Interior Plants
Options for Foliage and Color

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Consider….There are no native houseplants! All plants are exotic to the home environment.
What do we need to provide plants so that they will grow and flourish indoors?
Plant requirements will depend on their native habitat

- Humid tropics
- Tropical, subtropical, temperate deserts
- Tender annual/perennial plants
- Others
Environmental Factors

- Light
- Water
- Humidity
- Soil characteristics
- Nutrients
Light – Brightness and Intensity

• Exposure – South (greatest), East/West, North (least)
• Window coverings, cleanliness, screening, etc.
• Plant conditions (dust on leaves, density of foliage)
• Proximity to artificial light
Other light factors

• Duration – daylength, the number of hours of light in a 24 hour period (night length maybe more critical).
  – Long nights: poinsettia, kalanchoe, holiday cactus

• Light quality – spectrum of wavelength – plants generally use red and blue light

• Artificial light
  – fluorescent light mixture of warm+cool or Gro-lights
  – LED – red and blue lights
    - Incandescent – not very useful for plant growth
Temperature and water

• Temperature affects plant growth
• Foliage plants – 70-80F day, 60-70F night
• Flowering plants – 70-80F day, 55-60F night, lower night temp often helps with flowering

Watering

• Water requirements may vary with temperature
• Most houseplants need even soil moisture, some benefit from drier/dormant periods (Clivia)
Watering

• Water when plant needs it – not on a schedule
  – Feel the soil, water when dry
  – Water thoroughly when you water, let pot drain

• Use room-temperature water

• Some plants are sensitive to water treatment chemicals (fluoride) – used alternate source

• Avoid water on the foliage

• Don't let pots stand in water (30 – 60 min max)
Humidity

• Indoor environments rarely provide ideal humidity for plant growth
• Increase humidity around plants by…
  – Room humidifiers
  – Humidity trays
  – Grouping many plants together
  – Misting – less effective
Related to humidity - drafts

- Forced air ducts produce warm and cool drafts
  - Low humidity, drying
  - But air circulation is beneficial
  - Redirect air flow away from plants
Plant containers - Clay pots

- Heavy, anchorage
- Porous
- Soil dries out faster
- Mineral salts may accumulate, algae
- Breakable
- Sometimes expensive
Plastic and fiberglass pots

- Light weight
- Less expensive
- Easy to clean and reuse
- Overwatering may be a problem
- Easy to tip over
Soil

• All-purpose potting soil
  – Usually soil-less and this is best
  – Components: peat moss, compost, bark, perlite, sand, loamy soils, should be loose and crumbly

• Specialty mixes
  – Orchids: wood/bark is the main component
  – Cacti & succulents: additional sand or perlite for drainage
Fertilization

• Most important during active growth
• Best to fertilize ~ every two-four weeks with ½ strength of the label rate, water soluble material
• Never fertilize when plants are dry
• Always add fertilizer solution until some exits the drainage hole, this will reduce salt buildup in the soil
Insect and disease issues

• Examine plants closely before procuring
• Quarantine plants for 2 weeks

When infestations occur:

• Prune out buggy/diseased areas
• Treat plants for specific insects or disease, use indoor specific chemicals (even if organic)
• Never apply chemicals to a dry plant
Common pests
Aphids

Spider Mites

Whitefly
Mealy bugs

Scale
Fungus Gnats

J. A. Davidson, U of MD
Physiological Disorders

Excess Soluble Salts

Sun Scald

Cold temperatures
Propagation
Division
Rooting cuttings
Runners & Stolons
Air Layering
Foliage plants for the home
**Aglaonema modestum**  
(Chinese Evergreen)

- Very durable
- Tolerates poor light, dry air
- Prefers moderate light
- Warm temperatures (58-78°F)
- Will also grow for a short time in water
- Propagate by division or stem cutting
Chamaedorea elegans (Parlor Palm)

- Elegant, erect plant
- Tolerant of light conditions from indirect to full sun
- Temperatures 70-85F
- Moderate to high humidity, low causes browning
- Propagate by division
**Monstera deliciosa** (Split-leaf Philodendron)

- Split leaved Philodendron is also sold as *P. pertusum*. Very similar
- Very adaptable to home conditions
- Can get quite large in ideal conditions, climbs
- Propagate by cuttings, air-layering
Sansevieria trifasciata (Snake Plant)

- Extremely durable in the home environment
- Main issue is overwatering
- Propagate by leaf cuttings – maintain polarity of growth
- Variegated types may not come true-to-type
Heptapleurum arboricola
(Dwarf Schefflera)

• Rapidly growing
• Indirect to bright light
• Tolerates low humidity
• Propagate by stem cuttings or air-layering
Dieffenbachia amoena (Dumbcane)

• Tolerates very poor light but may drop leaves
• Air layer if this happens
• Overwatering is the biggest concern
• Propagate by air-layering or stem (cane) cuttings
**Ficus benjamina** (Weeping Fig)

- Adaptable to low light, prefers moderate light to full sun
- Will drop leaves when environment changes
- Needs good moisture
- Propagate by stem cuttings or air-layering
**Ficus elastica** (Rubber Plant)

- *Ficus* are figs
- Diffused light to full sun
- Moist soils but do not overwater
- Propagate by leaf or stem cutting or air layering
- Fiddle leaf fig would be similar to this
Spathiphyllum (Peace Lily)

- Nice plants, also easy to flower
- Very tolerant of low light but may not flower
- Need some humidity and pure water to keep leaves pristine
- Propagate by division
**Aloe barbadensis** (Aloe Vera)

- Succulent, needs high light and well-drained soil
- May benefit from summering outdoors
- Some types somewhat hardy
- Uses as medicinal herb
- Propagate by division or cutting
Crassula argentea (Jade Plant)

• Succulent, bright light and well drained soils
• Rarely flowers indoors
• Propagate by stem cuttings or leaf cuttings
• Similar care for other succulents
  – Bright light
  – Limit water
Peperomia

- Adaptable, can take cool, dim conditions if kept dry
- Flowers but not spectacular
- Propagate by leaf or stem cuttings
Scindapsus aureus  (Devil’s Ivy, Pothos)

- Very easy to grow
- Trailing vine, roots easily to totems
- Low to medium light
- Good moisture and humidity
- Cuttings easily rooted
- Can grow in water
Philodendron

- Very common houseplant
- Trailing vine that easily roots
- Indirect light, full sun will scorch foliage
- Can grow in water
- Propagate by cuttings
Flowering plants for the home
Orchids
Orchids - Orchidaceae

- One of the largest plant families
  - 20-25,000 species, >300,000 hybrids
  - Inhabit all continents except Antarctica
- Temperate, subtropical and tropical habitats
- Epiphytic or terrestrial root systems
  - Epiphytic = literally upon trees (trunks and branches)
  - Terrestrial = soil based, some bog/wetland habitats
  - Lithophytes = rocks, similar to epiphytes
  - Orchids are not parasites
Type for the home
Phalaenopsis – Moth Orchids

Dyes injected into stem during bud development, re-bloom as white.
Oncidium (dancing ladies) and hybrids
Cattleya and hybrids
(Florist orchid)
Dendrobium
Vanda and hybrids
Paphiopedilum
(Slipper orchids)
Growing most Orchids

- Light, airy growing medium, slippers require heavier medium – terrestrial
- Pots should have ample drainage
- Pot-in-pot systems may increase humidity around root system, avoid standing water
- Repot every 2-3 years as medium breaks down and plants outgrow their pot
- The presence of aerial roots is normal and healthy
- Soft, dark colored roots are a sign of too much water
Light

- Orchids generally need bright, often indirect, light – a little morning sun is okay
- Southeast or south exposure window is best for those needing lots of light: Cattleya, Oncidium, Dendrobium, Vanda, close to window
- East or west exposure window is best for lower-light species: Phalaenopsis and Paphiopedilum
- No mid-day sun for any, may benefit from summers outdoors but no direct mid-day sun
- Orchids do well under artificial lights
Watering

- Water often enough so that medium stays moist, brief periods of dryness is ok
- If water accumulates in saucer or outer pot, pour it out soon after watering else roots rot
- Ice can be used as a substitute for watering, I prefer to do so only occasionally
- Ensure humidity by grouping plants or placing in pebble-filled humidity trays
Temperature

- Phalaenopsis, Vanda, Dendrobiums – 75-85F days
- Cattleyas and Oncidiums a little cooler – 70-80F days
- Slippers are variable
- Difference in day/night temperatures may be critical – best for a 10-15F change
- Freezing temperatures must be avoided
- Note that leaves touching a single-paned window in winter may freeze
Other Flower Houseplants
Amaryllis

- After bloom keep them in bright light with warm temperatures
- After frost, set outside in light shade
- Before frost in fall, bring indoors and withhold water to induce dormancy
- Allow bulbs to rest for several weeks.
- Flowing will occur 6-8 weeks after watering
Christmas/holiday Cactus

- These are succulents, bright light, do not overwater
- Short day plants but not as sensitive as Poinsettia
- Lower night temperatures (55-65°F) will also help stimulate flowering
Cyclamen

- Very high light and cool nighttime temperatures (50-55F) are needed for flowering
- Need very good soil moisture except for a dormancy period after flowering
- Difficult to flower indoors
- Mealybug
Poinsettia

- Requires very bright light
- Over-summering:
  - Cut back and repot in spring
  - Grow in very bright light – maybe outside
  - Strict night-length >15 hr beginning in early October until bract color, still need bright daytime light
  - Move to a bright locations
  - Whitefly
**Saintpaulia species** (African Violet)

- Should have talked about with the flowering houseplants
- Very adaptable, easy to grow
- Issues with overwatering, too much fertilization, too much sun
- Propagate by leaf cuttings