



PAINTING MERIT BADGE

Requirement 1

Explain the proper safety procedures when preparing surfaces and applying coatings.

- ◎ Surface preparation is the most important part of the painting job. The purpose is to create a clean, dry, sound surface to which paint can properly adhere.
- ◎ Consider the following factors when selecting a method of preparation:
 - Type of surface and its condition
 - Location and environment
 - Coating to be used and manufacturer recommendations
 - Any type of contamination on the surface
 - Safety, health and environmental regulations.



- ◉ To begin, wash the area well with detergent to remove dirt, grime, oil and grease. Use a household cleaner and an abrasive pad to remove any stubborn stains. Then rinse the surface with fresh water to remove residue. NEVER mix solvents or household cleaners. Doing so can produce hazardous gases. \
- ◉ Remove mildew with a 3-to-1 solution of water and bleach or a commercial fungicide; let it dry thoroughly. Contact local paint store for advice.



- ◉ Wood: dry, clean, sanded, smooth, and dust-free. Sand in the direction of the grain. Apply a coat of primer to new or bare wood.
- ◉ Concrete: clean with a broom, wire brush, vacuum, hand and power tools. Remove any oil or grease with detergent or chemical cleaner, rinse thoroughly and allow to dry, patch holes prior to application.
- ◉ Metal: use a wire brush , sandpaper to remove rust and particles. Wash and rinse thoroughly and dry off with prior to application.





- ◉ Masking: protect the area surrounding your paint with painter's tape. Mask around doorways, trim, windows, etc. After paint has dried, slowly peel away the tape at a 90-degree angle.
- ◉ Patch and Repairing: fill any cracks, dig out loose plaster with putty knife, wipe surface clean, fill hole with patching compound, dry, lightly sand.
- ◉ Puttying: fill nail holes, cracks, rough spots with putty. Smooth with a putty knife.
- ◉ Caulking: seal joints, fill cracks, bridge gaps.

PRIMER SELECTION: THE 1ST COAT OF PAINT

- ◉ Primers for wood: available in oil-based and water-based products and can be used indoors or outdoors.
- ◉ Primers for concrete: often highly alkaline, so be sure to use primers on surfaces that are alkali-resistant.
- ◉ Primers for drywall: make sure primers for plaster surfaces are alkali-resistant and plaster dust removed first. The best primers for drywall are water based, such as vinyl and acrylic.
- ◉ Primers for steel: use an oil-based primer for poorly cleaned steel; synthetic primers require the steel to be cleaned.



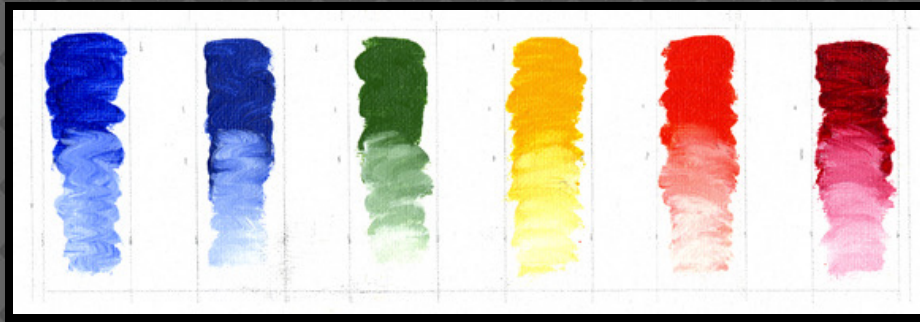
Requirement 2

Do the following:

- a. Explain three ways that coatings can improve a surface.
- b. Explain the difference between oil-based paints, acrylic-based paints, and water based paints.
- c. Explain where you would apply enamel paint, flat paint, wood stain, and varnish, and explain the importance of sheen.
- d. Tell why each is best for these uses.

Besides environmental resistance, the other purpose of a finish coat is to provide a pleasing appearance - including the desired sheen. Since high-gloss coatings contain more resin, and more resistance to the effects of the elements, most exterior trim finish coats are made to have a gloss or semi-gloss appearance. Interior coatings use less resistant resins and, often, more pigment. These coatings can have a variety of sheens, from flat to glossy.





- An oil-based paint contains drying oil, oil varnish, or oil-modified resin as the binder. Oil-based paints generally dry slower than water-based paints and have a strong odor. The final paint film the -topcoat- is formed by oxidation, the chemical process by which oxygen combines with the oil and hardens the paint. Most oil-based paints contain alkyds and epoxies, which allow the paint to dry harder and faster and to adhere better.
- Since water-based paint contains no oil, they generally dry quickly and have less odor. The final paint film is formed when the water evaporates. Water-based paints include latex and acrylic.

- ◎ ACRYLIC IS A WATER-BASED PAINT POPULAR FOR ITS EXCELLENT ABILITY TO RETAIN COLOR, FOR ITS DURABILITY AND EASE OF APPLICATION, AND FOR ITS EASE OF CLEANUP WITH SOAP AND WATER. Acrylics are appropriate for interior and exterior surfaces.



- ◉ Alkyds are synthetic resins used in paints and other protective coatings. Alkyd paint is oil-based, and its drying time depends on the type of oil used. Alkyds have a high durability for withstanding weathering work well for exterior painting.
- ◉ Polyurethane paints contain poly urethane resin. These durable paints adhere very well. Some polyurethanes are mixed with acrylic. These coatings are excellent for exterior use because of their durability, color retention, and resistance to abrasion.



- Latex paint generally is made of water-based pigments, synthetic polymers like vinyl acrylics, and other chemicals. Latex paints are suitable for indoor and outdoor use, and cleanup is easy with soap and water.



- ◉ Polyurethane varnish is best used on everyday pieces that take a real beating. Drying time is fast. Polyurethane closely resembles paint for wood.
- ◉ Oil-based varnish is made with alkyd or phenolic resin. Varnishes yellow faster. Use oil varnish where resistance to weather is critical, such as on exterior floors, doors, and boat decks.
- ◉ Acrylic varnish, a water-based varnish, does not penetrate wood as deeply as oil-based varnish. As a result, it is not as hard or as moisture-resistant, and it can appear dull and whitish when exposed to moisture. It may require more coats to achieve the same luster, as solvent-based varnishes. While acrylic varnish can be more expensive than the oil-based type, it is more environmentally friendly. Clean up is easier too.



- ◎ Sheen is critical characteristic that refers to the degree of shine or gloss of any coating or surface. The sheen currently on the surface can determine the amount of surface preparation required. Sheen affects the performance , and overall beauty of the painted area.
- ◎ The type of sheen you choose will depend on what you are painting. A flat finish is most often used for ceilings and on interior walls. The eggshell finish has a slight sheen and is popular for interior walls. Semi-gloss finish has a less porous surface and is perfect for trim, molding, doors and windows. It is used in kitchens and bathrooms.



FINISHING TOUCHES

Paint Sheens for Each Room in the Home

Kitchen



Paint with a high gloss or semi-gloss finish is durable and easy to clean.

Dining Room



Eggshell finish is less durable, but covers wall imperfections well.

Family Room

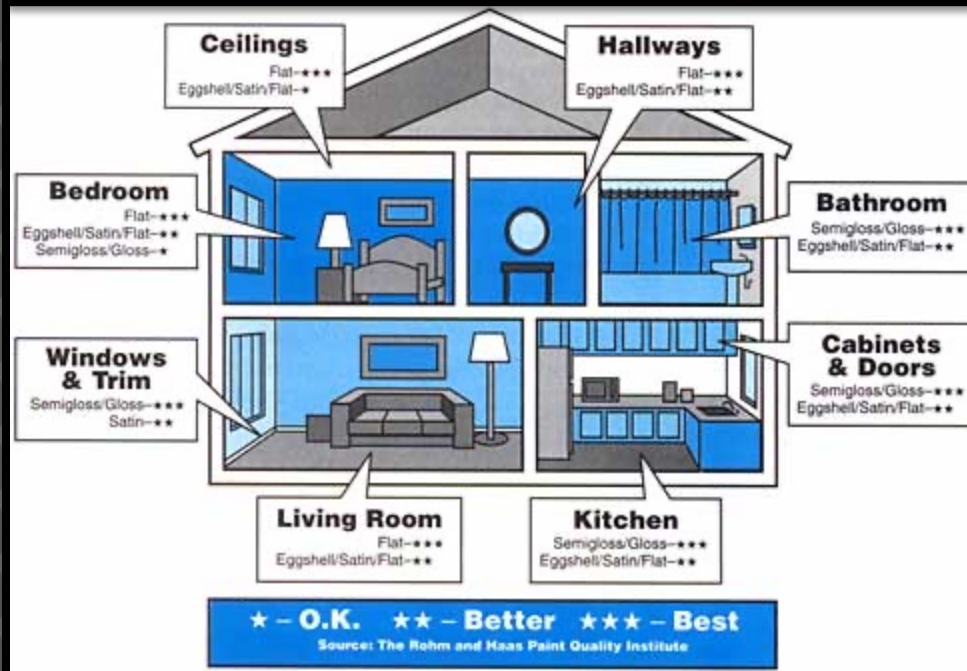


Satin finish is easily cleaned and can stand up to high traffic.

Bedroom



The high-pigment wall coverage of flat or matte finishes allows you to save money in a low traffic area.



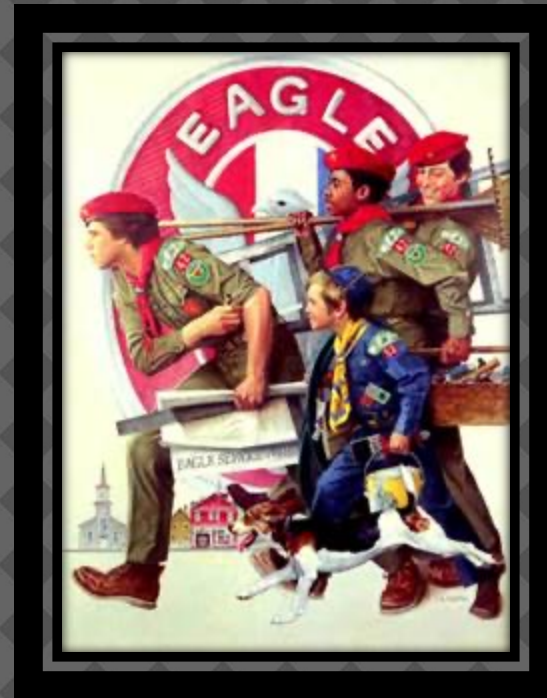
Requirement 3

Prepare and paint two different surfaces using patching material, caulking, and the proper primers and topcoats.

Suggested projects include an interior or exterior wall, a door, a piece of furniture, a concrete wall or floor, a porch rail, or a fence. Your counselor must pre-approve the projects.

DISCUSS YOUR PAINTING MERIT BADGE PROJECTS

- ◉ How much paint?
 - Material Preparation
 - Area Preparation
 - Mixing
 - Thinning
 - Straining



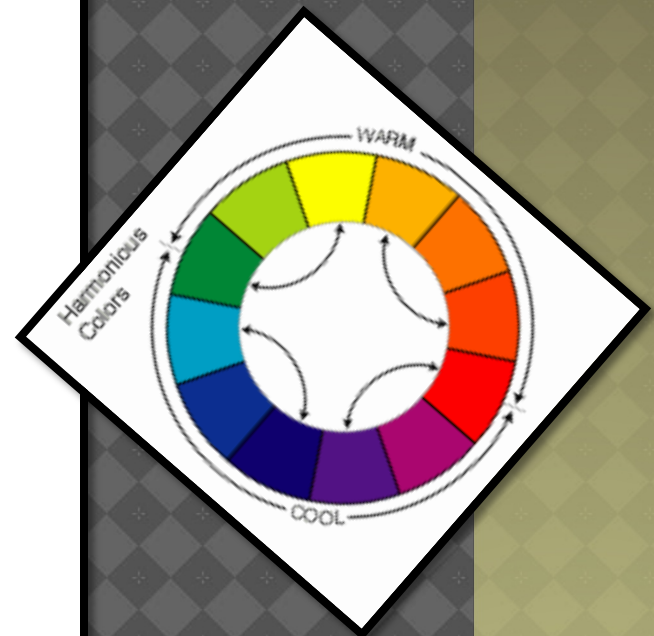
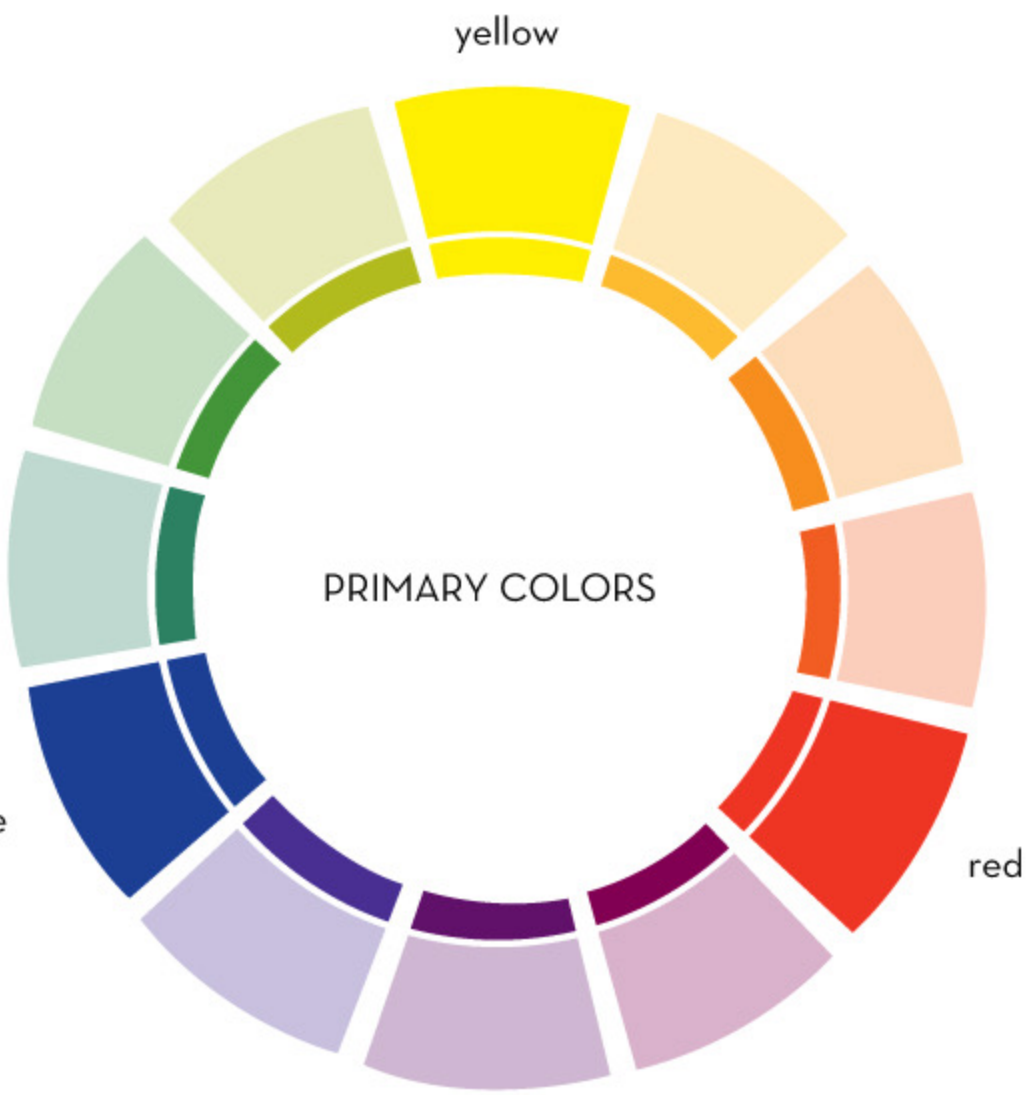
DISCUSS YOUR PROJECT

- ◉ Application Methods
- ◉ Application Techniques
 - Rolling
 - Concrete Finishing
 - Metal Finishing
 - Wood Finishing
 - Interior Stains and Varnishes
 - Exterior Stains and Varnishes



Requirement 4

Prepare and paint an item using harmonizing colors that you have selected using the color wheel in the Painting Merit Badge pamphlet.



How to Develop a Harmonious Color Scheme:

1. Select a main color, which will be the dominant color.
2. Use lesser, unequal amounts of secondary or accent colors.
3. Create an overall color scheme for the entire house and integrate each room into it.
4. Match colors to the use of each room.
5. If you create a focal point with a dramatic accent color, carefully coordinate the other colors with it.
6. Remember, that lighter colors tend to “open up” rooms visually, making them seem larger and brighter, and darker colors have the opposite effect.



Just for fun...
yes, no, or
maybe?

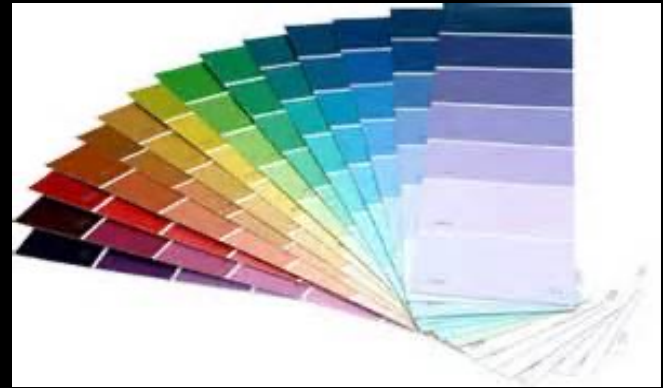


*Just for fun...yes,
no, or maybe?*



Many paint and hardware stores carry paint sample cards. Effects of various light like natural light or electric light can appear a different color.

It is wise to test a small area with a sample before purchasing large and often expensive quantities of paint.



Requirement 5

Show the right way to use, clean, maintain, and store painting equipment.

- Brushes: use on areas rollers can't reach. Select brush for appropriate job. Use synthetic brush with latex paint. Use natural bristles when using oil-based paints and varnish.



- Rollers

- Dip roller is dipped into the paint for application
- Pressure roller has a hollow core where the paint is stored and pressure fed through small pores



- Spray Systems:

- Airless sprayer uses a pump to pressurize the paint and force it through a tiny opening in the tip of the spray gun.
- Conventional air spray uses compressed air to atomize paint into fine droplets as it leaves the spray gun.



- ◉ Wire brushes clean debris from all types of surfaces.
- ◉ The scraper removes paint from any type of surface.
- ◉ A chipping hammer chips away layers of loose material from surfaces.
- ◉ Use putty knives and broad knives to apply patching material and to scrape loose paint.
- ◉ Use a cleaning brush to brush away debris and particles.



REMEMBER TO FOLLOW THESE SAFETY GUIDELINES:

- ◉ Always wear goggles and gloves
- ◉ Keep tools in good condition
- ◉ Do not leave unused tools lying around
- ◉ Never throw tools; use tools only for the purpose they were intended
- ◉ Avoid using tools that make sparks near combustible liquids or vapors
- ◉ Properly dispose of used rags throughout and at the end of each day.



CARE AND STORAGE

- ◉ Clean equipment immediately after painting
- ◉ Clean brushes that have been used in oil paint with a solvent based cleaner such as mineral spirits.
- ◉ Clean brushes that have been used in water based paint with soap and water.
- ◉ Carefully smooth down the bristles and wrap the brush in its original package or heavy paper.
- ◉ Remove and clean roller covers thoroughly
- ◉ Be sure to clean up around the painted area.



STORAGE

- ◉ It is best to limit storage of flammable materials. Purchase only the amount needed for a job. If you must store paints and solvents, keep them in a well-ventilated area to avoid buildup of flammable vapors.
- ◉ Never store these materials near a furnace, stove, water heater, or other source of heat.
- ◉ Make sure lids and caps on paint and solvent containers are tight
- ◉ Always keep fire extinguishers near the work area, ready for use





FIRE EXTINGUISHERS

- Use the class A multipurpose fire extinguisher on ordinary combustible materials such as paper and wood.
- For gasoline, grease, paint, and other flammable liquids, use a class B multipurpose or carbon dioxide fire extinguisher.
- Live electrical equipment requires the use of a class C multipurpose or carbon dioxide fire extinguisher.

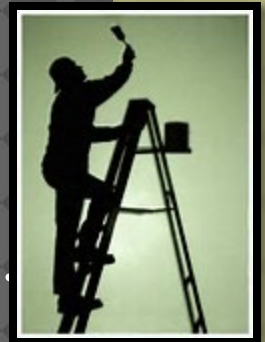
Requirement 6

Explain the importance of ladder safety, environmental responsibility, and personal hygiene when painting.

LADDER SAFETY



- ◉ Set up ladder properly and check for damage or missing parts
- ◉ Do not prop in front of door, or on soft, or uneven ground. Do not climb higher than highest level marked on the ladder and do not sit on the top
- ◉ Do not use near power lines or electrical currents
- ◉ Secure any ladder locking devices in place and face the ladder as climbing, only one person at a time while climbing
- ◉ Do not leave the ladder unattended, nor use upside down
- ◉ Follow the 3 point rule:
 - Keep three parts of your body in contact with the ladder at all times
 - ◉ Two feet and a hand
 - ◉ Two hands and a foot
- ◉ BSA safety guidelines require Scouts to wear a helmet and other safety gear when climbing higher than shoulder height.



ENVIRONMENTAL RESPONSIBILITY

- ◉ Always dispose of any chemical material according to the manufacturer's instructions and local laws.
- ◉ Do not sand or remove old paint that may contain lead, as such efforts may damage the environment or yourself.
- ◉ Lead paint can be lethal, contact a qualified professional painting contractor for projects where lead paint may be present.
- ◉ Sweep or vacuum any particles of old paint and properly dispose of this waste.



PERSONAL HYGIENE

- ◉ Wash skin frequently to reduce exposure to toxins that could cause irritation and prevent accidental ingestion of the toxin
- ◉ Take a shower
- ◉ Launder the dirty clothing and keep dirty clothes away from people and pets
- ◉ Never eat or drink in the work area



Requirement 7

Explain some of the environmental and health issues concerning removing paint, applying paint, and discarding old paint.

ENVIRONMENTAL AND HEALTH ISSUES CONCERNING REMOVING PAINT

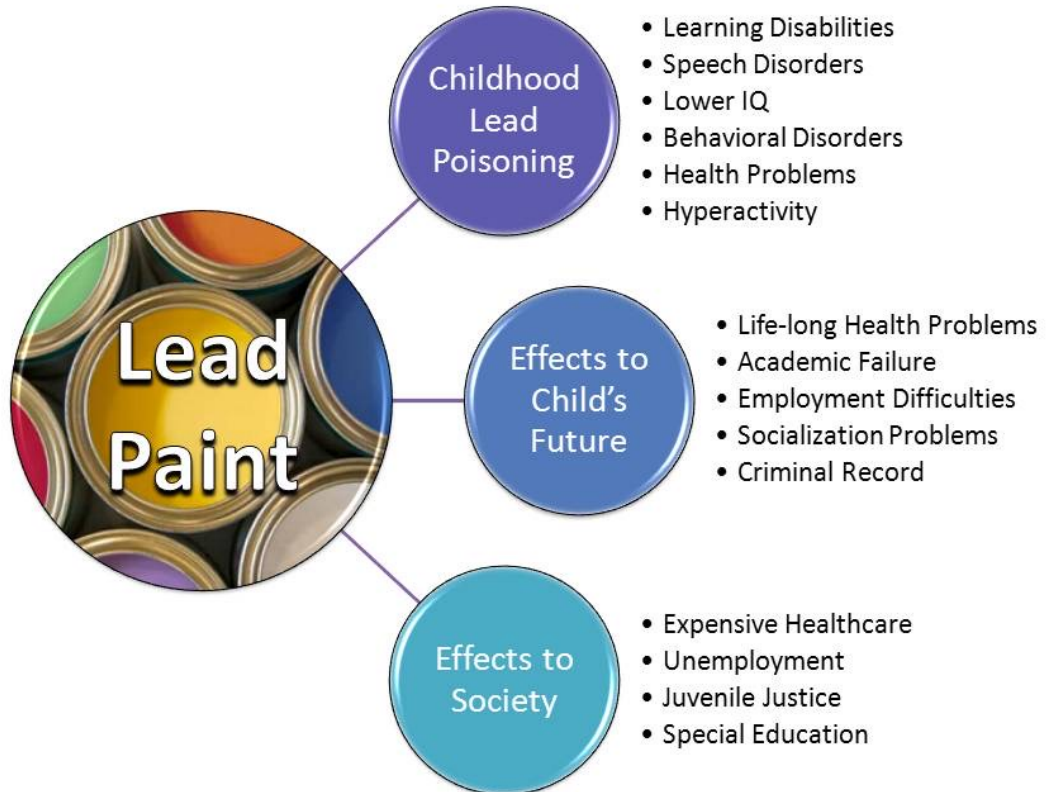
- ◉ Handle paint materials safely. Solvents, paints, paint chips, and dust may contain lead must be disposed of properly.
- ◉ Solvents are used to reduce or thin paint and during cleanup.
 - All solvent vapors are flammable and quite to ignite.
 - Most solvents are toxic when inhaled.
 - Contact with solvent can also be harmful and can dry, burn or leave it raw and irritated.
- ◉ Wear gloves and hands away from face
- ◉ NEVER ATTEMPT TO REMOVE LEAD-BASED PAINT YOURSELF. GET A PROFESSIONAL.





Infants biting toys coated with lead paint may suffer from -

Abdominal pain
 Attention deficit disorder
 Learning disabilities
 Kidney damage
 Loss of appetite
 Constipation
 Hearing loss
 Seizures



SAFETY

- ◉ Be alert and keep safety in mind when using flammable materials.
- ◉ Proper storage
- ◉ Fire Extinguishers
- ◉ Ignition Sources
- ◉ Improper Ventilation
- ◉ Air and Water Pollution
- ◉ Proper Disposal Procedures
- ◉ Understanding labels and Material Safety Data Sheets: all paint manufacturers are required by law to provide an MSDS so workers will be aware of safety measures to take when working with particular product.



Requirement 8

Find out about career opportunities in the paint industry. Discuss the training and experience required, and explain why this profession might interest you.

- ◉ The advantages of painting as a career include its relative ease to learn, good pay, and personal satisfaction in the improvements you make on your customers' environment. You often work outdoors and often are your own boss. You will rarely work in the same location or do the same job for long.



The Painting and Decorating Contractors of America is the nation's largest trade association serving the educational needs of the painting and decorating craftsperson and contractor. Membership is voluntary.

The International Union of Painters and Allied Trade offers 3 year apprenticeship programs and training in the removal of lead-based paint.

Painters often receive on the job training. Check community colleges to find trade courses in construction and painting industries.

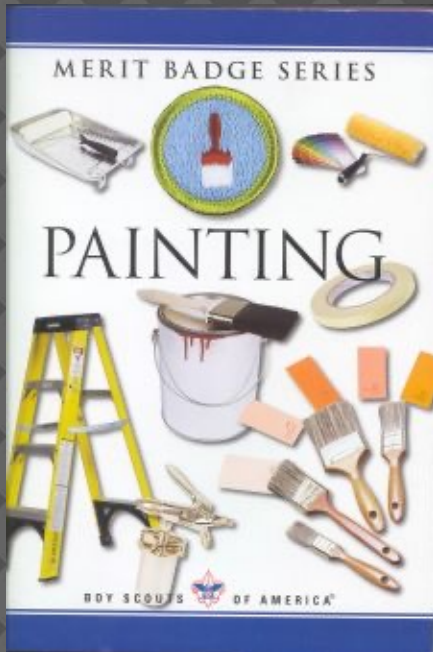


college pro
PAINTERS



Requirement Review:

- ___ 1. Explain safety
- ___ 2. Explain coating, differences between paints, and uses for each
- ★ ___ 3. Prepare and paint 2 different surfaces, pre-approved projects, using patching material, caulking, primers and topcoats
- ★ ___ 4. Prepare and paint item using harmonizing colors selected from BSA Color Wheel in Painting Merit Badge pamphlet
- ___ 5. Painting equipment care
- ___ 6. Safety and environment
- ___ 7. Health and paint disposal
- ___ 8. Career Opportunities





Don't forget:

Information for Applicant		Application for MERIT BADGE	
<ul style="list-style-type: none"> • A merit badge application can be approved only by a registered merit badge counselor. • You must have a buddy with you (buddy leads) part of each meeting with this merit badge counselor. • Start at new application application to start and Buddy will be awarded the merit badge emblem and certificate at a suitable occasion. 	Name Address City State Zip	Counselor Name Address City State Zip	is a requirement <input type="checkbox"/> Boy Scout <input type="checkbox"/> Girl Scout <input type="checkbox"/> Junior Scout <input type="checkbox"/> Explorer Scout <input type="checkbox"/> Venturer <input type="checkbox"/> Life <input type="checkbox"/> Eagle
Information for Counselor			
<ul style="list-style-type: none"> • Merit badge applications must be signed in advance by the applicant's leader. • The Scout Law is our quality. Scout leaders satisfy or otherwise at all individual situations. • We may not change any requirement, but you may apply your knowledge or experience that will make the counseling more interesting and relevant. 	and is qualified to begin working for merit badge subject on the same date. Date: _____ Signature of Scoutmaster: _____		

BOY SCOUTS OF AMERICA

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