



Wyoming 4-H

Produce Judging Handbook Senior



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Horticultural and Consumer Qualities

This publication is a reference for fruit, vegetable, and herb identification and judging and is intended to reduce confusion as contestants, coaches, and judges prepare for this contest. Check with your local University of Wyoming Cooperative Extension Service office to make sure you are using the most recent version of this publication.

The 4-H philosophy for produce judging is that the qualities describing horticultural merit are identical to those traits that make produce ready for purchase and consumption. These qualities include: product uniformity, stage of ripeness, freedom from disease and insect damage, absence of bruises and blemishes, and so forth.

The correct stage of ripeness is determined by examining either the product's skin or leaves. If the product's skin is wrinkled, shriveled, or collapsed in any way, it is probably overripe. Leafy produce should be firm and not wilted. Unripe vegetables and fruits will have uneven color and usually are very hard. Underripe is better than overripe when selecting produce.

Another way to tell if a vegetable or fruit is edible is to look for bruises, growth cracks, or sunscald. Mechanical damage, such as bruises, may need to be cut out. Growth cracks, most often caused by erratic watering practices, may need to be removed. If large portions of a produce item must be removed due to damage, the produce item is low quality.

Sometimes vegetables may be misshapen. This distortion often happens when root vegetables, such as carrots or rad-

ishes, are grown in heavy, compacted soil that has not been amended or properly worked. Odd shapes may occur in vegetables grown above ground or in fruits when they grow next to another plant, a rock, or some other obstacle.

Holes, chewed sections, and discolored areas on vegetables, fruits, and herbs are signs of insect damage. Disease damage results in discolored lesions, off-color and streaked appearances in the flesh, and rotted areas.

Produce Descriptions, Merits, and Faults

Apples (fruit) are round to slightly elongated. Apples commonly come in red, yellow, or green, but many of the newer varieties may be a mixture of these colors. The flesh of the apple should be white or, in some varieties, soft pink.¹

Merits of apples include: crisp flesh that is white and juicy, smooth skin devoid of blemishes, and firm tissue all the way to the core. The apple should have good symmetry.

Faults of apples include: brown or bruised flesh, discolorations of the skin, corky tissue on the skin, soft flesh, and a watery core. Any apparent insect damage is also a fault.

Artichokes (globe) (vegetable) are actually immature flower buds that are edible. Each bud contains many layers of bracts (modified flower petals), of which the



Correct Produce Names

apple	cucumber (slicing or pickling)	mint	rutabaga (table)
artichoke	dill	muskmelon or cantaloupe	shallot
asparagus	edible podded pea	mustard	snap bean (yellow or green)
banana	eggplant	okra	spinach
basil	endive	onion (dry)	strawberry (plural is strawberries)
beet (table)	garlic	orange	summer squash
broccoli	ginger root	parsley	sweet corn
Brussels sprout (plural is Brussels sprouts)	grape	parsnip	sweet potato (plural is sweet potatoes)
cabbage	grapefruit	pea (green, in pod)	thyme
carrot	green onion	pepper	tomato (plural is tomatoes)
cauliflower	head lettuce	pineapple	turnip
celeriac	jicama	potato (plural is potatoes)	watermelon
celery	kale	radish (plural is radishes)	winter radish or daikon (plural is winter radishes)
chard (also called Swiss chard)	kiwi	raspberry (plural is raspberries)	winter squash
Chinese cabbage	kohlrabi	rhubarb	
chive (plural is chives)	leaf lettuce	rosemary	
collard	leek		
	lemon		

lower bases of the bracts are edible. The heart of the artichoke, on which the bracts are attached, may also be eaten. ¹

Merits of the artichoke include: leaves that are thick and firm, stem free of holes and blemishes, and all of the leaves should be tightly closed, perhaps even squeaking when handled.

Faults of the artichoke include: leaves that are soft and browning, stems with holes, which may be evidence of insect damage within the head, and leaves that are loose or open.

Asparagus (vegetable) has young, immature stem tips, and scales on the tips are tight. Asparagus may be dark green or white, or it may be green toward the tip and white toward the base.

Merits of asparagus include: uniform stalk length and size (at least 1/2 inch in diameter), juiciness, bright color, and tightly closed scales at tips.

Faults of asparagus include: loose scales, or undersized, spindly, wilted, or oversized stalks.

Bananas (fruit) are a curved, long fruit. The skin is yellow, and the flesh is white and creamy. Bunches usually grow in 6 to 25 individual bananas. ¹

Merits of bananas include: bright yellow skin, absence of bruising on the flesh, and lack of skin browning near the stem. The flesh should be soft and creamy but not overripe.

Faults of bananas include: brown skin, bruised flesh, and squishy stem end.

Basil (herb) is a fragrant herb used as a seasoning in a variety of foods. Basil is sold dry or fresh.

Merits of fresh basil include: green bunches that are fresh and not wilted. Basil should be free of insect damage or yellowing and should have a strong, pleasing aroma.

Faults of basil include: yellow leaves, wilting, signs of insect damage, and blackening of the stems.

Beets (vegetable) have round or cylindrical roots. Beets may be red, yellow, or, rarely, white.

Merits of beets include: uniform size, color, and shape. Baby beets should be 1 1/2 inches and table beets should be 1 1/2 to 3 1/2 inches in diameter. The crown should have very little browning and no cracks.

Faults of beets include: damaged, cracked, pithy, or wilted tissues.

Broccoli (vegetable) has immature green flower heads and is harvested before buds open.

Merits of broccoli include: fresh green color with florets close together. Broccoli should be tender, crisp, and free from worms. Stems should be less than 6 inches long.

Faults of broccoli include: heads that are soft or wilted or are showing yellow flowers.

Brussels sprouts (vegetable) are firm, green, round buds measuring about 1 inch across. Brussels sprouts look like small cabbage heads.

Merits of Brussels sprouts include: fresh, solid, and tightly closed buds with good green color.

Faults of Brussels sprouts include: small or loosely closed buds, yellowish color, or wilted buds.

Cabbage (vegetable) is a compact ball of thickened leaves. The heads can be green, red, smooth, or crinkled. Cabbage is solid and heavy with outer leaves intact. The head may be rounded, flattened, conical, or egg-shaped. The midribs may be white.

Merits of cabbage include: solid, firm heads that measure about 6 to 9 inches in diameter. Heads should be tender, crisp, and heavy for their size. Worm damage or rot should never be present. Knowing the cabbage variety is important as varieties differ in size and shape.

Faults of cabbage include: prominent midribs on leaves, incorrect size, light weight, loosely formed, wilted, or uneven color.

Carrots (vegetable) have yellow or orange roots. They are cylindrical, tapered, or round, without side roots.

Merits of carrots include: uniform type (diameter depends on variety), smooth surface, and pale to deep orange color (depending on variety). When carrots are cut, they should have a small core without rings. Carrots should be tender and sweet.

Faults of carrots include: off-color, wilted, rough, or cracked roots. Worm damage, crooked or branched roots, or green crowns also are considered faults.

Cauliflower (vegetable) consists of a firm, heavy, white head of immature flowers. Some types may be purple or green.

Merits of cauliflower include: solid heads with good color and smooth, fine-grained texture. Cauliflower should be crisp with outer leaves trimmed about 1 inch above the head's center.

Faults of cauliflower include: wilted heads having yellowish color or rough, grainy texture.

Celeriac (vegetable) is a rough-surfaced, round root measuring about 2 to 6 inches in diameter. The root has crisp, white flesh. Celeriac smells like celery.

Merits of celeriac include: uniform color and solid roots.

Faults of celeriac include: incorrect size, wilted root, or damage from worms or insects.



Celery (vegetable) is the whole, above-ground portion of the plant. Leaf blades are trimmed off. Stalks may be green, white, or yellowish. Celery is a cylindrical cluster of leaf petioles attached to a very short stem.

Merits of celery include: thick, firm, and crisp petioles that are uniform and long. Color should be uniform.

Faults of celery include: stalks that are stale or wilted. Rust on the stalks is a fault. Stalks that are uneven in color, spindly, or unevenly arranged in the bunch also should be faulted.

Chard (vegetable) consists of large, thick, crumpled leaves. Chard can include single leaves or the entire plant with the roots removed. Stems are short. Petioles and midribs may be white, red, orange, or yellow.

Merits of chard include: firm, tender, crisp leaves free from insect or disease damage.

Faults of chard include: small or wilted leaves, roots that are still present, or uneven color.

Chinese cabbage (vegetable) has a compact, elongated head with thin, many-veined leaves. Chinese cabbage color can be light green to white. One type, bok choy, has dark green leaves and white petioles. Bok choy does not form a solid head.

Merits of Chinese cabbage include: solid, firm heads with tender, crisp leaves and uniform color.

Faults of Chinese cabbage include: very prominent midribs, incorrect sized heads, wilted leaves, or uneven color.

Chives (herb) are small, onion-like plants. Chives grow in clusters and are dark green. The leaves are hollow and thin.

Merits of chives include: fresh leaves that are evenly green and have no sign of blemish or drying.

Faults of chives include: wilted leaves, dried leaves, signs of insect damage, or unevenly colored leaves.

Collards (vegetable) consist of rosettes of tender, dark green leaves, which may be attached or detached from the main stem. The roots are removed.

Merits of collards include: firm, crisp leaves with uniform color and size.

Faults of collards include: wilted, dirty, or damaged leaves.

Cucumber (fruit) is an immature, firm, heavy, green fruit. Pickling cucumbers are 1¾ to 5 inches long, and they are blocky. Slicing cucumbers are 6 to 9 inches long. European slicing cucumbers can be up to 16 inches long. Lemon cucumbers are egg-shaped and 4 to 6 inches long. Lemon cucumbers have light yellow skin. Some might assume cucumbers and several other fruits mentioned in this guide, including edible podded peas, eggplant, okra, peppers, snap beans, squash, and tomatoes, are vegetables. They are fruits because the botanic and horticultural definition of "fruit" is a mature ovary, which may or may not contain seeds (some fruits are seedless).

Merits of cucumbers include: uniform size, crisp and straight fruits, dark green color, uniform maturity, and evenly spaced spines (if present).

Faults of cucumbers include: non-standard size or color, or wilted, over mature fruits.

Dill (herb) has green, fragrant flower heads with stems and green leaves. Seeds are brown and immature and should not be shedding.

Merits of dill include: freshness, uniform and balanced bunches, and clean leaves and stems.

Faults of dill include: dirty foliage or flower heads, disease or insect damage, discoloration, or wilted foliage.

Edible podded peas (fruit) are tender, flat pods. The seeds inside should be starting to enlarge. Some varieties have rounder, crisp pods with nearly full-grown seeds. Both ends of the pods are intact.

Merits of edible podded peas include: uniform color and size, both ends intact, and fresh, crisp pods.

Faults of edible podded peas include: wilted or over mature pods, pale color, or insect or disease damage.

Eggplant (fruit) is a black, purple, or white, round to egg-shaped fruit. An eggplant may be as long as 14 inches.

Merits of eggplant include: well-shaped, firm, mature fruit. Other merits are a connected stem and a shiny surface.

Faults of eggplant include: wilted or misshapen fruit, uneven color, or over maturity.

Endive (vegetable) is a green, leafy rosette plant. The roots are removed, and the center leaves are creamy-white.

Merits of endive include: fresh, uniform, and clean leaves and stems.

Faults of endive include: dirty, diseased, discolored, or wilted leaves or stems.

Garlic (herb) is a bulb 1½ to 3 inches in diameter. Garlic may be white to pink, and it has papery, dry skin.

Merits of garlic include: individual cloves that are uniform in size and shape. Clear skin also is a merit.

Faults of garlic include: soft or damaged bulbs.

Ginger root (vegetable) is actually an edible rhizome. The interior is golden white.

Merits of ginger root: few knots or branches, light brown skin that is smooth, and lack of blemishes or bruises.

Faults of ginger root: withered knobs, many knots and branches, and blemishes or bruised skin.

Grapes (fruit) are round fruits that grow in clusters on vines. The skin of the fruit may be green, red, purple, or yellow when ripe. The skin is usually thin and the flesh juicy. Seeds may or may not be present, depending on the variety. ¹

Merits of grapes include: plump fruits, stems securely attached, rich coloring, and absence of shriveling or skin blemishes.

Faults of grapes include: blackening of skin near stem, soft or shriveled fruits, and mold present on fruits.



Grapefruits (fruit) are large, round fruits with a thick rind. The rind is yellow but may be slightly red or pink. The flesh of the fruit is pinkish-red or yellow and is slightly bitter in taste. ¹

Merits of the grapefruit include: smooth and shiny skin, firm fruit, and absence of mold or bruising.

Faults of the grapefruit include: dull or wrinkled skin, soft fruit, and the presence of mold or bruising.

Green onions (vegetable) are immature onion plants. Green onions have thick, straight stems with roots trimmed short.

Merits of green onions include: no large bulge at the base, clear white base color, and dark green tops. Green onions should be fresh and clean.

Faults of green onions include: wilted or damaged tissues, or soft tops. Another fault is when the base bulges more like an onion.

Head lettuce (vegetable) is a solid, round head of green leaves. The midribs and center leaves are nearly white.

Merits of head lettuce include: a firm, crisp, clean, solid head heavy for its size.

Faults of head lettuce include: wilted, dirty, loose, or damaged leaves.

Jicama (fruit) is a large tuberous root from a legume plant.

Merits of jicama include: tubers free of bruises or cracks and tissue that appears fresh and firm.

Faults of jicama include: cracks, bruises, and soft tubers.

Kale (vegetable) has grayish or blue-green curly leaves. Kale looks like a non-heading cabbage.

Merits of kale include: firm leaves uniform in color.

Faults of kale include: wilted, dirty, or damaged leaves or uneven color.

Kiwi (fruit) is an egg-shaped fruit with bright green flesh and brown skin covered with brown fuzz. A ring of small black seeds is embedded in the flesh. The seeds are edible.

Merits of kiwi include: plump, fragrant fruit with skin free of spots or blemishes.

Faults of kiwi include: wrinkled, soft, or very small fruits, and blemishes or soft spots on the fruit.

Kohlrabi (vegetable) has an enlarged stem measuring about 2 to 3 inches in diameter. Leaf scars and petioles of kohlrabi are in a spiral pattern. Kohlrabi may be round or shaped like a toy top.

Merits of kohlrabi include: uniform size, tender stem, and even color.

Faults of kohlrabi include: an oversized (larger than 3 inches), wilted, damaged, or soft stem.

Leaf lettuce (vegetable) consists of a rosette of tender, green leaves attached to a stem. The roots are removed.

Merits of leaf lettuce include: firm, crisp leaves attached to the stem and having uniform color and size.

Faults of leaf lettuce include: wilted, dirty, or damaged leaves.

Leeks (vegetable) look like large, green onions with thick, straight, 1- to 2-inch thick stems. Leeks have flattened, green leaves.

Merits of leeks include: uniform size, shape, and color with dark green tops and clear white bulbs.

Faults of leeks include: uneven color, faded or pale tops, or a wilted or damaged product.

Lemons (fruit) are a bright yellow, oblong shaped fruit. The skin is smooth, and the fruit may have a slight protrusion at the stem end. The inner flesh is light in color with a fragrant smell and acidic taste. ¹

Merits of the lemon include: skin that is vibrant colored and smooth. The skin should lack blemishes. The flesh should be juicy and fragrant.

Faults of the lemon include: pulpy or dry flesh. Avoid skin that is bruised or blemished.

Mint (herb) is a perennial herb known for its distinctive minty smell.

Merits of mint include: green bunches that are fresh and not wilted. Mint should be free of insect damage or yellowing and should have a strong, pleasing aroma.

Faults of mint include: yellow leaves, wilting, signs of insect damage, and blackening of the stems.

Muskmelons or cantaloupes (fruit) are netted or ribbed, round to oval fruits. The fruits have cream-colored netting on rinds and greenish to yellow skins.

Merits of muskmelons include: clean, firm fruits free of soft spots, scratches, or decay. Netting should be deeply ridged over melons. Color should be even.

Faults of muskmelons include: over or under ripeness, poor color, blemishes, or coarse netting.

Mustard (vegetable) consists of green leaves that are used fresh or cooked.

Merits of mustard include: fresh, uniform, and clean leaves and stems.

Faults of mustard include: dirty, diseased, discolored, or wilted leaves or stems.

Okra (fruit) has pointed, velvety pods. The pods may be green, yellow, or somewhat red. The pods should be partially mature.

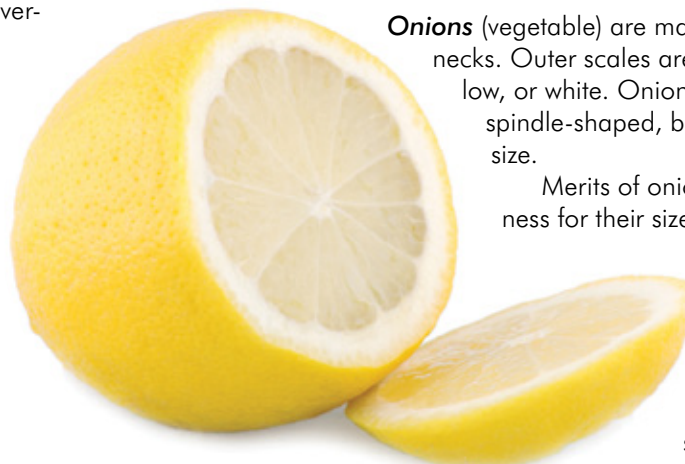
Merits of okra include: uniform pod size, shape, and color. Pods should be clean, fresh, and crisp.

Faults of okra include: uneven color, damaged, overly mature, or wilted pods.

Onions (vegetable) are mature bulbs with dry roots and dry necks. Outer scales are dry and can be red, brown, yellow, or white. Onions may be flattened, round, or spindle-shaped, but they should be heavy for their size.

Merits of onions include: even color and heaviness for their size. Onions also should have clear skin, thin necks, good color, and good shape, and they should be uniform in size.

Faults of onions include: any damage, too many layers of outer skin removed, or thick, soft necks.



Oranges (fruit) are a round fruit that bears similarity to grapefruit but are smaller. The rind tends to be somewhat rough and is orange to yellow-orange in color. The flesh is yellow-orange and sweet to the taste. ¹

Merits of the orange include: smooth and shiny skin, firm fruit, and absence of mold or bruising.

Faults of the orange include: dull or wrinkled skin, soft fruit, and the presence of mold or bruising.

Parsley (herb) has curled or smooth green leaves with no flowers or seed heads.

Merits of parsley include: fresh, deep green color and crisp, clean leaves.

Faults of parsley include: wilted or yellowish foliage, or foliage damaged by insects.

Parsnip (vegetable) is a long, tapered, creamy-white root.

Merits of parsnips include: uniformity in size and true-ness to type. Parsnips should be free of side roots. They also should be firm, solid, and exhibit good color.

Faults of parsnips include: cracked or branched roots, rubbery flesh, or uneven color. Warty or over or undersized roots also should be faulted.

Peas (vegetable) are full-size, tender, green seeds in fresh, green pods.

Merits of peas include: freshness, bright green color, and uniform length and size.

Faults of peas include: large, empty, or partially filled pods. Discolored, damaged, or over mature peas also should be faulted.

Peppers (fruit) are green, red, or yellow fruits. They have three or four lengthwise lobes, and their shapes may be round or long and tapered. Peppers have deep color. Peppers are firm and heavy with thick walls.

Merits of peppers include: uniform size, color, and variety. Peppers should be crisp, heavy, smooth, and free of blemishes. Stems should be attached but cut cleanly. Peppers should have the same number of lobes or sections.

Faults of peppers include: dull or rough texture and fruits that are off-color or light weight. Other faults include: soft spots or damage from sunscald, disease, or insects.

Pineapples (fruit) are oval or cylindrical and are topped by a crown of coarse leaves. The pineapple is a multiple fruit, or one that is made up of numerous flowers fused together. The skin of the pineapple has many scales and is yellow when ripe. The inner flesh is juicy, sweet, and yellow in color. There are no seeds inside the fruit, but the core of the pineapple is fibrous and white.¹

Merits of pineapples include: green and healthy top, firm fruit, and a bright yellow color.

Faults of pineapples include: brown leaves, soft fruit, bruises, mold, and sour smell.

Potatoes (vegetable) are swollen underground stems with buds (eyes). Potato skins can be smooth or russet (rough). Color

and shape may differ among varieties. Potatoes should be heavy for their size and should show no green spots.

Merits of potatoes include: medium size tubers (best show size 8 to 10 ounces) that are firm and plump. Skins should be smooth or russet, depending on the variety, and free of scab, mosaic, or other damage.

Faults of potatoes include: immaturity, rubbed off or thin skin, or odd shapes. Bruised or diseased potatoes also should be faulted.

Radishes (vegetable) are crisp, swollen roots measuring up to 1¼ inches in diameter. Radishes may be round or long, and their skin may be red, white, or purple. They are white inside.

Merits of radishes include: firm, crisp roots with bright color. Radishes should show good shape for their variety, and skins should be smooth and clean.

Faults of radishes include: poor shapes or colors, rough textures, or wilting. Radishes that are over mature, woody, or pithy should be faulted.

Raspberries (fruit) are aggregate fruits (one flower with multiple sections). When picked, their central core remains on the plant; therefore, the fruit is hollow when picked. Raspberries may be red, black, purple, or golden in color when ripe. ¹

Merits of the raspberry include: fruit is juicy and fragrant and has a rich color; the fruitlets are firmly held together; the fruitlets are not over or underripe, and they have unblemished skin.

Faults of the raspberry include: fruitlets that are soft and falling apart, leakage from fruitlets, and bruising or mold on the skin.

Rhubarb (vegetable) is a leafstalk with a small portion of the leaf blade included. The skin and inside of the stalk either may be red or green. Rhubarb is a vegetable because the edible leafstalk is not the seed-bearing portion of the plant.

Merits of rhubarb include: clean stalks and foliage, uniform color, and uniform stalk sizes.



Faults of rhubarb include: absent, wilted, or dirty leaf blades or damaged stalks.

Rosemary (herb) is an aromatic herb with slender, pointed leaves.

Merits of rosemary include: leaves that are green and pliable.

Faults of rosemary include: leaves that are brittle and dry.

Rutabagas (vegetable) are large, round, or slightly elongated roots. Rutabagas may include several smaller roots at the base. Their skin will be white to yellow, and the top may be purplish.

Merits of rutabagas include: uniform size and trueness to type. Rutabagas should be free of side roots, be firm and solid, and exhibit clear color.

Faults of rutabagas include: roots that are cracked or branched, rubbery flesh, or uneven color. Warty, under or oversized rutabagas also should be faulted.

Shallots (vegetable) are round or oblong bulbs. Shallots have dry yellow or red skin and measure about 1 inch in diameter. They may be up to 2½ inches long.

Merits of shallots include: bulbs that are crisp and have uniform color. Shallots should be relatively heavy, have clear skin, and be uniform in size and shape.

Faults of shallots include: thick, soft necks. Damaged or over or under mature bulbs also should be faulted.

Snap beans (fruit) are crisp pods containing nearly full-size seeds. The pods may be green, yellow, purple, or green with purple spots.

Merits of snap beans include: freshness, uniform color and length, and long, slender shapes. The pods should be brittle and fleshy, well-filled, and free from defects. Both ends of the pods should be intact, and pods may be straight or curled, depending on the variety.

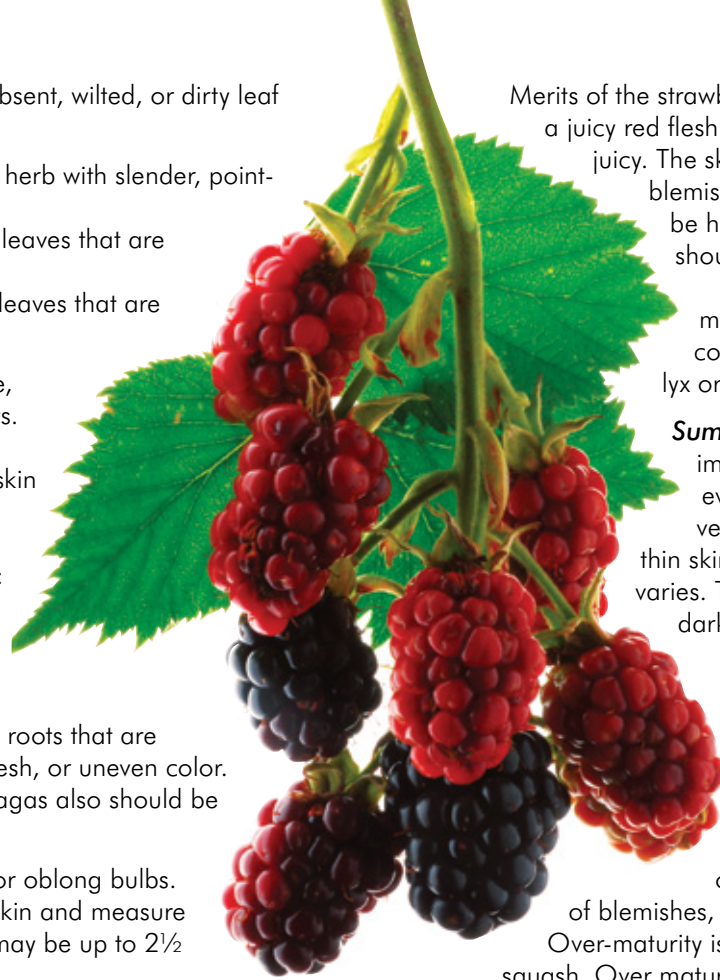
Faults of snap beans include: pods that are tough, wilted, stringy, pale or discolored, rusty, unevenly filled, or over mature.

Spinach (vegetable) consists of thick, dark green leaves that may be smooth or crumpled. Spinach is often harvested as a whole plant.

Merits of spinach include: clean and crisp foliage with fresh, green color.

Faults of spinach include: wilted foliage, dark or poor foliage color, or a gritty texture. Evidence of bolting is also a fault. Bolting is when the plant becomes reproductive and sends up a flower stalk.

Strawberries (fruit) are cone-shaped, red fruits having a skin scattered with small, hard seeds. Strawberry inner flesh is rich red and juicy. The green calyx (the outer covering of the flower bud) may be attached at the stem end. The strawberry is an aggregate fruit. ¹



Merits of the strawberry include: rich red skin with a juicy red flesh. The core should be fleshy and juicy. The skin should be free of bruises and blemishes. If present, the calyx should be healthy and green. No visible dirt should be present on the fruits.

Faults of the strawberry include: mold present on the skin, pulpy core, bruised flesh, and a brown calyx or soft tissue near the calyx.

Summer squash (fruit) is a tender, immature fruit. Squash is crisp and even in color, and the seeds are very immature. Summer squash has thin skin. The shape of summer squash varies. The color can be yellow or light to dark green, or squash can be striped.

Merits of summer squash include: an attached stem, heavy weight for size, clear and even color, maturity, and freedom from blemishes.

Faults of summer squash include: stems that are absent or soft, light weight, presence of blemishes, or fruits not uniform to type.

Over-maturity is a very common fault of summer squash. Over mature squash are often squishy and show bruising.

Sweet corn (vegetable) has well-filled kernels on ears covered with fresh, green husks. Sweet corn kernels should be in the milky stage. In this stage, kernel juices are milky white when kernels are squeezed.

Merits of sweet corn include: uniform in length, size, and color ears, according to variety. Kernels should be full and in the milky stage.

Faults of sweet corn include: immature, unfilled, over-ripe, or hard kernels. Sweet corn with uneven rows of kernels or rows not filled to the tips of the ears should be faulted. Also, damage from worms, insects, or disease is a fault.

Sweet potatoes (vegetable) are round, spindle-shaped, or cylindrical roots. Sweet potatoes may have red, orange, or yellow skin, and skin can be smooth or russet.

Merits of sweet potatoes include: uniform shape, size, and color. Sweet potatoes should be free from blemishes and should be fresh.

Faults of sweet potatoes include: roots that are branched or cracked, uneven in color, or blemished.

Thyme (herb) is a perennial herb. Thyme has a strong lemony flavor.

Merits of fresh thyme include: green bunches that are fresh and not wilted. Thyme should be free of insect damage or yellowing and should have a strong, pleasing aroma.

Faults of thyme include: yellow leaves, wilting, signs of insect damage, and blacking of the stems.

Tomatoes (fruit) can be red, orange, or yellow. Tomatoes can range from ½ inch to 6 inches in diameter and weigh

up to 1 pound. They are firm and heavy but not soft or over-ripe. Cherry tomatoes are smaller in diameter than standard tomatoes.

Merits of tomatoes include: medium size according to variety. Tomatoes should be firm and should show clear color typical of variety. They should be clean with no cracks. Stems should be closely trimmed, or all stems should be removed. Tomatoes should show only a small blossom scar.

Faults of tomatoes include: coarse skins or over or under ripeness. Bruised, soft, cracked, or lobed tomatoes should be faulted.

Turnips (vegetable) are round roots that may either be pure white or have a purple top. Turnips have thin, tender skin.

Merits of turnips include: uniformity in size, trueness to type, and freedom from side roots. Turnips should be firm and solid with clear, clean color.

Faults of turnips include: roots that are cracked or branched, rubbery flesh, or uneven color. Warty or under or oversized turnips for the type should be faulted.

Watermelons (fruits) are round or oblong fruits with gray-green, green, striped, or yellow skin. Watermelon flesh may be red, pink, or yellow and size varies.

Merits of watermelons include: good weight and medium to large size (10 to 20 pounds). Watermelons should exhibit bright color with even striping over the whole melon. Watermelon shapes should be even and without bulges, furrows, or dimples. If there is a yellow spot (rather than white) where the melon rested on the ground, it is ripe.

Faults of watermelons include: light weight, uneven shape or color, or presence of blemishes. A white, rather than yellow, ground spot also should be faulted.

Winter radishes (vegetable) are large, round, or elongated roots. Their skins may be black, white, or pink. Their flesh should be firm, crisp, and white.

Merits of winter radishes include: firm, crisp, and bright colored roots. Winter radishes should show good, uniform shapes for the variety and should have smooth, clean skin.



Faults of winter radishes include: poor shape or color, rough texture, wilting, or over mature roots.

Winter squash (fruit) is a mature, hard-shelled fruit. Winter squash shapes and sizes vary. Winter squash should be heavy for its size.

Merits of winter squash include: an attached stem and heavy weight. Winter squash should show clear, even color, be mature, and be free from insect, disease, or mechanical injury damage.

Faults of winter squash include: lack of or a soft stem, uneven color, immaturity, or light weight. Winter squash also should be faulted if the fruit is blemished or not true to type.

Suggested Judging Points Scale (Use as a Guide)

Color	20 points
Condition	20 points
Form	20 points
Size	20 points
Uniformity	20 points

Suggestions for assigning points in each of the above categories follow:

Color

If the produce's color is clear, bright, and typical of the type: 11 to 20 points

If the color is faded or not uniform: 10 points or less

Condition

If the produce's condition is fresh, unblemished, and mature for the type: 11 to 20 points

If the produce is bruised, injured, or scarred by insect or disease damage: 10 points or less

Form

If the produce is formed symmetrically and is typical of the type: 11 to 20 points. Produce may vary in shape, but they will almost always be bilaterally symmetrical. If the produce's form is misshapen, over or under mature, or distorted by insect, disease, or mechanical damage: 10 points or less

Size

If the produce's size is typical for ideal edibility and consumer use: 11 to 20 points

If the produce is too small or overly large: 10 points or less

Uniformity

If the produce has uniform size, form, color, and condition: 11 to 20 points

If size, form, color, or condition is not optimal: 10 points or less

Vegetable, Fruit, and Herb Terms

Aggregate fruit	One flower with multiple sections.
Bulb	Fleshy, underground leaves on a shortened stem. Compressed leaf tissue.
Butt	The bottom end of a fruit or vegetable.
Cob	The portion of an ear of corn to which kernels are attached.
Core	The central part of a fleshy fruit.
Ear	The fruiting spike of a cereal such as corn or wheat.
End	The tip of a branch, stem, fruit, or vegetable.
Flesh	The succulent, thick, or juicy portion of a fruit or vegetable.
Fruit	The ripened ovary; may or may not contain seeds.
Head	A dense formation of leaves or flowers.
Herb	A plant consisting only of primary tissues. Lacks wood.
Husk	The outer covering of certain fruits or seeds, such as corn.
Kernel	The seed of a grass such as corn. Notes: The kernels that are eaten are the seeds, not the fruits, which are ripened ovaries. Corn is in the grass family (Poaceae).
Leaf	The plant part that photosynthesizes and transpires.
Lobe	Any division or segment of a plant organ.
Midrib	The main or central vein of a leaf.
Neck	Any constricted, slender area.
Outer shell	A hard or tough covering.
Pod	Any dry fruit.
Rib	An elongated ridge, as on a leaf.
Rind	A hard or tough outer layer.
Root	The plant part below ground responsible for anchoring and water and nutrient uptake.
Russet	Rough.
Seed	The product of sexual reproduction in plants.
Shank	The connecting part of a plant between functional parts.
Skin	The outer or surface layer.
Spear	A young shoot.
Stalk	The main supporting structure, stem.
Stem	The vertical axis of a plant.
Taproot	A stout, tapering, primary root such as a carrot or radish.
Tip	The end of a branch, leaf, or fruit.
Tuber	A thickened, compressed, fleshy, stem, usually underground.
Vegetable	Any other edible portion of a plant besides a fruit.

Descriptive Words: Merits

Fresh	Smooth
Tender	Clean
Succulent	Straight
Crisp	Firm
High quality	Compact
Tapering	Ripe
Maturity	Mature
Solid	Heavy
Edible	Table use
Words concerning uniformity:	Uniform size
	Uniform shape
	Uniform color
Words concerning trueness to variety:	Same type
	Same variety
	Typical shape
	Typical color

Descriptive Words: Faults

Blemish	Cracks
Bruise	Decay
Weather damage	Blossom scars
Insect damage	Soft
Mechanical damage	Sunburn
Diseased	Rust
Deteriorated	Waste
Woody	Fibrous
Tough	Stringy
Pithy	Puffy
Withered	Shriveled
Wilted	Over mature
Overripe	Discolored
Yellowing	Immature
Dull color	

Points to Remember:

- Make comparisons
- Grant merits, and criticize faults
- Use different terms
- Be sure you know what you are talking about
- Judge as if the produce would be eaten immediately
- Learn and enjoy!

Sample Reasons

- “I placed corn tray 1 over tray 4 because the latter tray offers the consumer the highest amount of quality product. It has fuller, plumper kernels with more evenly spaced rows. The corn ears in tray 4 showed insect damage and lacked overall consistency of color and size of kernels. Therefore, I placed corn tray 1 over tray 4.”
- “I placed tray 2 of beans over tray 4 because of the rusty and shriveled appearance of the beans in tray 4. Although I grant that tray 4 was more uniform in size, shape, and maturity, the presence of the rust and shriveling reduced tray 4’s use by the consumer. Tray 2 has the merits of bright color, a more edible product, and a crisp appearance; therefore, I placed tray 2 over tray 4.”

- “I placed corn tray 1 over tray 4 because of the numerous faults in tray 4. The corn ears in tray 4 were not fully developed and had many empty spaces. The earworm insect damage evident on ears in tray 4 also decreased its appeal to the consumer. Although the ears are not as large as those on tray 4, tray 1 showed more consistent color, filling of kernels, and freedom from insect damage. Therefore, I placed corn tray 1 over tray 4.”

Sample Class Placement

- “I place this class of leaf lettuce 1, 2, 3, 4. I placed tray 1 over tray 2 because of the crisp, green leaves on the rosettes and the uniformity of the rosettes on the tray. I placed tray 2 over tray 3 because tray 3 shows damage on the leaves from either weather or harvesting. Leaf lettuce on tray 2 is less uniform than that on tray 1 but does not show the damaged foliage like that on tray 3. I placed tray 3 over tray 4 because, even though there is damage to the leaves on tray 3, there is no wilting and the foliage is clean. I placed tray 4 last because the rosettes are wilted and are not of uniform size, and the foliage is dirty; therefore, I place this class of leaf lettuce 1, 2, 3, 4.”
- “I place this class of strawberries 4, 3, 2, 1. I placed tray 4 over 3 because of the bright colored fruits, juicy ripe flesh, and healthy green calyx tissue on the strawberries on tray 4. I placed tray 3 over tray 2 because tray 2 shows bruising of the fruit and brown calyx tissues. While tray 3 has some blemishes on the fruit, no bruising is evident, and the calyx tissues are green. I placed

tray 2 over tray 1 because tray 1 has white mold growing on the fruit, and the flesh is extremely soft. Therefore, I place this class 4, 3, 2, 1.”

References

¹ Many of the fruit descriptions were adopted from the University of Florida. Many topics relating to gardening and plant sciences are at <http://florida4h.org/projects/plants/index.shtml>.

A manual on vegetable identification and judging is at <http://florida4h.org/projects/plants/HortIDJudging/4HPSJ24.pdf>.

A manual on fruits is at <http://florida4h.org/projects/plants/HortIDJudging/4HPSJ22.pdf>.





TELEVISIONS

Shopping for a television (TV) doesn't have to be stressful! You don't have to be an expert to get a great deal on a TV. It just takes a little time and patience and you need to know what you want in the product before you can make a wise decision.

Key Terms

- **3-D Capability** – A feature which allows for content to be viewed in 3-D. For example a DVD that is in 3-D could be viewed properly if this feature is included in that TV model.
- **Anti-burn-in Features** – A feature on plasma TV's which prevent static images from permanently etching into the TV's phosphor coating. Examples include screensavers and motion adaptive technology where the picture shifts on the screen every few seconds when the program is paused.
- **Anti-glare Screens** – Generally on a plasma TV, a screen that reduces the reflectivity on the viewing area, making the picture quality better.
- **Component-Video Inputs** – Connections that allow for other devices to be hooked up to the TV. Examples include DVD player, video games, or other such items. The inputs are usually color coded as green, blue and red.
- **Digital Tuner** – A feature that enables the TV to receive free digital TV signals, including high definition programming via an over-the-air antenna. This feature has been required on all TV's since March 2007.
- **Extended Warranty** – A warranty that can be purchased when a TV is bought that will extend beyond the factory warranty on the item. Extended warranty coverage varies depending on the policies offered, the number of years the policy will last, and more.
- **Film Mode** – This feature improves the appearance of movies converted from film to video. Other terms used to describe this feature include: 3:2 pull down, motion compensation, or brand-specific names such as CineMotion and Film Mode.
- **Flat Screen** -- A type of television that is only 4-6 inches thick that can be put on a stand or mounted on the wall like a picture.
- **Front Projection** – A projector that is used with a screen to project movies or television on to a larger surface. Front projection systems require additional equipment such as speakers, cables, and a screen to work properly.
- **HDMI Inputs** – Connections on a TV that allow for HD capable input devices to be connect to things such as cable and satellite boxes, Blue-ray DVD players, or other HD equipment.
- **High Definition** – Refers to video having a resolution substantially higher than traditional television systems. Sometimes referred to as "HD" or "HDTV".
- **Internet-enabled** – Televisions that provide a broadband internet connection without using a computer. Internet-enabled TV's can be used to subscribe to services such as movie rentals (Netflix, Blockbuster, or Amazon on Demand), music from services such as Pandora, YouTube, Twitter, Flickr photos, and more. Also known as "web services."
- **LCD** – The use of lights behind the display screen to help illuminate it. These are typically fluorescent bulbs or some new sets use LED (light-emitting diode) backlights. LCD stands for "liquid crystal display."
- **LED-lit** – LED means "light-emitting diode. This refers to backlights used behind the display screen to help illuminate it.
- **Picture in Picture (PIP)** – This feature allows the viewer to watch two channels at once. One channel is in a small window while the other is shown on the full screen.
- **Plasma Screen** – A type of TV which has many tiny cells between two panels of glass which hold a mixture of noble gasses. The gas in the cells is electrically turned into a plasma which emits ultraviolet light to create the picture.
- **Rear Projection** – The technology used in large-screen TV's to generate the image on the screen from behind the viewing monitor. The technology uses a series of lenses and mirrors to direct the image toward the screen.
- **Resolution** – The degree of sharpness or clarity of a displayed image. Resolution is defined as a matrix of "pixels" per inch. For example, a screen resolution of 1920 X 1080 means that the first number is the number of horizontal rows of pixels on the screen and the second number is the number of vertical rows of pixels on the screen. Some models may list only one number such as 1080p. This number references the vertical rows of



pixels.

- **Screen Size** – The dimension of the screen on a TV measured on the diagonal and includes only the display area, not binet or housing.
- **Viewing Angle** – The maximum angle at which a display can be viewed with acceptable visual performance.
- **Wall Mount** – The installation of a TV on the wall similar to a picture frame or mirror.

Shopping for Televisions

When shopping for televisions, there are a number of considerations that may need to be reviewed before a decision is made. Below are brief explanations of some of the important aspects to take into account in selecting a TV.

1. **Price Range** – It is important to know how much money is budgeted for this purchase. This type of product is not an expendable item or something that is replaced often. There will be several choices of products, depending on how much money is available to spend.
2. **TV Type** – There are several different types of TV's on the market today. Most models are now flat screens, but there are different types of flat screens. The most common types are plasma or LCD. They look very similar but the technologies are different. There are also front projection models available. A front projection TV is a good choice for a large home theater but not very practical for everyday use.
 - **LCD TV** – This type of TV is lightweight, comes in a range of sizes and well suited for viewing in a bright room. Screen size can range from 23-60 inches from most manufacturers, but a few offer screens as large as 100 inches. Most LCD TV's are only 4-5 inches thick. Prices vary, depending on screen size and other features. There are more companies selling LCD TV's than plasma TV's, but LCD TV's generally cost more than plasma sets, but the gap is narrowing. Many LCD sets 40 inches or larger have 1080p resolution.
 - **Plasma TV** – This type of TV is 42 inches or larger. Most common sizes are 42-58 inches. Most models are 6 inches or less in depth and some new ultra-slim models are becoming available. Prices vary, depending on the screen size and other features. There are more models which have 1080p resolution.
 - **Front Projectors** – This type of TV is best for a theater-like experience at home. The projector is a separate piece from the screen and is usually mounted on the ceiling. The screen area is typically 70 to 200 inches. Price begins at \$1000 and goes up from there. Screens are an additional cost of several hundred dollars, depending on the size. The size of the picture can be altered, depending on the distance the projector is from the screen, if the projector is not mounted on the ceiling. Other items that must be purchased separately include speakers, TV tuner, cables, mounting brackets, and possibly other items.
3. **Screen Size** – In order to determine what size TV to purchase, it is important to know how big the space is where the TV is going to be placed. This will impact the size of the screen that is chosen. If the TV is going to be placed in a cabinet, be sure to measure the opening, allowing for a few inches of clearance to be able to insert the TV. If the TV is going to be mounted on the wall and there is a limited amount of space, be sure to measure the wall space.

Screen size is measured on the diagonal of the TV viewing area. It will be important to take a tape measure when looking for TV's so that the actual width and height can be measured on the TV if those dimensions are not provided on the product information or box.

Another consideration is the size of the room. It is recommended that for an average size room such as a living room, a 37-inch screen is recommended. For smaller rooms such as a bedroom or kitchens, smaller screens are recommended.

The distance that seating is from the TV may also impact the screen size. It is recommended that seating be at least 5 feet from 40-47 inch screen or six feet for 50-inch or larger screens. The larger the screen, the farther from it the viewer should be. When viewing a TV close up, the picture may not be as clear or look "snowy" or lines may be visible on the screen.
4. **Screen Resolution** – This refers to the number of pixels, or picture elements, a screen contains. The higher the resolution, the better the picture. The resolution may be given in a set of two numbers such as: 1920 X 1080. This means that the first number is the number of horizontal rows of pixels on the screen and the second



number is the number of vertical rows of pixels on the screen. Some models may list only one number such as 1080p. This number references the vertical rows of pixels.

The screen resolution chosen will determine if specific other features will be available. In order to be able to access HD signal formats or use Blue Ray DVD players, the screen resolution must be at least 1080p.

5. Features – What are the features that are most appealing to the buyer? Are those features available within your budget? Features may include but are not limited to the items listed below. Be sure to review the Key Terms for additional features.
 - Flat Screen
 - High Definition
 - Rear Projection
 - Video Conferencing Capabilities
 - Wireless connectivity
6. Brand – Research the different brands of TV's and choose brands that provide the features that are wanted. How well a brand is rated could have bearing on the decision.
7. Customer Reviews -- There may be helpful information that can be gained from customer reviews about specific products or brands. Take the time to read customer reviews if they are available and take that input into consideration.

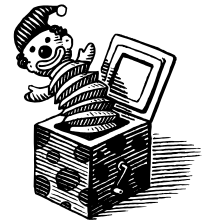
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TOYS

Toys bring a great deal of joy to children, and they also can be valuable learning tools. Exploring, pretending, and sharing are just a few of the important skills children develop when they play. Toys don't have to be expensive. A variety of toys for children exist. Some of them are safe and some of them are dangerous. How do you know which is which? The main idea is to pick the right toy for a particular child at the right time.



Here are a few helpful suggestions related to purchasing toys in general:

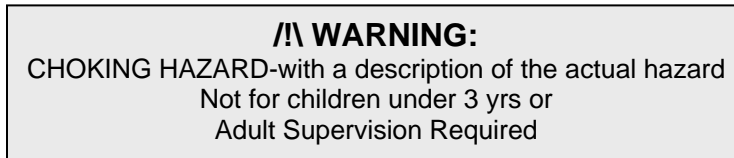
Acceptable Toys
Are safe. Any toy can be unsafe if given to the wrong child, to a child at the wrong age, or when it is misused. A child's safety depends on the types of toys selected, the way they are maintained, and the amount of safe handling taught and practiced in the home.
Are durable. Toys are mauled, hugged, dropped, stood on, chewed on, washed and dried. They need to stand up to all this normal wear and tear.
Work like they're supposed to. Nothing causes loss of interest as readily as a toy that fails to perform. It often results in frustration, anger and discouragement.
Are appropriate for the child's age. Toys should suit the physical, mental, and emotional abilities of the child. For example, an infant can not play with a two-wheeled bicycle; a school-aged child does not need a mobile for a crib. Many toys can be used by children at different stages, like blocks and modeling dough.
Stimulate creativity. The toy can be used in several ways and leaves room for imagining and learning.
Capture the child's interest and are fun. Children are drawn to appropriate toys and play with them spontaneously. Toys should reflect the child's interests.
Involve interaction with others. Encourages or even requires others like friends, siblings, or adults to play along with.
Can be kept clean easy.

Unacceptable Toys
Are dangerous. Unsafe toys have sharp corners, edges, and protrusions; are flammable; have easily lost or broken parts; toxic paint; might give an electrical shock; use glass instead of plastic in toy vehicle windows; have detachable parts that can be put into mouth, ears, nose; have fluffy trimmings that can be pulled off and swallowed; or are stuffed with toxic or unclean materials.
Are poorly constructed. Do not have proper labeling.
Cause anger or frustration by not working properly.
Are too mature for a particular child related to their physical, mental, and emotional abilities.
Have only one purpose and can be used only one way. Foster values the parents do not have. Cost too much.
Appear to contribute to misbehavior. They may stimulate too much excitement, aggression, or dangerous play.
Offer little chance of interaction. Wind-up or automated toys do not allow the child to be in control. The child merely becomes a passive observer of the toy's repetitive actions. These toys are often easily broken and irreparable, dangerous and expensive.
Cannot be cleaned with soap and water.

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Read the Label

The U.S. Consumer Product Safety Commission requires toy manufacturers to meet stringent safety standards and to label certain toys that could be a hazard for younger children. Look for labels that give age recommendations and use that information as a guide. Labels on toys that state "not recommended for children under three ... contains small parts," are labeled that way because they may pose a choking hazard to children under three. Toys should be developmentally appropriate to suit the skills, abilities and interests of the child. Effective January 1, 1995 products that are manufactured in or imported into the United States must comply with the Child Safety Protection Act. Look for this symbol on toy packaging:



When purchasing art materials and supplies, including crayons and paint sets, look for the designation "**ASTM D-4236.**" This means the product has been reviewed by a toxicologist and, if necessary, labeled with cautionary information.

When purchasing electronic toys, look for the Underwriter's Laboratories (**UL**) seal. This means the toy has been tested for safety. The labeling requirements specify that certain precautionary information shall be listed on labels on children's electrical products. The labeling is designed to help buyers choose the right toy for the right age and to warn the user of potential hazards. The package of every such product must carry a cautionary message and a minimum age recommendation. No item with a heating element may be recommended for children under 8 years of age. There are some hobby items, such as wood burning kits, that reach very high temperatures and have been exempted from certain maximum surface temperature regulations. These items cannot be recommended for, and should be kept out of reach of, children under 12 years of age.

Certain areas of electronic products also must be labeled:

- accessible surfaces that exceed certain specified temperatures must carry a warning of the danger
- toys with replaceable electric lights must carry a warning of the maximum safe wattage for a replacement bulb and a notice to disconnect the plug before changing the bulb
- products with non-replaceable lights will be so marked
- products not designed to be immersed in water must carry a notice to that effect.

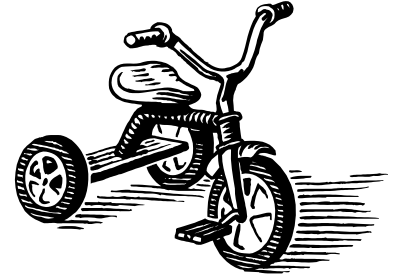
Storing and Caring for Toys

Toy safety involves choosing the right toy, checking it regularly for damage, and storing it safely. One of the greatest dangers in toy storage is the toy chest with a free-falling lid. Children are injured when the lid falls on their head, neck, or arms. Upright lids in trunks and footlockers pose this kind of hazard. Open chests or bins, chests with lightweight removable lids, or chests with sliding doors or panels do not present the hazard of a falling lid. Low, open shelves where toys can be reached easily and put away are a safer alternative and are often preferred by children. Caring properly for toys will extend their usefulness and avoid accidents and injuries. Don't leave indoor toys outdoors overnight. Rain or dew could damage them, making them unsafe. Store toys in a special closet or shelf so they won't be tripped over or broken. Train toddlers to put their toys away. Throw away broken toys; they are hazardous.

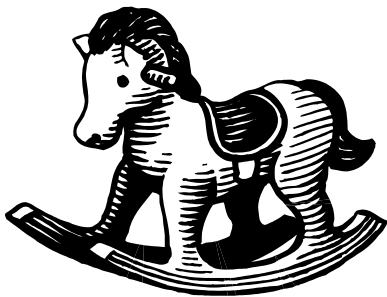


Think Toy Safety

More than 120,000 children are taken to hospital emergency rooms each year for treatment of toy-related injuries. Evaluate toys for your children from the standpoint of safety. The following are some guidelines:



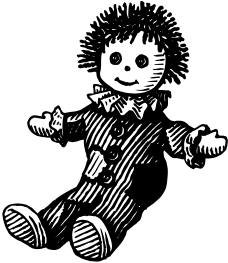
- Choose toys appropriate to the child's age. Some toys intended for children more than 3 years old may contain small parts, which could present a choking hazard for infants and toddlers.
- Toddlers should never play with any object that is smaller than a half dollar.
- Think BIG when selecting toys, especially for children under age three. Big toys without small parts can be enjoyed by youngsters of different ages. Keep toys intended for older children, such as games with small pieces, marbles, or small balls, away from younger children.
- Keep uninflated balloons out of reach for children under age 6, and discard pieces of broken balloons because of the choking hazard.
- Explain and show your child the proper use of safety equipment such as bicycle helmets. Studies show that helmets can reduce severe injuries from a fall.
- Check all toys periodically for breakage and potential hazards. Damaged toys can be dangerous and should be repaired or thrown away immediately.
- Store toys safely. Teach children to put toys away so they are not tripping hazards. Periodically check toy boxes and shelves for safety. Visit the Web sites listed on page 5 for more information.
- Some toys require adult supervision. Supervise children when playing with pull toys with long cords; they could strangle a child. Check toys with moving parts for safety. Make sure the child is mature enough for the toy.
- Follow instructions carefully and supervise children using any electronic toys. Failure to follow manufactures instructions may result in injury.
- Give outdoor play equipment and toys such as gym sets, skates and bikes to children who are old enough to use them safely.
- Teach children not to use bicycles, tricycles, or sleds where there is traffic, and to use them carefully in areas where other children play.
- Have children take off roller skates or in-line skates before crossing the street. They should always wear a helmet and other safety gear.



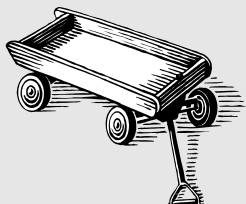
Age Appropriate Toys

There are many toys to choose from, but most can be grouped into specific developmental categories: physical or muscle; sensory (sight, sound, hearing, touch); social; and intellectual or creative development. Finding age appropriate toys for children enables them to grow and develop at a level suitable for them. Refer to the table on the next two pages for information on which toys are best for which ages.

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Age	Toys to Choose	Toys to Avoid	Age	Toys to Choose	Toys to Avoid
<p>Newborn to 1 year</p> <p>Age of Awareness</p> <ul style="list-style-type: none"> • Need toys with bright colors and texture • Toys should be washable, unbreakable, and large enough so they won't be swallowed. • Enjoy toys to look at, feel, chew on, and drop. 	<ul style="list-style-type: none"> • Brightly colored objects • Pictures within view but out of reach • Mobiles that have objects attached with cords less than 12 inches long • Unbreakable toys that rattle or squeak • Washable dolls or animals with embroidered eyes • Stacking ring cones • Tapes or CDs with gentle music 	<ul style="list-style-type: none"> • Toys with parts smaller than 1 ¼ inch • Toys with sharp edges • Toys with detachable small parts • Toys with toxic paint • Toys with cords more than 12 inches long • Stuffed animals with glass or button eyes • Balloons • Flammable items 	<p>2 to 3 years</p> <p>Explorative Age</p> <ul style="list-style-type: none"> • need "hands on" toys that require little coordination <div style="text-align: center;">  </div>	<ul style="list-style-type: none"> • Play dough • Large crayons • Pegboards with large pieces • Low rocking horses • Sandbox toys • Soft balls or different sizes • Cars or wagons to push • Simple musical instruments • Simple dress-up items like hats, scarves, and shoes • Sturdy riding toys • Books that rhyme 	<ul style="list-style-type: none"> • Toys with sharp edges • Toys with removable parts • Small objects such as beads, coins, or marbles • Electronic toys • Tricycles with seats more than 12 inches high • Riding toys • Flammable items
<p>1 to 2 years</p> <p>Investigative Age</p> <p>Along with the items listed for infants, this age group also enjoys any item that can be</p> <ul style="list-style-type: none"> • stacked • poured • opened • closed • pushed • pulled 	<ul style="list-style-type: none"> • Push and pull toys • Books with cloth or stiff pasteboard pages • Nonglass mirrors • Take-apart toys with large pieces • Blocks-foam, plastic, or cardboard • Nested boxes or cups • Musical and chime toys • Floating tub toys • Pounding and stacking toys 	<ul style="list-style-type: none"> • Small toys that can be swallowed • Toys with small removable parts • Stuffed animals with glass or button eyes • Toys with sharp edges • Flammable items 	<p>3 to 4 years</p> <p>Imitative Age</p> <ul style="list-style-type: none"> • Learn by doing • Becoming more social • Enjoy realistic toys 	<ul style="list-style-type: none"> • Dolls with simple cloths • Balls, any size • Non-electrical trucks, trains • Building blocks • Toy telephone • Dress-up clothes • Sturdy tea sets • Plastic interlocking blocks • Blunt scissors • Play dough • Washable markers, large crayons • Sewing cards • Simple board games • Books 	<ul style="list-style-type: none"> • Electronic toys • Flammable costumes • Toys with sharp edges or small, removable parts • Riding toys used in hilly or inclined driveways • Heavy toys

New Mexico 4-H Consumer Decision Making Classes R-2006

Age	Toys to Choose	Toys to Avoid	Age	Toys to Choose	Toys to Avoid
<p>4 to 5 years</p> <p>Beginning of Creative Age</p> <ul style="list-style-type: none"> • Enjoy painting and drawing • Enjoy building • Are energetic and active in their play 	<ul style="list-style-type: none"> • Building blocks • Simple construction sets • Modeling clay • Nonelectrical trains, battery operated toys • Puppets and puppet theater • Finger paints • Stencils • Board and card games • Simple musical instruments • Small sports equipment • Books • Bicycles with 20 inch wheels and training wheels 	<ul style="list-style-type: none"> • Toxic or oil based paint sets • Flammable costumes or ones that can be easily tripped over • Kites made of aluminized polyester film • Electronic toys (unless battery operated) • Shooting toys and darts with pointed tips • Fireworks of any kind 	<p>6 to 8 years</p> <p>Beginning of Dexterity Age</p> <ul style="list-style-type: none"> • Enjoy activities with a finished product • Develop keen interest in sports • Better understanding of rules and enjoy playing with others 	<ul style="list-style-type: none"> • Construction sets • Sled, roller skates • Sewing materials • Simple camera • Printing and stamp sets • Paints, colored pencils • Sketch pad • Kites • Battery powered electronic toys • Jigsaw puzzles • Dominoes • Board games • Simple toy sets • Dolls 	<ul style="list-style-type: none"> • Kites made of aluminized polyester film • Shooting toys and toys with loud noises like cap guns • Fireworks of any kind • Sharp-edged tools • Electronic toys that plug in • Bikes or skateboards without helmets
<p>8 to 12 years</p> <p>Specialization of Tastes and Skills</p> <ul style="list-style-type: none"> • Enjoy many of the same types of toys as younger children with more complex activities • Can learn math and problem solving skills through card and board games • Enjoy active and social toys 	<ul style="list-style-type: none"> • Hobby materials • Arts and crafts materials • Musical instruments • Sports equipment • Camping equipment • Construction sets • Electronic trains • Bicycles (26 inch wheels for children age 10 and older) 	<ul style="list-style-type: none"> • Fireworks of any kind • Air rifles • Chemistry sets • Darts • Skateboards • Arrows 	<p style="text-align: center;">Web Resources for More Information on Selecting Toys</p> <p>American Academy of Pediatrics http://www.aap.org/</p> <p style="text-align: center;">Toy Manufacturers of America http://www.toy-tma.org/consumer/parents/safety/4toysafety.html</p> <p style="text-align: center;">U.S. Consumer Product Safety Commission http://www.cpsc.gov</p> <p>References</p> <p><i>Understanding Children – Toys</i>, by Lesia Oesterreich, Iowa State University, University Extension</p> <p><i>Buying Age Appropriate Toys</i>, The Nebline, University of Nebraska, Cooperative Extension</p> <p>US Consumer Product Safety Commission,</p> <ul style="list-style-type: none"> • <i>Child Safety Protection Act Fact Sheet</i> • <i>The Dangers of Electric Toys</i> • <i>Toy Safety Shopping Tips</i> 		
					

Turner, 2006

Umbrellas

UMBRELLAS

Umbrellas are available in a wide range of colors, styles and designs. They are used as protection from rain or sun. The word umbrella comes from the Latin word *umbra*, meaning shade or shadow.

Parts of the Umbrella

Umbrellas are composed primarily of three sections: the canopy, the shank, and the handle.

The **canopy** is that part of the umbrella that spreads and protects the user from rain or sun. The material from which the canopy is made is stretched over metal ribs, which form the frame for the canopy. These ribs arch radially and impart the desired shape to the canopy. The ends of the canopy are stitched to rounded tips that slip over the ends of the ribs and hold the canopy in place. A tape attached to the canopy may be wound around it and fastened or a sheath may be slipped over the umbrella. **Spreaders** or **stretchers** are attached at the center of the ribs to enable the canopy to be opened or closed.

Between the canopy and the handle is a shaft (if wood) or rod (if metal). Over the shaft is a metal sleeve that slides up and down and enables the spreaders to which it is attached to be opened or collapsed. Two small springs, which can be depressed into the shaft by slight finger pressure, hold the sleeve in position. Some umbrellas have push-button, self-opening spreaders that operate with a hidden spring. A metal or plastic cup that fits over the tips of a closed umbrella may be affixed to the shank.

A rigid handle enables the user to hold the umbrella. Straps or cords are frequently attached to umbrellas so that they can hang over the wrist or shoulder. Many umbrellas also have carrying cases, pouches or loops.

Special Construction Features

The number of ribs in an umbrella differs, depending on the size of the umbrella, its construction, and its shape. The sturdiness of the ribs determines the quality of the umbrella. Self-opening umbrellas usually have 7 to 8 ribs; folding umbrellas usually have 8 ribs; umbrellas for young people usually have 8 ribs; slim umbrellas usually have 10 ribs; and other styles may have 16 ribs.

To stand up to the wind, umbrella frames must be strong yet flexible. The same rib material should be able to give, but spring back to its original form.

Materials Used for Umbrellas

The canopy is made from fabrics or plastics that are water repellent. Cotton is frequently used; it must be closely woven and may or may not have a plastic finish to increase its protective qualities. Teflon, a light-weight, quick-drying, coating is common. Gloria, originally a cotton and worsted combination but now a silk or rayon and cotton fabric, is a tightly woven, plain weave material commonly used in men's black umbrellas. Drill, a twill-weave cotton is often used for beach umbrellas. These materials are often colorfully dyed or printed.

Silk, acetate, rayon, and nylon make rain- and sun-resistant fabrics for umbrellas. Transparent umbrellas may be made from vinyl plastic. Outer sheaths may be made from the same material as the canopy or from leather or plastic.

The larger the canopy the more susceptible it is to the wind. The fabric in a parasol, which is used to provide protection from the sun, does not have to be water repellent and may be organdy or lace.

The ribs and spreaders are usually made of grooved metal. Steel is most commonly used for these parts. Better umbrellas have very sturdy steel ribs and spreaders. Brass plating for inexpensive umbrellas and chromium plating or enameling for more costly umbrellas keep the steel from rusting. Solid brass ribs and spreaders add to the sturdiness of the frame.

The shaft is made from wood; if made from metal (aluminum), it is called a rod. Shafts are often reinforced with fiberglass for strength and lightness. The tips are made from metal or plastic. Handles are made in a wide range of materials, such as woods, plastics, bone, horn, cane, bamboo, leather, or metal. They may be carved, studded with jewels, engraved, or hand painted. The most common shapes for handles are the **crook** (shaped like a question mark), the **straight**, the **golf**, and the **opera**. Umbrellas may have braided cord, leather, or plastic straps; beads; or chains that permit easy carrying.

Some Types of Umbrellas

Descriptions of various types of umbrellas follow:

Ballerina or Parasol: Dainty looking with ruffled edge that resembles ballerina's skirt.

Beach: Made from waterproof materials. Usually has gaily colored stripes or figured patterns. Center pole is usually made of wood, plastic or aluminum and is pointed on one end to fit easily into sand or soil. Size varies from 5 to 8 feet in diameter.

Bubble Shape: Deeply domed to cover the head and shoulders. Must be made of transparent material.

Folding: Ribs fold to permit umbrella to be reduced in size for ease in carrying or packing.

Golf or Sports: Large, colorful umbrellas with 8 ribs. Usually has alternating color panels in the canopy. The ribs are 27 to 35 inches long and the handle is correspondingly longer.

Child's: Approximately 15 inches in length, with 8 ribs. Often made in clear plastic or is colorfully decorated.

UV: Some umbrellas have sun protection ratings. A good sun umbrella has a UV rating of 50 or more.

Self-Opening: Push button works hidden spring that releases sleeve, pushing ribs into place. When closed, tip ends of ribs are held in place in metal or plastic cup.

Windproof: Can be snapped back into shape if blown inside out and will not break when pulled back into shape. Regular or folding style.

Wind-Resistant: Built for strength against the wind and can withstand fairly high winds without breaking or turning inside out.

Care of Umbrellas

SOME OVERALL CONSIDERATIONS:

Select type appropriate for intended use.

Select size in relation to use.

Closed size is important for some usage.

Folding (travel size is ideal for book bags, brief cases, riding buses, travel.

Shape may be important for use.

Plastic canopies may puncture.

Color may be selected to match raincoat, briefcase, etc.; to be easily identified; to not show soil; add color to dreary weather.

Strong, sturdy ribs are more durable and wind resistance.

Number and closeness of ribs may be indicator of durability,

Cost should be evaluated in relation to funds available, predicted loss, and intended use.

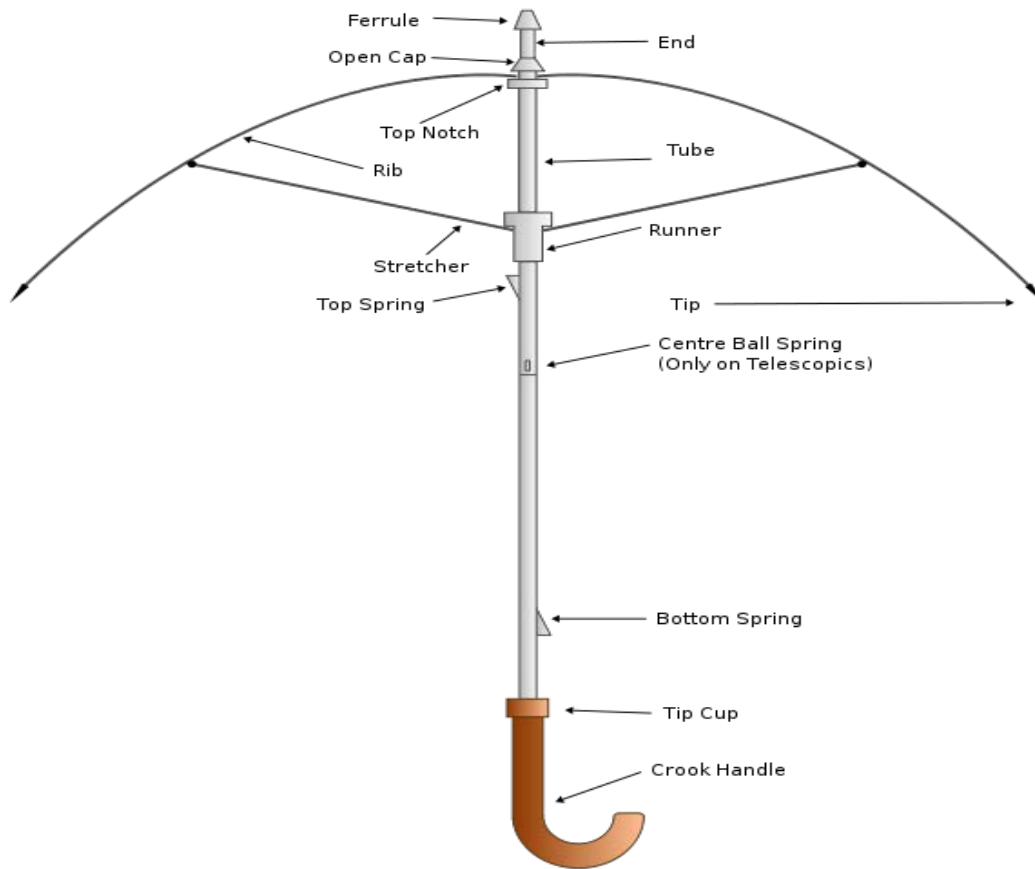
It is desirable to open a wet umbrella after use to allow it to dry thoroughly. This keeps the fabric from spotting and from wrinkling excessively. When dry, the umbrella may be rolled neatly and fastened shut or encased in a sheath. On a windy day the top of the umbrella should be directed into the wind to avoid its being blown inside out.

Price

Umbrellas range in price from \$3.00 to over \$200 and, for the most part, the price reflects the quality of the umbrella. Although, some people prefer to buy cheap and replace the umbrella when it breaks, those who've had to deal with a cheap umbrella in a rainstorm often choose to pay a little more to avoid having their umbrella flip inside out, drip water on their head, or fall apart just when they need it most.

Still, not many people are willing to spend more than \$50 or \$75 for an object that is easily lost or misplaced. Fortunately, there are quite a few reasonably good quality umbrellas available in moderate price ranges. Umbrellas are also available in various styles and choosing an umbrella may mean compromising one advantage for another.

The right umbrella is a balance between cost and quality, as well as convenience and durability. Spend the time to find a good quality, reasonably-priced umbrella and it will serve you well for years to come.



Yogurt

What is Yogurt?

Yogurt is a cultured dairy product that can be made from whole, lowfat or skim milk, including reconstituted nonfat dry milk powder. The Food and Drug Administration (FDA) describes yogurt as a food produced by culturing one or more of the basic ingredients (cream, milk, partially skimmed milk, skim milk, or the reconstituted versions of these ingredients may be used along or in combination) and any of the optional dairy ingredients with a characterizing bacteria (live and active) culture that contains the lactic acid-producing bacteria (*Lactobacillus bulgaricus* and *Streptococcus thermophilus*). Yogurt is made by inoculating certain bacteria (starter culture), usually *Streptococcus thermophilus* and *Lactobacillus bulgaricus*, into milk. After inoculation, the milk is incubated at approximately 110°F ± 5°F until firm; the milk is coagulated by bacteria-produced lactic acid. Yogurts may have additional cultures, sweeteners, flavorings, color additives, stabilizers and emulsifiers and preservatives add to it. Yogurts may be heat-treated after culturing to extend the shelf life of the food. Most yogurts in the United States is made from cow's milk, any type of milk can be used. In other countries, yogurt is made from the milk of water buffalo, yak, goat, horses and sheep.

Because of yogurt's is made with live and active cultures, it has become a healthy lifestyle favorite. Yogurt comes in many flavors and varieties which appeals to everyone's taste buds.

Health Benefits

Yogurt is a nutrient-dense food that meets a wide variety of nutritional needs at for everyone. Yogurt is a good source of protein-an average 8-ounce serving contains between 8 and 10 grams of protein, or 16 to 20 percent of the Daily Recommended Value (DRV). Because yogurt is cultured the amount of protein often exceeds liquid milk. Yogurt is also an excellent source of calcium. Yogurt may contain up to 35 percent of the Recommended Daily Intake (RDI) for calcium. Yogurt is low in fat and high in certain minerals and essential vitamins, including riboflavin B2, Vitamin B12, phosphorus and potassium.

The words "live and active cultures" refer to the living organisms—*Lactobacillus bulgaricus* and *Streptococcus thermophilus*—which convert pasteurized milk to yogurt during fermentation. Researchers are currently exploring how live and active culture yogurt may have a beneficial effect on the immune system, the potential to lower cholesterol, and how it may combat certain types of cancer-causing compounds, particularly in the digestive tract.

Health Benefits of eating yogurt:

- ❖ May help reduce osteoporosis risk
- ❖ Yogurt can be eaten by people who are lactose intolerant
- ❖ Diets rich in calcium may help reduce hypertension
- ❖ May enhance the immune system of certain individuals
- ❖ Versatile and convenient –use as a substitute for mayonnaise, sour cream and cream cheese to lower calories
- ❖ May reduce the risk of colon cancer
- ❖ Excellent source of calcium
- ❖ Yogurt is considered a meat alternative because of high protein content
- ❖ Large variety of flavors and styles that can be used to reduce calories

Protein

An average eight-ounce serving of live and active culture contains approximately 20 percent of the Daily Value for protein.

Recommended Dietary Allowances (RDA) of Protein for Children

Age Group (years)	RDA (g/day)
1-3	13g
4-8	19g
9-13	34g
14-18	52 g (boys), 46g (girls)
Source: Food and Nutrition Board, Institute of Medicine of the National Academy of Science	

Calcium

Calcium is needed at every stage of life and yogurt with its live and active cultures are a great source. Calcium is critical for bone growth, development, and maintenance at every age and stage of life. Toddlers have an increased need for dietary calcium to support growth and skeletal development that takes place rapidly in the early years of life. Calcium needs continue into the teenage years and is particularly crucial for adolescent girls who need to stock their calcium supplies to prevent osteoporosis later in life. The need for calcium increases as the body matures. Adults achieve their peak bone mass at age 35 and after that bone loss begins to take place. Calcium intake is critical in helping reduce bone loss, especially for postmenopausal women.

Yogurt is rich in calcium, high in protein, tolerated by lactose-sensitive children and adults, convenient, versatile and tasty.

Dietary Reference Intake:

Age Groups (years)	Adequate Intake (mg/day)
1-3	500 mg
4-8	800 mg
9-18	1300 mg
19-50	1000 mg
51+	1200 mg

Source: Food and Nutrition Board, Institute of Medicine of the National Academy of Sciences

Calcium is an essential part of any balanced diet and is found in a wide variety of foods, most people just don't get enough calcium each day. Use the chart below to ensure that you are meeting your daily calcium quota.

Quick-Read Equivalency Chart

Food	Serving Size	Calcium (mg)
Live & Active Culture Yogurt (plain)	One cup	450 mg
Calcium-fortified Orange Juice	One cup	300 mg
Milk, (nonfat)	One cup	300 mg
Chocolate milk 1%	One cup	285 mg
Swiss Cheese	One ounce	270 mg
Cheddar cheese	One ounce	205 mg
Salmon (edible with bones)	3 ounces	180 mg
Frozen yogurt	1/2 cup	155 mg
Turnip greens, cooked	1/2 cup	125 mg
Dried figs	3	80 mg
Broccoli, cooked	1/2 cup	35 mg

Source: The Food Processor. Esha Research 7.0, 1998

Yogurt Varieties

Yogurt products come in a wide variety of flavors, forms and textures. Here are the common terms associated with yogurt products available today. Some of the definitions were established by the Food and Drug Administration (FDA), while others were determined by the manufacturers.

Lowfat and nonfat: There are three types of yogurt: regular yogurt, lowfat yogurt and nonfat yogurt. Yogurt made from whole milk has at least 3.25 percent milk fat. Lowfat yogurt is made from lowfat milk or part-skimmed milk and has between 2 and 0.5

percent milk fat. Nonfat yogurt is made from skim milk and contains less than 0.5 percent milk fat.

Lite (light) yogurt: 1/3 less calories or 50% reduction in fat than regular yogurt.

Swiss or custard: Fruit and yogurt are mixed together for individual servings. To ensure firmness or body, a stabilizer, such as gelatin, may be added. These products are also referred to as “blended” yogurt.

Frozen yogurt: Frozen yogurt is a non-standardized food and, therefore, is not subject to Federal composition standards, as is the case for “yogurt”. In order to qualify for National Yogurt Association’s (NYA) Live and Cultures seal, frozen yogurt must be a product made by fermenting pasteurized milk (can include skim milk and powdered skim milk, plus other ingredients), using traditional yogurt cultures, until the proper acidity is reached. Many manufacturers, according to their unique recipes, will then mix this (the “yogurt” component) with a pasteurized ice cream mix of milk, cream, and sugar, plus stabilizers or other ingredients needed for desired consistency. This frozen yogurt base mix can then be blended with fruit or other ingredients and then frozen. The freezing process does not kill any significant amount of the cultures—in fact, during the freezing process the cultures go into a dormant state, but when eaten and returned to a warm temperature within the body, they again become active and are capable of providing all the benefits of cultures in a refrigerated yogurt product.

Not all products terms “frozen yogurt” actually contain live and active cultures. Some so-called “frozen yogurts” use heat-treated yogurt, which kills the live and active cultures, or they may simply add in cultures to the mix along with acidifiers, and skip the fermentation step all together. To make sure that a frozen yogurt contains yogurt produced by traditional fermentation and has a significant amount of live and active cultures, look for the NYA Live & Active Cultures seal.

Contains active yogurt cultures: Yogurt labeled with this phrase contains the live and active bacteria thought to provide yogurt with its many desirable healthful properties. Look for the NYA Live & Active Cultures seal to ensure that the yogurt you buy contains a significant amount of live and active cultures

Heat-treated: Yogurt labeled with this phrase has been heated after culturing, thereby killing the beneficial live and active yogurt cultures.

Liquid or drinkable yogurt: Fruit and yogurt are blended into a drinkable liquid.

Made with active cultures: FDA regulations require that all yogurts be made with active cultures. Only those that are *not* heat-treated, however, retain live and active cultures when they reach consumers.

Sundae or fruit-on-the-bottom: Fruit is on the bottom, so that turn upside down, it looks like a sundae. Consumers can mix the fruit and yogurt together to make it smooth and creamy.

Buttermilk: Buttermilk is reminiscent of yogurt because it made by adding a lactic acid bacteria culture to pasteurized whole milk (skim milk or nonfat milk can also be used). The old-fashioned way to make buttermilk was from the left over liquid from churning butter from cream, i.e., milk from the butter or buttermilk. After the addition of the culture, the milk is left to ferment for 12 to 24 hours at a low temperature. It is usually labeled cultured buttermilk and may be salted or unsalted. Buttermilk is slightly thicker in texture than regular milk but not as heavy as cream.

European-Style yogurt or stirred curd method: Yogurt in which the yogurt is cooked in a large vat instead of in individual cups. The curds are stirred in the vat, before they are poured into the cups, resulting in a smoother, creamier yogurt.

French yogurt or French-style yogurt: Is the same as custard-style yogurt.

Greek yogurt: Greek yogurt is a thicker, creamier version of the regular variety. Greek yogurt is strained to remove the excess whey from the yogurt which in turns gives it a thicker and creamier texture. In Greece, yogurt is made with sheep's or goat's milk.

Yogurt cheese: Yogurt that has been drained and pressed into a soft cheese form. The consistency of the yogurt cheese will be similar to soft cream cheese. It can be used as a base for dips and spreads, as a topping for baked potatoes. It is a great alternative for regular mayonnaise, sour cream or cream cheese.

Smoothie: There are many types of smoothies that contain yogurt or frozen yogurt. These smoothies usually use yogurt as the base and mix in various fruits into the consistency of a milkshake with healthier benefits.

Liquid Yogurt or Yogurt Smoothie: Yogurt that has been thinned to make it drinkable and blended with fruit, fruit juice or other flavorings.

Kefir: is similar to a drinking-style yogurt, but it contains beneficial yeast as well as friendly 'probiotic' bacteria found in yogurt. Kefir can be made from any type of milk, cow, goat or sheep, coconut, rice or soy. The curd size of kefir is smaller than yogurt which makes it easier to digest. Kefir is rich in Vitamin B12, and Vitamin K. It is an excellent source of biotin, a B vitamin which aids the body's assimilation of other B vitamins, such as folic acid, pantothenic acid, and B12.

Yogurt drinks: A "yogurt drink", according to Federal Standards of Identity, must meet the requirements for yogurt (the white mass –yogurt portion). It must contain a minimum of 8.25 percent milk solids not fat and 3.25 percent milkfat prior to the addition

of other ingredients. It also must be fermented with *Streptococcus thermophilus* and *Lactobocillus bulgaricus*. The processes of yogurt beverages closely resemble that used for stirred-style yogurt. Yogurt drinks usually pass through a homogenizer to reduce the particle size. This assures complete hydrocolloid distribution and stabilizes the protein suspension. Flavor may be added immediately prior to homogenization or the white mass may be homogenized and then flavored.

Costs

When looking at costs, you will need to decide whether to buy single-size cartons or larger cartons. Larger cartons are generally cheaper when you compare the price per ounce.

32-ounce store brand nonfat @\$1.66 = \$.05 per ounce

6-ounce store brand flavored nonfat @ \$.60 = \$.10 per ounce

Package of eight 2.25-ounce name brand portable yogurt treats (18 ounces) @\$2.95 = \$.16 per ounce.

Fruit-flavored varieties may cost more and include jam-like fruit that adds extra sugar. The sweetened fruit replaces some of the yogurt in the carton so you get less of the calcium-rich yogurt. Buy plain or vanilla yogurt and add your own fruit to it.

Other things to consider:

Serving size, calories, fat content and price.

Resources Used:

National Yogurt Association: <http://aboutyogurt.com/index.asp>

Iowa State University Extension: Spend Smart. Eat Smart. Milk, Cheese, and Yogurt: <http://www.extension.iastate.edu/Publications/PM2066AX.pdf>

Food and Drug Administration: <http://www.fda.gov/>

Making yogurt drinkable, Dairy Foods, June, 2004, by Bob Roberts: http://findarticles.com/p/articles/mi_m3301/is_6_105/ai_n6081210/

What is buttermilk? Does buttermilk contain butter: <http://homecooking.about.com/od/cookingfaqs/f/faqbuttermilk.htm>

Nutritional Content of Kefir: <http://www.kefir.net/nutrit.htm>

Yogurt Cheese: <http://lowfatcooking.about.com/od/quicktips/qt/yogcheese.htm>

How to Make Yogurt Smoothie: http://www.ehow.com/how_4536718_make-yogurt-smoothie.html

What is Greek Yogurt? http://www.cookthink.com/reference/257/What_is_Greek_yogurt