Glossary

Starred/purple items(**) are items relevant for all women's basic students; items without stars may possibly come up in both women's basic and women's advanced and tiny house classes.

****"Actual" lumber size -** The final size of a board after it has been kiln dried and planed smooth on all 4 sides. Typical "nominal" sizes become smaller "actual" sizes in thickness and width of commercial lumber. 2" becomes 1½", 4" becomes 3½", 6" becomes 5½", 8" becomes 7¼", 10 becomes 9¼", and 12" becomes 11¼".

Anchor bolt - A bolt that is typically embedded in concrete as it is poured, that allows for wood or other objects to be attached to the concrete. A typical anchor bolt is called a "J bolt". Sometimes these bolts are attached to the concrete rather than embedded.

Auger - A spiral-shaped tool that is used to drill holes into the ground and other surfaces or materials. (Source: The Federal Group)

Beam - A horizontal support member (see also Post and Post and Beam).

Blocking - Short wood pieces that are used as spacers and reinforcement between studs, joists, and rafters.

Bottom plate - The base horizontal framing member of a stud-framed wall. Also known as a sole plate.

****Bowed board -** A board that warped a specific way, where when you look down the board, the narrow edge of the board appears to bow. These boards can be used in framing without much challenge, as the warp does not throw the board out of line with the wall or floor the way that a crowned board does. Extra care should be taken when installing subflooring or wall/roof sheathing to pull boards like this into place before nailing so they end up in the correct place.

****Bracing -** Using a diagonal member to stabilize vertical and horizontal members of a frame or post foundation. The brace, during the building process, may be attached to a stake in the ground, and as the building is finished, the braces will be attached from one member of the building to another. Sheet material sheathing "braces" walls because of the triangulation that exists between any three screws affixing the sheet material to the framing.

****Butt -** To place materials end to end or end to edge without overlapping.

Checking - The splitting of wood during drying.

Collar ties - A member that holds opposing rafters together in a gabled roof. Usually the collar tie is placed in the upper third of opposing rafters. Collar ties keep the rafters from separating and the roof collapsing.

Crutch or Cripple stud - Short studs in a stud framed wall that are used below window sills and above and below windows and doors. We acknowledge that cripple isn't the best terminology but "cripple" is what most carpenters will use. We choose to say crutch.

****Crosscut -** To cut wood across the grain, or across a board, and is generally the short cut made on a board. A "rip cut" is a cut made with the grain, and is generally the longer cut.

Crown - A board that warped a specific way, where when you look down the board, the width of the board appears to bow. These boards are generally worse to use for framing floors and walls than boards that are "bowed". When used for joists, the crown (or the convex edge) is placed up, so that over time, and with load it will flatten.

****Cupping -** A type of warping that causes boards to curl up at their edges.

Dead load - Weight that is permanent and is not moving (weight of the building itself).

Double top plate - Typically two top plates (upper horizontal framing members of a stud wall) are used so that if weight from a roof is born between studs, that weight is transferred into the studs rather than warping the top plate. Using double top plates can also tie together intersecting walls.

Drip edge - A bent metal piece that moves water off of the face of rafters

Excavator - A large machine that excavates earth with a bucket attached to the end of a movable metal arm. These machines are useful for digging out earth to make trenches and holes, and are incredibly useful for digging out foundations.

****"Face" of the stud -** referring to the "width" of the board, for a 2*4*8, this is the 4" face.

Facing (trim) - The trim that is the most visible around the window that is installed parallel to the plane of the drywall or other interior paneling. It covers up gaps between window and door jamb extensions and the interior paneling. Facing is a place where the builder's artistic flair can be expressed to great effect.

Fascia - A board or other material that covers the ends of roof rafters. The fascia is typically used in conjunction with a soffit, which covers the bottom of rafter tails. The fascia is the board that is typically seen. It is best protected by drip edge, but it can be helpful to use rot resistant wood or wood product for this board, as it tends to see a good bit of moisture. It is the board that gutters are generally attached to.

Fastener - Typically a piece of metal that mechanically holds objects together. Examples are screws, nuts, bolts, and nails. They could be made out of materials besides metal, but in modern day construction are usually metal.

Finished wood or trim wood - Wood that has been kiln dried, planed, and has had some sort of finish applied for use in interior finishes, such as trim or built-ins.

Flashing - Thin pieces of impervious material installed to prevent the passage of water into a structure from a joint or as part of a weather resistant barrier system.

Footer - The part of the foundation that is at the very base. Typically the footer is at least four inches thick, and extends at least two inches in every horizontal direction past where the rest of the foundation bears on the footer. The footer typically is constructed of poured concrete, but can also be made of brickwork or other masonry. The shape of the footer works like the foot of a person, giving a greater bearing surface so that the foundation does not sink further into the ground.

Frame - The skeleton that supports a structure, this may be a timber frame, stick frame, post and beam, or other types of framing.

Frost line - Depth at which ground is free from danger of freezing. This depth changes based on elevation, latitude, and other climatic factors. This is the depth to where water lines and footer foundations must be dug in order to avoid freezing and frost heave (which can move buildings).

Gabled roof - Gabled roofs are the kind young children typically draw. They have two sloping sides that come together at a ridge, creating end walls with a triangular extension, called a gable, at the top. (Source: This Old House)

Girder - A beam that supports smaller horizontal beams, and acts as the major horizontal support of a structure. What distinguishes girders from other beams is that they can support major loads such as columns, posts, and their load capacity is higher than other beams.

Grade - a term used to describe the level of the earth at a specific location or at ground level. In construction, the terms ‘above grade’ and ‘below grade’ can be used respectively to describe the portion of a building that is above or below the ground (Designing Buildings Ltd.)

Header - A load bearing beam in a wall, typically constructed of doubled or tripled laminated dimensional lumber, such as 2x6’s, 2x8’s or 2x10’s, with spacers so that it makes it the thickness of the wall. The header bridges the top of rough openings for windows, doors, and other penetrations and transfers the load it bears to the jack studs upon which it rests.

Jack stud - Vertical framing members that support the header above a window or door opening in stick frame construction. They run continuously from the bottom plate of a wall to the header that they support.

Jamb - The vertical parts that form the sides and top of a window or door. Hinges of doors are typically attached to the jambs, and, if a window opens, there are typically tracks or hinges on the jambs.

Jamb extension - An extension of a window jamb to bring it to the plane of the inside of the interior paneling of a wall.

Joinery - A method of joining two pieces of wood together so they will stay. Timber framing joinery involves measuring and cutting specific shapes out of each timber so that they fit together snugly like two puzzle pieces. The result is a proper distribution of weight, and a secure connection between each part of the frame. In order to secure each joint, hardwood pegs are pounded through both timbers.

Joists - Horizontal framing members that support a floor and/or ceiling. These are typically at 16 inch or 24 inch on center spacing.

Joist hanger - Galvanized metal brackets that hold joists in place.

King stud - Vertical framing members on both sides of a rough opening of a window or door that run continuously from the bottom plate to the top plate. These are the same length as full length studs that are not associated with windows and doors. The header spans between and connects the king studs, and rests on the jack studs.

Lateral bracing - To stabilize a wall beam or structural system against lateral forces by means of diagonal or cross bracing either horizontally by roof or floor construction or vertically by pilasters, columns or cross walls (Source: The Free Dictionary)

****Level -** True horizontal. Also a tool used to determine level (see plumb).

Live edge - An edge of a board that retains the original shape it did when it was part of a tree. Commonly, this design element is used for siding and the edges of fancy bar room tables. It can also be used effectively for stair stringers, trim, and in cabinetry. Sometimes it will retain bark, and sometimes not, depending on pest considerations, the season the tree was cut, and the species.

Live loads - Objects that are temporary and move around in a building (ex: people working on the building).

****Nominal lumber size -** Lumber sizes are usually given in "nominal" measurements. The final size of a board after it has been kiln dried and planed smooth on all 4 sides is smaller than this nominal measurement. Typical “nominal” sizes become smaller “actual” sizes in thickness and width of commercial lumber. 2” becomes 1½”, 4” becomes 3½”, 6” becomes 5½”, 8” becomes 7¼“, 10 becomes 9¼“, and 12” becomes 11¼“. The nominal measurements are a board's size

before it has been planed smooth (surfaced) on all four sides. The actual measurements are the final size. (Source: Prowood Lumber)

OC (On Center) - The distance from the center of one regularly spaced framing member to the center of the next. Studs and joists commonly are 16 or 24 inches on center. The framing members on the ends of walls, floors, ceilings, or roofs typically vary slightly. On these ends, the outer edge of the framing member will be 16 or 24 inches from the center of the next framing member, rather than that measurement being from center to center.

Pier - A masonry or steel post. Piers typically have a footer that is wider than the pier under the ground at the frost line or deeper. Piers often serve as bases for wood or steel posts.

Plates - See sill plate, bottom plate, top plate, and double top plate.

Platform framing - In platform framing, each floor is framed separately, as contrasted with balloon framing, in which the studs (vertical members) extend the full height of the building.

****Plumb -** True vertical. Level is true horizontal, and perpendicular to plumb. A plumb bob is a tool for finding vertical. The name, plumb, originates with “plumbum,” the Latin for lead. Lead weights were used at the bottom of a string originally for plumb bobs.

Point loads - A point load is an area where the structure is transferred vertically to the foundation, a horizontal beam, or a bearing wall. These vertical loads are typically picked up by studs or steel columns. (Source: Professional Builder)

Positive grade - Positive grade, or positive drainage is when the land around a building slopes away from it. When it rains or snows, water will flow away from the building and foundation. This is important for remediating issues of flooding and mold, but is a bit less important if your building has a post foundation.

Post - Any vertical support member.

Purlins - There are two types of purlins. One type is frequently used in barns and old timey houses. These are typically 1x4 or 1x6 boards that run on top of and attach to the rafters, from one end of the roof to the other. In this case, usually a metal roof is attached at intervals to the purlins. In other cases, purlins are more structural, the rafters are at a lower frequency, and the roof deck is attached to the purlins, which span large distances between rafters or the walls of the buildings.

Rafters - Parallel framing members that support a roof, and transfer weight to load-bearing walls.

Ridge - The peak of a roof.

****Rip -** To cut wood in the same direction as its grain.

Rim joist - A joist that runs perpendicular to other joists, capping them, and providing lateral support for floor joists to prevent them from leaning under the weight of the load-bearing walls resting on them.

Roof pitch - The roof pitch refers to the slope of the roof. A steeper pitch is a steeper roof. Generally, this refers to the distance of height change per distance of horizontal span. The vertical change is given first, and then the horizontal change. Typically 12 inches is the reference for the horizontal span, so a 12/12 roof pitch is a 45 degree angle. A 6/12 Roof pitch has a 22.5 degree angle, and a 3/12 pitch is an 11.25 degree angle.

Rough opening - The opening in framing for a window or door. Framed openings have a header across the top, a sill across the bottom, and jack studs on their sides.

****Rough sawn lumber -** Wood cut at a sawmill mill that has not been kiln dried and planed (finished). It has a rough texture, and can be used for framing and siding, but best not used in interior applications. It is generally cut to “true” dimensions. The nominal and actual dimensions of rough sawn are close to accurate, though there is often up to ¼ inch variation. This differs from conventional 2x4s, which are actually 1 ½ x 3 ½ .

Sashes - The part of a window (usually wood, but can also be metal or vinyl) that surrounds and supports the glass. In an opening window, the sash moves with the glass.

Scribe - A tool that appears much like a compass, but typically with two pointy ends rather than one end with a pencil. Rather than for drawing circles, it is used to trace a shape onto a piece of wood, To scribe is the act of tracing one piece of material onto another to establish a line for cutting.

Shed roof - A roof that has just one pitch. Arguably, the simplest roof to build.

Sheathing - The base layer covering floors, walls, and roofs to which flooring, siding, and roofing are fastened. The material of choice for sheathing was once one inch thick planks, but now is typically sheet goods like plywood, OSB, AdvanTech, or Zip System.

****Shim -** A thin piece of material used to fill in a space, or to make them level or plumb. Tapered wood shingles can easily be split into excellent shims, and packs of shims may be purchased at a reasonable price from hardware stores. They can also be made. The tapering nature of shims makes it easy to make fine adjustments with them, which is generally why they are employed.

Sill plate - The board (generally made of pressure treated wood) that is bolted to the foundation and typically makes the transition between concrete and wood. Typically, a floor system rests on a sill plate. Sometimes a wall is framed above the sill with the bottom plate or sole plate of the wall resting on the sill plate, or with the sill plate doubling as the bottom plate of a wall.

Simpson ties - Simpson Strong-Tie® manufactures wood-to-wood, wood-to-masonry and wood-to-concrete connectors. (Source: Strongtie.com)

Skid - In the days of farms with draft animals, many buildings were built with skids, or heavy timbers that run the length of the building and bear the entire weight that floor joists rest upon. These buildings could be moved around the farm on these skids by dragging them with animals. The skids acted like skis that the building moved on around the land. Nowadays, sheds or tiny houses are still built on skids, but instead of animals moving them around, people typically hire a rollback truck or use a wheel kit built to accommodate skids to move them.

Skirting - When a home is built on a pier foundation, the underside of the home is exposed. Material that is installed around the perimeter of the building going from the siding to the ground is known as skirting.

****"Snap your lines" with your chalk box -** A "chalk line," or "chalk box" is a small tool composed of a cotton string wound up inside of a metal or plastic box where chalk dust is added through a small portal. This tool is used to miraculously mark a straight line on dry surfaces by pulling the string between two points, and with tension on both ends of the string, pulling up the string at the middle, and releasing, or "popping" a line as the chalk releases along the line that the string falls to.

****Square**
The tool: any number of tools that help you define a 90 degree angle in your work. The carpenters square and speed square are the most commonly used for construction applications.
Checking for: to square a piece of work is to check its 90 degree corners with tools or measurements.
To square a foundation (3-4-5) triangle: a simple mathematical method to check whether a large angle is square (90 degrees). Measure 3 feet along one side, 4 feet along the other; if the corner is square, the diagonal distance between those two points will equal 5 feet. This can be translated to a 6-8-10 triangle or a 12-16-20 triangle for greater accuracy when squaring up a bigger building. Once a foundation or floor is built it may be checked for square by checking that the diagonals of the rectangle that makes up the foundation are close to identical.

Soffit - The material covering the underside of rafters or roof overhang. Typically, it is installed in conjunction with a fascia board, which covers the ends of the rafters. This combination of pieces is often referred to as a "soffit box". Often, roof venting is part of the soffit.

Sonotubes - A trademarked name for a specific brand of large, reinforced cardboard tubes. These tubes are designed for placement in a pre-dug hole, after which they are filled with concrete. (Source: Handyman's World)

Stair stringers - The diagonal members that support stairs. These are typically cut in a zig-zag pattern on one edge, and this is where the treads or treads and risers are attached.

Stick framing - Also known as "stud framing." A framing method that distributes structural loads to each of a series of relatively lightweight studs. This contrasts with timber framing and other types of post and beam construction.

Stud framing - Also known as "stick framing." A building framing method that distributes structural loads to each of a series of relatively lightweight studs. This contrasts with timber framing and other types of post and beam construction.

****Studs -** Vertical 2x4 or 2x6 framing members spaced at regular intervals (typically 16 or 20 inches on center) within a wall. There are special studs, such as king studs, jack studs, and cripple studs that are used in and around rough openings for windows and doors.

Subfloor - Floor sheathing that bridges the spaces between floor joists that flooring is attached to. Subfloors were once made of diagonally run one inch thick boards. Today, they are typically made of sheet material. AdvanTech flooring is often the subfloor material of choice in modern construction.

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Through bolts - Rather than a timber lock or lag bolt, which are very strong and glorified screws, a through bolt goes all the way through the two or more pieces of material that are being joined and are secured with a nut on one end. A carriage bolt is a type of through bolt. These can be tightened as wood material shrinks over time.

Timber framing - Timber framing is a construction method that utilizes heavy timbers instead of skinny framing wood (like 2x4s or 2x6s). These pieces are connected by elegant and strong joinery, like mortise and tenon joinery, where pieces where members are cut to fit inside each other, which interlocks the timbers. Wooden pegs to secure them.

Toenail or toescrew - To attach two boards by nailing or screwing diagonally through the corner of one board in the other board.

Top plate - The top plate is the upper horizontal framing member that supports the roof structure by carrying the vertical forces from the rafters to the wall studs. Typically a double top plate is used.

“Trimmed out” - The final stage of interior finishing of a building is to put up “trim,” which covers where different parts of the building come together. When the trim is completed on a building it is said to be “trimmed out.”

Venting - A system of creating airflow within a building. This term is also applied to plumbing systems where air from the outside of a building must be accessed in order to avoid vacuums in the system.

Waney - See live edge.

Warping - Any distortion in a material. There are many types of warped boards. Crown, bow, twist, and cup are all different types of warping.

Window flange - A nailing strip that extends about 1 ½ inches on all sides of a window that makes it much easier to attach a window to a rough opening. Typically, the flange is nailed to the sheathing of a building and the siding covers it, which helps for water to stay outside of windows openings.

Window sill - On the inside of a building, it is the flat, horizontal piece of trim at the base of a window. In some windows, this is a shelf. On the exterior, a window sill will slope away from the window so that water does not accumulate there.

Zip board - A trademarked name for a specific brand of sheathing.