Assignment: Dusting and Lifting Latent Fingerprints II

Objective: You will complete an individual project showing evidence of your ability to correctly Dust, treat and lift latent fingerprints.

Directions: The following assignments must be completed. All activities will be included in your project. Read the directions carefully!

For each assignment that is part of your project, make sure you:
- Title each page with the assignment title.
- Put your name, date, and class period in the upper right hand corner of each assignment.

Materials:
- magnetic brush
- fiberglass brush
- newspaper to collect dust particles
- Gojo or Baby wipes
- lifting tape
- magnetic powder (gray/black)
- potato chips or ridge builder pads

RULE: USE THE CORRECT BRUSH WITH THE CORRECT POWDER! Use the White brush with the white powder and the black brush with the black powder. D’oh!

Watch as your teacher demonstrates the methods below:

1) If using a FIBERGLASS BRUSH:
   a) Before applying powder to the brush, gently spin the brush between your index finger and thumb to separate the bristles.
   b) Lightly dab the bristles into the powder.
   c) Again twirl the brush over the bottle to remove excess powder. Avoid making a mess.
   d) Make sure you have newspaper to cover the area where you are working!
   e) Twirl the brush between your index finger and thumb while lightly brushing the bristles across the surface where your fingerprint lies.
   f) If ridge detail appears, continue to twirl the brush in the direction of the ridge flow until you develop the ridge completely.
   g) It may be necessary to add more powder as you continue.

2) If using a MAGNETIC WAND:
   a) Similar to the above, but tap the wand on the side of the bottle to remove excess powder.
   b) NEVER allow wand to scrape along the latent print...just the dust. It acts as your brush.

If you miss the classroom demonstration, refer to: http://goo.gl/nKQDD (Some of our equipment is different so ask for help if you need).

Any group who leaves behind magnetic dust will be fined points in their lab. No excuses!
Assignment: Dusting Prints

Palm Print—This will be part of your project. It will require a title, your name, the date and class period.

Are you one of the 80-90% of us that are secretors? If so, this will be easy for you. Start by pressing your right palm onto a piece of white paper. Can you see your print? If you are a secretor, you will give off visible sweat from your palm. You may have also transferred visible grime from your hand to the paper. Use black powder to visualize your print. If you can’t see the print, you may be a non-secretor. You did not transfer enough oil from your palm to the paper to Non-secretors should make a second print. Rub your hands through your hair and across your cheeks and forehead to obtain oils to make a better print. You can also rub your hand with potato chips.

For your first print, write if you are a secretor or non-secretor at the bottom of the page. Label the print with the method you used (black powder, potato chips, ridge builder, wiped hands through hair, magnetic brush or fiber brush etc.). If you are a non-secretor, include your second print with the method at the bottom.

Assignment: Lifting Latent Fingerprints

Materials:

- magnetic brush
- fiberglass brush
- Gojo
- super glue
- backing card (white or black)
- lifting tape
- scissors
- aquarium
- Big 7 labels
- magnetic powder (gray/blk)
- Glow Germ Powder
- hot plate
- black lights

1) Lifting Latent Prints—Your teacher will model the process of lifting prints that have been visualized with black and white powder. You will be using the techniques to:

a) lift two latent prints from a smooth surface with black powder and a white facing card and

b) lift one latent print from a surface with gray powder and a black facing card.

You will be making a total of three pieces of evidence that will be part of your project:

- Use any surface you wish but make sure to protect the area as you will be cleaning it later.
- Choose an appropriate dust that will show contrast against the surface you have selected. You must use white dust for one print and black dust for the other two prints.
- PRESS your finger on the surface and dust your print.
- Select an appropriate backing card-white if using black dust, dark color if using gray dust.
- Making sure not to cloud the lifting tape with your own prints, press the tape onto the print.
- Apply the tape to the backing card. Trim the edges with scissors.
- Write the BIG 7 on the back of each fingerprint:
  - Date, time (military), address (LHS), evidence number (use any number), name (your name), agency (LHSFS), and a detailed description of location (ex. desktop, S 14)
- Tape one edge of the fingerprint on a piece of paper so you can flip it over and still read the Big 7. Next to each print, write the method you used: the type of powder, wand, etc.
You may place all three prints (two with black powder and one with gray powder) on the same piece of paper or on two or more pages. Title the paper, “Lifting Latent Prints,” and remember to label the paper with your name, the date, and the class period in the upper right hand corner.

2) **Using a Black Light and Fluorescent Powder to Visualize a Latent Palm print**

This will be part of your project. Title your paper and include your name, the date and class period.

Use a sheet of paper, press a palm print from your right hand. Lay the print on newspaper and dust with Glow Germ® powder. DO NOT USE A DUSTING WAND FOR THIS PROCEDURE! Pour the powder on the print and tap the extra powder back into the container. Glow Germ is a fluorescent powder that should adhere to the print. Observe your print under a black light to see the friction ridges. Spray the page with hairspray. Fill out a prepared Big 7 label and attach it at the bottom right corner of the page. The location will be ‘Classroom S14.” If your print needs to dry, place it on the drying rack.

3) **Using Iodine Crystals to Visualize Latent Prints**

This will be part of your project. It will require a title, your name, the date and class period. You may put both the iodine visualization and the Super Glue results on the same page.

Cut out a 1.5 x 1.5” piece of copy paper. Write the Big 7 on the back. The location will be ‘Classroom S14.” Press any fingerprint onto the blank side of the paper. Before you continue, put on safety goggles and gloves. Using forceps, place the latent print into a beaker with iodine crystals. Place a watch glass on top. Expose the print to sublimating iodine for an hour or more. Retrieve your print. Put clear tape over the print. Tape one edge of the fingerprint on a piece of paper so you can flip it over and still read the Big 7.

4) **Using Super Glue to Visualize Latent Prints**

This will be part of your project. It will require a title, your name, the date and class period.

Press a print onto the shiny side of a CD-ROM disk. Place the disk in an aquarium under the fume hood. Your teacher will place a hot plate in the aquarium and set it to low heat. Your teacher will squeeze super glue onto a metal pan and place the pan on the warm hot plate. Cover the aquarium and close the hood. Allow the print to develop overnight. The cyanoacrylate will adhere to the print so you can dust and lift it later. **NOTE: Cyanoacrylate is highly flammable so keep the heat low. Cyanoacrylate is dangerous to inhale!**

Carefully open the aquarium and let the hood draw the fumes out before attempting to retrieve your disk. Once the print has developed, dust and lift it using black powder and a white backing. Write the Big 7 on the back of the print. Tape one edge of the fingerprint on a piece of paper so you can flip it over and still read the Big 7.
## FYI: Methods For Processing Latent Prints

<table>
<thead>
<tr>
<th>SURFACE</th>
<th>EXAMPLES</th>
<th>Mag Powder</th>
<th>Powder</th>
<th>Super Glue</th>
<th>Iodine</th>
<th>Ninhydrin</th>
<th>Silver Nitrate</th>
<th>Crystal Violet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>cans, screen frames, foil</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Bricks</td>
<td>red bricks, walls</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Ceramic</td>
<td>vases, tiles, toilet</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cloth</td>
<td>fine woven linen</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fornica</td>
<td>bank &amp; kitchen counters</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Galvanized metal</td>
<td>vending machine coin boxes</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
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<tr>
<td>Glass</td>
<td>windows, bottles, etc.</td>
<td>X</td>
<td>X</td>
<td></td>
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<tr>
<td>Leather</td>
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<td>X</td>
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<td></td>
</tr>
<tr>
<td>Metals</td>
<td>guns, cars, cans</td>
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<td>X</td>
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<tr>
<td>Paper, porous</td>
<td>cardboard, checks, letters</td>
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<td></td>
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<tr>
<td>Paper, slick</td>
<td>magazines, advertisements</td>
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<td>X</td>
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<tr>
<td>Plaster</td>
<td>dry wall</td>
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<td></td>
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<td>Plastics, hard</td>
<td>cash drawers, dashboards</td>
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<tr>
<td>Plastics, soft</td>
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<tr>
<td>Rubber</td>
<td>handgun grips</td>
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<tr>
<td>Styrofoam</td>
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<td>Tape, sticky side</td>
<td>electrical, kraft, duct tapes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Tape, smooth side</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Veneers</td>
<td>panels, furniture</td>
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<td>X</td>
<td>X</td>
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<td></td>
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<tr>
<td>Vinyls</td>
<td>purses, auto seats</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>Wax</td>
<td>candles, coated cups</td>
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<tr>
<td>Wood, unfinished</td>
<td>lumber, boxes</td>
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<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Wood, finished</td>
<td>walls, doors</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
**Requirements for “Prints” Unit Project II**

**Name** ________________________________  **Due Date** __________________________

- The following assignments are required for your Prints Unit Project II. Additional details for each assignment can be found in your directions packet. If you did any additional work, include it in your portfolio.
- Keep in mind: Each assignment must have a title, your name, date, and class period in the upper right hand corner of the page unless otherwise directed. Any written work must be in black pen or it will NOT be graded.
- Your project should be handed in inside a manila folder. Make sure your name is on the outside of the folder and on the folder tab—use a marker to write your name so it is conspicuous.
- Use the following order for your project:

<table>
<thead>
<tr>
<th>Description</th>
<th>Check</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Requirements-</strong> Include this page as the first page of your project. Check off completed assignments.</td>
<td></td>
</tr>
<tr>
<td><strong>Part I. Dusting prints</strong></td>
<td></td>
</tr>
<tr>
<td>Directions for “Assignment: Dusting for Latent Fingerprints” (included with packet under Part I)</td>
<td></td>
</tr>
<tr>
<td>1) Palm Print—Print with ‘secretor,’ or ‘non-secretor’ label.</td>
<td></td>
</tr>
<tr>
<td><strong>Part II. Lifting Prints</strong></td>
<td></td>
</tr>
<tr>
<td>Directions for “Assignment: Lifting Latent Fingerprints” (included with packet under Part I)</td>
<td></td>
</tr>
<tr>
<td>1) Lifting Latent Prints—Three prints, Big Seven, Title, Methods, Big 7 Labels on back of each print, etc.</td>
<td></td>
</tr>
<tr>
<td>2) Using a Black Light and Fluorescent Powder to Visualize a Latent Print—appropriate labels.</td>
<td></td>
</tr>
<tr>
<td>3) Using Iodine—Iodine print with labels. Label with the Big 7 on back of print.</td>
<td></td>
</tr>
<tr>
<td>4) Print lifted from the Cyanoacrylate print. Label with the Big 7 on back of print.</td>
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</tr>
</tbody>
</table>

12 points total.