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Materials Needed:

1. Drywall sheets. Currently "lightrock for walls and ceiling" is the standard material delivered from the suppliers. Be sure that is the material you have. If you have something else, it may not be strong enough to be used on the ceiling. ½ inch sheetrock is used in almost all cases. Verify with the site supervisor if 5/8 is required in garages or other common walls.
2. Drywall screw guns and drywall screws
3. "Rotozip" cutout tools with pilot bits
4. Chalk line
5. Utility knives with new sharp blades
6. 2 ft work platforms
7. 4 foot drywall squares
8. Drywall foot lift levers
9. Drywall rasps and plunge saws

Most Common Mistakes:

1. Screws miss studs
2. Screws not at correct depth into drywall
3. Poor fit around light fixture and outlet openings.

Roles

1. Each team consists of 4-5 people. They can alternate in the roles of cutting, lifting, holding and driving screws. The team needs to coordinate so that when a sheet is lifted (especially full 12 ft ceiling sheets), 3-4 are holding the sheet while another is getting the 1st 10 or so screws into hit to hold it in position. It is typically productive that one person finish putting all the screws in a sheet while others move ahead to measure and cut the next sheet.

Construction:

1. Before anyone starts hanging any drywall, one worker takes a can of spray paint and puts a large dot on the floor adjacent to every electric box (outlet and ceiling fixture). These marks will help us remember to cut out the drywall around every fixture. Failure to do so can lead to miserable rework at trim-out time.

2. The overall strategy is to minimize joints. Every joint is more work for the drywall finisher, more risks of finish imperfections and future cracks. We will increase the amount of waste of drywall to decrease the number of joints. Walls and ceiling are done with the largest possible sheets rather than using several small cutoff pieces. Run larger sheets up and over windows and doors instead of having joints at the edges of windows and doors.

3. In drywall, one should not try for perfect fit. There is always some crookedness in neighboring walls or neighboring drywall sheets. Your cut will have some crookedness. If you try for a perfect fit, you will end up doing excess re-cutting and refitting. Measure both ends of where the sheet will go. If one is slightly smaller, use that measurement. Measure this "tight" measurement, then subtract 1/8th inch and cut that 1/8th smaller. Modest size gaps are routinely filled by the finishers with drywall "mud".

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4. When hanging drywall, always start with the ceiling and work down. Sheets should be placed so the longest side of the drywall is perpendicular to the joists. Once the ceiling is completed, hang the top piece of drywall horizontally as shown in *Illustration 1*. The bottom drywall sheet should be tight to the upper sheet. Use a pair of drywall lift lever to raise the sheet off the floor. The bottom sheet will be 1/2" above the floor. This will be covered by baseboard.

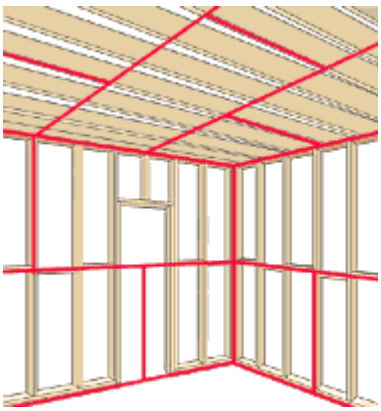

Illustration 1: Drywall Placement

5. Is it very rare that a full 12 ft sheet fits without being cut. Sheets must start and end on studs/joist. They must "split" the joists with their neighboring sheet. On a wall stud, this means a sheet gets ¾ in of screw surface. Measure and cut each sheet to fit stud to stud.
6. Some ceiling and a few wall sheets will need to be cut in both directions. For example, if a room is 10 ft wide, the 1st two 4 ft wide ceiling sheets go up full size. The last will have to be "ripped" to 2 ft. One normally measures, marks and snaps a chalk line. Then score the paper on the chalk line with a knife "freehand". When you snap a long cut, you need a second person to help hold it.
7. Cut drywall sheets to size. Use a sharp utility knife along a drywall square to cut drywall. After you make the cut through the face paper, with the help of another person, move the board away from the stack and quickly snap the board along the line you cut. Then cut the paper on the other side. If the edge did not break cleanly, you can smooth the rough edges with a sanding rasp.
8. It is very important that the drywall is properly screwed into the floor/roof joists on the ceiling and into studs on the walls. When setting a ceiling sheet, next to a wall, it is smart to pencil mark on the wall where the trusses are. This will facilitate quickly and accurately getting the 1st dozen screws into the board during the critical time when people's arms are getting tired holding the sheet.

9. Everyday drywall workers can "eyeball" where a line of screws must go and hit the stud/truss accurately. Most volunteers cannot and will end up wasting a lot of time and effort removing screws that did not hit lumber. It is better to set your drywall square on the sheet and draw pencil lines. Be sure you hold the tee to the board edge so that your pencil lines are accurate.

   There should be 5 screws per stud on wall each sheet. One near each edge, one in the center and 1 evenly spaced between center and edge. On walls, in addition to these screws in the studs, there is to be one additional screw midway between studs into both the top and bottom plate.

   Sometimes the structural engineer includes drywall's rigidity and strength in his shearwall calculation. He/she may specify more screws be used in certain spaces (such as where SIS board and foundation straps are used on the exterior. In those cases, metal clips are not sufficient attachment. Wood backing must be securely attached to framing. Consult with the site supervisor for such cases and mark these places with spray paint on the floor. Add extra screws as specified in the structural drawings.

10. When screwing in the sheets, the screw should be recessed **slightly** below the surface of the sheet.

There is a depth adjustment on the screw gun to produce this proper depth. Hold the gun and screw perpendicular to the sheet. If you drive a screw crooked, you will have a hard time driving the screw flush.

11. On some corners, we use metal drywall clips instead of lumber as drywall backers. Less lumber in the wall allows more insulation. In these cases, you do not have continuous screw support. You need to carefully mark the center of the clip and located your screw so that it hits the perforated area of the clip.
12. When placing drywall over light fixtures and electrical outlets, first determine the center of the fixture and pencil mark that location on the drywall. Once the drywall is placed on the wall, the opening can be cut out using the rotary tool. The rotary tool should also be used to cut out window openings after the drywall is screwed to the wall. Do not to drive screws near electric and HVAC outlets until they are rotozipped out. If you do, the screws will pull through.
13. Using the rotozip can easily stray beyond the hole you are attempting to cut, resulting in additional work to fill the voids. An experienced volunteer should demonstrate the correct way of using the tool. The correct technique is to;
    A. Plunge into the center of the box (where you marked the "X" prior to hanging the sheet.
    B. Drive the zip tool toward one side until you feel that you have hit the side
    C. Pull out the zip tool and skip over to the outside of the box edge (about 1/8 inch)
    D. Lightly push the zip tool toward the box edge. Cut out around the box, following the feel of tracking around the edge of the box.
    E. Cut the 3 sides of the box that are not against the stud. Cutting the side that is against the stud may be a little more difficult because the tip of the zip bit may hit the stud.
14. When a sheet is to go over a HVAC duct or an exterior door, you cannot rotozip the opening after the sheet is hung. You must cut it out with a saw before you hang the sheet.
15. Closet by-pass door and laundry room bi-fold door openings get trimmed with drywall. Unlike all the other walls, the drywall in these openings must go completely to the floor. Baseboard does not wrap around these openings.
16. You will generate a lot of cut-off pieces. Try to keep your cut area clean and organized. Do not put stack your cutoff pieces on top of the stack of sheets. Instead, sort them by size (large, medium, small) and stack them on the opposite side of the room. Before you cut a piece out of a full sheet, see if there is a cut-off piece that is big enough to use. You will have a large number of small cut off pieces that are too small to be used. Occasionally, dump those pieces outside and take them to the dumpster.
17. All 4 sides of windows must be faced with drywall. The drywall edge against the window frame cannot be improved with drywall mud. The edge of the drywall put against the window must be very straight. This is typically accomplished by cutting the piece from a scrap that has a factory edge. Only use pieces that are the full length of the window edge. Do not have any joints due to using 2 pieces to finish a window edge.
18. Stairway walls are the most challenging layout tasks. Avoid the temptation to do the stairway wall by piecing together many pieces. Set the pieces so the line between top and bottom sheet is horizontal, not at an angle. Use a level to set a horizontal line on the wall. Then, make a sketch showing the height at the top and bottom of the staircase from that line and the length on that horizontal line from top to bottom of stairs.
19. The above described installation of drywall in the house interior. In some model homes, there may be drywall to be hung in the garage. This is done, not to make a beautiful finished garage, but to meet a

certain fire code. A layer of drywall substantially slows the progression of a fire, giving the fire dept time to arrive and put it out before more serious damage. A garage, containing gasoline and automobiles, has a higher probability of causing a fire.

In a garage, you may be using 5/8th thick drywall. You may be putting drywall over the top of 1" foamboard or fiberboard. The garage wall may be more than 8 ft tall, requiring more than two 4 ft sheets to be hung.

If you are hanging drywall over 1 inch fiberboard or foam board, you will need 2 ½ inch drywall screws. These are considerably harder to drive. It is more important that the screws be driven straight, else they may miss hitting the stud.

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Safety

Drywall is heavy and clumsy to lift, especially when lifting ceiling sheets. Use 3-5 people to lift a sheet. Trying to lift too much on your own can result in back strain, falls or other injuries. When setting ceiling sheets, you have to simultaneously hold the sheet overhead while stepping up onto the 2 ft platform. This is another reason to use a large team to lift. Others can bear the weight for the few seconds while you step up onto the platform.

3	Fall From Height	Fall while setting ceiling and upper wall drywall sheets in stairway area	On houses with 2 flights of stairs and a landing, use the "Baker's Scaffold". One set of scaffold sections go on the upper flight of stairs. A 2nd set goes on the lower flight. One end of each is on the landing. The other end for the top flight is on the 2nd floor subfloor. The other end of the bottom flight is about 3 steps up from the bottom, just uphill from the wall. Do not use the scaffold wheels. Be sure the bottom of the scaffold are not at the edge of the step or floor, that small shifts in the scaffold will not cause it to slip off its support. Be sure all the pins are in place securing the stacked end sections of the scaffolds and the scaffold plank supports to the end sections. On houses with a single, longer flight of stairs, the solution is not yet designed. It will need to be similarly safe as for the above 2 flight solution. A stairway guard rail will need to be up to protect from fall from the open side of the stairs. A safe Baker's scaffold solution will be needed that is adjusted to fit on the longer stairs
18	Electrocution	Bad cord on power tool	Inspect a tool's cord before using the tool. As necessary, red tag and remove from service

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17	Electrocution	Large array of extension cords end up in a puddle on a rainy or snowy day.	Use the power distribution box (“turtle”). Set the power distribution box somewhere away from snow piles, puddles, etc. Use the cord connector covers. Follow the “1 cord, 1 tool” rule. Splitters create a lot more connections that can get wet and short. They also make over-current on a cord more likely.
20	Electrocution	Bad extension cord - frayed, broken ground pin,	Before use, inspect cord for failed strain reliefs, cracked or cut insulation and broken ground pins. Red tag and set aside bad extension cords
31	Hazardous Material	Drywall Dust	Dust masks are available to those who want them

I have heard and understood the briefings on how to use the tools required for this activity. I have heard and understood the methods we use to do this activity

Date _____

_____ Instructor Name _____ Signature

_____ Name _____ Signature