Floor and Carpet Care for Schools

Miami-Dade County Public Schools in Conjunction with Florida School Plant Management Association, Inc. Present Safety in Schools Manual IV
F.S.P.M.A., Florida School Plant Management Association, was organized and established in 1960 with three (3) main objectives.

• FIRST, to determine the nature, extent and quality of non-instructional services required for the educational program, and to promote the development of these services by establishing the acceptable policies, standards, and practices.

• SECOND, to develop a working relationship with school administrators, managers, non-instructional, and instructional personnel, to foster programs through adequate facilities and environment.

• THIRD, to promote the professional advancement of school plant maintenance, operation, safety, energy management and environment.
What is FSPMA dedicated to?

- The exchange of information and ideas among school districts, community colleges and universities for the purpose of improving school plant management, maintenance and care through the promotion of acceptable policies, standards and practices; and to promote the professional advancement of school plant management personnel.
Plant Operations

11035 SW 84th Street
Miami, FL 33173
305-835-1050 | 305-835-1056

http://plantoperations.dadeschools.net/
The Mission of the Department of Plant Operations is to serve as the professional custodial consultant to school site personnel and provide support that will ensure our District facilities are clean, safe and sanitary for our students, faculty and visitors.

Our primary functions are as follows:

- Perform yearly Sanitation Audits
- Provide management and custodial training
- Develop custodial standards and cleaning protocols
- Perform Custodian Allocation Surveys
- Provide Job Assignments
- Perform and assist schools with organizing Cleaning Schedules and Standards in order to ensure a satisfactory grade during the Sanitation Audit
- Supply District custodians with I. D. badges
- Assist with Disciplinary process
- Assist with Custodial selection during the interview process
- Serves as the Emergency Response Team
IMPORTANCE OF FLOOR CARE

- The first thing almost everyone notices about a building is the floor. A well-kept, attractive floor is the basis for good custodial care. There are three main reasons why floor care is an extremely important area in a professional custodians job.

http://plantoperations.dadeschools.net/clean_protocol.asp
• Health & Safety - The floors affect the health and safety of everyone in a building. By removing loose dirt, litter, and wetness, the custodian helps prevent disease and injury. More about this topic is found in the Sanitation and School Housekeeping Manual, III. In addition there are statutes that set standards and frequencies for cleaning that can be found in Florida Administrative Code (FAC 69A-58).

• Appearance - The floor is one of the most noticeable parts of every building. No matter how clean the rest of the building is, it will look unattractive if the floor is not well kept.

• Preservation - Preserving floors in a school is vital. Generally, a large part of the cost of a school building is invested in its floors and flooring systems. The custodial staff must help protect this investment. Proper care and maintenance will keep the floors functional for a longer time. Mistakes in floor care, such as using the wrong chemicals or techniques, can shorten the useful life of a floor and cause unnecessary expense, damage or create hazardous conditions.
The Role of the Custodian

- The custodian is the person most responsible for floor care in any school. A great deal of on-the-job time is spent cleaning and maintaining floors. This area is also one of the most complicated. Every custodian must have a broad base of knowledge about different types of floors and particular techniques for their care.

- The technology of floor care, and the variety and types of floors and flooring systems, make floor care a rapidly changing area in the custodial service industry. Professional custodians must stay aware of new advances in floor care technology, and should update their level of knowledge whenever possible. You must be willing to change procedures as new equipment, products, techniques and flooring types are introduced.
Types of Floors

• Generally “floor” is used to refer to the part of the building surface on which everyone stands. The material of the structure underlying the floor may be the same as the standing surface, such as the concrete slab floor of a garage; or the structural floor may have a floor covering of some different material. Two examples of this are vinyl installed over concrete or carpet installed over wood.

• The actual standing surface is the one, which affects choice of care technique and substances. Except where otherwise noted, floor will mean the surface receiving care.
Four main types of floors or floor coverings

- WOOD
- RESILIENT – SYNTHETIC / EPOXY
- MASONRY
- CARPET

Other types of unusual flooring is listed in the “In Depth Information” portion of your manual, examples of these are:
  - Marble
  - Slate
  - Synthetic Gym Flooring
  - Linoleum
  - Vinyl Composition Tile (VCT)
Wood is a common material for a floor or floor covering. Given the proper care it is very attractive and durable. There are two basic types of wood; hardwood and softwood. The fibers in wood are arranged in a pattern called the grain of the wood. Definitions of the two wood types and other terms are given below.

- **Hardwood** - This type of wood comes from trees with a very hard dense grain. Examples of hardwood are maple, birch, and cherry. Exception: While oak is considered a hardwood, its grain tends to not be as tight as others. A sealer is always recommended for oak.

- **Softwood** - A grain that is looser, more open. This wood is less durable. If not carefully sealed it can soak up liquids and be stained or warped more easily. Examples are pine, fir and cedar. All softwoods come from trees that bear cones.
• Parquet-Wood that has been cut into pieces, which are then, formed into square or rectangle patterns.

• Strip-Wood cut into long pieces; may be laid in a straight or zigzag pattern.
Wood is difficult to maintain. This is due in part to some problems that old types of finishes created. New finishes include a new pretreated wood flooring that is very durable. In these a plastic sealer has been applied during manufacturing. Some actually bond with the wood fibers and are more like solid sheets. Unfortunately, some of the old finishes in use will not bond with these new products. In schools that have one of these new floors, a check with the manufacturer or installer for tips on maintenance is recommended.

CAUTION:
Particular care is needed when cleaning wood. Avoid over wetting, which can cause warping or buckling, and may raise the grain. This damage is almost impossible to reverse and usually requires replacement.
Floor Type – Resilient

- **Asphalt Tile**: An old form of flooring, this was made of a combination of asphalt, asbestos, coloring and fillers. It requires sealing but wet procedures can still cause color or bleed. **BECAUSE OF THE ASBESTOS, NEVER USE DRY STRIPPING ON ANY ASPHALT FLOOR.**

- **Rubber**: Usually found in tile form, this is a mixture of natural and synthetic rubbers, fillers and coloring. It is quiet, resilient, and deadens sound. **PETROLEUM BASED PRODUCTS MUST NEVER BE USED ON RUBBER.** This includes mops with an oily treatment.
More Resilient Floor Types

- **Seamless or One Piece**: Some floor coverings are synthetics or plastics that are poured onto the structural floor. This forms a single sheet over the floor surface, which has no seams. The result is usually similar to vinyl sheet floors, but is easier to clean. **THESE FLOORS CAN BE SOFT, SO ABRASIVE CLEANERS SHOULD NOT BE USED.**

- **Vinyl**: This is a synthetic or plastic that is used in either tile or sheet form. It can be a single layer or bonded to a softer under layer such as foam. It is installed over some existing floor or sub floor. Vinyl of good quality is durable, attractive and easy to care for. It is sometimes wrongly called by the old name linoleum, which is quite different. (See the In Depth Section of your manuals for more on Linoleum.)
**Floor types continued - resilient**

- **Vinyl-Asbestos**: Sometimes referred to as VAT. Older forms of vinyl flooring occasionally had asbestos fibers included. Care for vinyl asbestos is similar to vinyl, and they are difficult to tell apart. For this reason, dry stripping is NEVER recommended. Asbestos fibers could possibly be loosened during dry stripping and then could be inhaled.

- If a custodian notices that the surface of a resilient floor is significantly worn, he/she should ask a supervisor to get verification that the floor does not contain asbestos.
Floor Types – Masonry

- Masonry floors are very durable and long lasting. However they are also harder, noisier, and colder than wood or resilient flooring. Masonry floors can be made of concrete occasionally with stone chips or ceramic tile added.

- Concrete: A mixture of cement, sand and/or gravel and water. May be sealed or painted.

- Terrazzo: Marble or granite chips are mixed into concrete, which is poured over the floor. The surface is then ground and polished to form terrazzo. Synthetic terrazzo has a plastic resin instead of concrete, and could be considered a form of seamless flooring. Dividing strips of metal are occasionally seen in terrazzo floors.
Masonry floor types Cont.

- Ceramic Tile: Clay is formed into squares or other shapes of many sizes and then fired at a high temperature. A glass like glaze may be added. Quarry tile is usually unglazed, larger squares. Tiles are set onto a sub floor, usually cement but occasionally wood. A tile floor has grout, a cement like filling between the tiles. Some of the new grouts are plastic based, are non porous, and therefore are much easier to maintain.

- River Rock: This type of floor is small round pebbles mixed into a synthetic or plastic. The surface tends to be somewhat rough.
Floor Type-Carpeting

• Four factors involved with carpet:

  – Carpet Fibers: The fibers used in modern carpeting are usually synthetics. The most common of these are nylon, acrylic or mod-acrylic, polyester, polypropylene, and rayon. Nylon is the single most common fiber in use today. The synthetic fibers may be blended with natural fibers, such as wool and cotton. Occasionally a totally natural fiber carpet is found, but this is increasingly rare. Each of these fibers has advantages and disadvantages.

  – Carpet Backing: The backing used to hold the fibers together can be single or double layered. The layers are made of jute (a rough, burlap like cloth) or a synthetic fiber. Sometimes the bottom most layer is high-density foam, for softness. More often the carpet is installed over a pad for this cushion effect or for support.

  – Construction: (The way the fiber is put into the backing). Construction of the carpet affects the way the carpet looks, as well as the way it feels and holds up to wear.

  – Textile Coating: A finish may be added to the fibers after manufacture of the carpet, or made part of the fiber during manufacture. Finishes can be added to reduce mold or mildew, control bacteria, reduce static electricity or improve stain resistance.
A custodian’s primary concern is:

- The depth of the pile (the length of the individual fibers)
- The density (the distance between the fibers)
- The backing (with or without moisture barrier)
NOTE: Major carpet manufacturers are promoting a new generation nylon fiber. In the future stain removal and other carpet cleaning may become as simple as for other types of flooring.

Safety Note: The flammability, or resistance to fire, rating of each carpet should have been considered during installation. This factor, along with others discussed above, can be determined for many brands of carpet. This information is part of the Florida School Plant Management Associations Product Evaluation Program. They may be contacted through their web page www.FSPMA.com or by calling their toll free number 1-888-570-1159 for details.
In addition to cleaning agents, the two major categories of floor care products are sealers and finishes.

- A Sealer is used on new wood, masonry, and some vinyl floors in order to fill in the small holes (pores) or cracks that may be present.

- A finish is used to make the floor look better and increase the useful life of the floor. Many floor finishes can also be used as sealers, but a true sealer is usually tougher and more flexible. A sealer should not be used as a finish since buildup is much more difficult to remove.
Floor types that tend to require the use of a sealer:
- Asphalt
- Wood
- Terrazzo
- Vinyl Asbestos
- Cement type grout ceramic tile
- Concrete
There are two types of soil problems to consider:

- The dirt that can be removed by a simple physical process such as vacuuming, dust mopping, or sweeping.
- The type of soil that is held to the floor by some other substance, such as oil or grease. This type requires the use of some liquid, such as water plus detergent, or other substance such as dry powder.

Use of entry or walk-off mats, which are large enough are an effective means to help control dirt.
Removing Loose Dirt

Manual Sweeping

- Manual sweeping with a push broom or regular upright (corn straw) broom is used to remove bulky soil or litter that is not easily moved by a dust mop. A small whisk or toy broom can be used in close, hard to reach areas.

- Sand, as most Florida custodians know, is very difficult to deal with; a corn broom usually does not work, try a vacuum, dust mop or push broom.
Removing Loose Dirt
Manual Sweeping

• Except in unusual cases a broom is not recommended for carpeting. The exception would be where light, bulky litter such as leaves had collected. The rotary brush type sweepers can remove some dirt and small litter, and slightly lift carpet pile. However this is only a makeshift, as it does not remove deep dirt. Power sweeping or vacuuming is more useful.

• As a rule the use of a sweeping compound is not recommended. Many floors can be damaged by some of the ingredients found in certain compounds. (There may be an application for sweeping compounds on unfinished concrete floors. Check with your supervisor.)
General Procedure for Manual Sweeping

• Brush soil from farthest away toward a collection point. In a classroom this would be from the far corner toward the door. Use an easy smooth movement. Don’t overstretch arms. If the pile of sweepings (soil and litter to be removed) grows too large for easy pushing, pick up with dustpan and put into waste container.

• Depending on type of soil, it may help to tap the bristles at the end of each stroke so soil falls out of bristles onto the pile of sweepings. Don’t brush or tap so hard that dust flies.

• Use a pattern suited to the area being cleaned. In a room with fixed furniture, go up and down rows. Pile the dirt on one side of the room for easy removal. In rooms with movable furniture, shift each row over into cleaned area. Or use the Tip and Drop Method.
Removing Loose Dirt

Dust Mopping

• Whether treated or untreated mop heads are used, use a dust mop only on a dry floor. Dust mopping is a frequent floor care task. If done thoroughly and often many floor care problems can be prevented.

• Some mop head covers are disposable. Dust mops are manufactured in both traditional long fibers and new micro-fiber.

• Micro-fiber technology is much more effective than the standard dust mops at picking up loose sand and soil. See the Equipment Section of this manual.
Removing Loose Dirt
General Procedure for Dust Mopping

- Position the mop head on the floor so the long fibers are folded in the back and straight in the front (all fibers point away from the worker).
- Keep arms close to body to reduce fatigue.
- In open areas, push the mop head with handle held about chest high. In corners twist the wrist so one end of the mop goes into the corner.
- When mop head is loaded with soil, shake the load onto an un-mopped area or brush it into a container. Be careful to keep the head close to the floor so dust does not travel. Do not bang the mop head on the floor.
Removing Loose Dirt
General Procedure for Dust Mopping

• To mop stairs move backwards and mop the third stair above. Start in the middle and move to each side with a twist of the wrist, if stairs are very narrow a vacuum or broom is a better choice. CAUTION! Whenever moving backward with the mop, be sure to feel behind or look back for the next step down or any obstacle.

• In classrooms use the same basic pattern as described for manual sweeping. Move the dirt into a pile that can be removed with a dustpan and brush.

• Never leave mops unattended for any length of time, as they maybe a tripping hazard.

• Clean, treat and store mop head according to local procedures. Be sure heads and handles are stored or hung neatly in the proper area, off the floor.
Removing Loose Dirt
Dry Vacuuming and Power Sweeping

• For removing loose soil a vacuum or power sweeper with rotating brushes and suction is good for most floors.

• Due to the small size of the working head on some vacuum cleaners, dust mops can be more time efficient on uncarpeted areas.

• Vacuums can be canister, upright, or tank type. Back Pack vacuums are also very popular.
• NEVER try to pick up liquids with a vacuum cleaner that was not designed to do so. We’ll address Wet-Dry Vacuuming in the Cleaning with Liquids Section.

• ALWAYS be sure electrical equipment is in good repair before using it. Do not use equipment if the electric cord is frayed, spliced, cracked, or broken.

• Using appropriate attachment, move the vacuum in a long and slow movement. Overlap each area on the next pass.

• Empty the collection bag on bottom loading types of vacuums frequently; empty others as they become full.

• Heavily soiled areas need a second vacuuming in a crisscross pattern, at right angles to the first direction in heavy traffic areas.
Cleaning with Liquids or Chemicals-Non-Carpeted Floors

- **WOOD**: Use as little liquid as possible and remove all liquid as soon as possible. Use a non-slip floor finish.

- **CERAMIC TILE**: Strong acid cleaners may damage cement type grout. Test a small hidden area if in doubt. NEVER use steel wool since it may leave rust marks. Mild abrasives may be used for stubborn stains.

- **TERRAZZO**: NEVER use a strong acid based cleaner. NEVER use soaps or scrubbing powders that contain water-soluble crystallizing salts. Use a synthetic detergent to avoid crystal formation. NEVER use steel wool.

- **CONCRETE**: Avoid over scrubbing with harsh cleaners.

**NO MATTER THE FLOOR, IF IT REQUIRES USING A LIQUID, POST A WET FLOOR SIGN!!!**
Cleaning with Liquids or Chemicals Non-carpeted Wet Mopping

- Remove loose dirt from the floor before wet mopping.
- Use the proper cleaner for the floor type or plain water.
- Dampen mop in cleaning solution and press out part of the liquid. The mop should not be dripping wet, as too much water can damage many floors. Change mop water frequently. Dirty mop water creates a dirty floor. Note: Make sure to select the proper mop head for the application.
- Move the mop in a side-to-side motion, like a sideways 8. Avoid splashing the wall. Wipe any spatters immediately. Rinse and wring out mop frequently.
Cleaning with Liquids or Chemicals
Non-carpeted Wet Mopping Cont.

• Technique is important. Don’t over extend arms; keep elbows close to the body. Keep heel of mop on floor and fibers well spread. Once cleaning liquid has been applied to part of the floor the dirt and liquid can be collected with a squeegee and removed with a vacuum or mop.

• If rinsing is required, dip mop in rinse solution. Wring until partially wet, use mop to remove dirty solution from floor.

• Rinse mop again, then wring it as dry as possible and remove rinse water from floor. Or use a squeegee and wet dry vacuum.

• When the task is completed, thoroughly clean equipment and dry it. FSPMA recommends all mops should be laundered or replaced daily. Mops should never be stored in water/solution.

Note: Flat mop technology is new to the industry and is similar to this procedure. See equipment section for flat mop technology.
Cleaning with Liquids or Chemicals Non-carpeted - Deep Scrubbing

• Remove loose dirt from the area to be scrubbed.

• Use wet mop to apply a neutral cleaning solution to a small area of the floor in front of the machine. Do not let solution sit for over a minute. Do not use hot water or too much liquid.

• Scrub floor in an over lapping pattern. Do not let solution dry and try not to splatter.

• Scrub along baseboards and corners with a hand pad. Wipe up splatters.

• Pick up dirty cleaning solution with damp mop and bucket, squeegee or wet dry vacuum.
• Rinse scrubbed area thoroughly. Remove rinse water with clean wet mop or wet dry vacuum.

• Continue until entire area has been cleaned and rinsed.

• Either burnishing or recoating should follow this process.

• Clean and store equipment.
Spray Buffing

- If done correctly, spray buffing can be a touch up procedure used to maintain finishes. It eliminates heel marks, scuffs, and/or light soil that cannot be removed by a dry method, such as dust mopping.

- It is easier and quicker than scrubbing; **BUT IS NOT A SUBSTITUTE FOR SCRUBBING**; it delays the need for a complete scrubbing and refinishing.

- FSPMA does not recommend spray buffing as an effective procedure.
Cleaning with Liquids & Chemicals Hard Floor Surface – Stripping

- Stripping is the complete removal of the old finish and soil on the floor. This requires much effort and time. Stripping should only be done when existing finish is worn out, discolored, marked in a way that cannot be removed by scrubbing and buffing or many layers of finish has built up in the corners and edges. FSPMA recommends that floors should never be dry stripped. (See Manual II: Safety In Schools)

- Old finish is removed in two steps.
  - The finish is dissolved by the stripping solution, then loosened by the action of the machine. The old finish and solution then must be completely removed from the floor through rinsing and pickup.
What type of floor treatment were we doing here?
SAFETY NOTE

• Many stripping solutions are hazardous. Before using any solution, it is recommended that reference be made to the Material Safety Data Sheets (MSDS) for that chemical. Wear rubber gloves, goggles and boots or enclosed slip resistant shoes. Avoid splashing solution onto the skin.

DO NOT MIX STRIPPERS WITH OTHER CHEMICALS OR MIX DIFFERENT STRIPPERS.
Cleaning with Liquids & Chemicals Carpets

Schedule a time for cleaning when the carpet can be allowed to dry before use if using a wet method.

• Remove all loose soil/sand first by vacuuming with adequate equipment.

• Spot test a small hidden area to be sure the carpet will not be damaged and the color will not be affected.

• Remove as much liquid as possible to avoid stretching or loosening the carpet and IAQ problems resulting from microbial growth.

• Spot treat any stains before cleaning. Start from outside of spot and work towards center. See Stain Removal Chart.

• Loosen and remove, not spread. Always vacuum after cleaning carpets.
Cleaning with Liquids or Chemicals Carpet-Hot Water Extraction

- Hot water extraction cleaning often called steam cleaning; uses equipment which forces hot water in the form of mist or fog mixed with cleaners, into the carpet fibers. This method is very effective when done properly.

- Improper use of this technique can cause severe problems. Some machines use more liquid than others, some recover more of the liquid than others.

- Shrinking, Stretching or IAQ problems may occur if too much liquid is left in the carpet. This method requires experienced operators and extensive training.
Carpets-Dry Foam

- Dry foam is not truly dry; it uses small amounts of liquid. It is not likely to cause stretching or shrinking and requires less drying time. Dry foam is primarily for surface cleaning and is another form of encapsulating cleaning.

- General procedure for using dry foam machine:
  - Move the machine in overlapping straight lines.
  - Use a crisscross pattern with the machine, first one direction, then back across at right angles.
  - After carpet is dry, thorough vacuuming is necessary to remove loosened soil.

This is a cosmetic method of cleaning and is not recommended by FSPMA.
General procedure for using the dry powder method:

- Sprinkle compound over an area about 15’ square.
- A cylindrical brush machine is commonly used to agitate the compound into the carpet.
- Allow the compound to sit in the fibers for the amount of time recommended by the manufacturer. It is not necessary to restrict traffic during this time.
- Remove the compound with a vacuum, using a crisscross pattern. Be sure this is done thoroughly.
- Clean and store equipment properly.
Bonnet Cleaning (Carpet Mopping)

• While this method is no longer recommended by most manufacturers, it is still sometimes used to temporarily improve a carpet’s appearance when there is no time for proper cleaning. The technique called bonnet cleaning (carpet mopping) is designed for surface cleaning only. In this technique a carpet solution is applied to the carpet with a sprayer or mop. The carpet is then rubbed with a mop or absorbent pad (bonnet) on a rotary machine. This time required between shampoos or other time consuming cleaning techniques can be lengthened using this technique.

• Points to remember if considering carpet mopping:
  – Careful dry vacuuming is always the first step before any cleaning procedure.
  – Only the surface fibers are cleaned. Deep soil, bacteria or other odor causing agents may not be reached or controlled.

This is a cosmetic method of cleaning and is not recommended by FSPMA.
Restoring Appearance
Non-Carpeted Finishing

• As mentioned before, floor finishes are used to protect the floor and improve its appearance.

• General procedure for finishing and re-finishing floors:
  – Scrub or strip floor as condition and type of old finish indicates.
  – Pick up residue and thoroughly rinse the floor.
  – Be sure floor is dry and free of any dust or cleaning residue.
  – Apply finish to applicator. (Refer to equipment section for selection of applicator)
  – If only one coat is to be applied, start at the baseboards and use a similar technique to wet mopping. Apply a fairly thin coat, overlapping strokes slightly.
Restoring Appearance
Non-Carpeted Finishing Cont.

- If more than one coat is applied, start the first coat about 8” to 10” from baseboard. Allow manufacturers recommended drying time between coats. Additional coats should be thin, and only the last coat applied up to the edge but not on the baseboards. Avoid buildup in corners and edges that would cause unnecessary stripping to be required.

- Many modern finishes do not need buffing after application. If a buff-able finish is being used, the floor must be polished with a power machine and appropriate buffing pad. Non-buff-able finishes do not require buffing after application.

- If high speed (above 300 rpm) or ultra high-speed (1500 rpm and above equipment is used in the school cleaning program, the floor is now burnished. This leaves a wet look shine which many people feel looks cleaner than the more satin appearance left by many scrub and refinish programs.
Burnishers or both speeds are generally moved in a straight line lawn mower fashion over the floor. Some older types of floor finishes can be used with high-speed equipment. Many manufacturers recommend the use of the thermoplastic or cross linked compounds with these new machines.

Clean and store equipment. Be sure to wipe off any splatters or finish that may be on the machine. It is also advisable to wipe off the cord, to remove any soil that may later be rubbed on the floor.
Most floors are porous to some degree. That is their composition or density permits liquid to penetrate and/or be absorbed into the floors surface. If not properly prepared the pores can trap soils that are difficult to impossible to remove.

Examples of porous floors:
- Terrazzo
- Wood
- Vinyl Asbestos
- Concrete
- Asphalt

The pores can also allow cleaning solutions to penetrate and damage the floor. For example some solutions form crystals (salts) when dry that can actually break apart the surface of terrazzo and other masonry floors. To avoid these problems a sealer is applied which fills in these pores and leaves a smooth, tough surface.
General procedure for sealing is similar to finishing

- Be sure the floor is completely clean and dry.
- For best results most seals should be applied when the air temperature is between 65 and 75 degrees, with low humidity.
- If using a solvent-based sealer, allow adequate ventilation.
- Apply the recommended number of thin coats, and using the same method as in finishing.
- Allow the recommended drying time between coats.
- Except on terrazzo and concrete, apply the floor finish, which has been chosen to protect the floor, see Floor Finishing section.
- Dry, clean, and store equipment properly.
There are three major types of stain removal actions, each of which is appropriate for certain stains.

- **Absorb Stains**: An absorbent will pick up the staining material and prevent it from soaking too far into the floor.
- **Dissolve Stains**: A solvent will dissolve some staining materials that have dried and soaked in.
- **Bleach Stains**: Chemically changes the color of the stain so it is no longer visible.

**CAUTION**: Whenever working with chemicals follow the label directions. If you are unfamiliar with any of the chemical substances mentioned in this section, do not try to use them until training has been received. Refer to the precautions on the MSDS for each chemical used.
• As quickly as possible after a spill of whatever type, begin stain removal.

• Absorb or wipe up as much as possible of the spill while it is still wet.

• Try spot washing with a neutral cleaner. Often this will be enough to remove the stain. Work from the outer edge of the spill and do not spread the stain.

• If necessary apply the stain removal solution (usually in the form of a spray mist) that is best for the stain and floor type, see Stain Removal Chart in this manual and one handed out. Do not over wet.

• Blot the stained area with a paper towel or cloth to absorb the stain and the solution.
• If the floor needs refinishing after the stain is removed, be sure area is clean and no stain remains. *Apply one or two thin coats of the same finish as on the rest of the floor *Time permitting re-buff area.

• Store stain removal equipment properly.

• When using any method for the first time on a particular floor, always try to spot test a hidden area of flooring material first to ensure the method won’t damage the floor.
Restoring Appearance
Non – Carpeted – Repair

• In some districts custodians perform certain minor repairs on non-carpeted type floors. Damaged flooring should be fixed as soon as possible; if allowed to remain unattended the damaged area can become larger and hazardous.

• Wood
  – Wood floors can be dented, warped, cracked or roughened by improper use. If a wood floor is damaged by too much water, heavy objects, it is not recommended that school custodians attempt sanding or any other repair of wood flooring. A professional wood floor firm is usually called.
• **Tiles**
  – Loose tiles, either ceramic or resilient can often be reattached. The tile is carefully removed and the old adhesive scraped. New adhesive is applied to the under floor; the tile replaced, and a weight applied while adhesive dries. Broken tiles can be difficult to match, however if a replacement is found to be acceptable, the broken tile can be removed and new tile laid in the same manner.

• **Sheet Flooring**
  – Resilient sheet flooring can have seams loosened by improper care. If seams become loose, it can be reattached in a manner similar to that of tiles.
Proper cleaning procedures as described earlier, may be all that is necessary for most carpet appearance problems. There are only three techniques that are occasionally needed in addition to cleaning.

Three techniques are:
- Pile lifting
- Spot & Stain removal
- Repair

Follow the recommendations of the carpet manufacturers.
Pile lifting, using what equipment is available, should be done on a regular schedule especially in traffic areas. Pile lifting may also be necessary when furniture has been moved, leaving crushed spots.

General procedure for pile lifting:
- Use a pile lifter or at a minimum an upright vacuum with brushes.
- Use the Pile lifter in one direction, moving it slowly, with overlapping strokes.
- If necessary move the pile lifter a second time over the area in a crisscross pattern.
Carpet stains are an acute custodial problem. Carpet fibers tend to trap staining liquids, making removal of the stain difficult. The custodian can keep most carpet problems to a minimum by using proper cleaning procedures.
Restoring Appearance
Carpeting – Stain Removal

• General procedure for removing stains in carpets (is similar to that for non-carpeted floors):

  – As quickly as possible after a spill of whatever type, begin stain removal. It is important to try and find out what was spilled on the carpet. This will aid in step #4.

  – Absorb or wipe up as much as possible of the spill while it is still wet.

  – Try spot removal with a neutral cleaner and white terry cloth towel. Often this will be enough to remove the stain. Blot (do not rub) from the outer edge of the spill and do not spread the stain.

  – Apply the proper chemical for the type of stain. FSPMA best practices: Apply chemical to cloth, and then blot carpet. See the Job Aid Chart, Carpet Fibers and Characteristics in this manual. Spot test a hidden part of the carpet or scrap of carpet first. If any color change is noticed or any color comes off on the cleaning cloth, do NOT continue. Professional carpet advice is required.
– Work from outer edge center or stain. Do not over wet the fiber with cleaner or spot remover. This can cause the stain to spread down into the fiber and backing. Have patience when removing stains.

– Placing absorbent material, such as terry cloth, paper towels, absorbent powder, etc. over spot will aid in removing the stain and the rest of the liquid.

– Vacuum or use a pile lifter as necessary after stain is removed and area is dry.
• **Recurring soil after cleaning**: Often with wet cleaning procedures, as cleaning takes place, the cleaning results appear to be satisfactory. As the carpet dries, soil seems to reappear. Often this can be attributed to dry soil that has been carried to the surface by the water. When drying occurs, soil “wicks” back to the surface because of the evaporation process and the stain reappears. Thorough vacuuming should be performed prior to cleaning to remove dry soil. Thorough soil removal prior to cleaning can lessen the effect of soil wicking.

• **Re-soiling following cleaning**: Re-soiling is different from recurring soil in that re-soiling takes place over a number of days of weeks following cleaning rather than immediately following drying. Often re-soiling can be attributed to detergent residues left behind during cleaning. Detergents, by design, attract soil. To limit this occurrence, FSPMA discourages the use of detergent in the extractor rinse tank. Detergents should only be used as a pre-spray and should be rinsed with an extractor using fresh water only.
Restoring Appearance – Carpeting – Common Carpet Challenges Cont.

• Spots that return:
  – In most instances, spots that return can be attributed to incomplete removal of the original spill.
  – These spills wick up from the backing during drying.
  – The wicking that appears in vinyl-back carpet is very different from wicking that occurs in traditional carpet, where synthetic latex backing absorbs spills and releases content when moisture is introduced.
  – Many spills may leave oily, sugary, or sticky residues that may attract additional soil.
  – Incomplete removal of these residues may encourage new soiling rather than a reoccurrence of the original spill.
  – Some spotting solutions may encourage additional soiling because of oily residues used in the formulation.
  – Most spotting agents are very good cleaners, but should never be used for wide area cleaning and should always be thoroughly rinsed to limit re-soiling potential.
• Inability to remove spots: FSPMA certified carpets offer the finest soil and stain treatments available, but no flooring product is stain-proof. In addition, there is no single spot removal product that can be used universally to remove all spills. If available spot removal solutions are ineffective in removing a spill, select other solutions on the spot chart or contact the manufacturer for assistance.

• Yellowing: Yellowing can be caused by a number of chemical environmental factors. In general terms, when yellowing has occurred, apply an acid rinse first, such as white vinegar. Some yellowing caused by heating sources, environmental pollutants, or improper cleaning agents may not easily be reversed. Optical brighteners should never be used in any cleaning solution used in carpet maintenance, it can cause carpet color to face or yellow and the use of any cleaning solution containing brighteners may affect warranty coverage.
• The school custodian may perform some minor carpet repairs. The custodian can usually successfully correct a loose edge, small cigarette burn, or missing fibers. For extensive or complicated repairs, it is best to call in a carpet specialist. Check with carpet manufacturer for training and best practices for carpet repair.
General Descriptions of Minor Carpet Repairs

• **Loose Edges**
  – Carpet that has come loose from the tacking strip or out from under a metal strip can usually be retightened. A stretching tool may be used to push the carpet back over a tacking strip. A dull scraper or putty knife can be used to force the carpet back under a metal strip; the strip can then be tightened or reattached by gentle pressure.

• **Lose Seams**
  – Loose seams can occasionally be repaired. If the carpet was glued to the substrate, similar glue can be injected under the backing and a weight applied. Do not use this method if the carpet was not applied this way originally.

• Reinforced tape can be inserted under the seam. The carpet backing can then be glued to the tape. In some cases, a curved upholstery needle and strong thread can be used to whip the seam together.
• **Small Patching**
• First, try carefully trimming away just the damaged fibers. If this leaves a bald spot that is noticeable there are two methods to try.

  – Trim small fibers from a hidden area or spare scrap of the carpet and glue them into the spot with latex or hot melt glue. **BE CAREFUL** not to use too much glue.

  – If the above would be unsatisfactory, a small area of the carpet around the damage is cut away and replaced with a patch of the same carpeting made from a scrap piece. A patch of the same size and shape as the removed area is cut from a spare carpet scrap. This patch is then glued into place in the cut out area. **Be sure the fiber rows (grain) in the patch, run in the same direction as the main carpet.**
Static electricity can be a problem on both carpeted and non-carpeted floors, though carpets usually cause more problems. Modern electrical equipment, especially computers can be damaged by static charges.

Static is also responsible for those unpleasant shocks sometimes received after walking across a carpet and touching some object.

Some flooring materials come already grounded, which means static electricity leaks off harmlessly into building structure or substrate. Some types of carpet contain stainless steel wires, carbon, or other anti static materials built in for this purpose. Some special non-conducting types of floor are manufactured for use in computer and other equipment rooms. If static is a problem, an anti static spray or shampoo additive can be used on the flooring. However, some of these sprays can cause increased soil retention. Local conditions will dictate which action should be taken to solve the problem.

For more details about static electricity, see the In Depth Information Section in this manual.
• No matter how clean a floor looks, if proper cleaning is not done an unpleasant odor can form. This is particularly true in carpets. The use of a strong deodorant cannot correct this problem. If proper cleaning procedures and schedules are used, plain deodorants are never necessary.

• Odor causing bacteria can be controlled by use of a germicide added to the appropriate cleaning solution (some cleaners have this built in). Mold and mildew can similarly be eliminated. There are some treatments that are marketed to control mildew, mold, and fungus; as well as protect carpet fibers. They can be sprayed on, or added to carpet shampoos. Proper cleaning and drying of the floors can reduce or eliminate odor. For more about deodorants and floor sanitation use your Sanitation and School Housekeeping Manual III.

For odor and bacterial control in carpet, consult with the manufacturer and your IAQ specialist. (Security and Environmental)
Other Tasks
Special Area Floor Care

• Gymnasiums
  – Gym areas are usually large and have little furniture. Dust mopping is easy and usually the main type of care that is needed. (FSPMA recommends the use of micro-fiber dust mops). For non-sport uses such as dancing, the gym floor should be protected from hard sole shoes. The uses of mats designed for this purpose are recommended. Other substances such as cornmeal or sawdust can damage the finish or flooring.
What is the difference between a spot vs. a stain?
30 Second Carpet Spotting

- **Equipment:** Absorbent paper towels or white Terry Cloth Cleaning towel, carpet spotter or absorbent spotter material and small brush or Extractor-Vacuum.

- **Procedures:** Apply carpet spotter to spot, agitate with brush, blot with towel, or vacuum if using absorbent spotting material and Extractor-Vacuum.