

Introductory Classroom Greenhouse: Intended for elementary and middle school classrooms introducing horticulture. Most instructors will not be qualified to operate a fully automated greenhouse. An emphasis has been placed on simple yet effective equipment. Average size: 16' x 32'.

1. Side Wall Vents

Description: Aluminum framed, awning hinged windows with fiberglass screens.

Size: Typically 3' wide x 2' tall.

Operation: Manual crank-out.

Manufacturer: Sunshine Rooms, Inc.

Purpose: Allows fresh air intake at bottom of greenhouse.

Suggested qty.: One per 4' to 5' of side wall.

Notes: Must be used in conjunction with roof exhaust fans.



2. Roof Exhaust Fans

Description: A small, quiet, exhaust fan with insulated damper.

Size: Approx. 27" wide x 13" tall replacing a glass panel 36" wide x 18" tall.

Operation: 110V; Operated by manual switch, thermostat, or humidistat.

Manufacturer: Tamarak model TC-1000

Purpose: Extract hot air from greenhouse, pulling fresh air in from wall vents.

Suggested qty.: One per three to four side wall vents.

Notes: Must be used in conjunction with side wall vents.



3. Operable Door(s)

Description: Aluminum framed, narrow stile, commercial door.

Size: Typically 3' wide x 7' tall.

Operation: Push/pull hardware.

Manufacturer: Manko.

Purpose: Provides access in and out of the greenhouse (may be a fire exit).

Suggested qty.: As needed per project.

Notes: Panic hardware, 42" wide, and 6' wide double doors are available.



4. Horizontal Air Flow (HAF) Fans

Description: Fan with wire basket suspended from rafters.

Size: 12" diameter.

Operation: 115V; manually activated.

Manufacturer: Schaefer model VT12PA.

Purpose: Use in pairs to create gentle, horizontal air circulation.

Suggested qty.: Two per 750 sq. ft. of floor area.



5. Heater

Description: Ceiling suspended unit heater (natural or LP gas available).

Size: Determined per geographic region, glazing and usage.

Operation: 115V; thermostat activated.

Manufacturer: Modine models Hot Dawg or Effinity.

Purpose: Keep plants alive and people comfortable during winter months.

Suggested qty.: Determined per region, glazing and usage. Call for support.

Notes: Heat may be supplied by the building's primary heat system if controlled separately. Gas heaters will require gas piping and venting duct work.



6. Shade System

Description: Shades for the roof area using built-in shade tracks.

Size: Width to match bay for the length of the roof.

Operation: Manual pull cords.

Manufacturer: Thermal Designs model Comfort Glide.

Purpose: Reduce glare and heat in warmer months. Provide insulation during winter nights.

Suggested qty.: Every bay for roof area and possibly west facing walls.

Notes: Fabric and color selection by architect.



Optional Equipment

7. Growing Benches

Description: Aluminum frame benches with stationary legs and plastic tops.

Size: 3' tall x 3' wide x 3', 4', and 6' lengths.

Operation: n/a.

Manufacturer: Frames-Sunshine Rooms, Inc.; tops-Dura-Bench.

Purpose: Provides a growing area for plants.

Suggested qty.: Typically around the perimeter and center of the greenhouse.

Notes:



8. Potting or Work Tables

Description: Stainless steel top work tables

Size: 36" tall x 30" wide x 48" or 60" long.

Operation: n/a.

Manufacturer: Eagle or equal.

Purpose: Provides an area to work with plants and study area.

Suggested qty.: Two or three per average sized greenhouse.

Notes: Optional sink and lower shelf are available.



Other Equipment to Consider by Other Trades

9. Water Supply

Multiple water spigots with watering and misting hoses.

10. Floor Drains

At least one per greenhouse will ease cleaning considerably.



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