Space Planning and Functionality
Objectives

- Apply principles of space utilization, zoning, and traffic patterns in planning and furnishing housing.
- Organize space by grouping rooms according to function.
- Evaluate storage needs and space.
- Analyze ways to arrange furniture effectively.
Grouping by Functional Zones

- Space planning—the process of placing furnishings for a well-functioning and visually pleasing area
- Certain rooms of a house are usually located next to one another
  - Certain rooms serve similar purposes (functions)
  - Grouping rooms together by functional zone is an efficient way to organize
  - Three zones encompass most of the space within a house: a private area, work area, and social area
The Private Area

- Consists of bedrooms and bathrooms
  - Space for sleeping and resting
    - Best setting for rest and relaxation
    - Comfortable and quiet place
  - Space for dressing and grooming
    - Privacy and space for storing clothes and grooming supplies
- Both bedrooms and bathrooms help fulfill these spatial needs.
- Some bedrooms may provide space for other activities, such as reading, studying, watching TV, listening to music, and working on hobbies. When this is true, the rooms become multipurpose rooms.
The Work Area

- Includes all parts of the house needed to maintain and service the other areas
  - Vary from house to house
  - Kitchen, laundry area, utility room, and garage
  - Workshop, home office, or sewing room

Home office space may be determined by use – how might different people use home offices and how might that change its location in the home?
The Social Area

- Provides space for daily living, entertaining, and recreation
  - Entrances
    - Guests are greeted, remove outerwear and place it in nearby closets
    - Direct the movement of people throughout the house
    - If a dwelling has more than one entrance, each may have a slightly different purpose
  - Dining rooms (and/or area of the kitchen)
    - May have separate dining rooms for eating meals and entertaining guests
    - During mild weather, household members often enjoy eating outdoors
  - Living rooms and family rooms
    - Space for family activities and entertaining guests.
    - If both, the family room is often more casual. It offers space for recreational activities and relaxation.
Outdoor Living Spaces

- Important and useful extensions of social, work and private zones
  - Porches, decks, patios, pools, etc.
  - Locating these spaces near the kitchen can encourage outdoor dining and grilling
  - An outdoor space near the social zone promotes entertaining
  - A master suite connected to a deck or patio provides a retreat and an excellent place for meditation and relaxation
Highlighting Functional Zones Worksheet
Separating Areas and Rooms

- Locate different areas on different ends or levels of the house
  - Example: Private rooms upstairs, social and work on ground floor

- Hallways are another way to separate areas.
  - Buffer zone—a neutral area designed to separate space—for noise
  - A hallway between the private and social areas makes it possible for some people to rest or sleep, while others are entertaining guests, dining, or watching TV.
  - Near work areas, hallways help reduce the volume of noise from appliances and tools
  - Hallways range from 36 inches to more than 48 inches wide (46-inch width is the most common width used)
Separating Areas and Rooms

- Walls usually separate individual rooms
- Some dwellings have large open areas with divisions into separate areas
  - Alcoves, varied ceiling heights, and balconies sometimes separate spaces for different functions
  - Screens, freestanding storage units, and careful arrangement of furniture can also separate space
- An advantage of not separating areas with walls is a large, open area where people can enjoy more than one activity at a time. The open space in some kitchen/dining/living rooms allows those preparing food to take part in other activities
Room Relationships

- The nearness of and connections between various rooms is important to convenience and ease of use
  - Kitchens should be close to the dining room
  - Garage or parking area should be close to the kitchen
  - Bathrooms should be close to the bedrooms
  - Outdoor living areas should be close to the social areas

- Considering how to use the space and its closeness to related activities will improve the functionality of the living space
Type of Circulation Activities

- **Family**: Family members should be able to move freely between living areas without having to pass through a bedroom to get to another part of the house. High-frequency routes are short and direct.

- **Guest**: Guest circulation provides access to a coat closet, living room, and dining room without having to walk through the work areas or private areas of a home. There should also be a bathroom close by for guests.
Type of Circulation Activities

- **Work:** To meet this circulation need, the kitchen should be located near the service entrance and have easy access to basement, garage, and laundry/utility areas.

- **Service:** This type of circulation refers to movement of persons into and out of the home including repairmen and service people. Service circulation also includes taking garbage out and bringing in groceries.
Traffic Patterns

 When organization of a space is effective, people move easily within a room, from room to room, or to the outdoors

 Traffic patterns are the paths they follow
   Require enough space for people to move about freely but not too large or there is wastes space
   Should be about 40 inches wide with extra width in areas where major traffic patterns intersect
   Furniture naturally funnels people onto particular paths in open spaces
   Design of traffic patterns should allow people to move throughout a house without disturbing other activities
Traffic Patterns

- Traffic patterns should...

  - be convenient and direct
  - provide adequate space without wasting it
  - provide easy access from the entrances to other parts of the house
  - separate traffic to the work area from traffic to the private and social areas
  - avoid cutting through the middle of rooms
  - avoid interfering with furniture arrangement/interrupting activities in a room
  - avoid interfering with privacy in areas of the house where privacy is expected
Traffic Patterns

Traffic patterns should...

- avoid cutting through a kitchen, work area, or any other hazardous area
- give the kitchen easy access to all areas of the home
- provide a direct access from the service entrance to a cleanup area
- provide access from a service entrance to the private area without going through the social area
- provide direct access from utility area to the outside service zone
- provide direct access from the main entrance to social areas without going through work or private area
Evaluating Traffic Patterns Worksheet
Spaces for Doors

- Outside doors and doors between rooms also help determine the flow of traffic.
- Space in front of doors must remain free:
  - Blocked doors will stop traffic and cut off access to stored items.
  - Should also be space for doors to swing and stand open.
  - People need space to approach the doors, go through the doors or to use storage area.
- Door space required:
  - Exterior and high-traffic areas should have at least 36 inches for openings.
  - Bedrooms and walk-in closets require at least 32 inches.
  - Linen closet doors may be as small as 18 inches.
Storage Space

- Plenty of storage space should be scattered throughout a house
  - Make sure there is enough space to store all belongings
  - Check to see if the storage space is located in convenient places
  - Closets are a common storage space
  - Built-in storage can also be found and includes shelves and drawers that are built into a housing unit
- Ideally, 10 percent of the floor space should be storage
CHECK FOR UNDERSTANDING

- What are the three functional zones in a house?
- What are the four types of circulation activities?
- List five guidelines for functional traffic patterns.
Developing a Scale Floor Plan for Pleasing Furniture Arrangement

- Measure the length and width of each room
- Measure and determine the location of all the existing room features, such as doors and windows, electrical outlets, heating and cooling vents, and air intakes
- Measure the dimensions of any alcoves or other permanent features, such as fireplaces, cabinets, or built-in furniture pieces
- Develop a scale floor plan
- Draw the room on graph paper and include the features and dimension measurements
- Indicate the doors, windows, electrical outlets, and other features in the plan
- Use furniture templates to represent the furniture in the room
  - Templates must be the same scale as the floor plan
<table>
<thead>
<tr>
<th>Room</th>
<th>Clearance Space in Inches</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Living Room</strong></td>
<td></td>
</tr>
<tr>
<td>Around seating, such as chairs and sofas</td>
<td>18–30</td>
</tr>
<tr>
<td>Between sofa and coffee table</td>
<td>15–30</td>
</tr>
<tr>
<td>For minor traffic pattern area</td>
<td>18–48</td>
</tr>
<tr>
<td>For major traffic pattern area</td>
<td>48–72</td>
</tr>
<tr>
<td><strong>Dining Room</strong></td>
<td></td>
</tr>
<tr>
<td>Between chair backs and wall or buffet (for diners remaining seated)</td>
<td>18–24</td>
</tr>
<tr>
<td>Between chair backs and wall or buffet (for self-service or host/hostess service)</td>
<td>30–36</td>
</tr>
<tr>
<td>Between table edge and wall or buffet (for self-service or host/hostess service)</td>
<td>18–30</td>
</tr>
<tr>
<td>For leg room in front of chair</td>
<td>48</td>
</tr>
<tr>
<td>Room</td>
<td>Clearance Space in Inches</td>
</tr>
<tr>
<td>---------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td><strong>Kitchen</strong></td>
<td></td>
</tr>
<tr>
<td>Between oven and opposite workspace (opening door)</td>
<td>40 minimum</td>
</tr>
<tr>
<td>Between refrigerator and opposite workspace (opening door)</td>
<td>36 minimum</td>
</tr>
<tr>
<td>Between dishwasher and opposite workspace (opening door)</td>
<td>40 minimum</td>
</tr>
<tr>
<td>For circulation space</td>
<td>24</td>
</tr>
<tr>
<td>For work zone space between counter and nearby obstacle</td>
<td>48</td>
</tr>
<tr>
<td><strong>Bath</strong></td>
<td></td>
</tr>
<tr>
<td>For activity zone in front of sink</td>
<td>18</td>
</tr>
<tr>
<td>For circulation space</td>
<td>24</td>
</tr>
<tr>
<td>Between front of sink and opposite wall or obstacle</td>
<td>40 minimum</td>
</tr>
<tr>
<td><strong>Bedroom</strong></td>
<td></td>
</tr>
<tr>
<td>For activity zone in front of dresser to allow for work space and opening</td>
<td>42–48</td>
</tr>
<tr>
<td>For work zone space for making beds</td>
<td>26–40</td>
</tr>
<tr>
<td>For circulation space</td>
<td>24</td>
</tr>
<tr>
<td>Between twin beds</td>
<td>24</td>
</tr>
</tbody>
</table>
Designing Furniture and Arrangements Worksheet
Templates (pg. 2-3)
Evaluating Clearances Worksheet
CHECK FOR UNDERSTANDING

- Why is using a scale floor plan an effective method for deciding furniture arrangements?
- Identify three factors to consider when planning a furniture arrangement.
- Why are traffic patterns and clearance space important to creating effective furniture arrangements?