Haircoloring includes the following processes:

- Depositing color on natural hair color
- Depositing color on previously colored hair
- Depositing color on hair that has been lightened
- Lightening and depositing color in one step (double process)

Hair lightening or decolorizing involves diffusing natural or artificial color from hair.

It is important for you to understand the principles of the color wheel, color theory, and color levels.

Primary colors are pure or fundamental colors that cannot be achieved from a mixture:

- Red: warm-toned colors
- Yellow: help to lighten other color
- Blue: cool-toned colors

Primary Colors

- Black has all three primary colors present in equal proportions.
- Neutral brown has primary colors in the following proportions:
  - Blue (B)
  - Red (RR)
  - Yellow (YYY)

Secondary Colors

Mix equal parts of two primary colors:

- 1 oz Red + 1 oz blue = violet
- 1 oz Yellow + 1 oz blue = green
- 1 oz Red + 1 oz Yellow = orange
TERTIARY COLORS

Mix a secondary color with a neighboring primary color in equal amounts. OR
TWO primary colors present in unequal proportions.

- blue – green => 2 oz blue + 1 oz yellow
- blue - violet
- red - violet
- red - orange
- yellow - orange
- yellow - green

COMPLEMENTARY (BASE) COLORS

- These neutralize each other
- A base color is the predominant tonality of an existing color. It influences the final color result.
- blue and orange
- red and green
- yellow and violet

NATURAL HAIR COLOR

- Two types of melanin in the cortex
  - Eumelanin is melanin that gives black and brown color to hair.
  - Pheomelanin is melanin that is found in red hair. Very dark hair and most brunettes contain this pigment.
- Contributing pigment is the pigment in natural hair color. The foundation of haircoloring is based on modifying this pigment with haircolor to create new pigment.

THE LEVEL SYSTEM

- Level is the unit of measurement used to identify the lightness or darkness of a color; also referred to value or depth.
- Colorists use the Level System to analyze the lightness or darkness of a hair color.
- Levels are arranged on a scale of 1 to 10, with 1 being the darkest and 10 being the lightest.

THE LEVEL SYSTEM

- Tone—describes the warmth or coolness of a color
  - Warm tones are reds, oranges, yellows, auburn, copper, gold, bronze, or honey
  - Cool tones are blue, green, violet, ash, drab, smoky, or platinum
- Intensity—refers to the strength of a color tone, described as mild, medium, or strong

TONERS

- Toners are semipermanent, demipermanent, and permanent haircolor products used primarily on prelightened hair to achieve a pale, delicate color
- Toners require double-processing.
- Do not prelighten past the pale yellow stage.
- Patch test is required 24 hours before toner; to save time, strand test can be performed at same time.
- Proceed with service if patch test is negative.
HYDROGEN PEROXIDE DEVELOPERS

- Oxidizing agents that, when mixed with an oxidative haircolor, supply the oxygen gas to develop color molecules and change hair color
- Also called oxidizing agents or catalysts
- Have an acidic pH between 2.5 and 4.5
- Hydrogen peroxide most common

Volume of developers
- 10
- 20
- 30
- 40 (more lift)

Hydrogen peroxide dilution chart

<table>
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<th>Hydrogen peroxide volume</th>
<th>Peroxide OZ</th>
<th>Water OZ</th>
<th>Hydrogen peroxide result</th>
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<td>1</td>
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<tr>
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</table>

IDENTIFYING NATURAL LEVEL AND TONE

- Take a 2-inch square section in crown and hold up from scalp; allow light to pass through.
- Use swatches and find a match to the hair.
- Move swatch from scalp to ends.
- Determine the natural color level.

PATCH TEST

- The U.S. Federal Food, Drug, and Cosmetic Act prescribes a patch test to be given 24 to 48 hours prior to the application of an aniline derivative product to determine if the client has allergies or sensitivities.
- This is also called a predisposition (PD) test.

PRELIMINARY STRAND TEST

- Apply the haircolor formula on a small strand of hair to determine how the hair will react and how long the formula should process.

HAIRCOLOR CLASSIFICATIONS

There are four categories of haircolor:
- Temporary
- Semipermanent (P.D test required)
- Demipermanent (P.D test required)
- Permanent (P.D test required)
TEMPORARY COLOR

- Large molecules do not penetrate cuticle.
- Color coats the shaft only; creates a physical change in the hair.
- Process is good for neutralizing unwanted tones.
- These are available in:
  - color rinses.
  - colored mousses and gel.
  - hair mascara.
  - spray-on haircolor.
  - color-enhancing shampoos.

SEMIPERMANENT HAIRCOLOR

- Lasts through several shampoos.
- Partially penetrate hair shaft.
- Diffuses out of hair during shampooing.
- No regrowth maintenance.
- Formulated with ammonia.
- Can be used right out of the bottle.
- After rinse, can be used to prevent fading.

DEMIPERMANENT HAIRCOLOR

- Is similar to semipermanent but longer lasting.
- Can penetrate hair shaft.
- Is deposit-only; no lifting power.
- Has smaller pigment molecules.
- Gives vivid color results.
- Causes little to no damage.
- Has low to no ammonia.
- Is ideal for covering unpigmented hair.
- Requires a patch test.

PERMANENT HAIRCOLOR

- Mixed with a developer and remains in the hair permanently.
- Best for covering gray hair.
- Contains ammonia, oxidative tints, and peroxide.
- Requires a patch test.
- Contains aniline derivatives, very small compounds that penetrate the hair shaft.

PERMANENT HAIRCOLOR

- Aniline derivatives, combined with H₂O₂, penetrate the cortex.
- Color cannot be shampooed out.
- This simultaneously removes natural pigment while adding artificial color.

NATURAL HAIRCOLORS

- Are also known as vegetable haircolors such as HENNA.
- Are obtained from the leaves or bark of plants.
- Have no lifting power.
- Can be messy and lengthy process.
- Limited shades of black, chestnut, and auburn.
- Are incompatible with many professional chemical products.
METALLIC HAIRCOLOR

- These are also called **gradual colors** or **progressive dyes**.
- They contain metal salts
- Progressive buildup creates a dull, metallic, unnatural appearance.
- They require daily application and historically have been marketed to men

TEST FOR METALLIC DYE

- Use glass or plastic bowl.
- Mix a simple bleach, which is a mixture of hydrogen peroxide and ammonia. OR mix 1 OZ of 20 volume peroxide with 20 drops of 28 percent ammonia.
- Immerse 20 strands or more of hair in solution for 30 minutes.
- If metallic salts are **not** present, hair will **lighten slightly** and you may proceed with service.
- If metallic salts are **present**
  - Bubbles of gas (oxygen) being given off can be observed. Steam rises and heat is given off. The hair elasticity is increased and breakage occurs until the hair is completely destroyed and give off an unpleasant odor and do not proceed with service.

HAIR LIGHTENERS

- # of pigments in the hair: how dark
- the strength of the lightening product.
- processing time

HAIR LIGHTENING

- Often referred to as “bleaching” or “decolorizing”
- Diffuses natural or artificial color pigment
- Contains developer (hydrogen peroxide) as the oxidizing agent, release oxygen
- Contains an alkalizing ingredient
  - To facilitate the oxidation reaction
  - To facilitate lightening action of peroxide

TEN DEGREES OF DECOLORIZATION

1. Dark red/brown
2. Red brown
3. Red
4. Red/orange
5. Orange
6. Orange/gold
7. Gold
8. Yellow/gold
9. Yellow
10. Pale yellow
CONTRIBUTION OF UNDERLYING PIGMENT

The natural pigment remains in hair and contributes to the artificial color that is added.

CAUTION

- Never lift past pale yellow stage to white with lightener; this will cause excessive damage to hair.
  - Hair will become mushy.
  - Hair will lose its elasticity.
  - Hair will be harsh and brittle.
  - Hair often suffers breakage and won’t accept toner.

SUMMARY

- Haircoloring follows the Law of Color, a system of understanding relationships of color.
  - All colors are created from the three primaries.
  - Three primaries can be mixed to create secondary colors that can then be mixed with adjacent primary colors to create tertiary colors.

SUMMARY

- Temporary colors are removed by shampooing.
- DEPOSIT ONLY: semipermanent and demipermanent color lasts longer than temporary, and bridges the gap to permanent colors.
- LIFT and DEPOSIT: permanent color
- The lasting ability of any hair product will be directly affected by the hair’s porosity.

CLIENT CONSULTATION

- Book 15 minutes to introduce yourself; welcome client; offer beverage; and ensure there are no interruptions.
- Have client complete an information card. Note the client’s eye and skin color and condition, length, and the percentage of gray in hair.
- Look directly at your client.
- Discuss hair history; ask leading questions such as:
  - Are you looking for a temporary or permanent change?
  - Are you taking medications? (Medical treatments for diabetes, high blood pressure, and thyroid problems can affect outcome of color.)
CLIENT CONSULTATION

- Recommend two options; show pictures in different ranges.
- Review procedure, cost, and maintenance.
- Be honest; don’t promise what you can’t deliver.
- Gain approval from client.
- Start the haircolor service.
- Follow through during the service by educating the client about home care, products, and rebooking for follow-up service.
- Fill out client record card.

RELEASE STATEMENT

- Used primarily to explain to clients that if their hair is in questionable condition, it may not withstand the service.
- Designed to protect the school or salon.

CAUTION

- Never use aniline derivative tints on the eyebrows or eyelashes.
  - To do so may cause blindness.
  - A positive patch test will show signs of inflammation such as
    - redness.
    - slight rash.
    - welt.

NOTES

- Four questions in formulating color
  - What is the natural level?
  - What is the client’s desired level and tone?
  - Are contributing pigments (undertones) revealed?
  - What colors should be mixed to get the desired result?
  - Shade and H,0, volume determine lifting ability.