education, training and experience of a conservator provides the additional tools, advanced knowledge, and critical thinking to apply decision-making to issues that carry the responsibility of long-term preservation and of mitigating the risks to cultural property. Conservators have the necessary background in the science, the properties of materials, and the ethical and aesthetic issues, as well as in the legal ramifications that may result from decisions they make. For further information on a conservator's role, see "Defining a Conservator: Essential Competencies," AIC 2003 at http://www.conservation-us.org/coredocs.

To help clarify the differences in the roles of conservators, conservation technicians, and collections care specialists for readers of this document who are not conservators, we have included a conservator level definition for each task.

As an example, consider the task called "Collection Housing." The performance levels have been defined as:

Level I: (beginning level) performs basic housing techniques (e.g., placing objects in specified, prefabricated enclosures) and makes simple custom-fit enclosures.

Level II: (intermediate level) designs and makes complex, custom-fit enclosures with supplied materials.

Level III: (advanced level) determines and/or proposes appropriate housing materials and techniques, as well as equipment and supplies needed, and designs and constructs appropriate enclosures and supports.

Conservator Level: determines appropriate housing materials and techniques; determines and reviews designs and oversees fabrication of enclosures and supports; evaluates enclosures, storage furniture, and the storage environment.

The performance level definitions for each task can be found in the following pages.

Defining the training and education required for a conservation technician or collections care specialist falls outside the scope of this document. However, several observations on accepted practice will be indicated. Currently there is no formal, nationally recognized curriculum for training conservation technicians in the United States. Individuals performing technician tasks tend to receive training on the job or in workshops taught by conservators or preservation professionals. Recognizing the many challenges this approach to training presents, conservators have over the years sought ways to improve the effectiveness of training conservation technicians and collections care specialists through such methods as: mentorship, increased institutional support for preservation, provision of support groups for trainees, follow-up sessions, and on-site visits.

Equally challenging is providing status or legitimacy to conservation technicians and collections care specialists who, for the most part, receive their training in this informal way. Doing so would allow us to formally recognize those who contribute so much to the preservation of cultural property.

Many of the tasks identified in this document may, and often are, performed by conservators, particularly in venues with small staff size or in cases where there are no conservation technicians on staff. The work of this task force and the information presented in this report does not addresses the further qualifications, duties, knowledge, or skills of conservators. (For further information on qualifications of a conservator, see "Defining a Conservator: Essential Competencies," AIC 2003 at http://www.conservation-us.org/coredocs.)

Knowledge and Skills Areas for Each Task

After delineating the tasks, the task force determined a set of knowledge areas and a set of skill areas for each of the nineteen tasks. By defining the knowledge and skill areas in a broad way, the task force was able to narrow the areas down to twenty knowledge areas and twenty-one skill areas that, in different combinations, cover the needs represented by the list of tasks. Detailed information about each task and the suggested knowledge and skills requirements for each can be found in the following pages.

The task force discussed and assigned the competencies that a technician would generally need to complete to be able to be proficient at each task. As with most learning and work situations, a new employee would need a basic level of competency to begin a job from scratch, but would develop skills and abilities over time and with advanced education and training. This experience and exposure could provide them with intermediate and eventually advanced levels of competency in the performance of a given task. Each individual learns and advances at different rates and from different types of experiences.

This document outlines competencies for three levels: basic, intermediate, and advanced. Although three levels of experience are delineated, a technician may not necessarily advance along a linear path from basic to advanced in every or any task. There are likely differences in the developed competencies of a specific person in a specific position. The needs of the work environment will also impact the level on which the technician will be required to perform.

The knowledge areas defined:

Collections Management

Conservation Assessment

Conservation, History, Ethics, Philosophies, and Goals

Conservation Research

Conservation Terminology

Data Collection

Deterioration Processes

Documentation

Emergency Preparedness

Environment

Examination

Exhibition

Health and Safety

Housekeeping

Laboratory and Studio Maintenance

Management

Materials Properties/Conservation Chemistry

Pest Management

Preventive Care

Treatment

The skill areas defined:

Communication Techniques

Cosmetic Reintegration Techniques

Database Management Techniques

Documentation Techniques

Education and Training Techniques

Emergency Response Techniques

Graphic Illustration Techniques

Handling Techniques

Health and Safety Techniques

Housekeeping Techniques

Housing Techniques

Instrumental Techniques

Laboratory Techniques

Mending Techniques

Mount-making Techniques

Organizational Techniques

Photography Techniques

Stabilization Techniques

Superficial Cleaning Techniques

Technical Examination Techniques

Treatment Techniques

Putting It All Together

After looking at a number of ways to present the sum of information produced by the task force, it was decided to integrate the information into a chart (a sample follows) for each conservation technician task. The reader can then reference the definition sections for specifics.

Sample Chart: Collection Housing

Protecting single items or collections of items from exposure to the deleterious effects of the environment, abrasion, and handling by containing them within discrete enclosures designed to prevent physical, chemical, and biological damage to the materials and their support(s).

Task Level I: performs basic housing techniques (e.g., placing objects in specified, prefabricated enclosures) and makes simple custom-fit enclosures.

Task Level II: designs and makes complex, custom-fit enclosures with supplied materials.

Task Level III: determines and/or proposes appropriate housing materials and techniques, as well as equipment and supplies needed; drafts designs and constructs appropriate enclosures and supports.

Conservator Level: determines appropriate housing materials and techniques; determines and reviews designs and oversees fabrication of enclosures and supports; evaluates enclosures, storage furniture, and the storage environment.

KNOWLEDGE	LEVEL			SKILLS	LEVEL		
	1	2	3		1	2	3
collections management	B	I	A	communication techniques	B	I	A
conservation assessment		B	A	cosmetic reintegration techniques			
conservation history, ethics, etc.	B	I	A	database management techniques			
conservation research			B	documentation techniques			
conservation terminology	B	I	A	education and training techniques			I
data collection				response techniques			
deterioration processes		B	I	graphic illustration techniques		B	B
documentation		B	A	handling techniques	B	I	A
emergency preparedness	B	B	B	health and safety techniques	B	I	A
environment		B	A	housekeeping techniques			
examination		B	I	housing techniques	B	I	A
exhibition				instrumental techniques			
health and safety	B	B	I	laboratory techniques			
housekeeping				mending techniques			
lab and studio maintenance	B	I	A	mount-making techniques			
management			B	organizational techniques	B	I	A
materials properties/cons chem		B	I	photography techniques			
pest management			I	stabilization techniques			
preventive care	B	I	A	superficial cleaning techniques			
treatment				technical examination techniques			
[B= Basic; I= Intermediate; A= Advanced Level]							

More than fifty reviewers, including the AIC board, professional conservators, curators, technicians, scientists, and professionals in other disciplines, have reviewed the set of task charts with all accompanying definitions. It was sent to the directors of the conservation training programs in the US, Canada, Australia, and Europe, the AIC Internal Advisory Committee, and each of the Specialty Group Chairs to share with their members. The draft was also shared with selected representatives of the American Association of Museums, the American Library Association, and the Society of American Archivists.

The task force has had many discussions about how this information can be used and has been given suggestions by reviewers on potential uses for the documents:

To define and/or plan training:
One use would be to clarify the types of education and training required for a conservation technician to perform a specific task. It could be used to determine staff training needs. It could be used as a guide in planning training to upgrade the knowledge and skills of employees for specific tasks.

As an aid in hiring and personnel activities:
Employers can use it to appropriately assign tasks. It could be used in the evaluation of applicants for positions and to help in the hiring of qualified employees for positions. It can be used as an aid in writing appropriate job descriptions.

As a guide for curricula development:
It could be used as a guide in developing curricula for collections-care and conservation technician training, workshops, and programs and might provide more consistently trained collections care and conservation technicians. It might be used to establish training standards. It could be used to justify the need and funding for training development and implementation funding for programs.

To define and clarify the relationships between conservators and conservation technicians:
It can be used to detail and define the role of conservators in the supervision, training, and oversight of collections care and conservation technician staff, consultants, volunteers and their activities.

To legitimize and validate:
It can be used to legitimize and validate the role of conservation technicians in meeting collections care goals and in the museum, archives, library, and academic arenas.

The work of the Collections Care Task Force has been extremely rewarding for the task force members. We have forged a hard won greater understanding of the nuances and concerns of our colleagues in different specializations and in different conservation environments. We have had the privilege to work hard as a team under Carolyn Rose's direction on a project that each of us believes is critically important to the future of our profession and of the preservation of cultural property.

Tasks, Knowledge and Skills

Tasks

All levels require training and supervision by a conservator. Supervision may range from close (**Task Level I**) to minimal or infrequent (**Task Level III**).

Collection Housing: protecting single items or collections of items from exposure to the deleterious effects of the environment, abrasion, and handling by containing them within discrete enclosures designed to prevent physical, chemical, and biological damage to the materials and their support(s).

Task Level I: performs basic housing techniques (e.g., placing objects in specified, prefabricated enclosures) and makes simple custom-fit enclosures.

Task Level II: designs and makes complex, custom-fit enclosures with supplied materials.

Task Level III: determines and/or proposes appropriate housing materials and techniques, as well as equipment and supplies needed; drafts designs and constructs appropriate enclosures and supports.

Conservator Level: determines appropriate housing materials and techniques; determines and reviews designs and oversees fabrication of enclosures and supports; evaluates enclosures, storage furniture, and the storage environment.

Collection Condition Survey: systematically assessing the physical and/or chemical state of collections, buildings, or other cultural property. (The AIC defines cultural property as: "Cultural Property: Objects, collections, specimens, structures, or sites identified as having artistic, historic, scientific, religious, or social significance.") (See also Documentation and Examination.)

Task Level I: documents obvious structural damage to and superficial dust and dirt on cultural property, either written or electronically.

Task Level II: assists conservator in documenting physical and chemical damage, and noting general conditions of cultural property via written or electronic reports.

Task Level III: recognizes and documents physical and chemical damage to cultural property via written, electronic, or photographic means.

Conservator Level: independently recognizes and documents physical and chemical damage to cultural property via written, electronic, or photographic means; designs surveys; evaluates condition; determines preventive care for climate, storage, housing, display; provides prioritizations, treatment proposals and time estimates for further resource assessments and future project planning as a result of the survey.

CONSERVATION ASSESSMENT: systematically examining, documenting, and evaluating all of the factors that contribute to the preservation/deterioration of cultural property, as well as its condition, in order to develop and implement a collections care plan.

TASK LEVEL I: assists conservator in conducting a conservation assessment by compiling background information, taking notes, and monitoring environmental conditions as assigned.

TASK LEVEL II: assists conservator by independently gathering and compiling data as assigned.

TASK LEVEL III: assists conservator by independently gathering and compiling data, and analyzing some of the data, developing recommendations, and drafting portions of the report as assigned.

CONSERVATOR LEVEL: defines the background information and data needed; determines appropriate level of analysis; analyzes relevant data; develops final recommendations; writes final report.

DOCUMENTATION: recording, in a permanent format, information derived from conservation activities.

TASK LEVEL I: sets up photographic equipment and prepares cultural property to be photographed; measures and prepares objects for examination; prepares sketches or drawings of cultural property; counts cultural property or tracks groups of collection materials for examination purposes.

TASK LEVEL II: photographs materials using standard format photographic equipment; writes description reports and condition reports for review by a conservator; documents conservation and collections care activities in writing and graphically.

TASK LEVEL III: photographs cultural property using a range of techniques such as normal and ultraviolet illumination, infrared illumination and an infrared monitor; assists with x-radiography and other sophisticated documentation methods; prepares or assists in preparing description, condition, treatment, and collections care reports, as well as accompanying written and graphic documentation.

CONSERVATOR LEVEL: determines written, graphic, and photographic documentation needed; writes and/or reviews description reports and all types of condition documentation; is responsible for developing and producing treatment proposals and final treatment reports.

EMERGENCY PREPAREDNESS AND DISASTER RECOVERY: protecting cultural property through the evaluation of risk to the collection and minimizing those risks to the extent possible; developing action plans to respond to emergencies; preparing information, materials, supplies, and personnel for emergency response; and responding to the emergency by carrying out recovery activities.

TASK LEVEL I: assembles listed equipment, information, and supplies; maintains and stocks emergency depots as instructed; performs actions, and assists others as assigned, in response and remedial-level recovery procedures.

TASK LEVEL II: completes and maintains portions of an emergency plan as assigned (e.g., updates call and vendor lists); prepares materials, information, and supplies for use in response as instructed; responds to emergencies as instructed by supervisory staff; performs remedial-level recovery procedures as instructed.

TASK LEVEL III: fills an assigned role in emergency planning, assists in the creation of an emergency plan; assists in responding to an emergency as indicated in the institution's plan; assists with recovery procedures and conservation treatment activities related to the emergency, as appropriate.

CONSERVATOR LEVEL: writes and/or reviews emergency procedures; shares responsibility for all collections care aspects of an emergency plan jointly with all responsible professional colleagues; oversees response and recovery activities related to sites, historic buildings and collections; assigns response and recovery tasks to appropriate personnel.

ENVIRONMENTAL MONITORING: systematically measuring and documenting environmental factors that affect cultural property, such as relative humidity, temperature, illumination/radiation, contaminants, and pests (see also Pest Management).

TASK LEVEL I: collects data from monitoring equipment and documents findings for review and interpretation by a conservator or environmental specialists.

TASK LEVEL II: maintains and sets up monitoring equipment; collects data; documents findings for review and interpretation by a conservator and/or environmental specialist.

TASK LEVEL III: assists in developing monitoring plans and data collection methods; maintains and sets up monitoring equipment; collects data and ensures complete documentation and reporting; summarizes data for review and interpretation by a conservator and/or environmental specialist; trains others in environmental monitoring techniques.

CONSERVATOR LEVEL: develops monitoring programs; assesses environmental data; makes recommendations for implementation of monitoring programs; determines environmental specifications; coordinates recommendations with environmental specialists in determining a plan of action to monitor and/or mediate problems.

EXAMINATION: investigating the structure, materials, and condition of cultural property items including the identification of the extent and causes of alteration and deterioration (see also Documentation).

TASK LEVEL I: visually examines cultural property and describes its general condition, identifies any questionable aspects to a conservator.

TASK LEVEL II: uses a variety of simple, visual examination techniques and equipment such as a microscope and ultraviolet illumination to describe the materials, construction and condition of cultural property.

TASK LEVEL III: performs a detailed examination of the cultural property item based on a broad knowledge of fabrication methods and materials, condition features, terminology, and visual examination techniques using equipment such as a microscope, ultraviolet and/or infrared illumination.

CONSERVATOR LEVEL: conducts a thorough examination of cultural property based on in-depth knowledge of the materials composing the structure, its fabrication and use; uses various visual examination techniques such as different types of magnification and various sources and angles of illumination, and uses sound analytic techniques to determine the material composition and reactivity of the object; describes, indicates the condition, results of analytical tests, and, if possible, the agents of deterioration, of cultural property.

EXHIBITION PREPARATION: designing and manufacturing appropriate, protective supports and/or enclosures for cultural property through activities such as case making, mount making, hinging, matting, framing, and installation; preparation also may involve cleaning, documentation, materials testing and environmental control (see also Treatment, Documentation, and Environmental Monitoring).

TASK LEVEL I: constructs simple supports, mounts, mats, and frames; assists with installation and de-installation; performs record keeping activities.

TASK LEVEL II: constructs complex supports and enclosures; assists in testing materials and creating microenvironments; monitors and documents environmental conditions; performs record keeping activities and collates activity documentation.

TASK LEVEL III: reviews facility reports and assists in developing environmental specifications; develops and/or constructs appropriate supports; designs custom supports and/or enclosures for complex or unique objects or display conditions; tests materials and creates microenvironments per conservators' specifications; monitors and documents environmental data; documents activities.

CONSERVATOR LEVEL: reviews facility reports; determines environmental specifications; reviews exhibition designs; researches new material, and, when appropriate, performs analytical tests on those materials to determine suitability for use; specifies appropriate materials to be used for case construction, supports, and

mounts; and recommends design protocols to designers, curators, and collections care specialists.

HOUSEKEEPING: routinely monitoring and maintaining (e.g., cleaning) facilities that contain cultural property to preserve and ensure their safety.

TASK LEVEL I: monitors collections for theft, loss, or misplacement of items; assists an intermediate or advanced level person in the superficial cleaning of cultural property; cleans and maintains tools and equipment for housekeeping.

TASK LEVEL II: performs routine dusting and vacuuming; schedules the frequency and type of cleaning; observes signs of deterioration and damage; helps to formulate housekeeping procedures to protect the cultural property; suggests safe, effective supplies and equipment; drafts monthly and annual reports.

TASK LEVEL III: assists in designing housekeeping plans in conjunction with appropriate staff members and in drafting policies and procedures to protect cultural property; acts as a liaison with other departments; suggests safe and effective supplies and materials; ensures complete documentation and reporting; trains others in housekeeping techniques.

CONSERVATOR LEVEL: reviews documentation; formulates and reviews housekeeping policies and procedures; determines safe and effective supplies, materials and equipment; provides training.

LABELING: linking artifacts to records by using suitable labeling materials in locations that are appropriate for the item.

TASK LEVEL I: uses approved materials and methods to label collection items.

Task Level II: suggests appropriate labeling materials and methods; trains others in simple labeling techniques.

TASK LEVEL III: refines methods for labeling and may suggest new techniques for using approved materials; tests labeling materials as appropriate; trains others in labeling techniques.

CONSERVATOR LEVEL: determines materials and methods for labeling; reviews materials and methods as appropriate for each type of application; researches safety and efficacy of new labeling techniques and materials; provides training in materials, methods.

LABORATORY AND STUDIO MAINTENANCE: performing routine tasks to keep a laboratory or studio operating safely and effectively.

TASK LEVEL I: performs routine tasks such as washing laboratory dishes, putting supplies and equipment away, and cleaning counters and work benches.

TASK LEVEL II: participates in laboratory safety training; prepares solutions and other stock treatment essentials (e.g., paste, adhesives); cleans and maintains equipment; maintains supply inventory; and locates and orders equipment and supplies.

TASK LEVEL III: assists in developing, improving, and/or implementing laboratory or studio maintenance and safety procedures; independently orders equipment and supplies; documents expenditures; arranges laboratory safety training; arranges routine maintenance of laboratory equipment.

CONSERVATOR LEVEL: responsible for all laboratory safety procedures; ensures right-to-know laws are followed; approves supplies and equipment orders; oversees proper handling, labeling, storage and use of all materials and equipment; determines equipment and supply needs.

OUTREACH: sharing information about the preservation of cultural property and the conservation profession.

TASK LEVEL I: locates, compiles, and duplicates preservation information in support of outreach activities and participates in laboratory tours, as appropriate.

TASK LEVEL II: assists conservator with lectures, workshops, graphics, and other outreach activities as appropriate.

TASK LEVEL III: disseminates information through lectures, workshops, publications, and outreach activities.

CONSERVATOR LEVEL: disseminates up-to-date and new information through lectures, workshops, publications, and other outreach activities; reviews information and delivery methods prior to dissemination and ensures the content is appropriate for the intended audience.

PACKING/MOVING/TRANSPORT: conducting all activities necessary to ensure the safety of cultural property during movement between various locations.

TASK LEVEL I: prepares and moves collection items according to standard methods and procedures; performs record keeping as appropriate.

TASK LEVEL II: assists in developing packing and transport methods; prepares and moves collection items; performs record keeping activities.

TASK LEVEL III: assists in designing, planning, and implementing the packing and transport of collections, the selection of appropriate methods and materials, and the construction of packing and moving systems; prepares complete documentation; assists in training others in packing and transport methods.

CONSERVATOR LEVEL: designs, plans, and implements the packing and transport of collections; selects or approves appropriate methods and materials and container construction, packing and moving systems; reviews documentation; provides training in packing and transport methods.

PEST MANAGEMENT: discouraging, controlling, and eliminating biological agents that can damage cultural property, such as birds, rodents, and insects, through the creation and maintenance of an environment that is inhospitable to them. Pest management places an emphasis on non-toxic methods of pest control and relies upon regular inspection and monitoring, as well as modification of the building environment, good housekeeping, and good work habits.

TASK LEVEL I: assists in setting up and collecting monitoring devices, such as insect traps, and in recording findings.

TASK LEVEL II: assists conservator and institution staff in setting up and implementing a pest management program.

TASK LEVEL III: assists in designing and implementing a pest management program and trains others in monitoring activities; helps to draft policies, procedures, and implementation methods to ensure the success of the program.

CONSERVATOR LEVEL: reviews current literature; determines best policies and practices in conjunction with pest management professionals and the nature of current risk of actual infestation.

RESEARCH: identifying a problem in need of solution, designing a way to solve the problem, gathering data aimed at solving the problem, analyzing the data, and incorporating the synthesized data into the current knowledge base.

TASK LEVEL I: assists in collecting information and data as instructed by conservator or a scientist.

TASK LEVEL II: assists by collecting information and data, locating and retrieving requested literature, and operating equipment.

TASK LEVEL III: assists in all of the following: designing research projects; conducting literature searches; taking and preparing samples; operating equipment; collecting and analyzing data; documenting findings in conjunction with conservators or scientists as appropriate.

CONSERVATOR LEVEL: develops and reviews research project design and protocols; obtains sample permissions and takes samples; reviews information for dissemination; analyzes data; draws conclusions; writes and/or reviews final reports.

SAMPLE PREPARATION: manipulating and modifying a sample to produce a form appropriate for the proposed analytical procedure. This activity may involve acquiring the sample.

TASK LEVEL I: assists in preparing samples for analysis as instructed by a conservator or scientist.

TASK LEVEL II: prepares documents requesting approval to sample; following approval, acquires samples from designated locations using demonstrated methods.

TASK LEVEL III: calculates and suggests sample size and weight in conjunction with conservator or scientist; proposes sampling method and location; following approvals, acquires sample; prepares sample for analysis.

CONSERVATOR LEVEL: determines and approves sample size, location, purpose, and methodology; reviews sample requests and acquires all additional approvals; prepares and/or reviews documentation before, during, and after sampling; performs or oversees sample preparation and analysis unless performed by a conservation scientist.

SITE PROTECTION: preserving cultural property at an archeological/historical site by safeguarding it from misuse, theft, vandalism, weathering, and natural disasters.

TASK LEVEL I: performs site preservation activities as instructed by a conservator.

Task Level II: assists in developing site preservation plan.

Task Level III: assists in developing and implementing an integrated site preservation program.

Conservator Level: reviews, develops, and implements integrated site management in conjunction with other professionals and communities.

Training: providing instruction in conservation theory, approaches, methodologies, ethical practices, documentation techniques and standards, analytical procedures, treatment techniques, and so forth.

Task Level I: not applicable.

Task Level II: locates and retrieves requested literature; assists conservator in education and training activities.

Task Level III: identifies useful literature; retrieves literature and supplies; assists in planning and implementing education and training activities.

Conservator Level: identifies need and develops audience-appropriate training; develops curricula; identifies needed literature and supplies; provides and/or leads training.

Treatment: deliberately altering the chemical and/or physical aspects of cultural property, aimed primarily at prolonging its existence. Treatment may consist of: stabilization and/or restoration for objects and specimens; and rehabilitation, restoration, and/or reconstruction for buildings.

Task Level I: performs simple stabilization treatments as directed, including superficial cleaning and simple repairs under the direct supervision of a conservator.

Task Level II: performs stabilization techniques as directed, including cleaning and repair activities under close supervision of a conservator; performs minor treatments under general supervision.

Task Level III: in conjunction with a conservator, identifies problems, suggests appropriate approach, proposes treatment, and performs treatments with minimal supervision.

Conservator Level: based on condition, analyses, and understanding of the material and available resources, determines best treatment approach and methodology; proposes treatment; independently performs treatment and thoroughly documents the work; ensures that treatment performed is in keeping with the AIC Standards of Practice.

Knowledge

All levels require training and supervision by a conservator. Supervision may range from close (**Basic Knowledge Level**) to minimal or infrequent (**Advanced Knowledge Level**).

Collections Management: an understanding of the principles, ethics, procedures, and practices governing the acquisition, documentation, care, and use of collections.

Basic Knowledge Level: basic understanding of the fundamental concepts and practices of collections management.

Intermediate Knowledge Level: broad understanding of the various principles, strategies, methods, materials, and techniques used in collections management and practical experience.

Advanced Knowledge Level: in-depth understanding and experience with applying the various principles, strategies, methods, materials, and techniques used in collections management.

Conservation Assessment: an understanding of the approaches and methodologies used for conducting a conservation evaluation of the institution, buildings, storage facilities, and collections in order to develop a conservation plan.

Basic Knowledge Level: basic understanding of what constitutes a conservation assessment in order to recognize data needed for the assessment.

Intermediate Knowledge Level: broad understanding of conservation assessments through assisting a knowledgeable professional in the performance of up to three conservation assessments and a demonstrated ability to collate data.

Advanced Knowledge Level: in-depth understanding of and experience with conducting conservation assessments by gathering and collecting data, drawing conclusions, and writing reports.

Conservation History, Ethics, Philosophies, and Goals: an understanding of the concepts, approaches, and intentions, as well as their historical development, regarding the examination, documentation, treatment, and preventive care of cultural property.

Basic Knowledge Level: basic understanding of the fundamental concepts of and approaches to conservation.

Intermediate Knowledge Level: broad understanding of the fundamentals of conservation including history, approaches, examination and documentation techniques, preventive care and treatment philosophies and goals.

Advanced Knowledge Level: in-depth understanding of conservation ethics, philosophies, goals, and historical development regarding examination, documentation, treatment and preventive care.

Conservation Research: an understanding of the principles and theory of scientific investigation as applied to conservation problems, including a working knowledge of current and past research, and how to locate relevant information.

Basic Knowledge Level: basic understanding of the fundamental concepts of and approaches to science.

Intermediate Knowledge Level: broad understanding and practical experience of the concepts and methods of scientific research in a scientific laboratory setting under the supervision of a scientist.

Advanced Knowledge Level: in-depth understanding and experience with the concepts and methods of scientific research using laboratory equipment and supplies, setting up analyses according to protocol, and documenting relevant data under the supervision of a scientist.

Conservation Terminology: an understanding of the vocabulary, particularly descriptive terms, used by the conservation profession.

Basic Knowledge Level: basic understanding of general conservation terms relating to the technician's work.

Intermediate Knowledge Level: broad understanding and practical use of specialized conservation terms in a conservation context and familiarity with the core conservation literature.

Advanced Knowledge Level: in-depth understanding and use of conservation terminologies in various interdisciplinary contexts, familiarity with current literature, and established professional interaction with colleagues.

Data Collection: an understanding of the methods and terminology used for gathering information that make cultural property more meaningful or for research or analytical purposes.

Basic Knowledge Level: basic understanding of the fundamental methods and terms used in data collection.

Intermediate Knowledge Level: broad understanding and practical use of the terminology and methods used to collect and document data plus practical experience gathering data.

Advanced Knowledge Level: in-depth understanding and practical use of specific methods and terminologies used to define and document various types of collections; experience working with the generation and application of data.

Deterioration Processes: an understanding of the factors and mechanisms that may chemically and physically alter, damage, and destroy cultural property over time.

Basic Knowledge Level: basic understanding of deterioration processes.

Intermediate Knowledge Level: broad understanding of chemistry and physics as it relates to deterioration processes; familiarity with the current conservation literature concerning the factors and mechanisms that chemically and physically alter cultural property over time; practical experience in identifying and documenting deterioration processes of cultural property.

Advanced Knowledge Level: in-depth understanding of the chemistry and physics of deterioration processes; familiarity with the current conservation literature concerning the factors and mechanisms that chemically and physically alter cultural property over time and extensive experience in identifying and documenting the deterioration processes of cultural property.

Documentation: an understanding of the principles of recording conservation and collections care activities through written and visual means.

Basic Knowledge Level: basic understanding of techniques available and conventions used for routine documentation.

Intermediate Knowledge Level: broad understanding and practical application of techniques available and conventions used for routine documentation and experience in independently describing objects and condition features.

Advanced Knowledge Level: in-depth understanding and practical application of techniques available and conventions used for routine documentation and ability to determine which documentation approaches and techniques are appropriate for the specific tasks; experience with independently documenting condition.

Emergency Preparedness: an understanding how institutions prepare to minimize losses due to emergencies; awareness of resources available to assist with emergencies and how to make contacts during emergencies; understanding of role of each staff member in the event of an emergency and how to prepare for and implement an emergency preparedness plan.

Basic Knowledge Level: basic understanding of why and how emergency preparation is essential to the preservation of cultural property.

Intermediate Knowledge Level: broad understanding of emergency planning, response, and recovery with a hands-on component and practical training and/or experience in emergency planning, response, and recovery.

Advanced Knowledge Level: in-depth experience applying knowledge of emergency preparedness, response, and recovery through contributions to or writing of emergency plans, active participation in emergency preparedness and responding to emergencies to protect and/or salvage cultural heritage.

Environment: an understanding of the environmental factors that cause the deterioration of cultural property; and an understanding of current approaches and methodologies for monitoring and controlling light, temperature, relative humidity, and air quality.

Basic Knowledge Level: basic understanding of the environmental factors that cause deterioration of cultural property.

Intermediate Knowledge Level: broad understanding of environmental deterioration factors and a basic understanding and practical application of monitoring and control methods.

Advanced Knowledge Level: in-depth understanding of environmental deterioration processes and mitigation methods and experience in monitoring, control, and mitigation methods as well as in developing monitoring programs.

Examination: an understanding of and experience with the tools and techniques necessary to identify the material composition of cultural property, its method of manufacture/construction/preparation, and its condition.

Basic Knowledge Level: basic understanding of examination principles and practices used in the examination of cultural property.

Intermediate Knowledge Level: broad understanding and experience with visual examination principles and practices; familiarity with the literature on the material composition, method of manufacture, and condition of the specific object/building/specimen.

Advanced Knowledge Level: in-depth understanding and experience in instrumental analysis and specialized experience in independently examining cultural property to determine the material composition, method of manufacture, and condition of the specific object/building/specimen.

Exhibition: an understanding of the many activities and various personnel responsibilities necessary for using cultural property for an exhibition, such as evaluating objects for display, planning schedules, developing budgets, establishing guidelines and procedures, evaluating environmental factors, preparing cultural property for exhibition, designing and building appropriate cases and mounts, and devising systems for security and maintenance.

Basic Knowledge Level: basic understanding of the approaches and methods used during the exhibition process.

Intermediate Knowledge Level: broad understanding of the methodologies and the various techniques utilized in the exhibition process and practical experience with exhibit case and/or mount construction or exhibit installation.

Advanced Knowledge Level: in-depth understanding of exhibition goals and processes and practical experience with reviewing plans for exhibitions, building cases or mounts, and installation of exhibit furniture and objects.

Health and Safety: an understanding of the sources of and the risks associated with treating and maintaining cultural property as well as the practices necessary to protect oneself, fellow practitioners, and the building that houses, or is part of the collection.

Basic Knowledge Level: basic understanding of health and safety issues, including familiarity with the literature and reference materials as well as the safe use of tools and equipment.

Intermediate Knowledge Level: broad understanding and practical experience concerning the selection and use of personal protective equipment and the handling and disposal of potentially dangerous or toxic products and training in local and federal regulations and right-to-know laws.

Advanced Knowledge Level: in-depth understanding and practical experience with protective equipment and gear and its use, the use of reference material and sources of information on products and safety and training in local and federal regulations and right-to-know laws, and experience in training others in the handling and disposal of potentially dangerous or toxic products.

Housekeeping: an understanding of the concepts and procedures of preventive conservation, cleaning chemistry, and cleaning techniques as they apply to housekeeping.

Basic Knowledge Level: basic understanding of housekeeping materials and methods.

Intermediate Knowledge Level: broad understanding of housekeeping materials and methods, preventive conservation, and agents of deterioration and practical experience.

Advanced Knowledge Level: in-depth understanding of housekeeping materials, methods, and approach and experience in the planning and implementation of housekeeping programs and projects.

Laboratory and Studio Maintenance: an understanding of the fundamentals of laboratory and studio work, safety, materials, equipment, and maintenance procedures.

Basic Knowledge Level: basic understanding of the fundamentals of laboratory or studio work, materials, equipment, and procedures.

Intermediate Knowledge Level: broad understanding of and experience with performing the fundamentals of laboratory or studio work, materials, equipment, and procedures.

Advanced Knowledge Level: in-depth experience of and experience with performing and scheduling lab maintenance, safety procedures, and daily use and care of laboratory materials and equipment.

Management: an understanding of how to manage and/or implement policies and procedures within an organizational context, i.e., record keeping, financial, health and safety, etc.; an understanding of how to supervise staff (Advanced Knowledge Level only).

Basic Knowledge Level: basic understanding of the policies and procedures of the working group/unit and of the short-term goals for the same; fundamental understanding of how to work cooperatively with colleagues and with people in a team environment; and basic understanding of managing interactions with peers, colleagues, and superiors.

Intermediate Knowledge Level: broad understanding of the policies and procedures of the organization and of short to mid-term goals; broad understanding of heading a project; broad understanding of administrative principles and methods and practical experience in an assistant administrative capacity.

Advanced Knowledge Level: in-depth understanding of administrative goals, policies, methodologies, supervisory techniques and responsibilities; practical experience in administering a unit and developing administrative protocols for the unit.

Materials Properties/Conservation Chemistry: an understanding of the basic chemical and physical properties of the materials of which cultural property is made; an understanding of the formation, origin, deterioration, and stabilization of these materials; and an understanding of the physical and chemical properties of the materials used for their care and conservation.

Basic Knowledge Level: basic understanding of the fundamental properties of materials and their formation.

Intermediate Knowledge Level: broad understanding of the sciences and the technology used in the technician's specialty (e.g., the technologies used to process and fabricate paper) and practical experience applying knowledge of materials science and conservation chemistry to the collections.

Advanced Knowledge Level: in-depth understanding of the principles and practices of the science and technology and instrumental analysis used in technician's specialty; familiarity with the standard and current related literature; and in-depth experience with applying knowledge of materials science.

Pest Management: an understanding of current approaches and methodologies used for monitoring, identifying, exterminating, and controlling pests in collections.

Basic Knowledge Level: basic understanding of pest management principles.

Intermediate Knowledge Level: broad understanding of and experience with monitoring techniques and identification of pests, trap setting, and pest eradication techniques, including freezing and the use of inert gases; and familiarity with the literature and reference materials.

Advanced Level: in-depth understanding of and experience with current pest management approaches and methodologies and experience in observing a complete annual cycle of pests and in designing and carrying out a pest management and/or eradication program.

Preventive Care: an understanding of the approaches and methods used to prevent or mitigate the deterioration of cultural property in storage, on exhibit, in transit, or in use.

Basic Knowledge Level: basic understanding of the approaches and methods used to prevent deterioration of cultural property.

Intermediate Knowledge Level: broad understanding of and experience with the approaches and methods used to prevent and mitigate deterioration of cultural property.

Advanced Knowledge Level: in-depth understanding of and experience with preventive care concepts, approaches, and methods, including the development, redesign, and/or execution of preventive care programs.

Treatment: an understanding of various treatment methods and materials available as well as their effect on different types of cultural property, based on an understanding of condition, natural use, cultural, historic, and scientific significance, and if applicable, the maker's intent.

Basic Knowledge Level: basic understanding of treatment alternatives that can be used for a specific object/specimen/building and familiarity with the basic literature.

Intermediate Knowledge Level: broad understanding of and hands-on experience with treatment alternatives under the direct supervision of a conservator; and familiarity with the related conservation literature.

Advanced Knowledge Level: in-depth understanding of conservation treatment alternatives and ability to identify the best course of treatment; familiarity with the related conservation literature; and hands-on experience with carrying out treatments with minimal supervision.

Skills

All levels require training and supervision by a conservator. Supervision may range from close (**Basic Skill Level**) to minimal or infrequent (**Advanced Skill Level**).

Communication Techniques: ability to present concepts in oral, written, and graphic forms.

Basic Skill Level: demonstrated ability to communicate in oral, written, and graphic forms.

Intermediate Skill Level: demonstrated ability to present concepts in oral, written, and graphic forms.

Advanced Skill Level: demonstrated ability to present complex concepts and methodologies in oral, written, and graphic forms.

Cosmetic Reintegration Techniques: ability to repair visible damage to the surface of an object without compromising the integrity of the object.

Basic Skill Level: demonstrated ability to match colors, manipulate materials, and to apply simple cosmetic reintegration techniques as instructed.

Intermediate Skill Level: demonstrated mastery of simple cosmetic reintegration techniques and ability to apply more complex techniques as instructed.

Advanced Skill Level: demonstrated ability to select appropriate cosmetic reintegration techniques for the task at hand; ability to apply a range of cosmetic reintegration techniques independently; ability to train others in cosmetic integration techniques.

Database Management Techniques: ability to enter, manipulate, and retrieve data using computer-based programs.

Basic Skill Level: demonstrated ability to enter, retrieve, and manipulate data using state-of-the-art computer software programs as instructed.

Intermediate Skill Level: demonstrated ability to enter, manipulate, and retrieve data independently using state-of-the-art computer programs.

Advanced Skill Level: ability to contribute to the design of databases that permit the analysis and reporting of conservation activities; ability to train others in data management techniques.

Documentation Techniques: ability to accurately, and permanently, record information derived from conservation activities. (See also Graphic Illustration Techniques, Handling Techniques, and Photography Techniques.)

Basic Skill Level: demonstrated ability to accurately record and document simple conservation information as instructed; experience with basic photography techniques; handling and object movement; and experience with using basic monitoring equipment .

Intermediate Skill Level: demonstrated ability to accurately record and document simple conservation information independently and more complex documentation techniques as instructed, including: varied and complex experiences with photography techniques, object handling and movement, and the set-up and use of documentation and monitoring equipment.

Advanced Skill Level: demonstrated ability to select documentation techniques appropriate for the task at hand; ability to apply a range of documentation techniques independently; ability to train others in documentation techniques and the set-up and use of documentation and monitoring equipment.

Education and Training Techniques: ability to communicate effectively with others in order to impart knowledge, to teach methods, and to develop skills.

Basic Skill Level: not applicable.

Intermediate Skill Level: demonstrated ability to organize and convey information to others in an area of technical expertise as instructed.

Advanced Skill Level: demonstrated ability to select, organize, and convey information independently in an area of technical expertise.

Emergency Response Techniques: ability to respond appropriately to emergency situations, in order to stabilize and protect cultural property.

Basic Skill Level: demonstrated ability to perform simple emergency recovery and treatment procedures as instructed.

Intermediate Skill Level: demonstrated ability to participate in the implementation of response, recovery, and emergency treatment procedures.

Advanced Skill Level: demonstrated ability to act with some autonomy in responding to an emergency, and in recovering and stabilizing cultural property affected by the emergency; experience with emergencies; ability to train others in emergency response techniques and/or act as a team leader.

Graphic Illustration Techniques: ability to apply drawing skills to document or illustrate conservation information.

Basic Skill Level: demonstrated ability to apply drawing skills to document or illustrate conservation information as instructed.

Intermediate Skill Level: demonstrated ability to apply drawing skills to document or illustrate conservation information independently.

Advanced Skill Level: demonstrated ability to apply drawing skills to document or illustrate conservation information independently; ability to train others in graphic illustration for conservation.

Handling Techniques: ability to prevent damage to objects during lifting, moving, and working with collections (see also Health and Safety Techniques).

Basic Skill Level: demonstrated ability to lift and move objects safely as instructed.

Intermediate Skill Level: demonstrated ability to safely manipulate a variety of different objects independently.

Advanced Skill Level: demonstrated ability to determine safe handling techniques; demonstrated ability to safely manipulate a variety of different objects independently; ability to train others in handling objects.

Health and Safety Techniques: ability to select, use, and care for personal protective gear, tools and equipment, and machinery; ability to handle, use, store, and dispose of hazardous materials and contaminated items; and an ability to work ergonomically.

Basic Skill Level: demonstrated ability to use and care for personal protective gear, tools and equipment, and machinery as instructed; demonstrated ability to handle, use, store, and dispose of hazardous and contaminated materials as instructed.

Intermediate Skill Level: demonstrated ability to independently select, use and care for personal protective gear; ability to use tools, equipment, and machinery safely and ergonomically; ability to independently handle, use, store, and dispose of hazardous and contaminated materials.

Advanced Skill Level: demonstrated ability to create a safe and ergonomically sound work environment for self and others; ability to train others in health and safety practices.

Housekeeping Techniques: ability to handle objects safely, manipulate cleaning tools and materials, and ability to track and report housekeeping activities and programs.

Basic Skill Level: demonstrated ability to safely handle objects and perform simple housekeeping techniques as instructed; ability to record housekeeping activities as instructed.

Intermediate Skill Level: demonstrated mastery of simple housekeeping techniques; ability to perform complex housekeeping techniques as instructed; ability to track projects and record activities as instructed.

Advanced Skill Level: demonstrated ability to select appropriate housekeeping techniques for the task at hand; ability to perform a range of housekeeping techniques from simple to complex; ability to develop appropriate record-keeping mechanisms, to track projects, and to record activities; ability to train others in housekeeping techniques.

Housing Techniques: ability to use pre-made or to construct enclosures that are both physically and chemically non-damaging to single items or collection of items in order to protect them from exposure to deleterious effects of the environment, abrasion, and handling.

Basic Skill Level: demonstrated ability to use pre-made enclosures and to make basic custom-fit enclosures as instructed.

Intermediate Skill Level: demonstrated mastery of basic custom-fit enclosure construction and the ability make a complex, custom-fit enclosures as instructed; demonstrated ability to choose appropriate pre-made enclosures.

Advanced Skill Level: demonstrated ability to design and make complex, custom-fit enclosures; ability to train others in the efficient construction of enclosures; ability to recognize and identify need for custom enclosure rather than using pre-made, commercially available enclosures.

Instrumental Techniques: ability to operate and maintain scientific equipment and apparatus to produce accurate and precise results.

Basic Skill Level: demonstrated ability to operate scientific equipment as instructed.

Intermediate Skill Level: demonstrated ability to operate and maintain equipment and to resolve problems independently.

Advanced Skill Level: demonstrated ability to operate, maintain, resolve problems with, and repair (when possible) scientific equipment; ability to train others in instrumentation techniques.

Laboratory Techniques: ability to handle and measure solid and liquid chemicals in a safe and proper manner; ability to use, clean, and maintain basic laboratory tools such as balances, heating apparatus, fume extraction systems, and laboratory glassware; and an ability to use, clean, and maintain basic workshop tools.

Basic Skill Level: demonstrated ability to safely handle and measure chemicals as instructed; ability to handle, use, and care for basic laboratory and workshop tools as instructed.

Intermediate Skill Level: demonstrated ability to independently safely handle and measure chemicals and ability to handle, use, and care for basic laboratory and workshop tools.

Advanced Skill Level: demonstrated ability to independently safely handle and measure chemicals and ability to handle, use, and care for basic laboratory and workshop tools; ability to train others in laboratory or studio techniques.

Mending Techniques: ability to perform hands-on mending treatments to repair cultural property.

Basic Skill Level: demonstrated ability to perform simple repairs as instructed.

Intermediate Skill Level: demonstrated mastery of simple repairs and ability to perform complex repairs as instructed.

Advanced Skill Level: demonstrated ability to recognize when cultural property is in need of mending; ability to select mending techniques appropriate for the task at hand; ability to independently perform a range of mending techniques after consultation with conservator; ability to train others in mending techniques.

Mount-making Techniques: ability to develop and fabricate appropriate mounts that properly support objects and protect them from slippage, jarring, and other movements due to air currents, ambient vibration, and visitor movement.

Basic Skill Level: demonstrated ability to fabricate simple mounts as instructed.

Intermediate Skill Level: demonstrated mastery of simple mounts construction and ability to fabricate complex mounts as instructed.

Advanced Skill Level: demonstrated ability to design and fabricate mounts appropriate to the task at hand after consultation with conservator; ability to design and fabricate a range of mounts and to train others in mount making.

Organizational Techniques: ability to organize materials and human resources to carry out a specific project or job.

Basic Skill Level: demonstrated ability to organize tools, equipment and materials as instructed for a specific project.

Intermediate Skill Level: demonstrated ability to anticipate the needs and arrange for the tools, equipment and material resources for a specific project.

Advanced Skill Level: demonstrated ability to anticipate the need and arrange for the tools, equipment, material and staffing resources for a specific project and the ability to schedule and organize those resources.

Photography Techniques: ability to use photographic equipment, various sources of illumination, and object supports, as well as skill in applying lighting and photographic techniques, such as raking, specular, and transmitted light, to produce a high quality photographic documentation without causing any damage to the cultural property.

Basic Skill Level: demonstrated ability to safely set up and assist in photographing cultural property.

Intermediate Skill Level: demonstrated ability to safely set-up and photograph cultural property as instructed.

Advanced Skill Level: demonstrated ability to select photographic techniques appropriate for the task at hand; ability to independently photograph cultural property; ability to train others in photography techniques.

Stabilization Techniques: ability required to treat cultural property or its environment in a manner intended to reduce or eliminate the probability of or rate of deterioration.

Basic Skill Level: demonstrated ability to perform simple stabilization techniques on cultural property as instructed.

Intermediate Skill Level: demonstrated mastery of simple stabilization techniques and ability to perform complex stabilization techniques on cultural property as instructed.

Advanced Skill Level: demonstrated ability to recognize when cultural property is in need of stabilization; ability to select stabilization techniques appropriate for the task at hand; ability to perform a range of stabilization techniques independently; and ability to train others in stabilization techniques.

Superficial Cleaning Techniques: ability to reduce extraneous material from cultural property.

Basic Skill Level: demonstrated ability to manipulate cleaning tools and to perform simple superficial cleaning techniques as instructed.

Intermediate Skill Level: demonstrated mastery of simple superficial cleaning techniques and ability to perform complex superficial cleaning techniques as instructed.

Advanced Skill Level: demonstrated ability to recognize when cultural property is in need of superficial cleaning; ability to select superficial cleaning techniques appropriate to the task at hand; ability to perform a range of cleaning techniques independently; ability to train others in superficial cleaning techniques.

Technical Examination Techniques: ability to use tools and equipment to identify and document the composition, construction, and condition of and modifications to cultural property.

Basic Skill Level: demonstrated ability to use equipment to perform simple examination techniques as instructed to examine, identify, and document the materials composing cultural property, its construction, condition and modifications, if any.

Intermediate Skill Level: demonstrated mastery of simple examination techniques; ability to use equipment to perform more complex examination techniques as instructed; ability to examine, identify, and document the materials composing cultural property, its construction, condition, and modifications, if any.

Advanced Skill Level: demonstrated ability to select technical examination techniques appropriate for the task at hand; ability to independently use equipment to perform examination techniques; ability to train others in technical examination techniques.

Treatment Techniques: see Cosmetic Reintegration Techniques, Mending Techniques, Stabilization Techniques, and Superficial Cleaning Techniques.

Charts

Collection Housing

Protecting single items or collections of items from exposure to the deleterious effects of the environment, abrasion, and handling by containing them within discrete enclosures designed to prevent physical, chemical, and biological damage to the materials and their support(s).

Task Level I: performs basic housing techniques (e.g., placing objects in specified, prefabricated enclosures) and makes simple custom-fit enclosures.

Task Level II: designs and makes complex, custom-fit enclosures with supplied materials.

Task Level III: determines and/or proposes appropriate housing materials and techniques, as well as equipment and supplies needed; drafts designs and constructs appropriate enclosures and supports.

Conservator Level: determines appropriate housing materials and techniques; determines and reviews designs and oversees fabrication of enclosures and supports; evaluates enclosures, storage furniture, and the storage environment.

KNOWLEDGE	LEVEL			SKILLS	LEVEL		
	1	2	3		1	2	3
collections management	B	I	A	communication techniques	B	I	A
conservation assessment		B	A	cosmetic reintegration techniques			
conservation history, ethics, etc.	B	I	A	database management techniques			
conservation research			B	documentation techniques			
conservation terminology	B	I	A	education and training techniques			I
data collection				emergency response techniques			
deterioration processes		B	I	graphic illustration techniques		B	B
documentation		B	A	handling techniques	B	I	A
emergency preparedness	B	B	B	health and safety techniques	B	I	A
environment		B	A	housekeeping techniques			
examination		B	I	housing techniques	B	I	A
exhibition				instrumental techniques			
health and safety	B	B	I	laboratory techniques			
housekeeping				mending techniques			
lab and studio maintenance	B	I	A	mount-making techniques			
management			B	organizational techniques	B	I	A
materials properties/cons chem		B	I	photography techniques			
pest management			I	stabilization techniques			
preventive care	B	I	A	superficial cleaning techniques			
treatment				technical examination techniques			
[B= Basic; I= Intermediate; A= Advanced Level]							

Collection Condition Survey

Systematically assessing the physical and/or chemical state of collections, buildings, or other cultural property. (The AIC defines cultural property as: "Objects, collections, specimens, structures, or sites identified as having artistic, historic, scientific, religious, or social significance.") (See also Documentation and Examination.)

Task Level I: documents obvious structural damage to and superficial dust and dirt on cultural property, either written or electronically.

Task Level II: assists conservator in documenting physical and chemical damage, and noting general conditions of cultural property via written or electronic reports.

Task Level III: recognizes and documents physical and chemical damage to cultural property via written, electronic, or photographic means.

Conservator Level: independently recognizes and documents physical and chemical damage to cultural property via written, electronic, or photographic means; designs surveys; evaluates condition; determines preventive care for climate, storage, housing, display; provides prioritizations, treatment proposals and time estimates for further resource assessments and future project planning as a result of the survey.

KNOWLEDGE	LEVEL			SKILLS	LEVEL		
	1	2	3		1	2	3
collections management	B	B	B	communication techniques	B	B	A
conservation assessment	B	I	A	cosmetic reintegration techniques		B	I
conservation history, ethics, etc.	B	I	A	database management techniques	B	B	B
conservation research				documentation techniques	B	B	B
conservation terminology	B	I	A	education and training techniques			
data collection	B	I	B	emergency response techniques			
deterioration processes	B	B	A	graphic illustration techniques			B
documentation	B	B	A	handling techniques	B	I	A
emergency preparedness				health and safety techniques	B	B	B
environment	B	I	A	housekeeping techniques			
examination	B	I	A	housing techniques	B	B	B
exhibition				instrumental techniques			
health and safety	B	B	B	laboratory techniques			
housekeeping		B	B	mending techniques			
lab and studio maintenance				mount-making techniques			B
management				organizational techniques			B
materials properties/cons chem	B	B	A	photography techniques			B
pest management	B	B	I	stabilization techniques		B	I
preventive care	B	B	A	superficial cleaning techniques		B	I
treatment	B	I	A	technical examination techniques		B	B
[B= Basic; I= Intermediate; A= Advanced Level]							

Conservation Assessment

Systematically examining, documenting, and evaluating all of the factors that contribute to the preservation/deterioration of cultural property, as well as its condition, in order to develop and implement a collections care plan.

Task Level I: assists conservator in conducting a conservation assessment by compiling background information, taking notes, and monitoring environmental conditions as assigned.

Task Level II: assists conservator by independently gathering and compiling data as assigned.

Task Level III: assists conservator by independently gathering and compiling data, and analyzing some of the data, developing recommendations, and drafting portions of the report as assigned.

Conservator Level: defines the background information and data needed; determines appropriate level of analysis; analyzes relevant data; develops final recommendations; writes final report.

KNOWLEDGE	LEVEL			SKILLS	LEVEL		
	1	2	3		1	2	3
collections management	B	I	A	communication techniques	B	I	A
conservation assessment	B	I	A	cosmetic reintegration techniques	B	B	B
conservation history, ethics, etc.	B	I	A	database management techniques			
conservation research				documentation techniques			
conservation terminology	B	I	A	education and training techniques			
data collection	B	I	A	emergency response techniques			
deterioration processes	B	I	A	graphic illustration techniques			
documentation	B	I	A	handling techniques			B
emergency preparedness	B	I	A	health and safety techniques			B
environment	B	I	A	housekeeping techniques		B	I
examination	B	I	A	housing techniques		B	I
exhibition	B	I	A	instrumental techniques			
health and safety	B	I	A	laboratory techniques			
housekeeping	B	I	A	mending techniques			
lab and studio maintenance				mount-making techniques	B	B	B
management	B	B	B	organizational techniques	B	I	A
materials properties/cons chem	B	B	B	photography techniques			B
pest management	B	I	A	stabilization techniques			
preventive care	B	I	A	superficial cleaning techniques			
treatment	B	I	A	technical examination techniques			
[B= Basic; I= Intermediate; A= Advanced Level]							

Documentation

Recording, in a permanent format, information derived from conservation activities.

Task Level I: sets up photographic equipment and prepares cultural property to be photographed; measures and prepares objects for examination; prepares sketches or drawings of cultural property; counts cultural property or tracks groups of collection materials for examination purposes.

Task Level II: photographs materials using standard format photographic equipment; writes description reports and condition reports for review by a conservator; documents conservation and collections care activities in writing and graphically.

Task Level III: photographs cultural property using a range of techniques such as normal and ultraviolet illumination, infrared illumination and an infrared monitor; assists with x-radiography and other sophisticated documentation methods; prepares or assists in preparing description, condition, treatment, and collections care reports, as well as accompanying written and graphic documentation.

Conservator Level: determines written, graphic, and photographic documentation needed; writes and/or reviews description reports and all types of condition documentation; is responsible for developing and producing treatment proposals and final treatment reports.

KNOWLEDGE	LEVEL			SKILLS	LEVEL		
	1	2	3		1	2	3
collections management	B	I	A	communication techniques	B	B	B
conservation assessment			B	cosmetic reintegration techniques		B	I
conservation history, ethics, etc.	B	I	A	database management techniques	B	B	B
conservation research			B	documentation techniques	B	I	A
conservation terminology	B	I	I	education and training techniques			
data collection	B	I	A	emergency response techniques			
deterioration processes	B	I	I	graphic illustration techniques	B	I	A
documentation	B	I	A	handling techniques	B	I	A
emergency preparedness			B	health and safety techniques	B	I	A
environment	B	I	A	housekeeping techniques		B	I
examination	B	I	A	housing techniques	B	I	A
exhibition				instrumental techniques		B	I
health and safety		B	B	laboratory techniques			B
housekeeping				mending techniques	B	B	B
lab and studio maintenance				mount-making techniques			B
management				organizational techniques	B	B	A
materials properties/cons chem	B	I	A	photography techniques	B	I	A
pest management		B	I	stabilization techniques	B	B	B
preventive care	B	I	A	superficial cleaning techniques	B	B	B
treatment	B	I	A	technical examination techniques	B	I	A
[B= Basic; I= Intermediate; A= Advanced Level]							

Emergency Preparedness and Disaster Recovery

Protecting cultural property through the evaluation of risk to the collection and minimizing those risks to the extent possible; developing action plans to respond to emergencies; preparing information, materials, supplies, and personnel for emergency response; and responding to the emergency by carrying out recovery activities.

Task Level I: assembles listed equipment, information, and supplies; maintains and stocks emergency depots as instructed; performs actions, and assists others as assigned, in response and remedial-level recovery procedures.

Task Level II: completes and maintains portions of the emergency plan as assigned (e.g., updates call and vendor lists); prepares materials, information, and supplies for use in response as instructed; responds to emergencies as instructed by supervisory staff; performs remedial-level recovery procedures as instructed.

Task Level III: fills an assigned role in emergency planning, assists in the creation of an emergency plan, and response; assists in responding to an emergency as indicated in the institution's plan; assists with recovery procedures and conservation treatment activities related to the emergency, as appropriate.

Conservator Level: writes and/or reviews emergency procedures; shares responsibility for all collections care aspects of an emergency plan jointly with all responsible professional colleagues; oversees response and recovery activities related to sites, historic buildings, and collections; assigns response and recovery tasks to appropriate personnel.

KNOWLEDGE	LEVEL			SKILLS	LEVEL		
	1	2	3		1	2	3
collections management	B	I	A	communication techniques	B	I	A
conservation assessment	B	B	B	cosmetic reintegration techniques			
conservation history, ethics, etc.	B	I	A	database management techniques			
conservation research				documentation techniques		I	I
conservation terminology	B	I	A	education and training techniques		I	A
data collection	B	B	B	emergency response techniques	B	I	A
deterioration processes		I	A	graphic illustration techniques			
documentation		I	A	handling techniques	B	I	A
emergency preparedness		I	A	health and safety techniques	B	I	I
environment		I	A	housekeeping techniques			B
examination		I	A	housing techniques	B	B	I
exhibition	B	B	B	instrumental techniques			
health and safety	B	I	A	laboratory techniques			
housekeeping	B	I	I	mending techniques			B
lab and studio maintenance				mount-making techniques		B	I
management		I	A	organizational techniques	B	I	A
materials properties/cons chem		I	I	photography techniques		B	B
pest management		I	A	stabilization techniques		B	I
preventive care		I	A	superficial cleaning techniques			B
treatment		I	A	technical examination techniques			
[B= Basic; I= Intermediate; A= Advanced Level]							

Environmental Monitoring

Systematically measuring and documenting environmental factors that affect cultural property, such as relative humidity, temperature, illumination/radiation, contaminants, and pests (see also Pest Management).

Task Level I: collects data from monitoring equipment and documents findings for review and interpretation by a conservator or environmental specialists.

Task Level II: maintains and sets up monitoring equipment; collects data; documents findings for review and interpretation by a conservator or environmental specialist.

Task Level III: assists in developing monitoring plans and data collection methods; maintains and sets up monitoring equipment; collects data and ensures complete documentation and reporting; summarizes data for review and interpretation by a conservator or environmental specialist; trains others in environmental monitoring techniques.

Conservator Level: develops monitoring programs; assesses environmental data; makes recommendations for implementation of monitoring programs; determines environmental specifications; coordinates recommendations with environmental specialists in determining a plan of action to monitor or mediate problems.

KNOWLEDGE	LEVEL			SKILLS	LEVEL		
	1	2	3		1	2	3
collections management		B	I	communication techniques			
conservation assessment		B	I	cosmetic reintegration techniques			
conservation history, ethics, etc.	B	I	A	database management techniques	B	B	B
conservation research				documentation techniques			
conservation terminology		B	I	education and training techniques			
data collection	B	B	B	emergency response techniques			
deterioration processes				graphic illustration techniques			
documentation				handling techniques			
emergency preparedness				health and safety techniques			B
environment	B	I	A	housekeeping techniques			
examination				housing techniques			
exhibition				instrumental techniques			
health and safety	B	B	B	laboratory techniques			
housekeeping				mending techniques			
lab and studio maintenance				mount-making techniques			
management			B	organizational techniques			
materials properties/cons chem				photography techniques			
pest management				stabilization techniques			
preventive care		B	I	superficial cleaning techniques			
treatment				technical examination techniques			
[B= Basic; I= Intermediate; A= Advanced Level]							

Examination

Investigating the structure, materials, and condition of cultural property items including the identification of the extent and causes of alteration and deterioration (see also Documentation).

Task Level I: visually examines cultural property and describes its general condition, identifies any questionable aspects to a conservator.

Task Level II: uses a variety of simple, visual examination techniques and equipment such as a microscope and ultraviolet illumination to describe the materials, construction, and condition of cultural property.

Task Level III: performs a detailed examination of the cultural property item based on a broad knowledge of fabrication methods and materials, condition features, terminology, and visual examination techniques and equipment such as a microscope, ultraviolet illumination, and infrared.

Conservator Level: conducts a thorough examination of cultural property based on in-depth knowledge of the materials composing the structure, its fabrication and use; uses various visual examination techniques such as different types of magnification and various sources and angles of illumination, and uses sound analytic techniques to determine the material composition and reactivity of the object; describes, indicates the condition, results of analytical tests, and, if possible, the agents of deterioration, of cultural property.

KNOWLEDGE	LEVEL			SKILLS	LEVEL		
	1	2	3		1	2	3
collections management			B	communication techniques	B	B	B
conservation assessment			B	cosmetic reintegration techniques			B
conservation history, ethics, etc.	B	B	I	database management techniques			
conservation research			B	documentation techniques	B	I	A
conservation terminology	B	I	A	education and training techniques			
data collection	B	B	I	emergency response techniques			
deterioration processes	B	I	A	graphic illustration techniques			B
documentation	B	I	A	handling techniques	B	I	A
emergency preparedness			B	health and safety techniques	B	B	B
environment		B	I	housekeeping techniques			
examination	B	I	A	housing techniques	B	B	B
exhibition				instrumental techniques			
health and safety	B	B	I	laboratory techniques			
housekeeping			B	mending techniques		B	I
lab and studio maintenance				mount-making techniques			B
management				organizational techniques			
materials properties/cons chem	B	I	A	photography techniques	B	I	A
pest management		B	I	stabilization techniques			B
preventive care	B	I	A	superficial cleaning techniques			B
treatment			B	technical examination techniques	B	I	A
[B= Basic; I= Intermediate; A= Advanced Level]							

Exhibition Preparation

Designing and manufacturing appropriate, protective supports and/or enclosures for cultural property through activities such as case making, mount making, hinging, matting, framing, and installation; preparation also may involve cleaning, documentation, materials testing and environmental control (see also Treatment, Documentation, and Environmental Monitoring).

Task Level I: constructs simple supports, mounts, mats, and frames; assists with installation and de-installation; performs record keeping activities.

Task Level II: constructs complex supports and enclosures; assists in testing materials and creating microenvironments; monitors and documents environmental conditions; performs record keeping activities and collates activity documentation.

Task Level III: reviews facility reports and assists in developing environmental specifications; develops and/or constructs appropriate supports; designs custom supports and/or enclosures for complex or unique objects or display conditions; tests materials and creates microenvironments per conservators' specifications; monitors and documents environmental data; documents activities.

Conservator Level: reviews facility reports; determines environmental specifications; reviews exhibition designs; researches new material, and, when appropriate, performs analytical tests on those materials to determine suitability for use; specifies appropriate materials to be used for case construction, supports, and mounts; and recommends design protocols to designers, curators, and collections care specialists.

KNOWLEDGE	LEVEL			SKILLS	LEVEL		
	1	2	3		1	2	3
collections management	B	I	A	communication techniques	B	I	A
conservation assessment	B	B	I	cosmetic reintegration techniques	B	B	I
conservation history, ethics, etc.	B	I	A	database management techniques	B	B	I
conservation research	B	B	I	documentation techniques	B	B	I
conservation terminology	B	I	A	education and training techniques	B	B	I
data collection	B	B	B	emergency response techniques	B	I	A
deterioration processes	B	I	A	graphic illustration techniques	B	I	A
documentation	B	B	I	handling techniques	B	I	A
emergency preparedness	B	B	I	health and safety techniques	B	B	I
environment	B	I	A	housekeeping techniques	B	I	A
examination	B	I	A	housing techniques	B	B	I
exhibition	B	I	A	instrumental techniques			B
health and safety	B	B	I	laboratory techniques	B	B	B
housekeeping	B	I	A	mending techniques	B	B	B
lab and studio maintenance				mount-making techniques	B	B	A
management	B	I	A	organizational techniques	B	B	B
materials properties/cons chem	B	I	A	photography techniques	B	B	I
pest management	B	I	A	stabilization techniques	B	B	I
preventive care	B	I	A	superficial cleaning techniques	B	B	I
treatment	B	B	I	technical examination techniques	B	I	A
[B= Basic; I= Intermediate; A= Advanced Level]							

Housekeeping

Routinely monitoring and maintaining (e.g., cleaning) facilities that contain cultural property to preserve and ensure their safety.

Task Level I: monitors collections for theft, loss, or misplacement of items; assists an intermediate or advanced level person in the superficial cleaning of cultural property; cleans and maintains tools and equipment for housekeeping.

Task Level II: performs routine dusting and vacuuming; schedules the frequency and type of cleaning; observes signs of deterioration and damage; helps to formulate housekeeping procedures to protect cultural property; suggests safe, effective supplies and equipment; drafts monthly and annual reports.

Task Level III: assists in designing housekeeping plans in conjunction with appropriate staff members and in drafting policies and procedures to protect cultural property; acts a liaison with other departments; suggests safe and effective supplies and materials; ensures complete documentation and reporting; trains others in housekeeping techniques.

Conservator Level: reviews documentation; formulates and reviews housekeeping policies and procedures; determines safe and effective supplies, materials and equipment; provides training.

KNOWLEDGE	LEVEL			SKILLS	LEVEL		
	1	2	3		1	2	3
collections management	B	I	A	communication techniques	B	I	A
conservation assessment	B	B	I	cosmetic reintegration techniques			
conservation history, ethics, etc.	B	I	A	database management techniques	B	I	A
conservation research	B	B	I	documentation techniques	B	B	B
conservation terminology	B	I	A	education and training techniques	B	I	A
data collection	B	B	B	emergency response techniques	B	I	I
deterioration processes	B	I	I	graphic illustration techniques	B	B	B
documentation	B	I	A	handling techniques	B	I	A
emergency preparedness	B	I	A	health and safety techniques	B	I	A
environment	B	I	A	housekeeping techniques	B	I	A
examination	B	I	A	housing techniques	B	I	I
exhibition	B	I	A	instrumental techniques	B	I	I
health and safety	B	I	I	laboratory techniques			
housekeeping	B	I	A	mending techniques	B	B	B
lab and studio maintenance				mount-making techniques	B	B	I
management		B	I	organizational techniques		B	I
materials properties/cons chem	B	I	I	photography techniques	B	I	I
pest management	B	I	A	stabilization techniques	B	I	I
preventive care	B	I	A	superficial cleaning techniques	B	I	I
treatment				technical examination techniques			
[B= Basic; I= Intermediate; A= Advanced Level]							

Labeling

Linking artifacts to records by using suitable labeling materials in locations that are appropriate for the item.

Task Level I: uses approved methods to label collection items.

Task Level II: suggests appropriate labeling materials and methods; trains others in simple labeling techniques.

Task Level III: refines methods for labeling and may suggest new techniques for using approved materials; tests labeling materials as appropriate; trains others in labeling techniques.

Conservator Level: determines materials and methods for labeling; reviews materials and methods as appropriate for each type of application; researches safety and efficacy of new labeling techniques and materials; provides training in materials, methods.

KNOWLEDGE	LEVEL			SKILLS	LEVEL		
	1	2	3		1	2	3
collections management	B	I	A	communication techniques	B	B	I
conservation assessment				cosmetic reintegration techniques	B	I	A
conservation history, ethics, etc.				database management techniques	B	B	I
conservation research				documentation techniques	B	B	I
conservation terminology	B	B	B	education and training techniques	B	I	A
data collection	B	I	A	emergency response techniques	B	B	I
deterioration processes		B	B	graphic illustration techniques			
documentation	B	B	B	handling techniques	B	I	A
emergency preparedness			B	health and safety techniques	B	I	I
environment				housekeeping techniques			
examination		B	B	housing techniques	B	B	B
exhibition	B	B	B	instrumental techniques			
health and safety	B	B	B	laboratory techniques	B	B	I
housekeeping				mending techniques	B	B	I
lab and studio maintenance				mount-making techniques	B	B	I
management		B	B	organizational techniques	B	I	A
materials properties/cons chem	B	B	I	photography techniques	B	B	I
pest management				stabilization techniques	B	B	I
preventive care		B	I	superficial cleaning techniques	B	B	I
treatment				technical examination techniques	B	B	I
[B= Basic; I= Intermediate; A= Advanced Level]							

Laboratory and Studio Maintenance

Performing routine tasks to keep a laboratory or studio operating safely and effectively.

Task Level I: performs routine tasks such as washing laboratory dishes, putting supplies and equipment away, and cleaning counters and work benches.

Task Level II: participates in laboratory safety training; prepares solutions and other stock treatment essentials (e.g., paste, adhesives); cleans and maintains equipment; maintains supply inventory; and locates and orders equipment and supplies.

Task Level III: assists in developing, improving, and/or implementing laboratory or studio maintenance and safety procedures; independently orders equipment and supplies; documents expenditures; arranges laboratory safety training; arranges routine maintenance of laboratory equipment.

Conservator Level: responsible for all laboratory safety procedures; ensures right-to-know laws are followed; approves supplies and equipment orders; oversees proper handling, labeling, storage and use of all materials and equipment; determines equipment and supply needs.

KNOWLEDGE	LEVEL			SKILLS	LEVEL		
	1	2	3		1	2	3
collections management	B	I	A	communication techniques		B	I
conservation assessment				cosmetic reintegration techniques			
conservation history, ethics, etc.		B	I	database management techniques		B	I
conservation research		B	I	documentation techniques	B	I	A
conservation terminology		B	I	education and training techniques		B	I
data collection	B	I	A	emergency response techniques	B	B	B
deterioration processes		B	I	graphic illustration techniques			
documentation		B	I	handling techniques	B	I	A
emergency preparedness		I	I	health and safety techniques	B	I	A
environment		I	I	housekeeping techniques	B	I	A
examination		I	I	housing techniques			
exhibition				instrumental techniques	B	B	B
health and safety	B	I	A	laboratory techniques	B	I	A
housekeeping	B	I	A	mending techniques			
lab and studio maintenance	B	I	A	mount-making techniques			
management		B	B	organizational techniques	B	B	B
materials properties/cons chem	B	I	A	photography techniques			
pest management	B	I	A	stabilization techniques			
preventive care		I	A	superficial cleaning techniques			
treatment	B	B	B	technical examination techniques	B	B	B
[B= Basic; I= Intermediate; A= Advanced Level]							

Outreach

Sharing information about the preservation of cultural property and the conservation profession.

Task Level I: locates, compiles, and duplicates preservation information in support of outreach activities and participates in laboratory tours, as appropriate.

Task Level II: assists conservator with lectures, workshops, graphics, and other outreach activities as appropriate.

Task Level III: disseminates information through lectures, workshops, publications, and outreach activities.

Conservator Level: disseminates up-to-date and new information through lectures, workshops, publications, and other outreach activities; reviews information and delivery methods prior to dissemination and ensures the content is appropriate for the intended audience.

KNOWLEDGE	LEVEL			SKILLS	LEVEL		
	1	2	3		1	2	3
collections management	B	I	A	communication techniques	B	I	A
conservation assessment		I	A	cosmetic reintegration techniques	B	B	B
conservation history, ethics, etc.	B	I	A	database management techniques			
conservation research	B	I	A	documentation techniques	B	B	I
conservation terminology	B	B	I	education and training techniques	B	I	A
data collection	B	B	I	emergency response techniques	B	B	B
deterioration processes	B	B	B	graphic illustration techniques	B	I	A
documentation	B	B	B	handling techniques	B	B	B
emergency preparedness	B	B	B	health and safety techniques			
environment	B	B	B	housekeeping techniques			
examination	B	B	B	housing techniques	B	B	B
exhibition	B	B	B	instrumental techniques	B	B	B
health and safety	B	B	I	laboratory techniques			
housekeeping	B	B	B	mending techniques	B	B	I
lab and studio maintenance				mount-making techniques			
management				organizational techniques	B	B	B
materials properties/cons chem	B	B	B	photography techniques	B	B	B
pest management	B	B	B	stabilization techniques	B	B	I
preventive care	B	B	I	superficial cleaning techniques	B	B	I
treatment	B	I	A	technical examination techniques	B	B	I
[B= Basic; I= Intermediate; A= Advanced Level]							

Packing/Moving/Transport

Conducting all activities necessary to ensure the safety of cultural property during movement between various locations.

Task Level I: prepares and moves collection items according to standard methods and procedures; performs record keeping as appropriate.

Task Level II: assists in developing packing and transport methods; prepares and moves collection items; performs record keeping activities.

Task Level III: assists in designing, planning, and implementing the packing and transport of collections, the selection of appropriate methods and materials, and the construction of packing and moving systems; prepares complete documentation; assists in training others in packing and transport methods.

Conservator Level: designs, plans, and implements the packing and transport of collections; selects or approves appropriate methods and materials and container construction, packing and moving systems; reviews documentation; provides training in packing and transport methods.

KNOWLEDGE	LEVEL			SKILLS	LEVEL		
	1	2	3		1	2	3
collections management	B	I	A	communication techniques	B	I	A
conservation assessment		B	B	cosmetic reintegration techniques			
conservation history, ethics, etc.	B	I	A	database management techniques		B	I
conservation research			B	documentation techniques		B	I
conservation terminology	B	I	A	education and training techniques		B	A
data collection		B	I	emergency response techniques			
deterioration processes	B	I	A	graphic illustration techniques		B	I
documentation	B	I	A	handling techniques	B	I	A
emergency preparedness	B	I	A	health and safety techniques	B	I	A
environment	B	I	A	housekeeping techniques			
examination	B	I	A	housing techniques	B	I	A
exhibition		B	I	instrumental techniques			
health and safety	B	I	A	laboratory techniques			
housekeeping				mending techniques			
lab and studio maintenance				mount-making techniques		B	I
management		B	I	organizational techniques		B	I
materials properties/cons chem		B	I	photography techniques	B	B	B
pest management		B	I	stabilization techniques			
preventive care	B	I	A	superficial cleaning techniques			
treatment				technical examination techniques			
[B= Basic; I= Intermediate; A= Advanced Level]							

Pest Management

Discouraging, controlling, and eliminating biological agents that can damage cultural property, such as birds, rodents, and insects, through the creation and maintenance of an environment that is inhospitable to them. Pest management places an emphasis on non-toxic methods of pest control and relies upon regular inspection and monitoring, as well as modification of the building environment, good housekeeping, and good work habits.

Task Level I: assists in setting up and collecting monitoring devices, such as insect traps, and in recording findings.

Task Level II: assists conservator and institution staff in setting up and implementing a pest management program.

Task Level III: assists in designing and implementing a pest management program and trains others in monitoring activities; helps to develop policies, procedures, and implementation methods to ensure the success of the program.

Conservator Level: reviews current literature; determines best policies and practices in conjunction with pest management professionals and the nature of current risk of actual infestation.

KNOWLEDGE	LEVEL			SKILLS	LEVEL		
	1	2	3		1	2	3
collections management	B	B	B	communication techniques	B	B	B
conservation assessment	B	B	B	cosmetic reintegration techniques			
conservation history, ethics, etc.	B	B	B	database management techniques			
conservation research				documentation techniques			
conservation terminology	B	B	B	education and training techniques			
data collection				emergency response techniques			
deterioration processes	B	B	B	graphic illustration techniques			
documentation	B	B	B	handling techniques	B	B	B
emergency preparedness				health and safety techniques	B	I	A
environment	B	B	B	housekeeping techniques	B	B	I
examination	B	B	B	housing techniques			
exhibition				instrumental techniques			
health and safety	B	B	B	laboratory techniques			
housekeeping	B	B	B	mending techniques			
lab and studio maintenance	B	B	B	mount-making techniques			
management		B	I	organizational techniques			
materials properties/cons chem	B	B	B	photography techniques	B	B	B
pest management	B	I	A	stabilization techniques			
preventive care	B	I	A	superficial cleaning techniques			
treatment				technical examination techniques			
[B= Basic; I= Intermediate; A= Advanced Level]							

Research

Identifying a problem in need of solution, designing a way to solve the problem, gathering data aimed at solving the problem, analyzing the data, and incorporating the synthesized data into the current knowledge base.

Task Level I: assists in collecting information and data as instructed by conservator or a scientist.

Task Level II: assists collecting information and data, locating and retrieving requested literature, and operating equipment.

Task Level III: assists in all of the following: designing research projects; conducting literature searches; taking and preparing samples; operating equipment; collecting and analyzing data; documenting findings in conjunction with conservators or scientists as appropriate.

Conservator Level: develops and reviews research project design and protocols; obtains sample permissions and takes samples; reviews information for dissemination; analyzes data; draws conclusions; writes and/or reviews final reports.

KNOWLEDGE	LEVEL			SKILLS	LEVEL		
	1	2	3		1	2	3
collections management				communication techniques	B	I	A
conservation assessment				cosmetic reintegration techniques			
conservation history, ethics, etc.	B	B	I	database management techniques		B	I
conservation research	B	I	A	documentation techniques		B	I
conservation terminology	B	I	A	education and training techniques			
data collection	B	B	I	emergency response techniques			
deterioration processes	B	I	A	graphic illustration techniques		B	I
documentation		B	I	handling techniques			B
emergency preparedness				health and safety techniques	B	I	A
environment				housekeeping techniques			
examination	B	B	I	housing techniques			
exhibition				instrumental techniques	B	I	A
health and safety	B	I	A	laboratory techniques	B	I	A
housekeeping				mending techniques			
lab and studio maintenance	B	I	A	mount-making techniques			
management				organizational techniques	B	B	I
materials properties/cons chem	B	I	A	photography techniques			
pest management				stabilization techniques			
preventive care				superficial cleaning techniques			
treatment				technical examination techniques	I	I	A
[B= Basic; I= Intermediate; A= Advanced Level]							

Sample Preparation

Manipulating and modifying a sample to produce a form appropriate for the proposed analytical procedure. This activity may involve acquiring the sample.

Task Level I: assists in preparing samples for analysis as instructed by a conservator or scientist.

Task Level II: prepares documents requesting approval to sample; following approval, acquires samples from designated locations using demonstrated methods.

Task Level III: calculates and suggests sample size and weight in conjunction with conservator or scientist; proposes sampling method and location; following approvals, acquires samples; prepares sample for analysis.

Conservator Level: determines and approves sample size, location, purpose, and methodology; reviews sample requests and acquires all additional approvals; prepares and/or reviews documentation before, during, and after sampling; performs or oversees sample preparation and analysis unless performed by a conservation scientist.

KNOWLEDGE	LEVEL			SKILLS	LEVEL		
	1	2	3		1	2	3
collections management	B	B	I	communication techniques	B	I	A
conservation assessment				cosmetic reintegration techniques			B
conservation history, ethics, etc.	B	B	I	database management techniques	B	B	I
conservation research	B	I	A	documentation techniques	I	I	A
conservation terminology	B	I	I	education and training techniques			
data collection	B	I	A	emergency response techniques			
deterioration processes	B			graphic illustration techniques			B
documentation				handling techniques			A
emergency preparedness				health and safety techniques	B	I	A
environment				housekeeping techniques			
examination	B	B	B	housing techniques			
exhibition				instrumental techniques	B	I	A
health and safety	B	B	B	laboratory techniques	B	I	A
housekeeping				mending techniques			
lab and studio maintenance	B	B	B	mount-making techniques			
management				organizational techniques		B	I
materials properties/cons chem	B	I	A	photography techniques	B	B	A
pest management				stabilization techniques			B
preventive care	B	B	B	superficial cleaning techniques			B
treatment	B	B	B	technical examination techniques	B	I	A
[B= Basic; I= Intermediate; A= Advanced Level]							

Site Protection

Preserving cultural property at an archeological/historical site by safeguarding it from misuse, theft, vandalism, weathering, and natural disasters.

Task Level I: performs site preservation activities as instructed by a conservator.

Task Level II: assists in developing site preservation plan.

Task Level III: assists in developing and implementing an integrated site preservation program.

Conservator Level: reviews, develops, and implements integrated site management in conjunction with other professionals and communities.

KNOWLEDGE	LEVEL			SKILLS	LEVEL		
	1	2	3		1	2	3
collections management				communication techniques	B	B	B
conservation assessment	B	I	A	cosmetic reintegration techniques			B
conservation history, ethics, etc.	B	I	A	database management techniques	B	B	B
conservation research	B	B	B	documentation techniques	B	I	A
conservation terminology	B	B	I	education and training techniques			
data collection	B	I	A	emergency response techniques	B	B	B
deterioration processes	B	I	A	graphic illustration techniques	B	B	B
documentation	B	I	A	handling techniques			
emergency preparedness	B	I	A	health and safety techniques	B	B	I
environment	B	I	A	housekeeping techniques			
examination	B	I	A	housing techniques			
exhibition	B	B	B	instrumental techniques			
health and safety	B	I	I	laboratory techniques			
housekeeping	B	I	A	mending techniques			
lab and studio maintenance				mount-making techniques			
management	B	I	A	organizational techniques			B
materials properties/cons chem	B	I	A	photography techniques			
pest management	B	I	A	stabilization techniques	B	I	A
preventive care	B	I	A	superficial cleaning techniques			
treatment			B	technical examination techniques	B	I	A
[B= Basic; I= Intermediate; A= Advanced Level]							

Training

Providing instruction in conservation theory, approaches, methodologies, ethical practices, documentation techniques and standards, analytical procedures, treatment techniques, and so forth.

Task Level I: not applicable.

Task Level II: locates and retrieves requested literature; assists conservator in education and training activities.

Task Level III: identifies useful literature; retrieves literature and supplies; assists in planning and implementing education and training activities.

Conservator Level: identifies need and develops audience-appropriate training; develops curricula; identifies needed literature and supplies; provides and/or leads training.

KNOWLEDGE	LEVEL			SKILLS	LEVEL		
	1	2	3		1	2	3
collections management		I	A	communication techniques		I	A
conservation assessment		I	A	cosmetic reintegration techniques		I	A
conservation history, ethics, etc.		I	A	database management techniques		I	A
conservation research		I	A	documentation techniques		I	A
conservation terminology		I	A	education and training techniques		I	A
data collection		I	A	emergency response techniques		I	A
deterioration processes		I	A	graphic illustration techniques		I	A
documentation		I	A	handling techniques		I	A
emergency preparedness				health and safety techniques		I	A
environment		I	A	housekeeping techniques		I	A
examination		I	A	housing techniques		I	A
exhibition		I	A	instrumental techniques		I	A
health and safety		I	A	laboratory techniques		I	A
housekeeping				mending techniques		I	A
lab and studio maintenance				mount-making techniques		I	A
management		B	I	organizational techniques		I	A
materials properties/cons chem		I	A	photography techniques		I	A
pest management		I	A	stabilization techniques		I	A
preventive care		I	A	superficial cleaning techniques		I	A
treatment		B	B	technical examination techniques		I	A
[B= Basic; I= Intermediate; A= Advanced Level]							

Treatment

Deliberately altering the chemical and/or physical aspects of cultural property, aimed primarily at prolonging its existence. Treatment may consist of: stabilization and/or restoration for objects and specimens; and rehabilitation, restoration, and/or reconstruction for buildings.

Task Level I: performs simple stabilization treatments, including superficial cleaning and simple repairs under the direct supervision of a conservator.

Task Level II: performs stabilization techniques as directed, including cleaning and repair activities under close supervision of a conservator; performs minor treatments under general supervision.

Task Level III: in conjunction with a conservator, identifies problems, suggests appropriate approach, proposes treatment, and performs treatments with minimal supervision.

Conservator Level: based on condition, analyses, and understanding of the material and available resources, determines best treatment approach and methodology; proposes treatment; independently performs treatment and thoroughly documents the work; ensures that treatment is performed in keeping with the AIC Standards of Practice.

KNOWLEDGE	LEVEL			SKILLS	LEVEL		
	1	2	3		1	2	3
collections management	B	B	B	communication techniques	B	B	A
conservation assessment				cosmetic reintegration techniques	B	I	A
conservation history, ethics, etc.	B	I	A	database management techniques			B
conservation research			A	documentation techniques	B	B	B
conservation terminology	B	I	A	education and training techniques			B
data collection				emergency response techniques	B	I	A
deterioration processes	B	I	A	graphic illustration techniques			B
documentation	B	I	A	handling techniques	B	I	A
emergency preparedness			B	health and safety techniques	B	B	A
environment	B	I	A	housekeeping techniques			B
examination	B	I	A	housing techniques	B	B	B
exhibition		B/I	B/I	instrumental techniques			B
health and safety	B	I	A	laboratory techniques	B	B	I
housekeeping				mending techniques	B	I	A
lab and studio maintenance	B	B	B	mount-making techniques			
management			B	organizational techniques			B
materials properties/cons chem	B	I	A	photography techniques	B	B	I
pest management		B	I	stabilization techniques	B	I	A
preventive care	B	B	I	superficial cleaning techniques	B	I	A
treatment	B	I	A	technical examination techniques		B	
[B= Basic; I= Intermediate; A= Advanced Level]							

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