<u>Toolkit for photography and documentation</u>

A toolkit inspired by the ITP+ Course *photography and documentation*

Held at the British Museum, London

4 – 8 December 2017

International Training Programme (ITP) and ITP+ Courses

The background

In August 2016 the ITP team asked alumni for feedback on potential ITP+ Courses enabling the team to create an analysis of needs and develop courses that would best help our fellows' career development and support their institutions.

ITP+ Courses are five-day workshops designed for fellows of the six-week Summer Programme (253 as of Summer 2017) to apply for and participate in post fellowship. Courses are run on selected themes that focus on specific parts of the Summer Programme. The courses respond to alumni's stated areas of interest and development needs and help to address identified challenges at their home institutions. Themes will change to reflect the demands and skills gaps of our alumni, contemporary issues and challenges in both the museum and wider cultural heritage sector and will be an opportunity for fellows of varying roles and responsibilities to participate.

ITP+ Courses

The courses offer a series of seminars, creative workshops, hands-on sessions and practical working groups with colleagues from the British Museum. As part of the programmes there are also opportunities to visit current exhibitions and displays at the British Museum and other London and UK museums.

There are a maximum of ten places on the courses to enable productive discussions, breakout groups and project work in specific subject areas, with places awarded through an open and competitive application process.

Course briefs

ITP+ Courses provide opportunities for further professional development, to reconnect with colleagues in the UK and to meet fellows with similar interests from across different years of the ITP and serve to enhance the potential for future collaborations and the creation of subject specialist networks.

Photography and documentation

In December 2017 the British Museum hosted the second ITP+ Course, *photography and documentation.*
Museum professionals from the British Museum (BM) presented sessions and workshops to ten ITP Fellows. The course aimed to broaden participants' understanding of how to develop, manage and deliver a documentation system to help manage their collections. The course also supported and advised fellows on how to get the best from their photography whatever equipment and space they have available.

Sessions included:

The benefits and challenges of effective documentation

Planning your project and writing a documentation policy

Choosing a database system that works for you and your institution

How to write an object entry

Studio and site photography

Object lighting: best practice

Understanding exposure, aperture, white balance and noise

Creative photography and how it can improve the images you produce

The Course was attended and informed by fellows currently working in the following institutions:

- Iziko Museums of South Africa
- Ministry of Antiquities, Egypt
- National Gallery of Zimbabwe
- National Museum of China
- National Museum of Tanzania
- Polokwane Art Museum, South Africa
- Sarawak Museum, Malaysia
- Sudan National Museum
- University of Ghana
- University of Paris 1 Sorbonne, France

Toolkit
Purpose: Based on the sessions and discussions during the *photography and documentation* ITP+ Course this document will guide you through procedures and processes to consider when setting up and/or running a collections database and taking photos of museum and art gallery collections.

Contents Page

Project scope document

Context: ITP+ fellows filled in a project scope document before and after the course to help them discover where their project required more thought and detail and how the course could assist them with this.

The project scope document is an excellent way of starting a project as it guides you through what ought to be considered, and ultimately becomes a checklist as you progress through your project. The document can also be referred to throughout your project to remind you of what your main aims and objectives are.

Project scope template

Project scope Create a project outline that briefly explains your plans.	
Aims and objectives *What is the purpose of the project? What do you hope to achieve?*	
Team structure & processes *Who will you work with on this project?*	
Resources *People, time and money.*	
Assumptions *What needs to happen or be in place for your project to be successful?*	
Timescale *List your goals and milestones*	
Benefits, challenges and risks	

Measuring success *What will success look like and how will it be measured?* *What will be your evaluation method?*	
Outputs, Outcomes & legacy	
Sustainability	
Supporting material *Work samples/team biographies*	
Notes and questions *Any additional comments or questions that arise and are not include above*	

Documentation: Glossary of terms

Accession:
To officially enter an object into the collections

Accountability:
To show that objects in custody of the museum are managed and cared for properly. A complete inventory of the collections is an important part of accountability.

Acquisition:
Transferring ownership of an object to the museum

Authority:
A list or hierarchy of terms. They can be arranged either as a thesaurus or a vocabulary. Usually used interchangeably with terminology

Cataloguing:
To compile and maintain information about objects in the collection and organising this information in records in a catalogue

Collections Management System (CMS):
An electronic database, often provided by a software supplier, which enables the user to record information about collections and their management, and forms part of the documentation system

Database:
Computer software that can store data, usually in tables or graphs

Documentation Policy:
A document that sets out the aims and principles of a museum's documentation activities

Documentation standards:
Predefined and agreed methods to record information. Documentation standards can include vocabularies and thesauri

Documentation system:
The way in which data is recorded and the media the data is held on. It can be paper-based or computerised

Free-text field:
A field where any text can be entered for search

Inventory:
A list of all objects in a museum's collection. The inventory should be done regularly to control that all objects are present and safe

Metadata:
Data about data - the information that describes an object or an image, for example

Stakeholder:

Persons and organisations which have an interest in something, for example in the museum and its collections

Thesaurus:

A list of terms arranged in a hierarchy with broad and narrow terms, which is used in many CMS to ensure records are compatible and easy to find

Vocabulary:

A list of terms describing a particular aspect of the collection. For example a list of terms relating to acquisition or the names of places

Documentation: Introduction

Handy hints and tips: Getting started

What is documentation?

Documentation refers to the activity of collecting, recording and maintaining information about all the objects in a collection. This information can consist of photographs, descriptions of the physical aspects of the object, letters and other documents referring to the object, object numbers, information about where the object was found, when it was used and how it relates to other objects in your collection or elsewhere in the world.

"[Museum] Documentation is the process of recording information for the collections for which a museum or institution is responsible". UNESCO Cultural Heritage Protection Handbook 3, 2007, p.2

"Documentation is essential to all aspects of a museums [sic!] activities. Collections without adequate documentation are not true 'museum' collections." (ICOM, 2010 http://network.icom.museum/cidoc).

Documentation answers a number of questions about the object:
Digital documentation refers to the process of capturing digital data, through for example photography, scanning and text input, and storing it in for example a collection database. In digital documentation, the information collected is referred to as METADATA, which means the data about the data – or data that describes other data. In the case of digital documentation of objects, it is the object that is the data that is being described and all the information you collect about it; the ID Numbers, title, provenance, date, location, etc. is the METADATA.

Documentation: purpose

Handy hints and tips: why is good documentation so important?
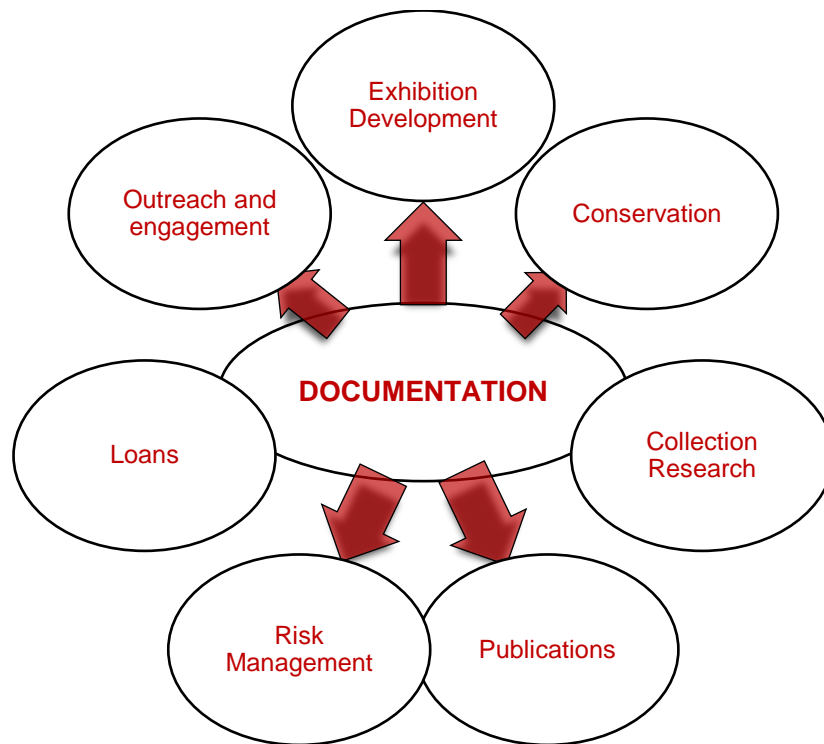
Accountability:

You know how many and which objects are owned by your museum/storeroom

You can identify and easily locate a specific object in your storeroom

Security:

You can record and keep information about object condition and status

You can provide evidence of ownership, i.e. you can show that an object belongs to your institution

You have easy access to descriptions and images of the object which can help you recover a stolen piece

By providing information about the condition of the objects and storage needs, you can contribute to the safety of the objects

Public access and research:

Provide access to, interchange and share information about, the objects efficiently for research, inventory, loans, display, etc.

Historical record:

Record information about the production, collection, ownership, and use of objects

Documentation supports all aspects of your work and without proper documentation which is organised in a way that is useful for all staff, every aspect of the work in the museum will suffer from lack of efficiency and a lot of lost time.

Some examples of how good documentation supports your work:
- It ensures that you can quickly retrieve any information you need about an object for an exhibition label, for research, or to plan for conservation.

- A request for a loan can be processed efficiently and without you having to physically locate the objects requested to decide if they are fit to travel, for example, as long as the documentation about object condition and status is updated.

- If the data is online, a request for information from a scholar does not even have to go through you – they can retrieve the information they need themselves from the online database, which saves you the time it would take if you had to retrieve the information yourself and provide it to the scholar.

- It also enhances the use of the collection; by giving researchers access to the metadata and images, they may be able to contribute with additional information from their research, which will further improve the documentation

Consequences of poor or no documentation:

1. Objects not safeguarded

If you do not know what objects you have in your collection, you cannot know if they go missing. You cannot know how best to store and display the objects, so they may be stored inappropriately and disintegrate or crack.

2. No legal accountability

If you have no documentation about an object you cannot prove that it belongs to your institution if it goes missing and turns up in an auction.

3. Reduced in value

The value of an object is in the information it carries about the people who made it and used it and the time in which they lived. Without this information, the value of the object is reduced, and it becomes much more likely to be neglected and forgotten.

Poor or no documentation means a lot of extra work for you, but more importantly, it puts the objects at risk.

References and Further Reading

Documentation of Museum Collections. Why? How? Practical Guide, A guide for documentation work for museums in developing countries, ICOMOS-UNESCO Partnership for the Preventive Conservation of Endangered Museum Collections in Developing Countries, Volume I. Documentation of Museum Collections, 2011.

International Guidelines for Museum Object Information: The CIDOC Information Categories, International Committee for Documentation, ICOM, June 1995.
Jens M. Lill and Werner Schweibenz*, Mind the gap! Documentation as a "missing link" in the ICOM definition of museum*, CIDOC 2014 Session A/1, Strategies and Policies in Documentation Dienstag, den 9.9.2014
http://network.icom.museum/fileadmin/user_upload/minisites/cidoc/ConferencePapers/2014/A-1_Lill_Schweibenz_paper.pdf

Statement of principles of museum documentation version 6.2: Executive summary, CIDOC, 2012.
http://network.icom.museum/fileadmin/user_upload/minisites/cidoc/DocStandards/principles_exec_summary_6_2.pdf

UNESCO Documentation of Artefacts' Collections, Cultural Heritage Protection Handbook

Documentation: Policy and Principles

Handy hints and tips: Restricting access

'Too many hands' can lead to inconsistencies in your data. Combat this by restricting access to your documentation system so that only trained members of your team can make changes to object entries. Various softwares offer different permissions.

Before a museum begins to document its objects, or decides to improve or amend its documentation, it should create and adopt a **documentation policy**. The ICOM Statement of Principles of Museum Documentation guidelines state that this policy should define the organisation's "documentation procedures and standards, the provision of documentation staff and systems, and the documentation services which it provides to users." (ICOM 2012, p.1).

"…the Museum has a duty to ensure that the objects in the collection are stored safely, conserved so that they are safe to handle, preserved for future generations and documented so that the Museum knows what it has and can find it when required".

From the Introduction to the British Museum Storage, Conservation and Documentation Policy

The documentation policy should:

1. Define the documentation procedures that everyone must follow

2. Outline who is responsible for the documentation (curators, registrars, collections managers, etc.) and the system that will be used

3. Describe how and which data should be made accessible to the public

4. How the information should be kept secure

In addition, a documentation policy usually contains an **introduction** with information about the museum and its vision and previous documentation policies. This section can be a ***mission statement*** or a brief history of the documentation activities in the museum.

"Documentation is crucial to making effective use of the Pitt Rivers Museum's collections, preserving the historical and contextual information that makes objects useful and interesting to visitors and researchers alike. It also enables staff to manage and care for the collections and facilitates their use by others."

Introduction, Pitt Rivers Museum's Documentation Policy

The documentation principles usually follow the introduction. These principles are statements about what the museum will document and how they will do it. They commonly refer to the following aspects:

1. Accountability
2. Access to information
3. Security of collections information
4. Professional standards

However, it is also useful to include principles on the following aspects:

1. Staffing and systems
2. Information and procedures

Documentation principles could also be described as aims of the museum's documentation policy or plan.

"The Museum's documentation aims are as follows:
- Improve accountability for the collections
- Maintain at least minimum professional standards in documentation procedures and collection information and attain the very highest standards wherever possible
- Extend access to collection information
- Strengthen the security of the collections "

Charles Dickens Museum's Documentation Policy

The **final section** of the Documentation Policy usually describes how the policy will be implemented. The most important information to include here is the duration of the policy – when and how will it be reviewed? It is essential to ensure that your policy is up-to-date with changes in your organisation or other collection management policies.

See **Appendix I** for further guidelines on how to develop a documentation policy

"**3.1**. The Documentation Policy will be submitted to the Syndics of the Fitzwilliam Museum for approval.
3.2. The Documentation Policy will be used to guide a Documentation Plan, prepared by the Documentation section in consultation with all areas of the museum involved in collections documentation.
3.3. The Documentation Policy, Plan and any related documents will be posted online for internal access by all staff. The policy document will be posted also on the Museum's website for public access.
3.4. Regular audits of documentation information and procedures will be carried out.
3.5. The Policy will be reviewed every five years"

Implementation, Fitzwilliam Museum's Documentation Policy

References and Further Reading

Statement of principles of museum documentation, ICOM, 2012.
http://network.icom.museum/fileadmin/user_upload/minisites/cidoc/DocStandards/Statement6v2EN.pdf

Documentation policies

Charles Dickens Museum, London: Documentation Policy
https://cdn.shopify.com/s/files/1/0925/3888/files/Documentation_Policy.pdf?11889104177599727163

Sydney University Museum: Collections Guidelines http://sydney.edu.au/museums/pdfs/policies-guidelines/SUM%20Collections%20Guidelines%20Section%204.pdf

The Fitzwilliam Museum: Documentation Policy
http://www.fitzmuseum.cam.ac.uk/sites/default/files/Documentation_policy_July_2014_0.pdf*The*

Metropolitan Museum in New York: Collections Management Policy
https://www.metmuseum.org/about-the-met/policies-and-documents/collections-management-policy#mission

Museo, Finland: Collections Management Policy
http://www.nba.fi/fi/File/2404/museum-collections-management-policy.pdf

National Museum Wales: Collection Information Policy
https://museum.wales/media/43049/5-Collection-Information-Policy-2016.pdf

Pitt Rivers Museum Documentation Policy
https://www.prm.ox.ac.uk/sites/default/files/uploads/PDFs/PRM_Documentation_Policy.pdf

Documentation Policy Template

[Museum Name (and logo)]

Documentation Policy

Date:
Author:

Introduction

[Delete the text below and replace it with your own.]
You can start with your museum's mission statement

Then, write a brief overview of what documentation is and how your museum will approach it. You can summarise your principles of documentation here, if you like.

And finally, one sentence that summarises what the purpose of your policy for documentation of the collections is.

(e.g. *Our policy for the documentation of the collections is to ensure that the information we hold relating to the collections is accurate, secure, reliable and accessible*)

Principles of Documentation

Principle 1:
Explain for example how you will ensure that you know what is in your collection and where each item is

Principle 2
For example, outline how you will ensure access to the information and how to keep it accessible in the future

Principle 3

For example, describe how you will ensure that the information is protected legally and physically

Principle 4

For example, which professional standards will you aim to follow

Documentation: Professional Standards

Handy hints and tips:

Controlled Vocabularies: International standards, such as the country codes: GB, EG, SE or currency codes: USD, EGP, GBP, ensure that people, businesses and governments all over the world can communicate with each other without misunderstandings or time-consuming explanations.

A controlled terminology for describing an object ensures there are no misunderstandings in what you mean when you call a stela a stela, and ensures that you can always find a stela, even if you search for a stele, for example.

The ICOM Code of Ethics is the main standard for all museums and all other standards are developed from this. There are standards for all aspects of the museum work, but here we will concentrate on documentation standards.

To ensure the reliability and efficiency of documentation, your collections should be documented to international professional standards. This means that you should use a documentation system and procedures that comply with standards developed by professional bodies to help museums care and manage their collections.

Why use standards?

By using standards and terminologies that help you structure your documentation procedures and your records, you can ensure that the information about your objects is reliable, easy to share and accessible.

Using standards will:

1. make it easier to find the information you are looking for (improve information retrieval)
2. ensure that important information is recorded (accountability)
3. make it easier to exchange and merge information between different systems (compatibility of data)

The professional documentation standards are a set of best practices that have been tried and tested, and are constantly updated as professional practices change, for example as museum records are transferred from paper to computers, to mobile technology, etc. They have been developed by museum professionals from all over the world who have worked on documentation for many years and in a variety of museums.

How do documentation standards work?

A standard is like a set of rules about how to document a collection and what type – or units – of information that should be collected for each object.

- The **SPECTRUM** standard helps you establish procedures for all the steps in an object's life in the museum, including how to record new acquisitions, how to document permanent and temporary locations, storage, cataloguing, etc.

- The **Object ID** standard helps you document objects in a way that which will help you recover stolen objects

- The **CIDOC** standard guides you in the recording of information about objects

- **National or local documentation standards** may be a combination of all the above, developed especially for your national circumstances

Consider the following scenario:

A colleague in another museum is looking for potential objects in your museum for a loan for a temporary exhibition. One of the objects they are interested in entered the museum in 1956, before you had established your current collection management procedures, so it lacks documentation about whether it came in as an acquisition or a loan. You will therefore have to establish the ownership of this object before you can lend it to another institution, a task that could take weeks if other object entry or loan procedures have been neglected.

Using your current standards on object entry means that the date and purpose of entry for all objects is carefully recorded in your collection management system and you are now able to account for all objects in your collection.

References and guidance documents

Accredited Museum Guidance: Collections
http://www.artscouncil.org.uk/sites/default/files/download-file/FINAL_201406_GuidanceSection2_PrintFriendly.pdf

CIDOC CRM
http://www.cidoc-crm.org/

CIDOC standards and guidelines
http://network.icom.museum/cidoc/resources/cidoc-standards-guidelines/

ICCROM-UNESCO, A Guide for Documentation Work for Museums in Developing Countries, Documentation of Museum Collections
http://epa-prema.net/documents/ressources/Practical-Guide-Documentation_eng.pdf

ICOM code of ethics for Museums,
http://icom.museum/fileadmin/user_upload/pdf/Codes/code_ethics2013_eng.pdf

Metadata Standards, CHIN Guide to Museum Standards, Canadian Heritage Information Network.
http://www.rcip-chin.gc.ca/normes-standards/guide_normes_musees-museum_standards_guide/metadonnees-metadata-eng.jsp#sub1_1 [Accessed 12 June 2015]

SPECTRUM
http://collectionstrust.org.uk/spectrum/

Object ID
http://archives.icom.museum/objectid/checklist.html

Documentation: Systems

Handy hints and tips: back up!

Keep your data on two external hard drives or servers. Keep one in house and one outside to be prepared in case of fire or flood, for example.

The documentation system is made up of the tools you use to collect information about the objects and the media you store it on. It can, for example, consist of:

- Registers for accessions and loans,
- movement forms,
- location code manuals, and
- the collections catalogue.

Some files and registers, such as the accession register and movement forms, may be paper based, but the object inventory and catalogue records and search facilities are commonly computer based.

You probably already have some form of documentation system in place in your institution; an accession book and perhaps a book for locations, for example.

The documentation system should:

1. keep information about the objects (in books, index files, databases),
2. support management procedures, such as loans, accessioning and movement and location control, and
3. facilitate different levels of access to the information (full access for documentation staff and curators, restricted access to scholars and general public)

Documentation specialists or registrars are responsible for the system and work with curators and other staff with specialist knowledge about the collections, to catalogue the objects.

Documentation system challenges:

1. Requires resources (staff, funds, equipment)
2. Must be kept up-to-date
3. Institution-wide (including managers, curators, visitor services)
4. Quality control

How to find the right documentation system for you:

1. Develop criteria that the system must meeting, including minimal professional standards
2. Consider your resources: staff, funds, skill sets, equipment, networks
3. Establish priorities for documentation: inventory, cataloguing, review

Your checklist for choosing a documentation system…

Your documentation system must:

- ☐ meet minimal professional standards

- ☐ run on Windows OS

- ☐ take authorities and thesauri

- ☐ have a search interface

- ☐ allow search result to be sorted

- ☐ allow data to be imported

- ☐ upload batches of updated data at once

- ☐ allow control over access and user permissions

- ☐ store .jpg and tiff images

- ☐ record user history / audits

Documentation System options:

Commercial (licenses)

TMS
https://www.gallerysystems.com/
KE EMu
http://alm.axiell.com/collections-management-solutions/technology/emu-collections-management/
Vernon CMS
https://vernonsystems.com/products/vernon-cms/
Modes (Lighter Version)
https://www.modes.org.uk/

Open Source (no license fees)

CollectionSpace
http://core.collectionspace.org/collectionspace/ui/core/html/cataloging.html?template=inventory
CollectionAccess
http://demo.collectiveaccess.org/index.php/ (demo)

Web-based (no installation, no storage needs, scalable, low-cost options)
eHive
https://ehive.com/
Omeka
https://www.omeka.net/signup

Microsoft Access
Start with:

An Introduction to Microsoft Access https://www.accessdatabasetutorial.com/what-are-microsoft-access-databases/

Helpful pages:

Microsoft Access development http://www.databasedev.co.uk/image-form.html

Microsoft Access tutorial https://www.quackit.com/microsoft_access/tutorial/

Learn MS Access https://www.tutorialspoint.com/ms_access/

Access tutorial https://www.accessdatabasetutorial.com/

Building an Access Database From the Ground Up
https://www.thoughtco.com/building-access-database-from-ground-up-1019285

MS Access 2016 https://www.gcflearnfree.org/access2016/

References

Vocabularies: Enhancing access to cultural heritage information, Lanzi, Lisa (?) Getty Information Institute. http://d2aohiyo3d3idm.cloudfront.net/publications/virtuallibrary/0892365447.pdf

Public Access to Collection Databases: The British Museum Collection Online (COL): A Case Study, T. Szrajber, 2008. Annual Conference of CIDOC, Athens, September 15-18, 2008. http://network.icom.museum/fileadmin/user_upload/minisites/cidoc/ConferencePapers/2008/82_papers.pdf

Documentation: Creating an object entry or inventory record

Handy hints and tips: Tricky objects

An object made up of many pieces and materials with different conservation needs, e.g. a necklace containing different amulets:
Create a 'parent entry': an entry for the whole necklace.
Add different entries for each amulet
A box or bag filled with lots of items:
If the box/bag is filled with lots of the same object e.g. cowrie shells, document each box bag as one entry
If there are different items within the box/bag, each object must be documented separately

The initial record of an object usually only contains basic information about the status of the object:

- Is it one piece, a group or a pair?

- Is it part of the permanent collection?

- If not, will it be accessioned or is it part of a loan?

- Does it have a number?

- When did it enter the museum and how?

- Where did it come from and who owned it previously?

- What is it and how old is it?

- What condition is it in?

Most institutions will have procedures in place for what steps to take when an object enters the museum, i.e. there may be an Object Entry Form. Here we will concentrate on how to ensure necessary information is recorded on your database or CMS once the object is registered as part of the museum collection (after acquisition).

The main information units to be recorded are for a new entry is:

- Identification and registration numbers

- Number of items or parts

- Object name

- Description

- Acquisition/Entry information

- Condition (if you are working with the physical object)

- Current Location

- Notes

For a more complete catalogue record, you should also enter information about:

- Provenance

- Production date

- Culture

- Dimensions

- Techniques

- Images

The Collections Management system should also provide options for recording information on exhibitions, loans, requests and should provide a history of the object's movements within and outside of the museum. Each of these procedures will require their own sets of information units, such as dates and venues for exhibitions, evaluations of objects going out on loan, etc. The management functions can either be located in the same CMS as the object information, or it can be a separate system that is linked to the main CMS.

References and Further Reading

International Guidelines for Museum Object Information: The CIDOC Information Categories
http://network.icom.museum/fileadmin/user_upload/minisites/cidoc/DocStandards/guidelines1995.pdf

SPECTRUM Object Information Groups   http://collectionstrust.org.uk/spectrum/information-requirements/object-information-groups/

Example: Creating an entry for visual art

The visual arts pose some particular dilemmas for documentation, especially when it comes to editioned works (eg prints and photographs) and intangible new media (eg video, sound art and performance). Below are suggested entry fields for documenting visual art, including items such as mounting and framing details, signatures and certificates, and print and edition information.

Artsy's Art Genome Project
The gallery sales platform Artsy has made public its set of categories with which it organises its clients' databases. If you work with visual art, this can be useful to look through to think about what kind of classification system you want to create for your database (in terms of medium, technique, genre and movement).

These categories are designed with both the commercial galleries and buyers in mind, so some areas may be less useful for you than others (eg subject matter, which is designed for buyers to look up all works dealing with a particular topic they are interested in, such as 'migration' or 'masculinity')
https://www.artsy.net/categories

Art Logic

The Art Logic database system is designed for commercial galleries, artists and collectors, and is therefore not a suitable option actually to purchase for institutional use.

However, taking a look at the way it is designed can again be helpful for institutional staff working with visual art collections to think about how they want to structure their own database.

You can download an online demo of Art Logic here: https://artlogic.net/artlogic/try-it-out/

Suggested entry fields – Visual Art

ENTRY ADDED BY: (staff member)
ENTRY LAST MODIFIED BY: (staff member)
DATE LAST MODIFIED
FINISHED ENTRY/NON-FINISHED ENTRY/CONTESTED

ACCESSION DATE
ID NUMBER
PREVIOUS/SECONDARY ID NUMBER (where applicable)

IMAGE
ARTIST
TITLE
YEAR
PRINT YEAR (if photography – ie vintage/contemporary print. Printed by artist's hand?)
EDITION NO. (where applicable) (ie 2/5 + 2AP)
ARTIST COUNTRY
PRODUCTION COUNTRY

MEDIUM
TECHNIQUE
ARTWORK GENRE
MOVEMENT

SIGNED: FRONT/VERSO/UNSIGNED
CERTIFICATE OF AUTHENTICITY: Y/N
SIGNATURE LABEL: Y/N

DIMENSIONS UNFRAMED/UNPACKED: L x W x H
WEIGHT UNFRAMED/UNPACKED

MOUNTED? Y/N
MOUNT DETAILS (ie dibond, loose mount, floating mount etc)
FRAMED? Y/N

FRAME DIMENSIONS: L x W x H
FRAME DETAILS (plexi/museum glass, black box frame etc)
WEIGHT MOUNTED/FRAMED

PACKED? Y/N
PACKED DIMENSIONS: L x W x H
PACKED WEIGHT
TRAVEL/HANDLING NOTES: (eg fragility, advice on handling, preferred shipper…)

CURRENT LOCATION
LOCATION HISTORY
CONDITION REPORT
CONDITION IMAGES

OWNERSHIP: donated / purchased / short-term loan / long-term loan / permanent loan
CURRENT OWNER NAME
CURRENT OWNER CONTACT DETAILS: (address, telephone, email)
LOAN DATES: (where applicable)
DONOR / PURCHASE FUND: (where applicable)

COLLECTION/OWNERSHIP HISTORY

EXHIBITION HISTORY
PUBLICATIONS
COPYRIGHT INFO

PRICE AT ACQUISITION
POST-PRODUCTION COSTS INCURRED (eg framing, mounting – if paid by institution)
INSURANCE VALUE

Documentation: Guidelines of policy

Handy hints and tips:

"A policy is useless if it is outdated, ignored, too complex to be followed, too simplistic to be useful, or does not serve the museum's mission. […] Good policies help the museum achieve its mission and demonstrate its commitment to professional standards and best practices."
**John E. Simmons (*Things Great and Small*, 2006)**

Use these guidelines, including common sections, to help you prepare your documentation policy:

Section	Type of content	Guidance questions
Introduction	Context of your policy, could include your museum's mission statement or vision, history of documentation and collection, definitions, commitments to documentation and information management, etc.	- What is this document about? - How does it relate to your institution's vision? - What does documentation mean to your institution? - How does the policy relate to other policies?
Principles	5. Accountability	- How will you ensure you can locate and identify each object at any time? - What are your priorities for improving your collections information and how will you achieve them?
	6. System and responsibilities	- What are the various elements of your collection information system (eg accession registers, forms, files, computer systems)?
	7. Security of collections information	- How will you keep the documentation and information safe (from fire, hacking, wrongful use)?
	8. Access to information	- How will you make the information accessible to the public? - What legal obligations apply to your collection information and how will you meet them (eg data protection, freedom of information)?
	9. Professional standards	- What professional standards will you

		comply with and refer to in your documentation activities?
		- What ethical obligations and other standards do you aim to meet, and how will you do this (eg your mission, Museums Association Code of Ethics, Accreditation, Spectrum)?
		-
Implementation	Duration of policy, review procedures, publication	- How long is this version of the policy valid?
		- Will you review the policy regularly? How often?
		- Where can the policy be found (online? Attained upon request? In exhibition?)

Photography: Glossary of terms

1 Depth of Field
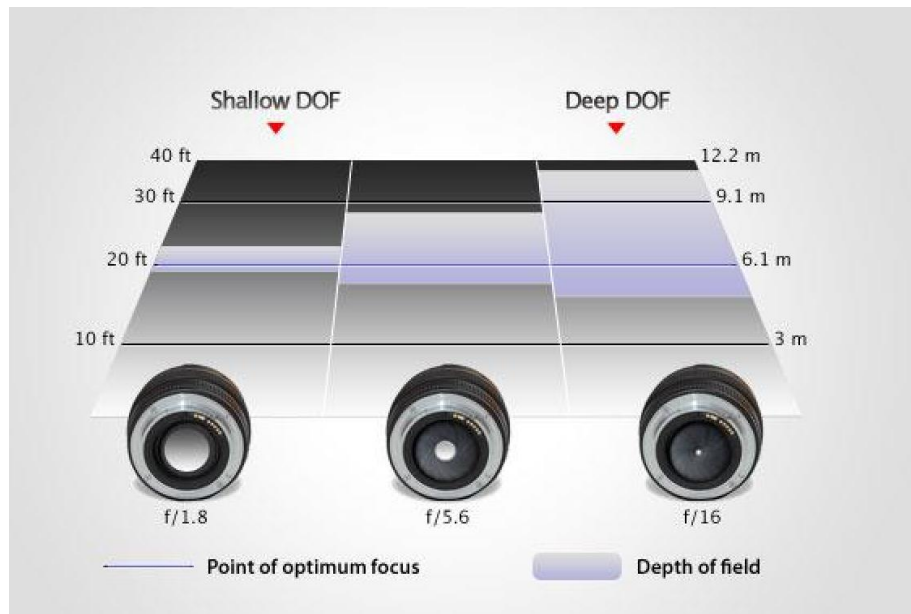
Depth of Field (DOF) is the front-to-back zone of a photograph in which the image is razor sharp. As soon as an object (person, thing) falls out of this range, it begins to lose focus at an accelerating degree the farther out of the zone it falls; e.g. closer to the lens or deeper into the background. With any DOF zone, there is a Point of Optimum focus in

which the object is most sharp. There are two ways to describe the qualities of depth of field - shallow DOF or deep DOF. Shallow is when the included focus range is very narrow, a few inches to several feet. Deep is when the included range is a couple of yards to infinity. In both cases DOF is measured in front of the focus point and behind the focus point. DOF is determined by three factors – aperture size, distance from the lens, and the focal length of the lens. Let's look at how each one works.

2 Aperture

The aperture is the opening at the rear of the lens that determines how much light travels through the lens and falls on the image sensor. The size of the aperture's opening is measured in f-stops - one of two sets of numbers on the lens barrel (the other being the focusing distance). The f-stops work as inverse values, such that a small f/number (say f/2.8)

corresponds to a larger or wider aperture size, which results in a shallow depth of field; conversely a large f/number (say f/16) results in a smaller or narrower aperture size and therefore a deeper depth of field.

3 Small vs Large Aperture

f/22 - small aperture
Deep Depth of Field

f/2.8 - large aperture
Shallow Depth of Field

Manipulating the aperture is the easiest and most often utilized means to adjust Depth of Field. To achieve a deep, rich and expansive DOF, you'll want to set the f-stop to around f/11 or higher. You may have seen this principle demonstrated

when you look at photos taken outside during the brightest time of the day. In such a case, the camera is typically set at f/16 or higher (that Sunny 16 Rule) and the Depth of Field is quite deep - perhaps several yards in front of and nearly to infinity beyond the exact focus point. Let's take a look at these two photos as examples. The photo on the left has an expansive DOF, most likely shot around noon (notice the short, but strong shadows), with an f/22 aperture. The photo on the right has an extremely shallow DOF; probably an f/2.8 aperture setting. However, to achieve an identical proper exposure, the shutter speed is probably closer to 1/1000th to compensate for the increased amount of light entering the lens at f/2.8.

4 Aperture Range

The aperture range identifies the widest to smallest range of lens openings, i.e. f/1.4 (on a super-fast lens) to f/32, with incremental "stops" in between (f/2, f/2.8, f/4, f/5.6, f/8, f/11, f/16, and f/22). Each f-number is represents one "stop" of light, a stop is a mathematical equation (which is the focal length of the lens divided by the diameter of the aperture opening) that determines how much light that enters the lens regardless of the length of the lens. Such that an f/4 on a 50mm has smaller opening than an f/4 on a 200mm, but an equivalent amount of light travels through both lenses to reach the image sensor thus providing the same exposure. Each movement up the range (say f/2 to f.2.8) reduces the amount of light by one-half and each movement down the range (say f/11 to f/8) doubles the amount of light passing through the lens. It's important to understand this concept and how it affects exposure because it works in tandem with the shutter speed (we'll discuss this in another section) to establish a given exposure value. Basically, when you change the aperture size one stop, you have to shift the shutter

speed one stop in the opposite direction to maintain a consistent exposure… and this change in aperture alters the depth of field (DOF) accordingly.

5 Distance from the Lens

The last element affecting depth of field is the distance of the subject from the lens - you can adjust the DOF by changing that distance. For example, the closer an object is to the lens (and the focus is set on that object) the shallower the DOF. Conversely, the reverse is true - the farther away an object is and focused on, the deeper the DOF. Changing the distance to subject is the least practical way to manipulate the depth of field, and by changing the distance from a subject to the lens, you immediately change your image's composition. To maintain the compositional integrity of the shot, but still have the change in DOF from a distance, you can change the focal length (either by changing lenses or zooming in). Why does changing the focal length negate the effects on DOF? This is because the visual properties of a given lens either provide either greater DOF (shorter lenses) or shallower DOF (longer lenses). The physical properties of a lens at a given focal length also affect the depth of field. A shorter focal length lens (say 27mm) focused at 5 meters, set at f/4 has a deeper DOF (perhaps from 3 meters in front and 20 meters behind) than a longer focal length (say 300mm), also set at f/4 focused at 5 meters. The 300mm lens has a remarkably shallow depth of field. Incidentally, to help you with this, every lens has a manual with a DOF chart for each f/stop and the major

focusing distances. DOF is just a matter of physics, and it's important to grasp this concept.

Conclusion

Manipulation of depth of field is a good way to modify the characteristics of your photo, and manipulating the aperture is the ideal way to do this because it has little or no effect on composition. You simply need to change the shutter speed (or change the light sensitivity – ISO) to compensate for the changes in the exposure from the adjustments to the fnumber. Changes in distance and focal length also affect DOF, but these changes have trade-offs in terms of composition. Therefore, changes to aperture are the best way to manipulate DOF without affecting a photo's composition.

Photography

Handy hints and tips: Looking after your camera…

Buy a UV protector filter!
This will protect your lens from dust, finger prints and scratches and doesn't affect the quality/appearance of the images. Again, make sure you purchase a filter at the correct diameter for your lens.

Use your lens cap!

Never clean marks on your lens (or filter) with a normal cloth
Buy a microfiber cloth designed for cleaning glass

Use a blower brush to remove dust from your camera.
This avoids unnecessary contact

Keep the camera in a purpose-made camera bag when you're not using it

Wear the camera strap around your neck or tie it double around your hand to avoid dropping the camera

Purchase a protector screen for the LCD monitor on your camera

Keep the rubber viewfinder cover on your viewfinder
This avoids it getting knocked/scratched

Never touch the mirror
When swapping lenses, always do this somewhere dry and dust-free, and never, ever touch the

mirror/sensor inside the camera body, even with a cloth. You can use the blower (without the brush on it) to remove any dust.

If you are getting grey spots on your photos in the same place every time and there isn't dust on your lens/lens filter, then you may have dust on the mirror. If you can't remove it with the blower, then take the camera to a professional to be cleaned.

Examples of dust on the sensor/mirror
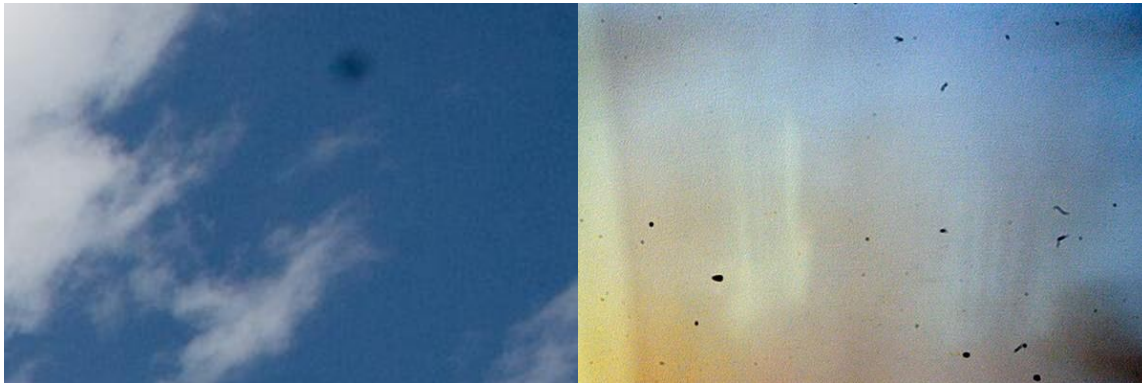
Photographing in sandy/dusty and rainy environments
Avoid this where possible! Although it might be necessary on archaeological digs
In these environments, try to keep the camera in the open for the shortest time possible

You can protect your camera with a plastic bag and rubber band (for rain) or with a cloth (for dust/sand), but must still be very careful with the lens.

Avoid swapping lenses in these circumstances – wait until you are inside, somewhere dry and wind-free, to do this

If you can hear a crunching when you try to move the zoom on your lens, then there could be dust or sand in the lens mechanism. Sometimes it can be bad enough to stop the zoom from functioning. In these circumstances, take the lens to be cleaned by a professional.

Photography: Camera Stance and Stability

If you have no access to a tripod…

1. Use the vibration reduction (VR) function, if your lens has this

2. Sit, crouch or lean on something, if possible, in order to steady your body

3. Hold the camera in both hands, pressed against your face (ie looking through the viewfinder, not the LCD display), bend your arms downward and brace both arms against the sides of your body

poor posture

good posture

4. If you are holding the camera vertically, the arm that is holding the camera underneath should be braced against the side of your body

Incorrect

Correct

Photography: Aperture

The aperture stop of a [photographic lens](#) can be adjusted to control the amount of [light](#) reaching the [film](#) or [image sensor](#). In combination with variation of [shutter speed](#), the aperture size will regulate the film's or image sensor's degree of [exposure](#) to light. Typically, a fast shutter speed will require a larger aperture to ensure sufficient light exposure, and a slow shutter speed will require a smaller aperture to avoid excessive exposure.

Reducing the aperture size increases the [depth of field](#), which describes the extent to which subject matter lying closer than or farther from the actual plane of focus appears to be in focus. In general, the smaller the aperture (the larger the number), the greater the distance from the plane of focus the subject matter may be while still appearing in focus.

A lens typically has a set of marked "f-stops" that the f-number can be set to. A lower f-number denotes a greater aperture opening which allows more light to reach the film or image sensor, which in turn corresponds to a factor of 2 x change in light intensity.

The size of the stop is one factor that affects [depth of field](#). Smaller stops (larger f numbers) produce a longer depth of field, allowing objects at a wide range of distances to all be in focus at the same time.

What is Aperture?

Put most simply – Aperture is 'the size of the opening in the lens when a picture is taken.'

When you hit the shutter release button of your camera a hole opens up that allows your cameras image sensor to catch a glimpse of the scene you want to capture. The aperture that you set impacts the size of that hole. The larger the hole the more light that gets in – the smaller the hole the less light.

Aperture is measured in 'f-stops'. You'll often see them referred to here at Digital Photography School as f/number – for example f/2.8, f/4, f/5.6,f/8,f/22 etc. Moving from one f-stop to the next doubles or halves the size of the amount of opening in your lens (and the amount of light getting through). Keep in mind that a change in shutter speed from one stop to the next doubles or halves the amount of light that gets in also – this means if you increase one and decrease the other you let the same amount of light in – very handy to keep in mind).

One thing that causes a lot of new photographers confusion is that large apertures (where lots of light gets through) are given f/stop smaller numbers and smaller apertures (where less light gets through) have larger f-stop numbers. So f/2.8 is in fact a much larger aperture than f/22. It seems the wrong way around when you first hear it but you'll get the hang of it.

Depth of Field and Aperture

There are a number of results of changing the aperture of your shots that you'll want to keep in mind as you consider your setting but the most noticeable one will be the depth of field that your shot will have.

Depth of Field (DOF) is that amount of your shot that will be in focus. **Large depth of field** means that most of your image will be in focus whether it's close to your camera or far away (like the picture to the left where both the foreground and background are largely in focus – taken with an aperture of f/22).

Aperture has a big impact upon depth of field. Large aperture (remember it's a smaller number) will decrease depth of field while small aperture (larger numbers) will give you larger depth of field.

It can be a little confusing at first but the way I remember it is that small numbers mean small DOF and large numbers mean large DOF

Photography: what is ISO?

Handy hints and tips: Event Photography

Arrive early and test the light!
Moving people should be photographed at a shutter speed of 60th/second or 12th/second (a fast shutter) BUT this might not be bright enough. So you will need a large aperture and shallow depth of field. Some people at the event will be out of focus, but this gives a nice effect (and not so much detail for the eye to deal with!).

In traditional (film) photography:
ISO (or ASA) was the indication of how sensitive a film was to light. It was measured in numbers (you've probably seen them on films – 100, 200, 400, 800 etc). The lower the number the lower the sensitivity of the film and the finer the grain in the shots you're taking.

In Digital Photography:
ISO measures the sensitivity of the image sensor. The same principles apply as in film photography – the lower the number the less sensitive your camera is to light and the finer the grain. Higher ISO settings are generally used in darker situations to get faster shutter speeds (for example an indoor sports event when you want to freeze the action in lower light) – however the cost is noisier shots.

100 ISO is generally accepted as 'normal' and will give you lovely crisp shots (little noise/grain).

Most people tend to keep their digital cameras in 'Auto Mode' where the camera selects the appropriate ISO setting depending upon the conditions you're shooting in (it will try to keep it as low as possible) but most cameras also give you the opportunity to select your own ISO also.

When you do override your camera, and choose a specific ISO you'll notice that it impacts the aperture and shutter speed needed for a well exposed shot. For example – if you bumped your ISO up from 100 to 400 you'll notice that you can shoot at higher shutter speeds and/or smaller apertures.

When choosing the ISO setting I generally ask myself the following four questions:

1. **Light** – Is the subject well lit?
2. **Grain** – Do I want a grainy shot or one without noise?
3. **Tripod** – Am I using a tripod?
4. **Moving** Subject – Is my subject moving or stationary?

If there is plenty of light, I want little grain, I'm using a tripod and my subject is stationary I will generally use a pretty low ISO rating.

However, if it's dark, I purposely want grain, I don't have a tripod and/or my subject is moving I might consider increasing the ISO as it will enable me to shoot with a faster shutter speed and still expose the shot well.

Of course, the trade-off of this increase in ISO will be noisier shots.

ISO is an important aspect of digital photography to have an understanding of if you want to gain more control of your digital camera. Experiment with different settings and how they impact your images today.

What is Shutter Speed?

As I've written elsewhere, defined most basically – **shutter speed is 'the amount of time that the shutter is open'**.

In film photography it was the length of time that the film was exposed to the scene you're photographing and similarly in digital photography shutter speed is the length of time that your image sensor 'sees' the scene you're attempting to capture.

ISO Explained

1 ISO Sensitivity

ISO is actually an acronym, which stands for International Standards Organization, and the ISO rating along with the shutter speed and aperture setting are the three elements that determine the final exposure of the photographic image. The ISO rating, which ranges in value from 25 to 6400 (or beyond), indicates the specific light sensitivity. The lower the number, the less sensitive to light the film stock or image sensor is. Conversely, a higher number indicates a higher sensitivity to light, thereby allowing that film or image sensor to work better in low light conditions.

2 ISO Sensitivity and Image Noise
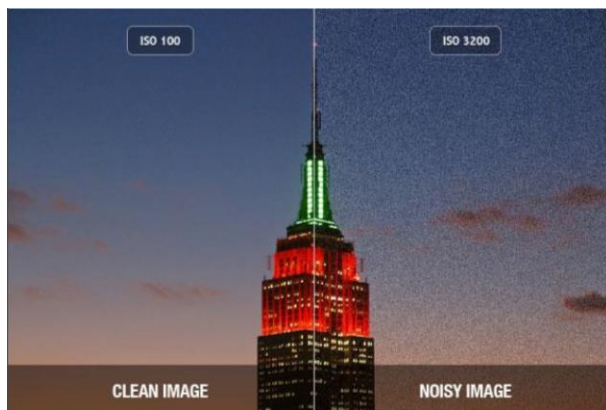
With film stocks, the lower ISO rating also meant that the photosensitive grains of salt on the film acetate were very fine, thus producing a smoother, cleaner image. A higher ISO had larger, jagged grains of salt, thus producing "rougher" or

grainier images. In digital photography, the same logic applies… the lower the ISO rating, the less sensitive the image sensor is and therefore the smoother the image, because there is less digital noise in the image. The higher the ISO rating (more sensitive) the stronger the image sensor has to work to establish an effective image, which thereby produces more digital noise (those multi-colored speckles in the shadows and in the midtones). So what is digital noise? It is any light signal that does not originate from the subject, and therefore creates random color in an image. The digital camera engineers have designed the image sensor to perform best at the lowest ISO (just like with film). On most digital cameras this is ISO 100, although some high end DSLRs have a mode that brings the ISO down to 50 or even 25. One more thing about the "grain"; in the old fashioned nondigital image many film photographers found ways to creatively and artistically utilize the grain to affect the final mood and tone of an image. Unfortunately, due to the nature of digital noise (as it manifests as random clumps of colored speckles), it is highly undesirable. However, some photographers have found limited creative ways to use digital noise. Maybe you can join that rare club.

3 ISO Speed vs. Motion Blur

SHUTTER SPEED: 4/10   APERTURE: F/11   ISO SPEED: 100   FLASH: FIRED

Lower ISO ratings produce color-accurate, smooth and aesthetically appealing images… and this requires ideal lighting conditions. However, there are some subjects that you want to photograph in low light conditions. Or, you may want to stop fast-moving objects (a humming bird, a race horse or a carousel). In both situations, you need higher ISOs to capture

those images with an acceptable exposure. Unlike film, with a digital camera you can increase the ISO with the touch of a button, and this flexibility makes it much easier to get the image you want. So with the higher ISOs, you can use faster shutter speeds to eliminate motion blur and/or camera shake. In the event that you want to use motion blur creatively, then decreasing the ISO is simple, and you can then decrease the shutter speed (less than 1/30s) to achieve the desired motion blur and still have smooth, noise-less images.

4 ISO Speed and Image Sensor Size

The size of the digital camera's image sensor dictates what ISO setting provides the least amount of digital noise. One must understand that image sensor size is not the same thing as pixel count. Image sensor size is the actual physical dimensions of the sensor, for most of the history of digital photography the image sensor has been smaller than a 35mm film frame. On point and shoot cameras, the sensor was quite small, and on most DSLR cameras, the image sensor has been the size of APC film (23x15mm). Smaller image sensors produce much more digital noise at higher ISOs (like 800) mainly because the high pixel count means that more pixels are being packed into a smaller area, thus producing more grain at all but the lowest ISO. Currently, many DSLR manufacturers produce image sensors the same size as a 35mm film frame (called Full Frame). The larger Full Frame sensor allows for more and larger pixels to be packed onto the image sensor, thus allowing for smoother, grain-free images at ISO setting of even 1600 (in some cases). On Full Frame sensors, the larger pixels are individually more sensitive to light, so the electronic energy required to mimic ISO 800 doesn't create the same amount of digital noise as with a smaller image sensor. The Full Frame cameras enable you to capture dynamic and effective images in a variety of

challenging or low light conditions without extraneous digital noise.

5 Image Quality and ISO Sensitivity

ISO 100   ISO 800   ISO 1600   ISO 3200
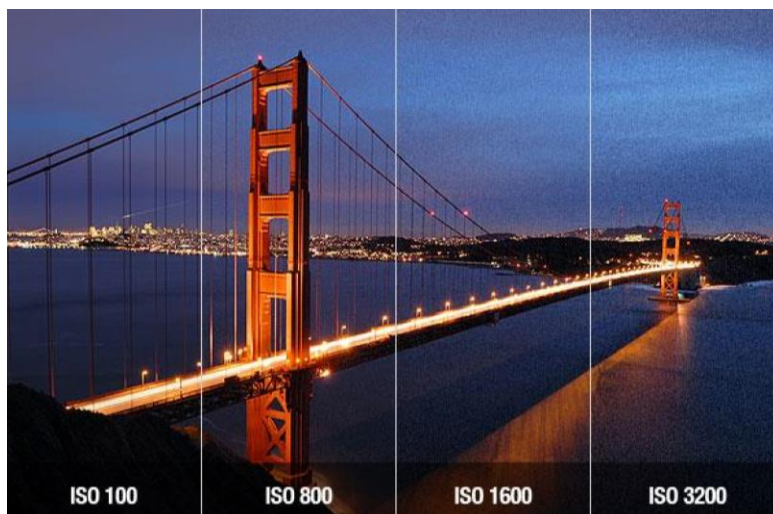
It is important to remember that the lower the ISO rating the better the image quality is going to be. While most digital cameras have a default "Auto ISO" setting, this reduces your control because it can automatically set a higher ISO, which will result in a grainier (noisier) image when other settings could have created an acceptable exposure with less noise.

Increasing ISO affects image quality in two major ways: 1) The distinction between fine details is reduced. 2) When you enlarge the image and make digital prints, or when you save the image as a jpeg (which has a high level of compression), the inherent high level of digital noise will result in a "muddier" image after conversion.

Recommended Settings

As we've stated, the lower the ISO the smoother, cleaner, and "better" images you will have. Lower ISO images will be more color-accurate and more aesthetically captivating. ISO between 100 and 200 will give you the best results, and depending on the image sensor and the camera's engineering you can get away with ISO 400 and still have clear, clean and sharp images for the vast majority of enlargements (up to 20x24).

Photography: Camera Histograms

Tones & contrast

Understanding image histograms is probably the single most important concept to become familiar with when working with pictures from a digital camera. A histogram can tell you whether or not your image has been properly exposed, whether the lighting is harsh or flat, and what adjustments will work best. It will not only improve your skills on the computer, but as a photographer as well.
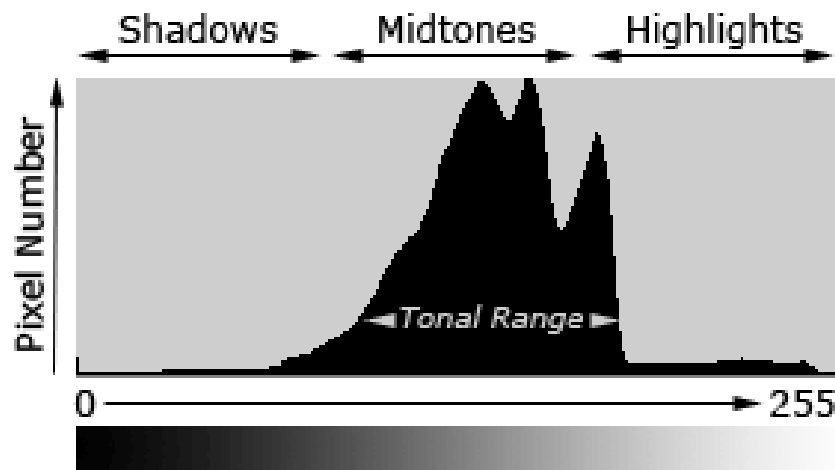

Tones

The region where most of the brightness values are present is called the "tonal range." Tonal range can vary drastically from image to image, so developing an intuition for how numbers map to actual brightness values is often critical—both before and after the photo has been taken. There is no one "ideal histogram" which all images should try to mimic; histograms should merely be representative of the tonal range in the scene and what the photographer wishes to convey.

The image below is an example which contains a very broad tonal range, with markers to illustrate where regions in the scene map to brightness levels on the histogram. This coastal scene contains very few mid-tones, but does have plentiful shadow and highlight regions in the lower left and upper right of the image, respectively. This translates into a histogram which has a high pixel count on both the far left and right-hand sides.

High and low key images

Although most cameras will produce mid-tone-centric histograms when in an automatic exposure mode, the distribution of peaks within a histogram also depends on the tonal range of the subject matter. Images where most of the tones occur in the shadows are called "low key," whereas with "high key" images most of the tones are in the highlights.

Lighting is often not as extreme as the last example. Conditions of ordinary and even lighting, when combined with a properly exposed subject, will usually produce a histogram which peaks in the centre, gradually tapering off into the shadows and highlights. With the exception of the direct sunlight reflecting off the top of the building and off some windows, the boat scene to the right is quite evenly

lit. Most cameras will have no trouble automatically reproducing an image which has a histogram similar to the one shown below.
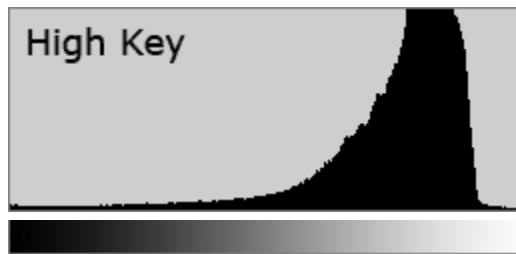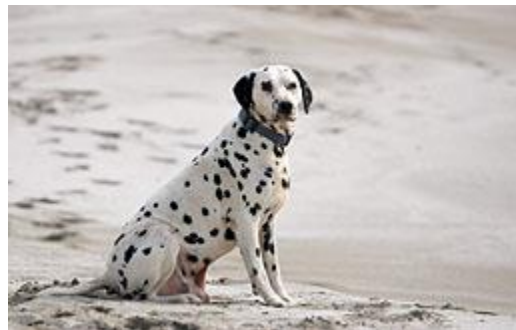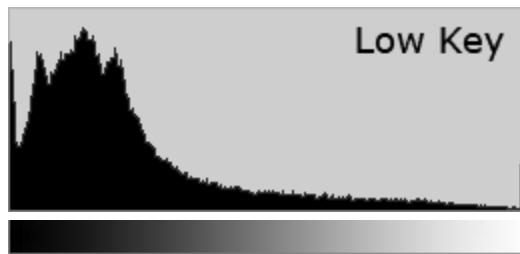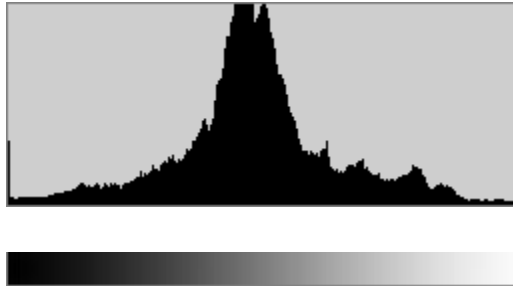
Before the photo has been taken, it is useful to assess whether or not your subject matter qualifies as high or low key. Since cameras measure reflected as opposed to incident light, they are unable to assess the absolute brightness of their subject. As a result, many cameras contain sophisticated algorithms which try to circumvent this limitation, and estimate how bright an image should be. These estimates frequently result in an image whose average brightness is placed in the mid-tones. This is usually acceptable, however high and low key scenes frequently require the photographer to manually adjust

the exposure, relative to what the camera would do automatically. A good rule of thumb is that you will need to manually adjust the exposure whenever you want the average brightness in your image to appear brighter or darker than the mid-tones.

The following set of images would have resulted if I had used my camera's auto exposure setting. Note how the average pixel count is brought closer to the mid-tones.
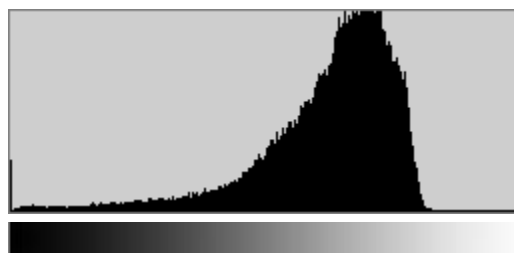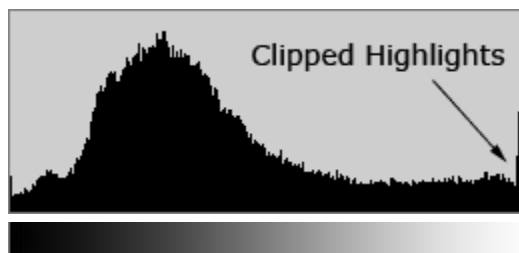
Most digital cameras are better at reproducing low key scenes since they prevent any region from becoming so bright that it turns into solid white, regardless of how dark the rest of the image might become as a result. High key scenes, on the other hand, often produce images which are significantly underexposed. Fortunately, underexposure is usually more forgiving than overexposure (although this compromises your signal to noise ratio). Detail can never be recovered when a region becomes so overexposed that it becomes solid white. When this occurs the highlights are said to be "clipped" or "blown."

The histogram is a good tool for knowing whether clipping has occurred since you can readily see when the highlights are pushed to the edge of the chart. Some clipping is usually ok in regions such as specular reflections on water or metal, when the sun is included in the frame or when other bright sources of light are present. Ultimately, the amount of clipping present is up to the photographer and what they wish to convey.
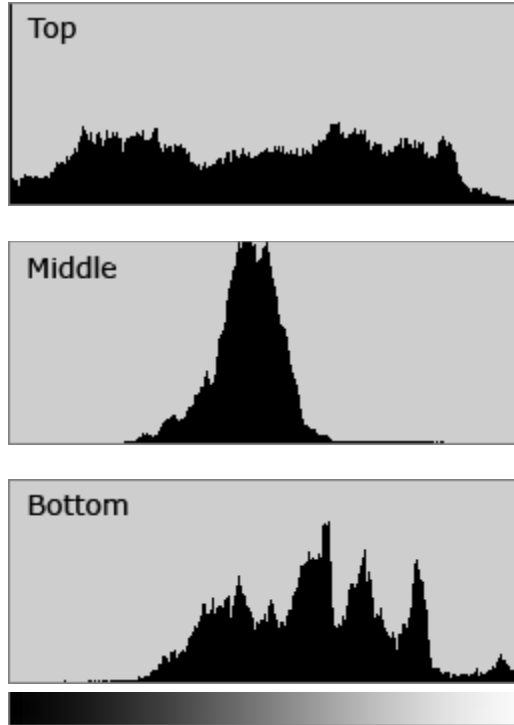
Contrast

A histogram can also describe the amount of contrast. Contrast is a measure of the difference in brightness between light and dark areas in a scene. Broad histograms reflect a scene with significant contrast, whereas narrow histograms reflect less contrast and may appear flat or dull. This can be caused by any combination of subject matter and lighting conditions. Photos taken in the fog will have low contrast, while those taken under strong daylight will have higher contrast.
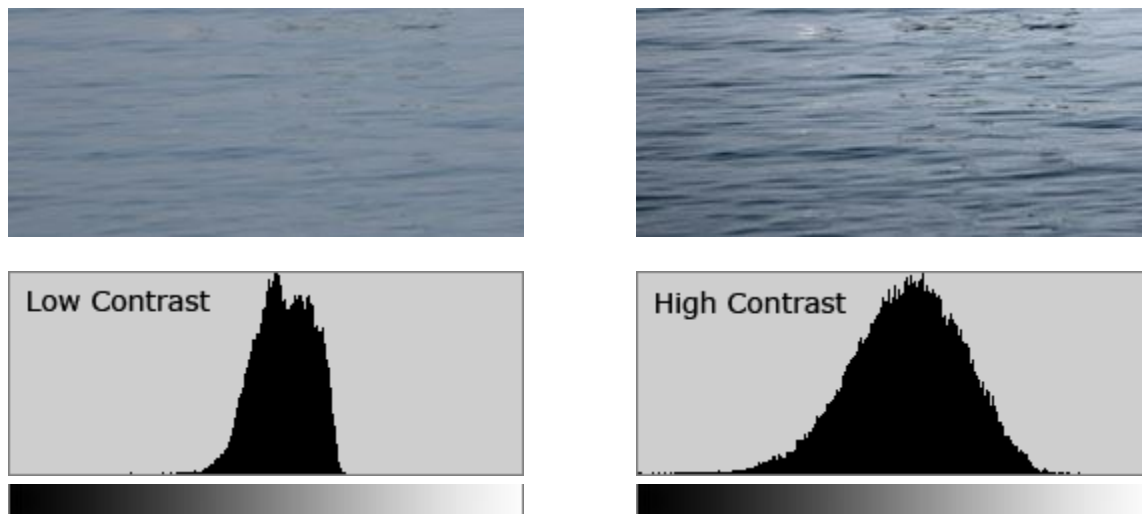
Contrast can have a significant visual impact on an image by emphasizing texture, as shown in the image above. The high contrast water has deeper shadows and more pronounced highlights, creating texture which "pops" out at the viewer.

Contrast can also vary for different regions within the same image due to both subject matter and lighting. We can partition the previous image of a boat into three separate regions—each with its own distinct histogram.
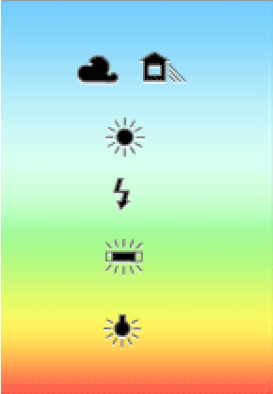
The upper region contains the most contrast of all three because the image is created from light which does not first reflect off the surface of water. This produces deeper shadows underneath the boat and its ledges, and stronger highlights in the upward-facing and directly exposed areas. The middle and bottom regions are produced entirely from diffuse, reflected light and thus have lower contrast; similar to if one were taking photographs in the fog. The bottom region has more contrast than the middle—despite the smooth and monotonic blue sky—because it contains a combination of shade and more intense sunlight. Conditions in the bottom region create more pronounced highlights, but it still lacks the deep shadows of the top region. The sum of the histograms in all three regions creates the overall histogram shown before.

Photography: White balance

1 Colour Temperature

To understand the concept of White Balance, you need to first understand the concept of colour temperature. Colour temperature is a characteristic of visible light. It provides a method of describing these characteristics and is measured in Kelvin (K). A light having higher colour temperature will have more blue light or larger Kelvin value as compared to lower light, which has a smaller Kelvin value. The following table shows the color temperature of various sources of light.

WB SETTINGS	COLOR TEMPERATURE	LIGHT SOURCES
	10000 - 15000 K	Clear Blue Sky
	6500 - 8000 K	Cloudy Sky / Shade
	6000 - 7000 K	Noon Sunlight
	5500 - 6500 K	Average Daylight
	5000 - 5500 K	Electronic Flash
	4000 - 5000 K	Fluorescent Light
	3000 - 4000 K	Early AM / Late PM
	2500 - 3000 K	Domestic Lightning
	1000 - 2000 K	Candle Flame

2 How does the Light Affect the Colour?

You must have noticed some photos turn out with an orange/yellow cast if shot under tungsten lighting or a bluish cast if shot under fluorescent lights. This occurs because each source of light possesses a different colour temperature. A digital camera can measure the colours in the red, green, and blue light of the spectrum, as reflected to its sensors. In a photo taken under the midday sun there is the whole spectrum of light (which makes up "white" sunlight). Under these conditions, the colors in an image appear nearest to the "true" colours. An image taken under tungsten bulb (a normal household incandescent bulb) without adjusting the digital camera for white balance produces the dull orange shade as it spreads the biased light. Similarly, an image taken under the fluorescent lighting produces a brighter bluish cast. However, it is possible to shift the colour in the desirable direction, provided you have a good understanding of your digital camera and its settings.

3 Why to Adjust the White Balance?

Since different sources of light have different colour hues, a picture taken with a normal white balance under artificial lighting conditions transmits the low heat to the camera's sensor. This light touches the red bits of the spectrum, which results into dull yellow or orange shades in the picture. Though the human eyes can automatically adjust to different lights and colour temperatures to sense right colour, a camera needs to be adjusted to different lights for accurate colour reproduction. By adjusting the white balance setting of your digital camera, you can alter the required light or temperature to produce the most accurate colours in a digital image.

4 Preset White Balance Settings

Auto – The Auto setting helps in adjusting the white balance automatically according to the different lighting conditions, but you can try other modes to get better results. Tungsten – This mode is used for light under a little bulb like tungsten, and it is often used while shooting indoors. The tungsten setting of the digital camera cools down the color temperature in photos. Fluorescent – This mode is used for getting brighter and warmer shots while compensating for cool shade of fluorescent light. Daylight – This mode is for the normal day light setting, while shooting outdoors. Many cameras do not have the Daylight mode.
Cloudy – This mode is ideal for while shooting on a cloudy day. This is because it warms up the subject and surroundings and allows you to capture better shots. Flash – The flash mode is required when there is inadequate lighting available. This mode helps pick the right White Balance under low light conditions.

Shade – A shaded location generally produces cooler or bluer pictures, hence you need to warm up the surroundings while shooting shaded objects.

5 Manual White Balance

You can also adjust your digital camera manually by setting a white object as the reference point. This is done to guide the camera how white the object would look in a particular shot. It is advisable to manually adjust the white balance when taking a picture to compensate for the changing lighting conditions. As the daylight changes during early morning and late evening hours, the varied light intensity is easily perceived by the camera. Therefore, you need to correct the white balance regularly while shooting during these times of the day. To manually set the white balance in your image, you first point your camera at a pure white object, set the exposure and focus. Now, activate the white balance on the object by pressing the button. It may take few seconds for the camera to perceive the shot, but it will this colour setting until the next white balance is performed.

Conclusion

Some people consider it amateurish to use pre determined settings, when in fact there may be times when we are in a rush and cannot adjust everything manually. Also remember that using these modes will teach you about photography and ideal settings for different conditions. If in doubt, you can use Auto mode, then adjust the settings manually. Auto settings are there to be used so try them all, and become familiar with what each one does.

Photography: ITP+ Course practical

ITP+ fellows visited the Enlightenment Gallery at the British Museum to practise their photography. Afterwards, they sat for a group peer assessment and feedback session with Chief Photographer John Williams to discuss what elements of the photographs were successful and what could be improved upon, thinking about:

1. Composition (camera angle, position from which photograph was taken)
2. Light (shutter speed, aperture, white balance)

Below are two examples of sculptures photographed by course participants. It could be useful to cover the writing and look first at the image yourself to think about 'what works well' and 'what could be improved', before looking at what the ITP+ group observed and concluded.

Eros Bending his Bow, marble statue, Roman, 2nd Century AD

What works well?
The sculpture is lit well (the choice of aperture, shutter speed and white balance are good)

What could be improved?

It would be better to change the angle so that the wing on the left isn't poking out a little bit under the chin – it confuses the image. We have reflection behind, which the fellows didn't have the equipment to reduce on the day, but could be improved by: closing curtains/blinds; using a circular polariser filter; turning off lights and using large standing flashes; or suspending a piece of material behind the sculpture to remove the background.

What works well?

With this angle, the wings are clearer and easier for our eye to understand. The sculpture is lit well and the image is crisp (not blurry).

What could be improved?

The image is not straight. Also see above about reflection.

See Collection Online entry for other images:

http://www.britishmuseum.org/research/collection_online/collection_object_details.aspx?searchText=cupid%20sculpture&ILINK|34484,|assetId=51728001&objectId=1431852&partId=1

Ganymede and the Eagle, marble sculpture, Roman, 1st – 2nd Century AD
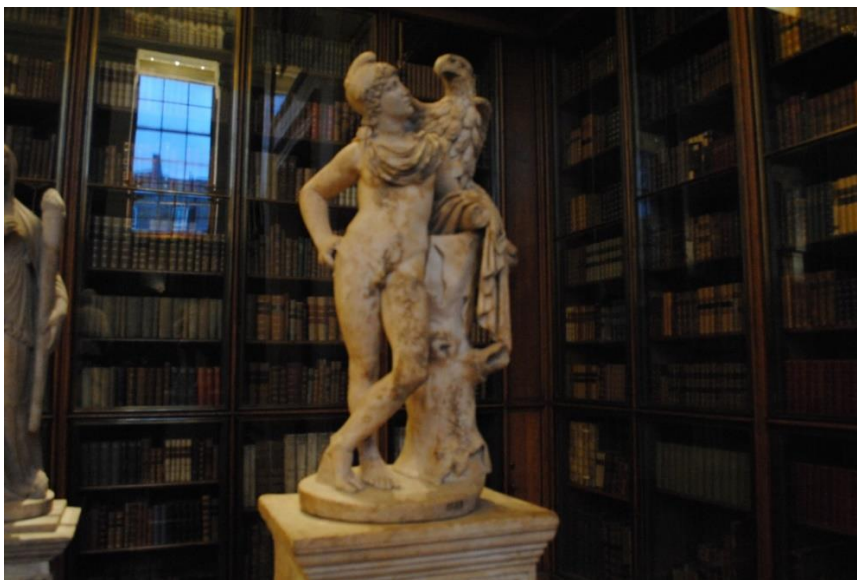

What works well?
This composition works well for marketing purposes (events etc). It has an element of humor to the composition, and shows visitors interacting with artefacts. It is a crisp image.

What could be improved?
The image is a little dark – histogram won't be perfect. So it would need some adjustment of shutter speed/aperture/white balance. This isn't the best angle to showcase this sculpture.
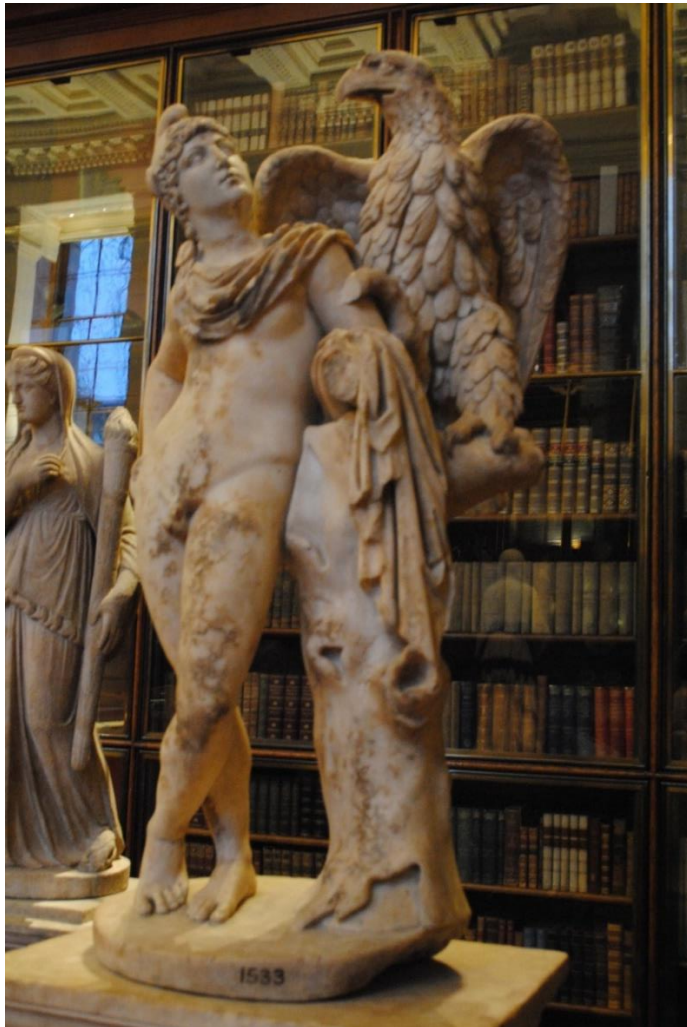
What works well?

This angle is better to show the sculpture's detail and 'story'.

What could be improved?

The image is dark – it would need an adjustment of shutter speed/aperture/white balance. Again, we have reflection, which could be dealt with as explained with the first photograph. There is another sculpture appearing on the left – the composition would be improved if this was not visible, to give the subject more impact.

What works well?

This is the best of the three angles to showcase this sculpture. We get the sense of the man looking up to the eagle, and see the most detail of both man and eagle in this position.

What could be improved?

The image is still a bit dark. From this angle, it is difficult to avoid the presence of the second sculpture behind. To deal with this, a piece of material could be held up/suspended behind the main sculpture to block out the background one.

See Collection Online entry with other images taken by the British Museum:

http://www.britishmuseum.org/research/collection_online/collection_object_details.aspx?objectId=1434268&partId=1&searchText=sculpture+eagle&images=true&page=1

Photography: Weblinks

British Museum Picture Library www.bmimages.com

Equipment and software used by the British Museum Photographic Department
Digital sensor back www.phaseone.com
Camera www.sinar.ch
Lights and flash equipment www.elinchrom.com
Computers www.apple.com
Image software, particularly Photoshop www.adobe.com

Professional Museum Photography Associations
ImageMuse
The website contains guidelines and standards for digital reproduction of fine art. There is also a link to the ImageMuse blog (under the 'Membership' tab) on which members can ask questions and get answers from other professionals. www.imagemuse.org

Association for Historical and Fine Art Photography
An organisation for image professionals in the cultural heritage sector in the UK
www.ahfap.org.uk

Useful information on all forms of Photography http://www.tabletopstudio.com/HowTo_page.html

Object handling: Weblinks

General
http://www.museumsassociation.org/home

Legislation and guidelines
http://www.hse.gov.uk/
http://www.hse.gov.uk/work-equipment-machinery/loler.htm
http://en.wikipedia.org/wiki/Lifting_Operations_and_Lifting_Equipment_Regulations1998
http://www.hse.gov.uk/work-equipment-machinery/puwer.htm
http://en.wikipedia.org/wiki/Provision_and_Use_of_Work_Equipment_Regulations_1998

Suppliers
http://www.slingsby.com/c-768-buy-lifting-equipment-lifting-gear-cheap-pallet-trucks-_slingsby.aspx
http://www.angliahandling.co.uk/