



SURFACE REMAINS AND MAPPING

PRACTICAL SKILLS IN EXHUMATION

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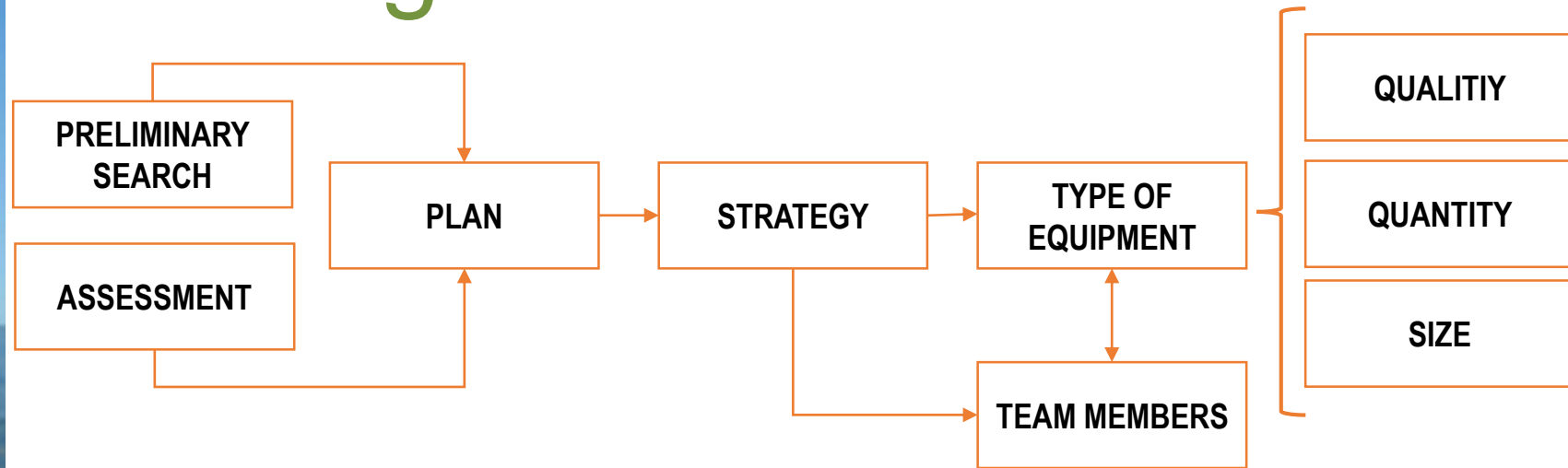
Work flow

- Assessing
- Surveying
- Planning
- Exposing
- Documenting
- Recovering
- Chaining custody
- Transporting
- Storing
- Reporting



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Planning



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Tools and equipment



 alamy stock photo

APW43C
www.alamy.com



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PPE



Roles and responsibilities



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- Photo (1)
 - Record (1)
 - Coordinator (1)
 - Excavators (n)
 - Sievers (n)
- 
- Cleaner (n)
 - Brusher (n)
 - Shoveler and hoer (n)
 - Scraper (n)
 - Bucket loader (n)
 - Triangulation (± 3 to 5)



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Exposition and visual appeal



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Sequence of events



26.07.2013. Georgia, Abkhazia. Sukhumi, Park Slavi. A forensic anthropologist and local forensic scientists are exhuming a gravesite in Park Slavi. Photographer: De Viguier, Veronique. Copyright. Getty Images/ICRC.

- The most likely explanation for an event depends on a successful recovery of evidence and this means that the evidence must be recovered in a way that allows the reconstruction of the event as it happened;
- Recovery occurs inversely to the way in which the event occurred.



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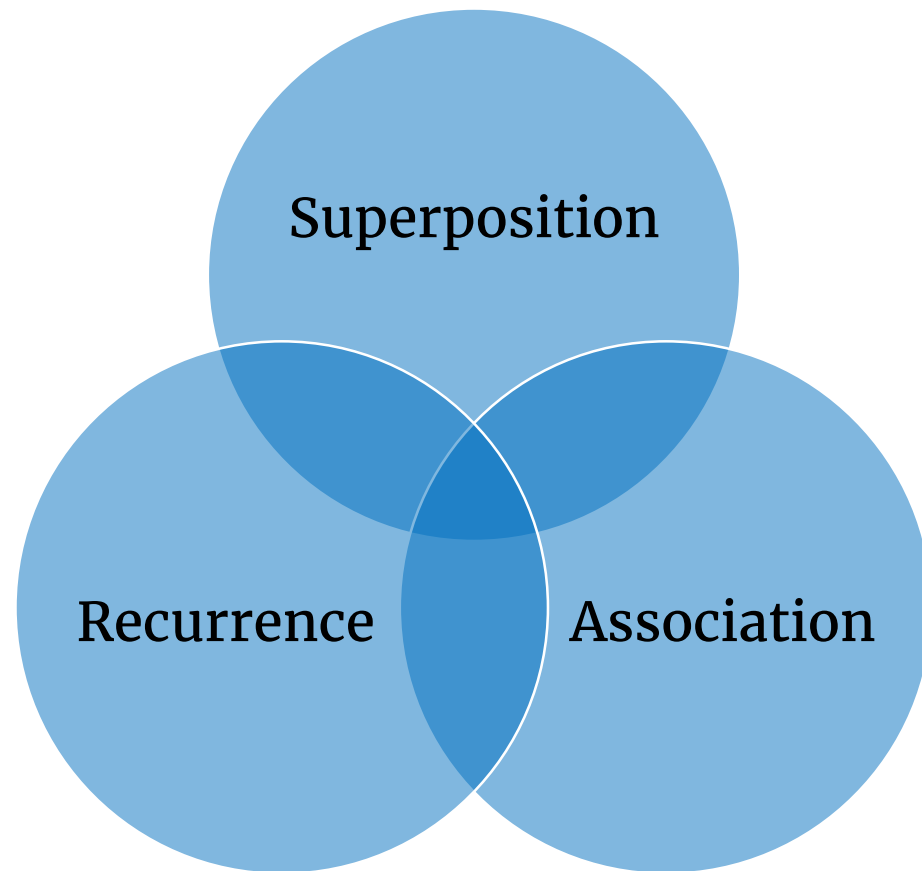
Proceed horizontally

- The most basic principle of any excavation is to proceed horizontally first and vertically second.



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Principles



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Superposition

- First things to be found (from the top) were the last to be deposited





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According to the superposition principle, the top bottom was the first group to be disposed



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Association

- There are associations between the evidence in a scene
- These could be accidental or intentional
- Recording them will help interpret the results





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Recurrence

- A feature, an association or artifacts that is found repeatedly, probably does not reflect random behavior



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To start

- Secure the area;
- Define the area and clean the surface;
- Initial scraping of the possible grave surface can help defining the grave outline.



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General view of the possible grave before intervention

AN INITIAL SCRAPE OF THE ALLEGED GRAVE SITE ALLOWS TO DEFINE THE WORKING AREA

Excavation proceeds by removing horizontal layers

THE EDGES ARE FOUND AND THE OUTLINE DEFINED

**THE GRAVE CONTENTS ARE EXPOSED.
THE REMOVAL OF GRAVE FILL TAKES
PLACE LAYER BY LAYER**

Remove soil inside of the pit should be sifted concurrently

**THE CONTENTS OF THE GRAVE ARE
EXPOSED, PHOTOGRAPHED AND
MAPPED PRIOR TO THEIR REMOVAL**

**FIND THE
BOTTOM**

**In mass/common graves, human remains must be
individualized prior to the recovery**

Be aware...

- Every scene is different but general methodology is similar.
- Techniques to recover must be adapted.
- Be systematic and controlled no matter context/conditions
- Graves have many particular characteristics that can provide vital information to the **sequence of events** and the **right to know**.



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Recording

- To record each artifact or context in three dimensions: length, width and depth.
- Only way to revisit the context after “destruction” recovery.
- Documentation includes:
 - forms and inventories;
 - maps and sketches;
 - photographs and video, etc.



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- **Record and map before anything is moved or removed.**
- Photographs should be used as backup to the written record and not as the principal source of information.



Simple rough sketch

- Does not need to be drawn in scale but should include measurements.

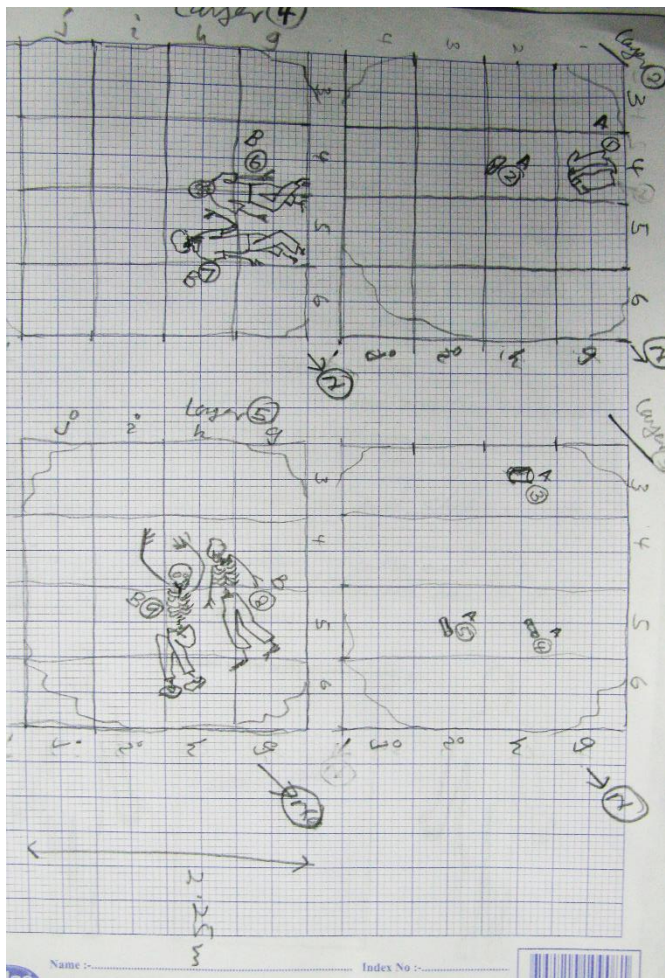


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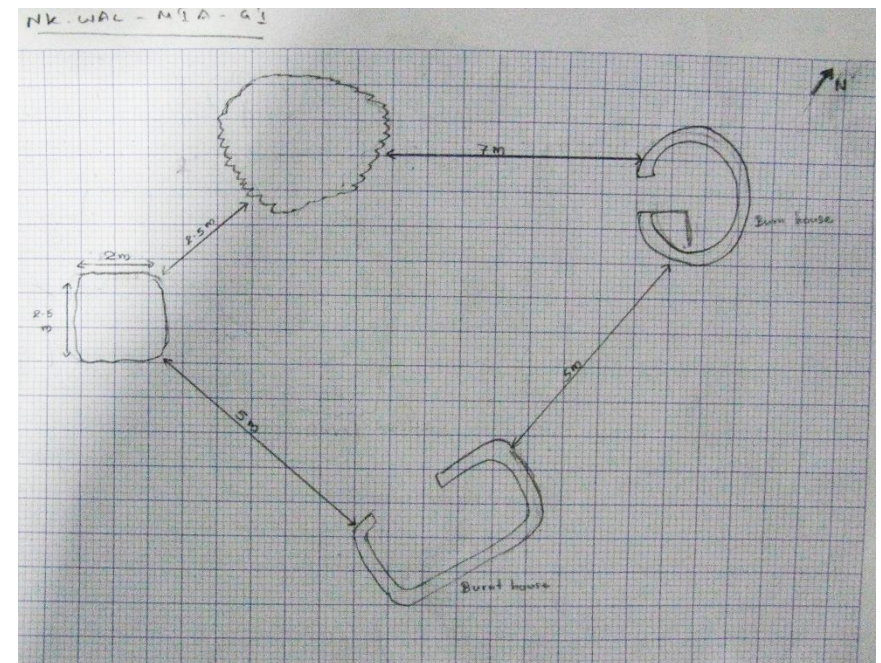
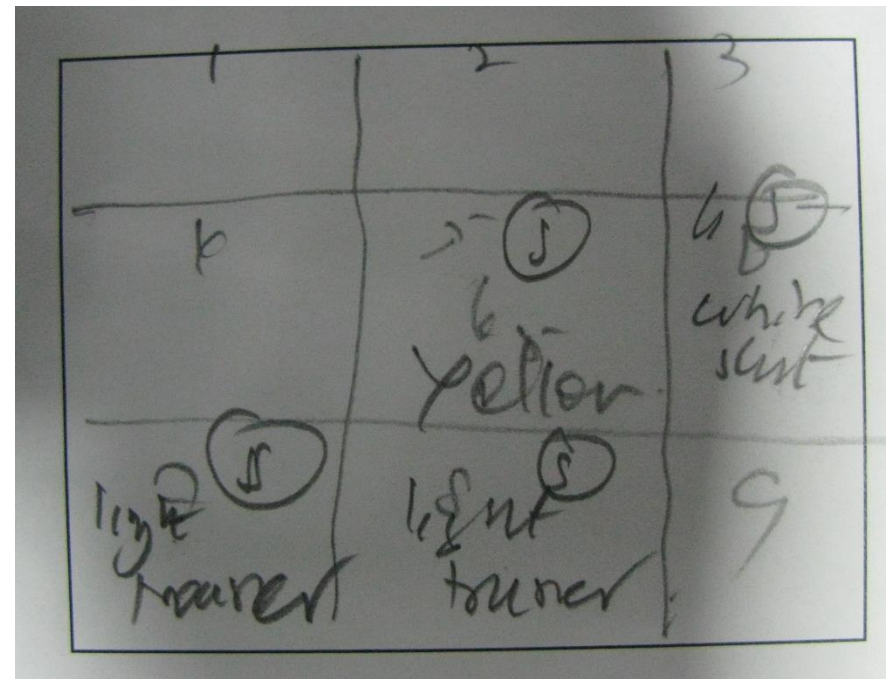
- Provide an overview of the most significant information and are used for planning.



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- Codes, legends, date, name, scale



Scaled map



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- First, mark the scene limits, determine the types of drawings and scale required.
- It is important to carefully consider the scale of your plan or section drawing prior to recording any information.
- A ratio of 1:10 (i.e., 1 centimeter on the plan equals 10 centimeters on the ground) is the standard for most burial plan drawings.
- It is also important to maintain a sense of neatness in maps, drawings, and corresponding field notes.



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Senses

- Touch
- Sight
- Hearing
- Smell



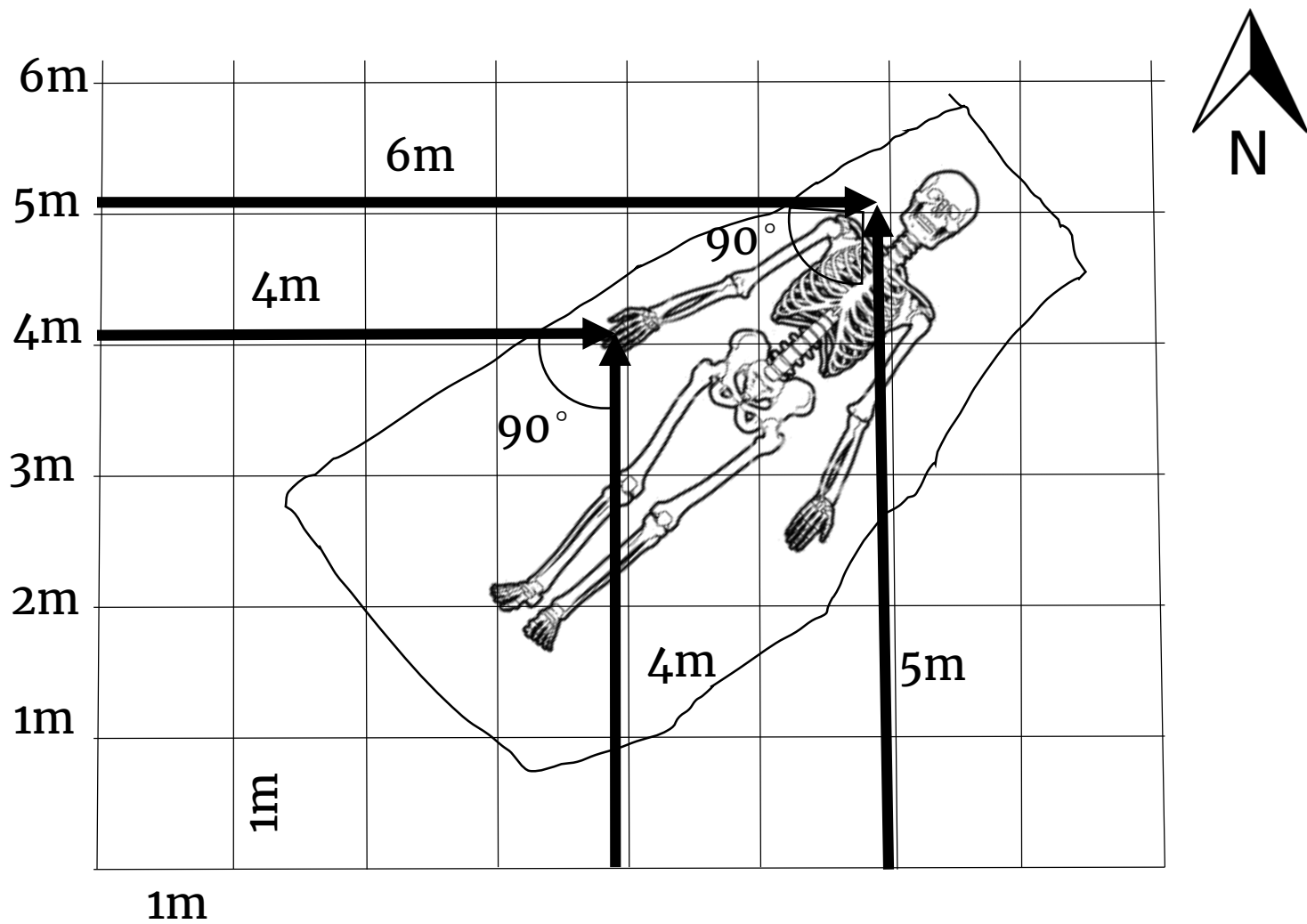
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Grid

- A system of perpendicular lines and equally spaced points to form a rectangle which is used as a frame;
- It is a rectilinear system of X, Y coordinates which is established over the area to be excavated so that spatial control can be maintained.
- A grid is usually defined by its distance and direction in reference to a datum point.



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Triangulation

- Triangulation is the process of determining the location of a point by forming triangles to it from known points (baseline).
- Uses straight-line measurements from the baseline to the evidence to create a triangle.



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Point A

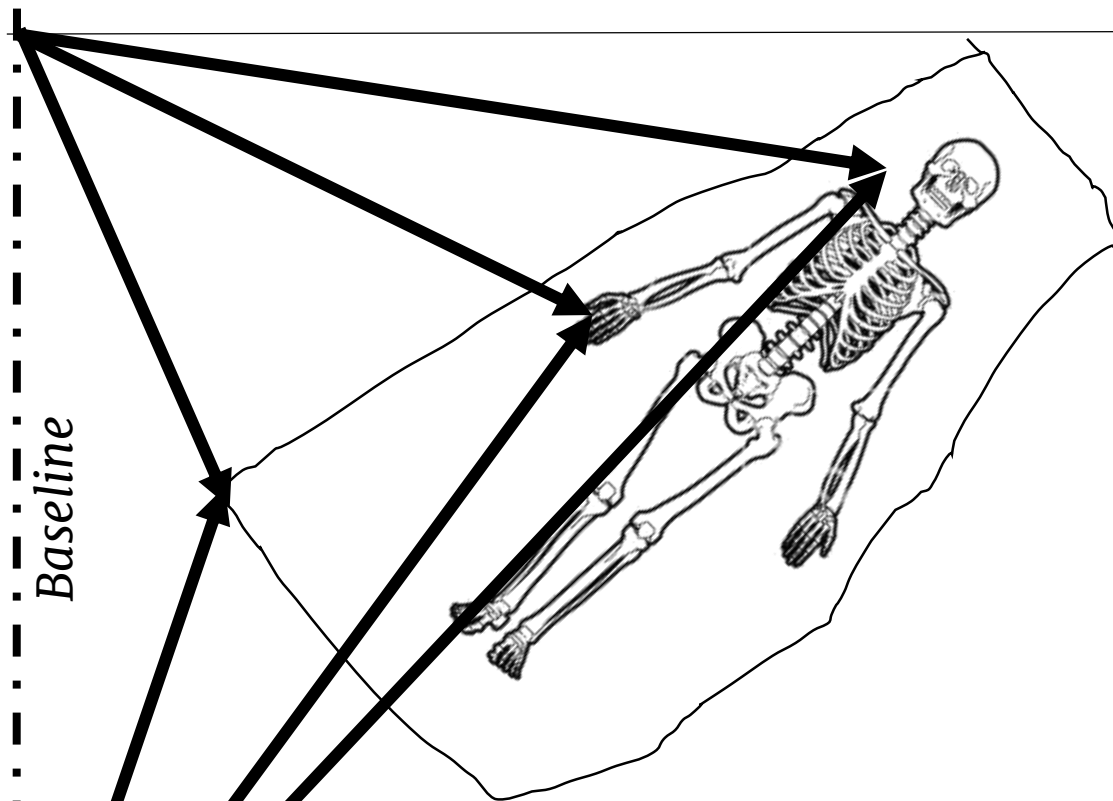
7m

Baseline

Point B



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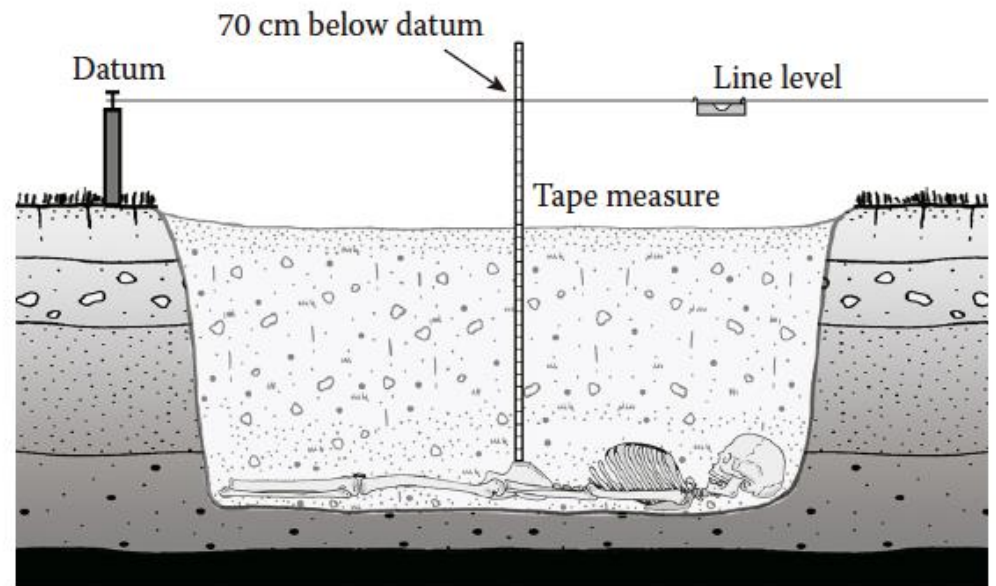
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Depth

- The depth must be taken from the datum point.
- Tie the line from your datum to other point.
- To leveling the line, use a line level (or bubble level). The bubble of the level must be in center.



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Cox, Hunter, 2005



Photos

- Photos are useful documents.
 - They are accurate.
 - They can present different angles and levels of detail.
 - They can be used as proof in a Court.
- Keep a photo record of the *entire* process.
 - From arrival to the site before the intervention to departure after recovering the last piece of evidence.



Photos

- Documenting the *process of recovery*, which is similar to telling a story: sequence and connections between elements.
- There is a "before" and "after" to every.
- No photograph should be disconnected from the rest.
- To document a detail, remember to first take the photographs you need to situate it in the context.



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Other information to retrieve

- The dimensions of the grave;
- The shape of the grave;
- The graves was made by hand or heavy machine;
- What kind of grave is;
- How the body was disposed;
- Take the depth of the bodies.



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Collecting

- Remove the remains carefully, including fragments and small bones. Use your trowel in a sweeping motion.
- The remains should be placed immediately in marked containers. These containers should include the site number, case number/code, date of excavation.
- Bones must be packed separated from other types of evidence (e.g. artifacts, clothes, etc.) if not in direct association.



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Chain of custody!



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Storing



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Same methods for surface



27.11.1993. Burundi. Buhiga. Village brule et pille. Photographer: Gassmann, Thierry.,
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Task

- Systematic approach
- Record your context
- Chose your methods
- Understand the sequence of events
- Describe the findings
- Interpretation based on evidences
- Report
- Integrated report



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