

A crime scene on a road at night. The road is dark, and the scene is illuminated by a bright light source, possibly a flashlight or a spotlight, creating a strong glare. White chalk lines are drawn on the road surface, forming a large 'X' shape that divides the scene into four quadrants. Yellow evidence markers are placed along the edges of the 'X' and in the quadrants. The text is overlaid on the top half of the image.

**CRIME SCENE
INVESTIGATIONS
ON A BUDGET**

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TOPICS

- fingerprinting lab
- making simulated blood
- identifying powders lab
- understanding bones
- how to set up a mock scene

INE DO NOT CROSS POLICE LINE

FINGERPRINTING LAB

Procedure

1. Have each group draw and color in a small area on their computer paper with the pencil. (This will be the fingerprint ink)
2. Each person will roll their fingers across the colored area and then roll into the appropriate box on the handout.
3. Once everyone has finished printing themselves, we are ready to move to dusting for fingerprints.
4. Each student will rub their right thumb on the side of their nose and then press their thumb on one of the objects.
5. Next, they will choose either the white or dark powder to dust with (color needs to contrast the objects color for best results).
6. Students will take a paintbrush and apply a small amount of powder then brush lightly in ONE direction across the print. Just enough to make the print visible.
7. Next, take clear tape and place over the object.
8. Now, lift the print and place on a contrasting sheet of paper.

Supplies

- Painting brushes
- Baby powder
- Cocoa powder
- Various surfaces
- Pencils
- Computer paper
- Clear tape.

MAKING SIMULATED BLOOD

Materials

- 1/2 cup warm water
- 1 tbsp. cocoa powder
- 4 tbsp. corn syrup
- 1 tsp. red food coloring
- 2 drops yellow or green food coloring

Procedure:

1. Blend the cocoa powder with the warm water first. Mix thoroughly before moving forward.
2. Add the corn syrup 1 tablespoon at a time into your mix until you have the desired consistency. Real blood is slightly thicker than water and readily drips when splattered across any surface.
3. Add food coloring sparingly until you have a deep brownish-red appearance. Adding green coloring darkens the blood, while red brightens it.
4. Mix your ingredients well and let them settle for a few minutes. Skim off the scum or residue that appears on top with a spoon or paper towel.
5. Test your blood's consistency. If it appears too runny, add another teaspoon of corn starch and remix or if it is too thick, add small amounts of hand sanitizer. The fake blood should darken and dry like the real thing.

IDENTIFYING POWDERS LAB

Supplies:

- Four known powders (cornstarch, sugar, salt, and baking soda) (You will use one of these as the crime scene powder too)
- Water
- pH strips
- Iodine
- Vinegar
- Spot test plates
- Magnifying glass
- Three pipettes

IDENTIFYING POWDERS

Procedure:

- 1. Label the spot test plate.**
- 2. Place a small amount of powder in the wells. You should have 3 wells for each powder.**
- 3. Study the powders with the magnifying glass. Examine what each powder looks like. How would you describe the powder's shape. Does it have large or small grains? Your observations should be written in the appearance column of the chart.**
- 4. Examine the powders further by rubbing each powder between your fingers. Describe how each powder feels in the Texture column of the chart.**
- 5. Using a pipette, place 10 drops of water in the first row of powders. Examine what happens. Do the powders dissolve? Is there a reaction? Write your observations in the Reaction to Water column.**
- 6. Take the pH strip and place in the solution and hold there for 5-10 seconds. Take the strip out and read the pH. Record on the worksheet.**
- 7. Using a different pipette, place 10 drops of iodine in the second row of powders. Record what happens in the Reaction to Iodine column. Iodine should be handled with care.**
- 8. Using the third pipette, place 10 drops of vinegar in the third row of powders. Record what happens in the Reaction to Vinegar column.**
- 9. Write your conclusion.**

UNDERSTANDING BONES

- **Key factors when examining human remains:**
 - Identify what bone you have
 - Can you determine if it is male or female?
 - Approximate age?
 - Cause of death?

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MOCK SCENE SET UP

To create a mock scene:

1. Wrap the area in crime scene or police tape by stretching tape from one side of a doorway to another. Make sure to still allow access to the area.
2. Have someone lay on the floor and use the white duct tape or chalk to draw a chalk outline around their body. You could also use a paper version of an outlined body if needed.
3. Place your evidence in the area. A general rule is to walk around with the evidence and try to create a story and place the evidence in very particular spots.
4. Tape all evidence in place to prevent accidental movement.
5. Allow students to enter and observe the crime scene. Make sure they know to watch where they step.
6. Students should start by drawing the crime scene exactly as they see it on graph paper.
7. After sketching the crime, then the evidence can be analyzed in the lab.
8. Last, students should create a conclusion based on their findings.