



Halos and Hammers Handbook

Where faith meets the road!

**Youth Ministry Committee
United Church of Christ – Southbury
Southbury, Connecticut**

Introduction

1 John 3:17-19

“¹⁷ How does God's love abide in anyone who has the world's goods and sees a brother or sister in need and yet refuses help? ¹⁸ Little children, let us love, not in word or speech, but in truth and action. ¹⁹ And by this we will know that we are from the truth and will reassure our hearts before God.”

You are about to embark on one of the most memorable events in your lifetime. You are going to touch the hearts and souls of those you assist. In turn they will leave an indelible mark on your soul. It is also a time for building new friendships and strengthening existing friendships.

This handbook was developed to ensure your trip is safe and fulfilling. It also provides you with essential information to maximize your work proficiency. Helping others is our single most important mission.

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Important Information

This book belongs to _____

Home phone number _____

Chaperone cell number _____

Base camp phone number _____

In case of emergency notify _____

Relationship _____

Phone number _____

Allergies: _____

Blood Type: _____

WHAT WE BELIEVE

- ***That they may all be one.*** [John 17:21] This motto of the United Church of Christ reflects the spirit of unity on which it is based and points toward future efforts to heal the divisions in the body of Christ. We are a uniting church as well as a united church.

- ***In essentials unity, in non-essentials diversity, in all things charity.*** The unity that we seek requires neither an uncritical acceptance of any point of view, nor rigid formulation of doctrine. It does require mutual understanding and agreement as to which aspects of the Christian faith and life are essential.

- ***The unity of the church is not of its own making.*** It is a gift of God. But expressions of that unity are as diverse as there are individuals. The common thread that runs through all is love.

- ***Testimonies of faith rather than tests of faith.*** Because faith can be expressed in many different ways, the United Church of Christ has no formula that is a *test* of faith. Down through the centuries, however, Christians have shared their faith with one another through creeds, confessions, catechisms and other statements of faith.

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Many of us use this statement as a common affirmation of faith in worship and as a basis for study.

- ***There is yet more light and truth to break forth from God's holy word.*** This affirmation by one of the founders of the Congregational tradition assumes the primacy of the Bible as a source for understanding the Good News and as a foundation for all statements of faith. It recognizes that the Bible, though written in specific historical times and places, still speaks to us in our present condition. It declares that the study of the scriptures is not limited by past interpretations, but it is pursued with the expectation of new insights and God's help for living today.

- ***The Priesthood of All Believers.*** All members of the United Church of Christ are called to minister to others and to participate as equals in the common worship of God, each with direct access to the mercies of God through personal prayer and devotion.

- ***Responsible Freedom.*** As individual members of the Body of Christ, we are free to believe and act in accordance with our perception of God's will for our lives. But we are called to live in a loving, covenantal relationship with one another—gathering in communities of faith, congregations of believers, and local churches.

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Each congregation or local church is free to act in accordance with the collective decision of its members, guided by the working of the Spirit in the light of the scriptures. But it also is called to live in a covenantal relationship with other congregations for the sharing of insights and for cooperative action under the authority of Christ.

The members, congregations, associations, conferences, General Synod, and covenanted ministries are free in relation to the world. We affirm that the authority of God as revealed in Jesus Christ and interpreted with the aid of the Holy Spirit stands above and judges all human culture, institutions and laws. But we recognize our calling both as individuals and as the church to live in the world:

- To proclaim in word and action the Gospel of Jesus Christ.
- To work for reconciliation and the unity of the broken Body of Christ.
- To seek justice and liberation for all.

This is the challenge of the United Church of Christ.

**United Church of Christ Statement of
Faith—original version**

We believe in God, the Eternal Spirit, Father of our Lord Jesus Christ and our Father, and to his deeds we testify:

He calls the worlds into being, creates man in his own image and sets before him the ways of life and death.

He seeks in holy love to save all people from aimlessness and sin.

He judges men and nations by his righteous will declared through prophets and apostles.

In Jesus Christ, the man of Nazareth, our crucified and risen Lord, he has come to us and shared our common lot, conquering sin and death and reconciling the world to himself.

He bestows upon us his Holy Spirit, creating and renewing the church of Jesus Christ, binding in covenant faithful people of all ages, tongues, and races.

He calls us into his church to accept the cost and joy of discipleship, to be his servants in the service of men, to proclaim the gospel to all the world and resist the powers

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of evil, to share in Christ's baptism and eat at his table, to join him in his passion and victory.

He promises to all who trust him forgiveness of sins and fullness of grace, courage in the struggle for justice and peace, his presence in trial and rejoicing, and eternal life in his kingdom which has no end.

Blessing and honor, glory and power be unto him.

Amen.

Mission Trip Covenant

You are about to embark on a mission trip adventure that will change your life and leave a lasting impression on many of the people you encounter along the way. It is absolutely essential to adhere to a code of conduct that promotes our shared goals and values. In the interest of establishing clear expectations, this covenant must be read and affirmed in writing by all youth, parents and chaperones.

I understand that the purpose of mission work is to serve God and others. I agree to put the needs of others (in the group and in the community) before my own. I understand that comfort and convenience are luxuries I cannot expect and I am prepared to make the best of whatever difficulties we encounter. No matter what, I will conduct myself as a child of God and disciple of Jesus Christ at all times.

I realize that I am part of a group and that my attitude and behaviors affect the whole group. I promise to contribute to and not to detract from the sense of community in the group. I will work to build relationships and to make others feel safe, welcome and included. I will treat everyone as I wish to be treated – with kindness and respect. I will be sensitive to and

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accepting of the many differences I find among the members of my group and the local people we meet.

In keeping with the spirit of the endeavor, I will refrain from using profanity, vulgar speech, discriminatory language and/or coarse humor while on the mission trip. Good clean fun doesn't hurt or offend anyone.

To ensure the safety of everyone involved I also agree to follow these safety precautions:

- I will wear my seatbelt at all times while traveling in airplanes and vans.
- I will apply sunscreen before going outside and reapply it at 30-minute intervals while I am working or playing in the sun.
- I will drink water every 30 minutes while working or playing in the heat.
- I will follow the instructions of my group leader and chaperones.
- I will remain part of a group with no fewer than three persons.
- I will maintain gender-specific areas (sleeping, changing, showering, etc.)
- I will not bring, use, purchase or possess alcohol, tobacco or illegal drugs.

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I understand that failure to follow any of the above safety rules may result in my exclusion from activities. Furthermore, I understand that the use of drugs or alcohol, sexual impropriety, violent behavior or direct opposition to authority will result in my immediate departure on the first available flight at my own expense.

I agree to abide by everything stated herein.

Clothing Guidelines

Specific guidance on clothing appropriate for the geographic location will be disseminated as required. These general guidelines remain in effect under all conditions.

PLEASE DO BRING:

Loose-fitting, comfortable clothing that you can work hard in and that you don't mind getting sweaty, dirty, torn or paint-stained, including:

- Closed-toe shoes such as work boots to protect your feet on the job-site.
- Hats with wide brims to protect you from the sun. Visors are not suitable protection from the extreme effects of the sun.
- Modest swimwear - this means one-piece swimsuits for girls and boxer style for boys. T-shirts are recommended beachwear for both girls and boys as they provide additional cover from the sun. (However, some UV rays will penetrate clothing; sunscreen must be worn even under t-shirts.)
- Shorts are acceptable everywhere in the summertime. However, they must be long enough to cover you to mid-thigh and worn

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high enough on your waist so as not to reveal your underwear.

PLEASE DO NOT BRING:



Clothing that distracts from our mission and ministry, including:

- Short shorts (fingertips must touch shorts with arms resting at sides).
- Shirts that reveal midriff or cleavage.
- Clothing that exposes underwear or bra straps.
- Any clothing with obscene, vulgar, abusive or discriminatory language.
- Any items that advertise or promote alcohol, tobacco, or illegal drugs.

Packing List

Regardless of how we travel, we will use airline guidelines for packing. Everyone going on the mission trip is authorized two pieces of luggage – one carry-on and one checked. **Pack sparingly!** Everything you bring must fit into these two pieces of luggage. You must be able to lift and carry your own luggage throughout the trip. Everyone will have his or her own luggage to carry and no one will be available to assist you. Practice packing and carrying your own luggage because it all has to fit back into your bag for the return trip home.

Remember to save some room for items you purchase while we are away!

You will have an opportunity to do laundry once, around the middle of the week.

Travel Clothes:

- Mission trip T-shirt
- Casual shorts/jeans
- Athletic shoes
- Lightweight jacket/sweat shirt

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Carry-On Baggage:

- Money (recommended minimum \$100)
- Reading material (including Bible)
- Cell phone/Camera/Ipod/Walkman
- Snacks/drinks
- Change of underwear and socks (1 each)
- Toiletries:
 - ✓ toothbrush
 - ✓ toothpaste
 - ✓ dental floss
 - ✓ soap
 - ✓ shampoo
 - ✓ deodorant
 - ✓ prescription medications
 - ✓ feminine hygiene products (females)
 - ✓ Razor/electric razor
 - ✓ Shaving cream
- Sunglasses
- Hat with brim (sun visors not allowed)

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Checked Baggage:

- Twin air mattress or foam sleeping pad
- Lightweight sleeping bag or blanket/sheets (2)
- Pillow (1)
- Towels (2) and washcloth (1)
- Sunscreen
- Insect repellent
- Work belt (see pages 33-35)
 - ✓ Two pouch belt
 - ✓ Hammer, 16-20 ounce, straight claw
 - ✓ Tape measure (minimum 12 foot)
 - ✓ Speed square
 - ✓ Carpenter's pencil
 - ✓ #2 Phillips head screwdriver
 - ✓ ¼ inch flat tip screwdriver
 - ✓ Pliers
 - ✓ Chalk line
 - ✓ Utility knife
 - ✓ Torpedo level

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- Work gloves
- Safety glasses
- Work shoes (closed toe, boots recommended)
- Work shirts (5)
- Work shorts (5)
- Shower/beach shoes
- Swimsuit (female – one piece, male – boxer)
- Casual shorts/jeans (opposite of your travel) (1)
- Casual shirts (2)
- Casual outfit (shirt and pants/skirt) for church (1)
- Sleeping clothes – shorts/t-shirt
(appropriate for mixed gender environment)
- Underwear (briefs, panties, bras, socks) (7 each)
- Rain gear (jacket or poncho)
- Entertainment (cards, games, Frisbee, etc.)

Safety

The following guidelines will keep you safe and healthy on your mission trip.



- ✓ **Always travel in groups of three or more.**
- ✓ **Structure activities around your work team.**
- ✓ **Evaluate an injured person:**
 - Check for responsiveness
 - Check for breathing
 - Check for bleeding
 - Check for shock
 - Check for fractures
 - Check for burns
 - Check for head injuries
 - Find a chaperone immediately



- ✓ **Protect yourself against heat:**
 - Drink sufficient amounts of water
 - Dark yellow urine = not enough water
 - Drink small quantities frequently
 - Don't rely on thirst
 - Excess water keeps you strong
 - Rest whenever possible

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- Eat regularly
- Eat something at each meal
- Eating replaces salt lost through perspiration



✓ **Know the symptoms of Heat Cramps:**

- Muscle cramps of the arms, legs or stomach
- Excessive sweating
- Extreme thirst
- **TREATMENT:** move person to a cool area, loosen clothing, slowly drink one quart of water, and *notify a chaperone immediately.*



✓ **Know the symptoms of Heat Exhaustion:**

- Profuse sweating
- Headache
- Weakness
- Dizziness
- Loss of appetite
- Nausea
- Urge to defecate
- Chills
- Rapid breathing
- Tingling hands and feet

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- Confusion
- **TREATMENT:** move person to a cool area, loosen clothing, slowly drink one quart of water, and *notify a chaperone immediately.*



✓ **Know the symptoms of Heat Stroke:**

- Headache
- Dizziness
- Stomach pain
- Confusion
- Weakness
- Loss of consciousness
- Seizures
- Hot and dry skin
- Pulse and respiration is rapid and weak
- **TREATMENT:** move person to a cool area, remove outer clothing, lie person down, pour water over person, slowly drink one quart of water, and *notify a chaperone immediately and evacuate.*



✓ **Know the symptoms of Hypothermia:**

- Shivering
- Faint pulse

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- Drowsiness
- Mentally slow
- Stiff, uncoordinated movement
- Glassy eyes
- Slow, shallow breathing
- Unconsciousness
- Irregular heart action
- Death
- **TREATMENT:** Begin rewarming the body evenly using hot water bottle, electric blanket, fire or another person's body; have person drink warm beverages; be prepared to begin CPR; *notify a chaperone immediately and evacuate.*



Know the symptoms of burns:

- Redness, swelling, blisters and charred skin.
- **TREATMENT:** eliminate the source of the burn – thermal, electrical, chemical, laser; expose the skin; apply a dressing; do not place dressing on face or genital area; do not break blisters; do not apply grease or ointments; treat the entry and exit wounds for electrical burns; flush

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chemical burns with water; give person water if conscious; and ***notify a chaperone immediately and evacuate.***

✓ **Protect against biting insects:**

- Apply insect repellent to exposed skin, ankles, and areas where clothing fits tight.
- Clean and inspect yourself daily.
- Use the buddy system to check for ticks and insect bites.
- Clean and inspect your clothing.

✓ **Identify poisonous plants:**

- **Poison Sumac:** reaches 6-10 feet in height, with many oval leaflets in opposite pairs, dark-spotted smooth bark and clusters of white berries.



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- **Poison Ivy:** reaches 2-7 feet, trailing or upright, with three part very variable leaves, but always with greenish flowers and white berries.



- **Poison Oak:** Resembles poison ivy but is smaller, always upright and with oak leaf-shaped leaflets and white berries.



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✓ **Treat poisonous plant rash:**

- Wash skin immediately after plant exposure is identified.
- Wash clothing and equipment.
- ***Notify a chaperone immediately and begin treatment with over-the-counter medicines.***

Leadership

The mission trip provides opportunities for everyone to practice and develop their leadership qualities. Leadership skills – just like carpentry, painting, roofing or landscaping skills – can be learned and practiced. The organization of our personnel facilitates this leadership laboratory.

Youth Ministry Committee and **Youth Minister** are responsible for the spiritual development of all involved in the mission trip and the overall planning and execution of the mission trip.

Chaperones are male or female adults age 25 and older. Chaperones must have a valid driver's license and are responsible for transporting a youth work team throughout the mission trip. Chaperones participate in work with the youth work teams and supervise all activities.

Youth Work Team is made up of five students in grades 9-12. Every effort is made to mix the grades and genders within work team to ensure representation of all groups in each work team.

Youth Work Group is made up of two youth work teams.

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Youth Minister



Staff Chaperones



Youth Work Group

(sample distribution of gender/grade)



Youth Work Team A

- Male Chaperone
- Female Senior (12)
- Male Junior (11)
- Female Junior (11)
- Male Sophomore (10)
- Female Freshman (9)

Youth Work Team B

- Female Chaperone
- Male Senior (12)
- Female Junior (11)
- Male Sophomore (10)
- Female Sophomore (10)
- Male Freshman (9)



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Every effort should be made to organize all activities around a Youth Work Group (ten students, two chaperones, and two vehicles).

A mission trip should not exceed twelve (12) Youth Work Groups (120 students, 24 chaperones, and 24 vehicles).

A mission trip will include the Youth Minister and additional staff chaperones/vehicles as necessary.

Leader Development

Leadership is best learned by doing. Chaperones should use mission statements when dealing with the students on a mission trip. A mission statement should answer these questions in relation to a task you want them to perform:

- Who?
- What?
- Where?
- When?
- Why?

It is then up to the designated student leader to determine **HOW** to accomplish the task at hand. Seniors are the designated leaders of a Youth Work Team.

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Underclassmen learn by observing so that one day they can assume a leadership role within the Senior Pilgrim Fellowship program and on a mission trip. Chaperones should designate one Team Leader “in charge” for Youth Work Group missions.

Leadership is the process of influencing people to accomplish the mission by providing purpose, direction and motivation.

Leadership is the interaction of the following:

- **The led:** A group of people with similar wants, needs, aspirations, and expectations who come together in the hope that this group will assist them in achieving their individual and collective goals.
- **The situation:** The group has found themselves in a situation that requires their collective effort to accomplish their goals.
- **The leader:** Out of the group one person steps forward to accept responsibility for the group’s success and failure. The other members of the group allow this person to lead them in the pursuit of their goal. This person must provide the group with direction and motivate them to complete the task at hand.

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- **Communication:** Effective two-way communication is the key to this process. People listen to leaders who listen to them.

Leadership has been described as an art by many authors. Leadership is an art – just as music, painting, drawing, woodworking, sports and any other activity that requires skill, commitment and desire are considered an art. You would not expect to play a piano, craft a painting, sketch a picture, build a cabinet or play golf well unless you first learned the essential skills, and then practiced those skills for a period of time.

There are seventeen essential skills of leadership. All are equally important in your role as a leader in any situation.

- **Oral Communication:** The ability to express oneself effectively in individual and group situations; includes gestures and other non-verbal communication. The ability to effectively listen to others.
- **Oral Presentation:** The ability to present ideas or tasks to an individual or group when given time for preparation.
- **Written Communication:** The ability to express ideas clearly, in writing, using good

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grammatical form. The ability to quickly read and comprehend written material.

- **Initiative:** The ability to influence events to achieve goals beyond those called for; originating action; self-starting rather than passive acceptance.
- **Sensitivity:** The ability to be considerate of the feelings and needs of others.
- **Influence:** The ability to use appropriate interpersonal styles and methods in guiding followers, peers, superiors, or groups toward task accomplishment.
- **Delegation:** The ability to use followers effectively, the allocation of decision making and other responsibilities to the appropriate followers.
- **Administrative Control:** The ability to establish procedures for monitoring and regulating processes, tasks or activities of followers; to monitor actively the results of delegated assignments or projects.
- **Problem Analysis:** The ability to identify a problem, secure information relevant to the problem, relate problem data from different sources and determine possible causes of problems.

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- **Judgment:** The ability to develop alternative course of action based on logical assumptions that reflect factual information.
- **Planning:** The ability to establish a course of action of self or others to accomplish a specific goal.
- **Organizing:** The ability to organize people, resources, work spaces and time to achieve maximum efficiency in accomplishing a goal.
- **Decisiveness:** The ability to make decisions, render judgments, take action and commit oneself.
- **Physical Stamina:** The ability to operate under mentally and physically stressful situations.
- **Technical Competence:** The ability to accomplish tasks to a specified standard. Includes the demonstrated understanding of technical information.
- **Mission Accomplishment:** The ability to accomplish assigned tasks according to specified standards and within the time allotted.
- **Followership:** The ability to cooperate in the accomplishment of group goals and exhibit a high degree of teamwork and cohesion.

Organizing Your Tool Belt

“Watching well-organized pros or do-it-yourselfers work in harmony with their tool belts is a study in skill, efficiency and “poetic glide.” Their tasks speed along as they intuitively reach into a pouch and grab the exact tool or fastener needed for the task. Without taking their eyes off their work, they send the tool to its pocket and the next one effortlessly appears in hand. The “dominant hand”—controlling the hammer, knife and pencil—orchestrates the operation, while the “helper hand” responds by bringing the appropriate fastener or accessory tool instantly into play.”

**Bruce Clark
The Family Handyman
Readers Digest June 2000**

Use some thought when you pack your tool belt. Do yourself a favor and buy the best tools you can afford. This tool belt will last for years and is an investment that will pay dividends down the road. Mark all of your tools with your initials. Here are some pictures of what you should buy:

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- ✓ Two pouch belt



- ✓ Hammer, 16-20 ounce, straight claw



- ✓ Tape measure (minimum 12 foot)



- ✓ Speed square



- ✓ Carpenter's pencil



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- ✓ #2 Phillips head screwdriver



- ✓ ¼ inch flat tip screwdriver



- ✓ Pliers



- ✓ Chalk line



- ✓ Utility knife



- ✓ Torpedo level



How To Read A Tape Measure



A tape measure blade is marked both in inches and in feet. The end hook always appears to be loose and this is intentional. It's designed to slide a distance equal to its own thickness so both inside and outside measurements will be accurate.

The upper scale is in 1/16-inch increments, so it reads 1/16, 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, and 1-inch.

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The bottom scale reads in 1/16-inch increments as well, so it reads 1/16, 1/8, 3/16-inch, and so on.

Studs read out at 16-inch on center, and are normally marked in red.

Trusses or floor joists read out at 2-foot on center and are normally marked in black.

The black diamond on the top scale starting at 19.2 inches is for truss layouts for 8-foot sheet goods—also referred to as the "**black truss**" markings. Originally the 19.2 was used in metric layouts. If you divide five into 96 inches (8 feet), it will give 19.2 inches—in other words, 5 trusses per sheet.

On the other hand, the "**red stud**" marking every 16 inches allows for a standard layout of six studs per 8-foot (96") section.

Look at it this way: there are 5 black diamonds or 6 stud markings in an 8-foot width.

General Clean-Up

Equipment required for clean up jobs:

Push broom



Straw Broom



Street broom



Dust pan



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Contractor clean-up bags



Trash can



Dumpster



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Wet/Dry Vacuum



Dust mask



Carpentry – Framing

Equipment required for framing:

Circular saw



Miter saw



Table saw

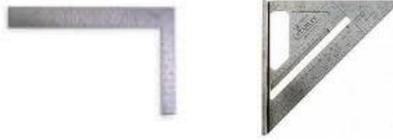


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Reciprocating saw



Carpenter's square and speed square



Air compressor



Air framing nail gun and hose



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Basic skills:

- Lumber measurements –
 - Boards are designated by a depth in inches, width in inches and length in feet number. A 2x4x8 means the board is 2 inches deep, 4 inches wide and 8 feet long. Modern lumber is planed to actual dimensions of 1 and a half inches deep by 3 and a half inches wide. A 2x6x8 means the board is 2 inches deep, 6 inches wide and 8 feet long. Modern lumber is planed to actual dimensions of 1 and a half inches deep by 5 and a half inches wide.
 - Sheets are designated by width in feet, length in feet and thickness in inches. A 4x8x1/2 sheet of plywood means the sheet is 4 feet wide, 8 feet long and 1/2 inch thick.
- A nail's length is designated by its penny size, a term that once indicated its price per hundred. Nails are available in lengths from 1 inch, or 2 penny (abbreviated 2d), to 6 inches, or 60 penny (60d)
 - 1 inch = 2d
 - 1 1/4 inch = 3d



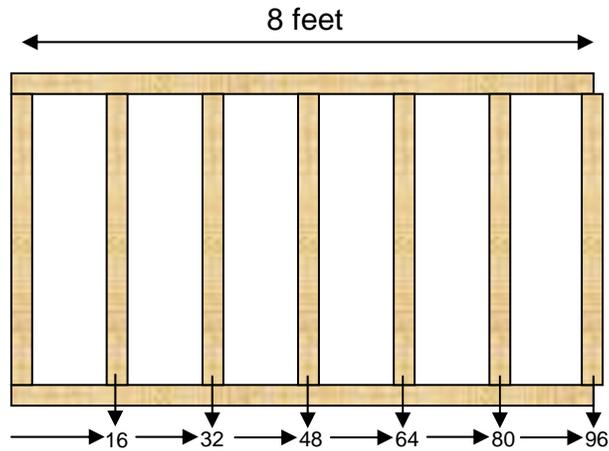
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- 1 ½ inch = 4d
 - 1 ¾ inch = 5d
 - 2 inch = 6d
 - 2 ¼ inch = 7d
 - 2 ½ inch = 8d
 - 2 ¾ inch = 9d
 - 3 inch = 10d
 - 3 ¼ inch = 12d
 - 3 ½ inch = 16d
 - 4 inch = 20d
 - 4 ½ inch = 30d
 - 5 inch = 40d
 - 5 ¼ inch = 50d
 - 6 inch = 60d
- Types of nails –
 - **Common nail** is for general purpose use in heavy construction and rough work. Large head won't pull through.
 - **Finish nail** is for trim where nail heads must be concealed. Head is sunk and filled over.
 - **Drywall nail** tightly secures wallboard panels with broad head and ringed shaft.
 - **Roofing nail** has extra-large head to hold asphalt shingles. Usually galvanized to resist moisture.

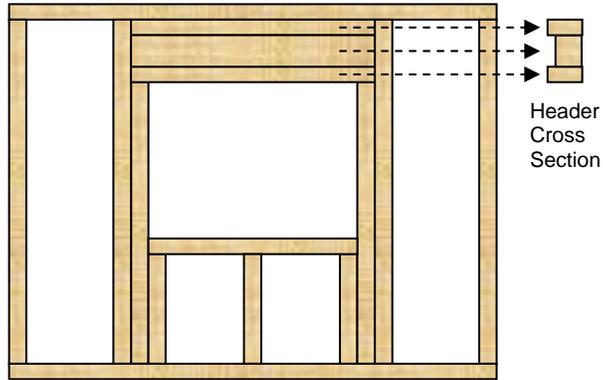
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- Framing a wall –
 - Interior walls are framed using 2x4x8 lumber. Exterior walls are framed using 2x6x8 lumber.
 - The soleplate is the board nailed to floor and to bottoms of studs.
 - The top plate is the board nailed to the tops of studs. It is usually doubled for supporting walls.
 - Studs are the upright boards.
 - Studs are spaced every 16 inches on center.

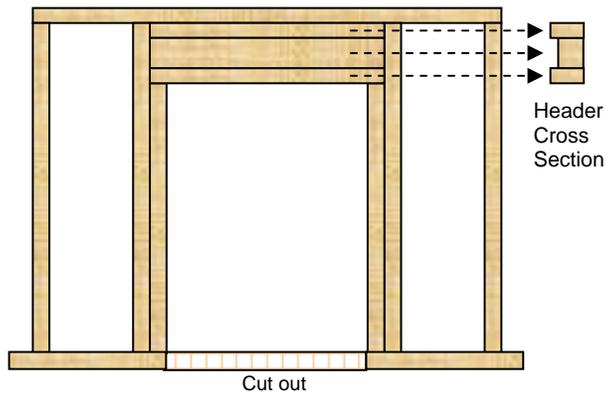


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- Framing a window –



- Framing a door –



Carpentry – Finish

Equipment required for finish carpentry:

Miter saw



Air compressor



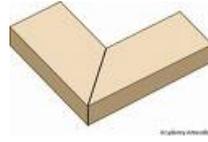
Air brad nail gun and hose



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Basic skills:

- Miter joint – the miter joint connects two boards with a 45 degree angle.



- Door and window casings are cut across the flat side of the board to create a “picture frame” around the door or window.



- Baseboards are cut across the end of the board to form inside and outside corners.



Insulation

Equipment required for insulation:

Staple gun



Dust mask



Safety glasses



Utility knife



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Basic skills:

- Types of fiberglass insulation:
 - **R-13** is made to fit between the studs on 2x4 construction. It comes in widths to fit 16 on-center and 24 on-center spans.
 - **R-19** is made to fit between studs on 2x6 construction. It comes in widths to fit 16 on-center and 24 on-center spans.
 - **R-30** is made to fit between ceiling rafters and floor joists on 2x8 and 2x10 construction. It comes in widths to fit 16 on-center and 24 on-center spans.
- Install fiberglass insulation with the paper backing towards the living area. This forms a moisture barrier.
- Insulation comes in pre-cut lengths to fit standard wall heights or in continuous rolls.
- To cut fiberglass insulation, lay the insulation on a piece of plywood – fuzzy side up. Use your utility knife to press down and cut the insulation and paper backing in one smooth stroke.
- Staple the paper flaps to the inside of the studs.



Drywall and Taping

Equipment required for drywall and taping:

Drywall square (48 inch)



Jab saw



Chalk line



Utility knife



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Taping knives (4 inch, 6 inch and 10 inch)



Sanding tools (hand and pole)



Drywall hawk



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Bucket, mixer and drill



Drywall screwdriver

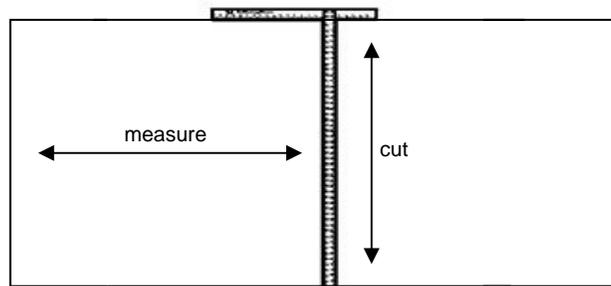


Basic skills:

- Drywall fundamentals –
 - Drywall comes in 4x8 sheets in various thicknesses – 3/8, 1/2, and 5/8. Longer sheets are available (4x12 and 4x16), but the 4x8 sheets are better for students to manage.
 - There are two basic types of drywall – regular and moisture/mildew resistant. Moisture/mildew resistant is used in damp areas like bathrooms.

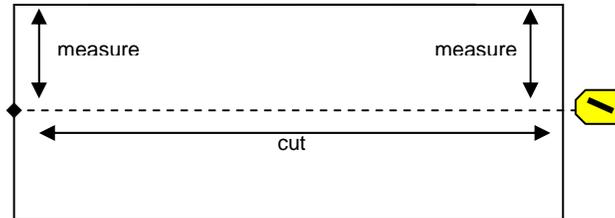
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- Drywall sheets have two different edges. On the 4 foot side is a “butt edge” and on the 8 foot side is a “tapered edge”. When hanging drywall, match the same edges to each other.
- Cutting drywall –
 - Drywall should be leaned against a wall or stacked with the white paper side facing you.
 - For cuts parallel to the 4 foot edge, measure from the end, mark measurement, line up the drywall square with your mark and use your utility knife to score the paper along the edge of the drywall square.



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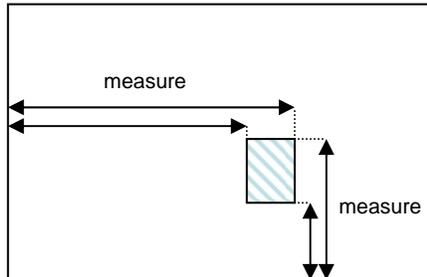
- Cutting drywall continued –
 - For cuts parallel to the 8 foot edge, measure from the side, mark measurement on both ends, line up the chalk line with your mark, snap a line and use your utility knife to score the paper along line.



- Once the drywall is scored, bend the drywall along the cut and then cut the paper on the backside with your utility knife.
- Cutting holes in drywall –
 - Holes are cut using the jab saw for electrical plugs, electrical switches, cable boxes, telephone outlets and lights, etc.
 - From one reference point on the wall or ceiling measure to the left and right side of the object. From another

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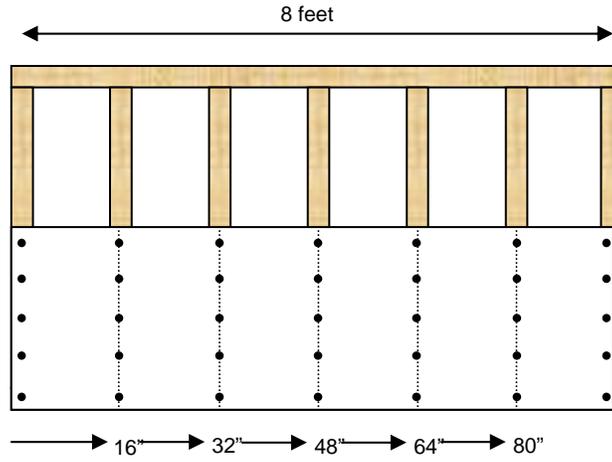
reference point on the wall or ceiling
measure the top and bottom of the
object. Mark these measurements on
the drywall using the same reference
points as the drywall will be placed on
the wall or ceiling. Draw a box or
circle the size of the object on the
drywall and cut out the hole.



- Hanging drywall –
 - Measure your pieces of drywall so they begin and end on a stud. Butt joints should end up on the center of the stud. Butt joints should be staggered on different studs.
 - Using the drywall screwdriver fasten the drywall to the stud with drywall screws. Place 5 screws along each stud on the 4 foot length of the drywall. To

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make fastening easier, use your drywall square to mark lines across the drywall where the studs are – stud interval is usually 16 inches on-center.



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- Taping drywall joints –
 - Joint compound is available in two types – drying compound and setting compound.
 - Drying compound is best used in its premixed form. It is applied in multiple thin layers until the surface is smooth.

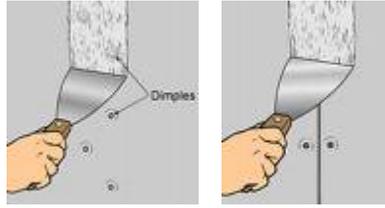


- Setting compound is available in several mixes that harden in different lengths of time (5, 20, 45 and 90 minutes). This is used on the first application to fill screw dimples, large gaps or deep gouges.



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- Use your taping knife to apply the joint compound.



- After the first application is hardened, all joints and corners must be taped. Spread a layer of joint compound (drying type) along the joint to be taped. Place the tape over the joint and then embed the tape with another layer of joint compound over the top.



- Continue applying joint compound in thin layers until the area is smooth. Lightly sand between layers.

Painting

Equipment required for painting:

Paint brushes



Paint roller, roller covers and roller pan



Extension pole



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Airless paint sprayer and gun



Extension ladder



Step ladder



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Painter's tape



Painter's putty



Painter's caulk



Painter's plastic



Caulk gun



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Basic skills:

- Paint comes in two basic forms – oil based and water based.
 - Oil based paints (alkyd) are cleaned up using paint thinner.
 - Water based paints (latex) are cleaned up using water.
 - *For mission trips it is recommended to use water based (latex) paints for ease of clean up.*
- Paint –
 - **Primer** is used to seal wood and sheetrock.
 - Ceiling white is a **flat** paint used on ceilings.
 - **Eggshell** paints are used on walls and offer a cleanable surface when dry.
 - **Semi-gloss** and **gloss** paints are used on trim – window casings, door casings, baseboards and crown moldings.
- Sequence –
 - Painting is 60% surface preparation and 40% painting.
 - Use painter's putty to fill all nail holes in trim.

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- Use painter's caulk along all edges where trim meets drywall, joints in trim and edges where two boards meet.
- Use painter's plastic to protect floors and furniture.
- Use painter's tape to protect surfaces where you don't want paint.
- Prime all surfaces.
- Paint ceilings.
- Paint walls.
- Paint trim.
- Clean up. Use water to clean latex paint off brushes, rollers, pans, equipment and people. **Denatured alcohol** is useful in cleaning dried latex paint off of floors, plugs, switches, etc.
- The biggest mistake people make when painting is not keeping enough paint on their brush or roller. Do not try to spread the paint too thin. Tap your brush on the side of the pale to remove excess paint – instead of scraping the brush along the rim of the pale.
- Bigger brush = more paint and less control. Smaller brush = less paint and more control.
- Airless paint sprayers are useful for large areas or painting textured ceilings. **WARNING** – paint is dispersed from the gun at very high pressure and will puncture skin at close range.



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Roofing

Equipment required for roofing:

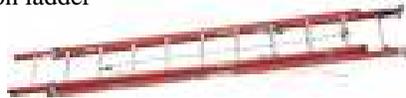
Air compressor



Air roofing nail gun and hose



Extension ladder



Utility knife with hook blade



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Roof jacks



Ladder jacks



Aluminum plank or 2x10 boards



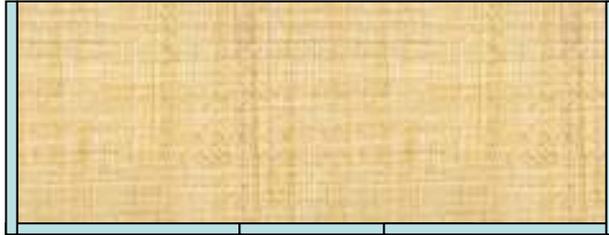
Roofing felt



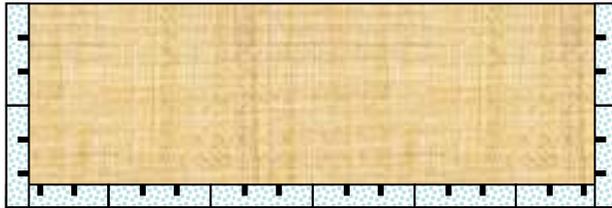
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Basic skills:

- Cover the plywood with roofing felt starting at the bottom edge, overlapping rows and working up to the peak.
- Stack roofing shingles on the peak of the roof.
- Apply drip edge to the side edges and bottom edge of the roof.

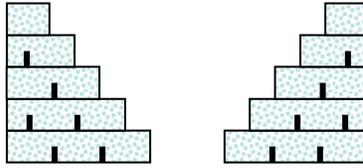


- Apply a starter course of roofing shingles along the side edges and bottom edge of roof. Starter course is placed with tabs facing in to the roof.

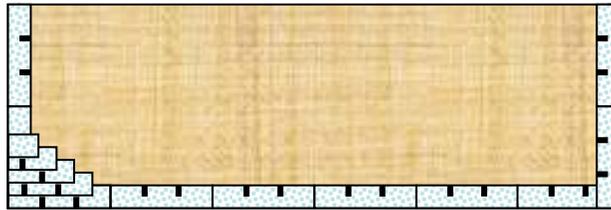


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- Cut roofing shingles into starter packages so the rows of shingles are staggered. If starting your rows from the left edge of the roof, cut half a tab off from the left side of the shingle. If starting your rows from the right edge of the roof, cut half a tab off from the right side of the shingle.

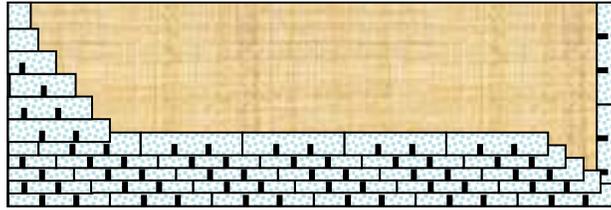


- Place your starter package at the bottom left or right corner of the roof. Rows of shingles overlap to the top of the cut out. Nail shingles along the adhesive strip above the cut out.



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- Continue applying shingles in rows across the roof.



- On the end of each row let shingles hang off the side edge of the roof. Use your chalk line to mark a straight line along the side edge of the roof. Use your utility knife with a *hook blade* to cut off excess shingles.
- A valley is where two roofs meet. There are two methods of dealing with a valley – weave and overlap. The weave interlaces shingles from both roofs. In the overlap method the first roof is run through the valley and onto the second roof; the second roof is run through the valley onto the first roof and then this layer is cut down the valley as marked with a chalk line. Your project foreman will determine which method is best for your roof and demonstrate the technique selected.

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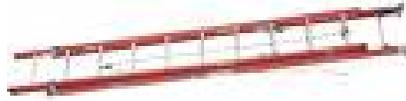
- The roof is capped with a ridge vent and shingles. Your project foreman will demonstrate the method selected.

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Siding

Equipment required for siding:

Extension ladder



Ladder jacks



Aluminum plank or 2x10 boards



Tyvek



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Pump jack system



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Hammer stapler



Basic skills:

- The first step is to cover the exterior surfaces with Tyvek Home Wrap. Use the hammer stapler to affix the home wrap to the exterior.



- There are a variety of siding options available. Here are some common types:
 - Clapboard



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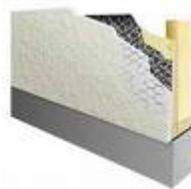
- Shake



- Vinyl – Vinyl siding comes in a variety of colors and styles. It can replicate both clapboard and shake sidings.



- Stucco



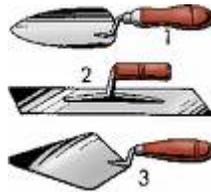
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- Use your chalk line to mark a level line for each row of siding.
- Your project foreman will demonstrate installation techniques for the siding option chosen for the project.

Masonry

Equipment required for masonry:

Trowels



Power trowel



Edger



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Brick Jointer



Brick Tong



Pointer



Mixing tub



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Mixing hoe



Cement mixer



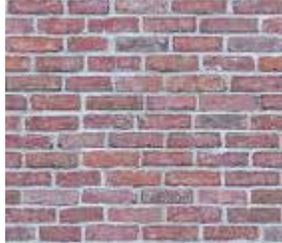
Wheel barrow



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Basic skills:

- Materials:
 - Cement - A building material made by grinding calcined limestone and clay to a fine powder, which can be mixed with water and poured to set as a solid mass or used as an ingredient in making mortar or concrete.
 - Brick



- Concrete block



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- Concrete forms



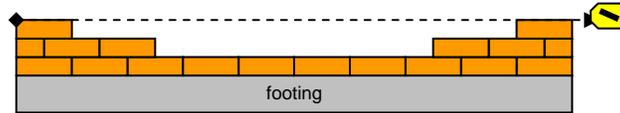
- Cement truck



- Brick and block are laid in courses (rows).
- Mortar is applied between each brick or block in a row and between rows.
- Walls are built from ends and corners to the center.
- Use your chalk line to mark a level line from corner to corner on a wall to ensure each row is level. Build each row up to the chalk line. When a row is complete, move the chalk line up to the next level.

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- Diagram of a wall



- Your project foreman will demonstrate the techniques required to complete your task.

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Electrical

Equipment required for electrical:

Linesman pliers



Wire stripper



Voltage tester

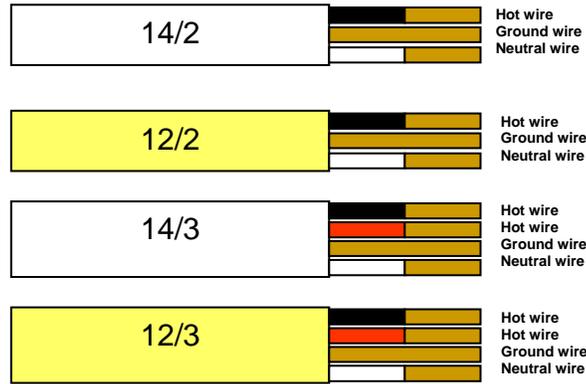


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Basic skills:



- **WARNING! Chaperones check it!**
 - Always test a wire with the voltage tester before working on it to ensure it is dead.
 - Always turn off power to a circuit at the breaker box before working on it.
 - Never stand on a wet or damp floor when working with electricity.
- Wire – basic home wiring uses 12 gauge and 14 gauge wires. 12 gauge is used for 20 amp circuits and 14 gauge is used for 15 amp circuits.



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- Wire nuts are used to connect wires. Strip the plastic cover on the wire back $\frac{3}{4}$ of an inch. Use the linesman pliers to twist the wires together. Screw a wire nut on to the twisted wires.



- Insulated staples are used to secure the wire to studs, floor joists or ceiling rafters.



- Electrical boxes come in two types – new work boxes and old work boxes.
 - New work boxes are used in construction where you can see the studs and nail the box to the stud.

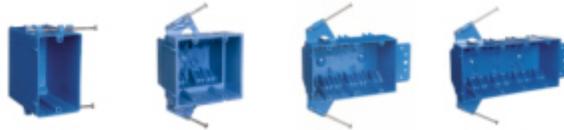


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- Old work boxes are used where you have to cut through drywall to install a box. It has flaps that extend to catch the back of the drywall and tabs to catch the front of the drywall.



- Wall boxes are described by how many openings, or **GANGS**, are available to accommodate switches and receptacles. Displayed here are 1, 2, 3 and 4 gang boxes.



- Ceiling boxes are round to accommodate lights and ceiling fans.



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- Basic toggle switches come in two forms, two styles and three basic colors – white, almond and ivory.
 - Single pole switch is used to control lights from one point.



- Three-way switch is used to control lights from two points.



- Basic receptacles come in one form, two styles and three basic colors – white, almond and ivory.



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- Ground Fault Circuit Interrupter (GFCI) is used on any receptacle location near water. It can sense a short in the circuit and turn it off. These are also available in three basic colors – white, almond and ivory.

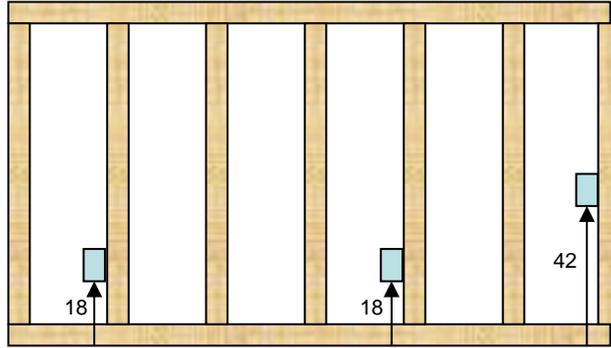


- Wall plates are available in a variety of forms to match the switch and receptacle layout. They are available in three basic colors – white, almond and ivory.



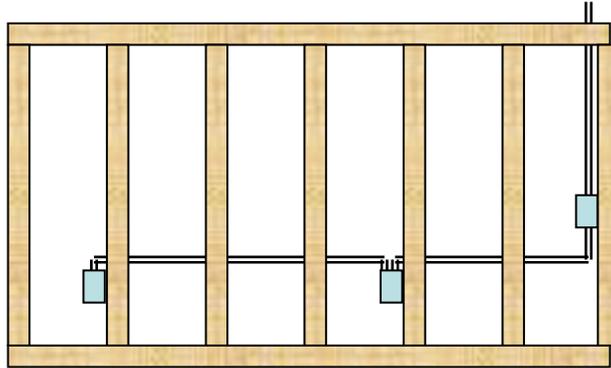
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- Switch boxes are installed at 42 inches from the floor to the bottom of the box. Receptacle boxes are installed 18 inches from the floor to the bottom of the box.



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- $\frac{3}{4}$ inch holes are drilled in studs, joists and rafters to run wire through them to the switch and receptacle boxes.



- There are three basic rules to use when wiring receptacles and switches:
 - **Black to Brass** – connect the black (red) hot wire to the brass screws.
 - **White to Silver** – connect the white neutral wire to the silver screws.
 - **Copper to Green** – connect the ground wire to the green screws.
- Your project foreman will demonstrate the techniques required to complete your task.

Plumbing

Equipment required for plumbing:

Pipe wrench



Pipe cutter



Hack saw



Copper pipe cleaner (deburrer)



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Propane torch



Solder, flux and flux brush



PVC primer and cement



PVC pipe cutter



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Basic skills:

- Copper pipe



- Copper cap



- 45 degree and 90 degree elbows



- Copper tee

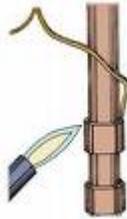


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- Copper coupler



- Copper pipe is cut using the pipe cutter. Measure the length and then tighten the pipe cutter on the pipe. Rotate the pipe cutter and continue tightening until the pipe is cut.
- Copper pipe is joined using a coupler, elbow or tee which is soldered together.
- Soldering:



- Measure, cut and dry fit all of your copper pipe and connectors.
- Clean the end of the pipe and the inside of each connector using the copper pipe cleaner or sand paper.
- Apply flux to the clean areas using the flux brush.
- Connect the pieces.
- Using the propane torch, **heat the connector** until the solder melts when it touches the copper pipe.
- Apply solder around each joint.
- Repeat the steps for each joint.

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- Holes are drilled in floors, studs, joists and rafters to run pipe through them to the bathrooms and kitchen.
- Teflon tape is used to seal threaded joints in copper pipe and connectors. It should be used on any threaded joint.



- PVC pipe:



- PVC pipe connectors – there is a vast assortment of elbows, couplers, clean-outs, drains, etc. available. It's best to draw a picture of your layout and then go to the supply store to get the pieces you need.

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- PVC pipe is cut using the hack saw or PVC pipe cutter. Clean any burrs from the cut with your fingers or sand paper.
- Working with PVC:
 - ***Make sure you have the correct primer and cement to work with the type plastic pipe you are using.***
 - Measure, cut and dry fit all of your PVC pipe and connectors.
 - Apply PVC primer to the end of each pipe and the inside of each connector.
 - Apply PVC cement to the end of each pipe and the inside of each connector.
 - Put the pipe into the connector and twist slightly.
 - Repeat the steps for each joint.
- Your project foreman will demonstrate the techniques required to complete your task.

Landscaping

Equipment required landscaping:

Long handle digging shovel



D-handle digging shovel



Transfer shovel



D-handle transfer shovel



Landscape axe



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Pick mattock



Post hole digger



Tamper



Tine rake



Leaf rake



Spring rake



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Spading fork



Bedding fork



Manure fork



Pruner



Lopper



Bow saw



Hedge shears



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Wheel barrow



Basic skills:



- **WARNING!** This is manual labor; wear your work gloves regardless of what you are doing. **Blisters** can form in very short time.
- Your project foreman will demonstrate the techniques required to complete your task.

Building Codes and Regulations

The purpose of building codes and regulations are to provide for the safety, health and public welfare through structural strength and stability means of egress, adequate light and ventilation and protection to life and property from fire and hazards incidental to the design, construction, alteration, removal or demolition of buildings or structures. These codes and regulations set forth requirements which are considered reasonable and are held in every instance to be the minimum for the promotion of public health, safety and the general welfare.

In all cases we will attempt to meet the requirements of local building codes and regulations. We will attempt to obtain guidance and assistance from the local building department for the parameters of our project work.

Project foreman should be familiar with standard building codes and regulations that apply to the project.

The homeowner or project coordinator is responsible for any permits required to complete the project.

Waiver of Liability and Hold Harmless Agreement

1. In consideration for receiving permission to participate in a *Halos and Hammers mission trip*, I hereby **release, waive, discharge and covenant not to sue** the United Church of Christ – Southbury, the United Church of Christ – Connecticut Conference, the National United Church of Christ, their officers, agents, servants, employees, chaperones, or students (hereinafter referred to as **releasees**) from any and all liability, claims, demands, actions and causes of action whatsoever arising out of or related to any loss, damage, or injury, including death, that may be sustained by me, or any of the property belonging to me, **whether caused by the negligence of the releasees**, or otherwise, while participating in such activity, or while in, on or upon the premises where the activity is being conducted or while traveling in any mode of transportation.

2. I am fully aware of the risks involved and hazards connected with the *mission trip*, including but not limited to ***the activities outlined in this handbook***, and I hereby elect to voluntarily participate in said activity with full knowledge that said activity may be hazardous to me and my property. **I voluntarily assume full responsibility for any risks of loss, property damage or personal injury, including death**, that may be

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sustained by me, or any loss or damage to property owned by me, as a result of being engaged in such an activity, **whether caused by the negligence of releasees or otherwise.**

3. I further hereby **agree to indemnify and hold harmless** the **releasees** from any loss, liability, damage or costs, including court costs and attorney fees, that they may incur due to my participation in said activity, **whether caused by negligence of releasees or otherwise.**

4. I understand that the United Church of Christ – Southbury does not maintain any insurance policy covering any circumstance arising from my participation in this event or any activity associated with or facilitating that participation. As such, I am aware that I should review my personal insurance portfolio.

5. It is my express intent that this Waiver of Liability and Hold Harmless Agreement shall bind the members of my family and spouse, if I am alive, and my heirs, assigns and personal representative, if I am deceased, and shall be deemed as a **release, waiver, discharge and covenant not to sue** the above-named **releasees**. I hereby further agree that this Waiver of Liability and Hold Harmless Agreement shall be construed in accordance with the laws of the State of Connecticut.

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6. In signing this release, I acknowledge and represent that I have read the foregoing Waiver of Liability and Hold Harmless Agreement, understand it and sign it voluntarily as my own free act and deed; no oral representations, statements, or inducements, apart from the foregoing written agreement, have been made; I am at least eighteen (18) years of age and fully competent; and I execute this release for full, adequate and complete consideration fully intending to be bound by same.

In witness whereof, I have hereunto set my hand and seal on this _____ day of _____.

Witnesses _____

Participant _____

Parent _____
(if participant is less than 18 years of age)

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Notes:



Chatfield's offers a 10% discount on the following items:

**Two pouch work belt
Hammer, 16-20 ounce, straight claw
Tape measure (minimum 12 foot)
Speed square
Carpenter's pencil
#2 Phillips head screwdriver
¼ inch flat tip screwdriver
Pliers
Chalk line
Utility knife
Torpedo level
Work gloves
Safety glasses**

Bring your Halos and Hammers Handbook to Chatfield's to get the discount on the required tools for your mission trip!

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