



DESIGN DECISIONS

Furniture Materials and Characteristics

Material	Characteristics
Woods: <i>Solid, Plywood, Veneer, Hardboard, Particle Board, Composite wood, etc.</i>	<ul style="list-style-type: none">• Most furniture contains some plywood. Plywood is strong and resists splitting and warping. It is made of layers of wood glued together with the wood grain at right angles.• Plywood is often faced with a thin veneer ranging from 1/60th inch to 1/10th inch. Thicker veneers with quality finishes will wear better over time. Refinishing and repairs will depend on the thickness of the veneer. Veneers help save rare woods and wood in general as less wood is used for the surface appearance.• Solid wood can be refinished many times if it is scratched or damaged. Depending on the wood, it is generally more expensive. Many older pieces were solid wood or solid with veneer and can be refinished for quality wood and structure. Chips, scratches and gouges expose like wood and can be covered more easily.• Hardboard is made of wood fibers sealed together with adhesives, steam and pressure. It comes in 1/16 to 3/4" thickness and is often used in unseen parts of furniture such as back panels and bottoms, drawer dividers and bottoms.• Particle board is made of wood particles and adhesive. It is formed by flat-pressing, extrusion or mat-forming. Thickness varies from 1/8" to 2" and comes in several sizes. Particle board has no grain so doesn't split easily. It is often used in place of plywood and then finished with veneers or laminates. It can be painted or enameled.
Paper/ Cardboard	<p>Paper is often used as a base for photographed wood and attached as a film over less expensive materials to look like wood. A thin layer or film such as "plastic" or other clean finish covers the paper. Unless covered with a very protective surface, it is not as durable to heat, moisture, heavy use, scratches and is not easily cleaned. It cannot be refinished or repaired easily. Often used in low-cost furniture.</p>



Material	Characteristics
Metals: <i>Steel, aluminum, copper, brass, bronze, iron</i>	Metals can be strong depending on their weight and construction methods. <i>Stainless steel</i> resists rusting. Other metals may need coatings or finishes to prevent rusting or oxidation. Coatings will affect the look and rust resistance and durability of surface. Usually easy to care for. Some <i>copper</i> and <i>brass</i> coatings are very thin and care wear away. <i>Iron</i> needs a protective coating to prevent rust.
Glass	Tempered or heavier glass is stronger than lightweight glass. Look for ½” thickness or more. Easy to clean. Glass can be fragile and break.
Plastics:	Plastics vary in ability to withstand heat, scratching, chemicals and sun. Plastics are generally strong but lightweight. Most plastics are made from oil, but some are now made from soybeans and other materials. Some plastics scratch easily and are affected by chemicals or cleaners. Plastics are often made to look like other materials like carved wood. The finish will sometimes wear away, revealing the plastic base underneath.
Bamboo and Rattan	Strong materials for their weight. Resists water. Good construction is important. Check the joint areas. <i>Rattan</i> is strong and durable. Rattan poles should be smooth and consistent in size. High grade rattan is light in color and free of dark blemishes. <i>Bamboo</i> resembles rattan but is hollow, not solid. Joints in bamboo tend to bulge and are dark. Bamboo is less flexible, which limits its bending capability. <i>Wicker</i> is a construction technique rather than a material. Wicker furniture can be made of rattan, reed, willow, bamboo, flexible twigs or branches.
Marble	<i>Marble</i> is sometimes used for furniture surfaces or tops. It can break – especially along the veining lines. <i>Travertine marble</i> is very porous and is usually filled and polished before it is used for furniture. Marble can stain from acids (sodas, drinks etc.), oils, metals, etc. Over time, the marble surface may scratch and look worn if the sealer wears away.

Prepared by: Shirley Niemeyer, Extension Specialist, University of Nebraska Lincoln Extension

Find more at <http://4h.unl.edu/designdecisions>

© The Board of Regents of the University of Nebraska on Behalf of Nebraska 4-H. This document may be reprinted for educational purposes only.



Extension is a Division of the Institute of Agriculture and Natural Resources at the University of Nebraska–Lincoln cooperating with the Counties and the United States Department of Agriculture.

The 4-H Youth Development program abides with the nondiscrimination policies of the University of Nebraska–Lincoln and the United States Department of Agriculture.