

Fabrication Training as Part of Design Education

Craig Berger

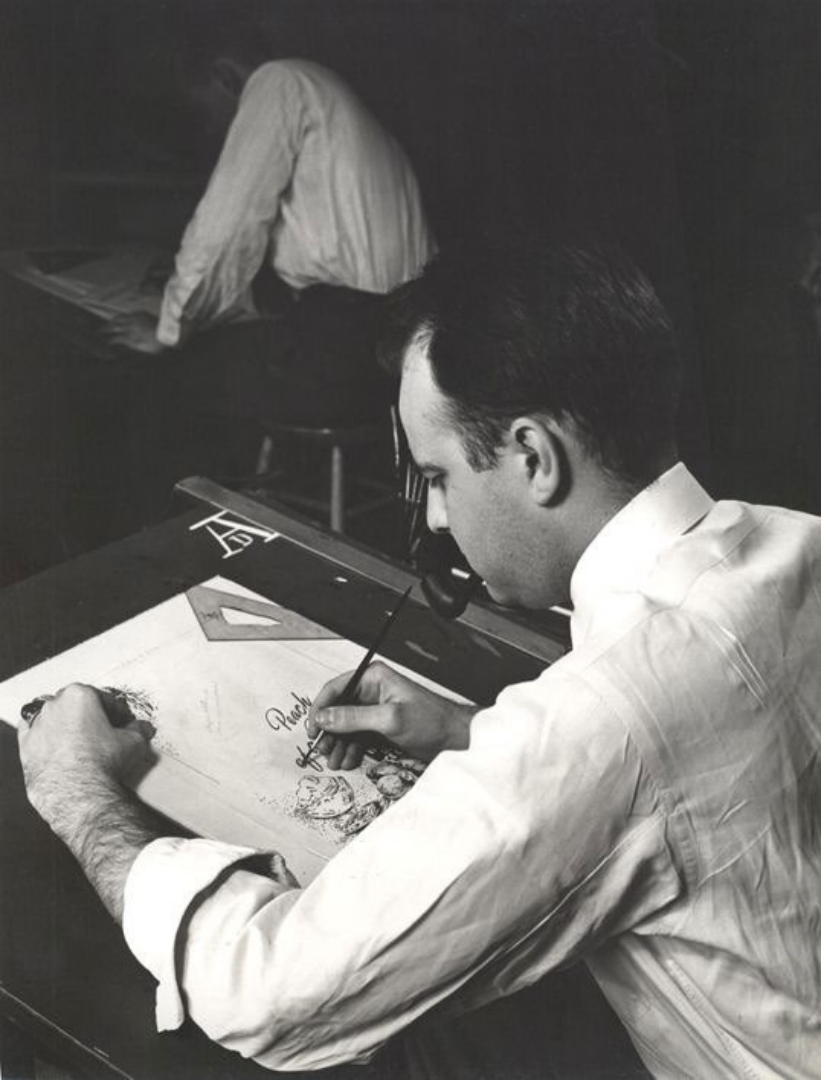
Chair of Communication Design Pathways
Fashion Institute of Technology

Introduction by Babu Khalfan

President
Signs and Decal
S+D Institute

2023
SEGD
ACADEMIC
SUMMIT





Traditional Design Education

Extensive freehand drawing and illustration

Technical drawing

Letter making

Printing technology including screen printing and 4 color print processes





Architectural Sign Design Grew Out of Traditional Hand Skills

Letter templates and cutting

Traditional metal fabrication

Long standing advanced skills with a century of
tradition



Students rarely draw and make to ideate in high school and college



EGD fabrication is a combination of advanced technology and traditional shop skills



Are Hand Skills Really Important in EGD and overall
Design Education?

Does Integrating Physical Skills Into the Design Process
Change the Ways Students Think About Design?

Will Students Be More Interested in Careers in EGD and
Fabrication if Exposed to Fabrication Methodologies?

The Goal

Highlight best practices in fabrication education.

Experiment in methodologies for best practices in fabrication methodologies.

Create a testing apparatus to reinforce successes and lessons learned.

Promote methods for promoting fabrication education

Publicize results and provide recommendations to design and vocational schools for integration into curriculum.

The Partnership

Babu Khalfan founded the S+D Institute based on his 60 years of experience building sign companies and educating dozens of sign makers.



SIGNS
332-2233

SIGNS

SIGNS & decal
corp.
WE DESIGN, MANUFACTURE AND INSTALL

SIGNS
custom etched
and cast plaques
store front signs
engraved plaques
and nameplates
and truck
lettering

33-26

SIGNS
corporate
identification signs
dimensional letters
and logos
silkscreened signs
and decals

33-24
1174

ALTA

OLPW
JUL 26 1972
1688 8242



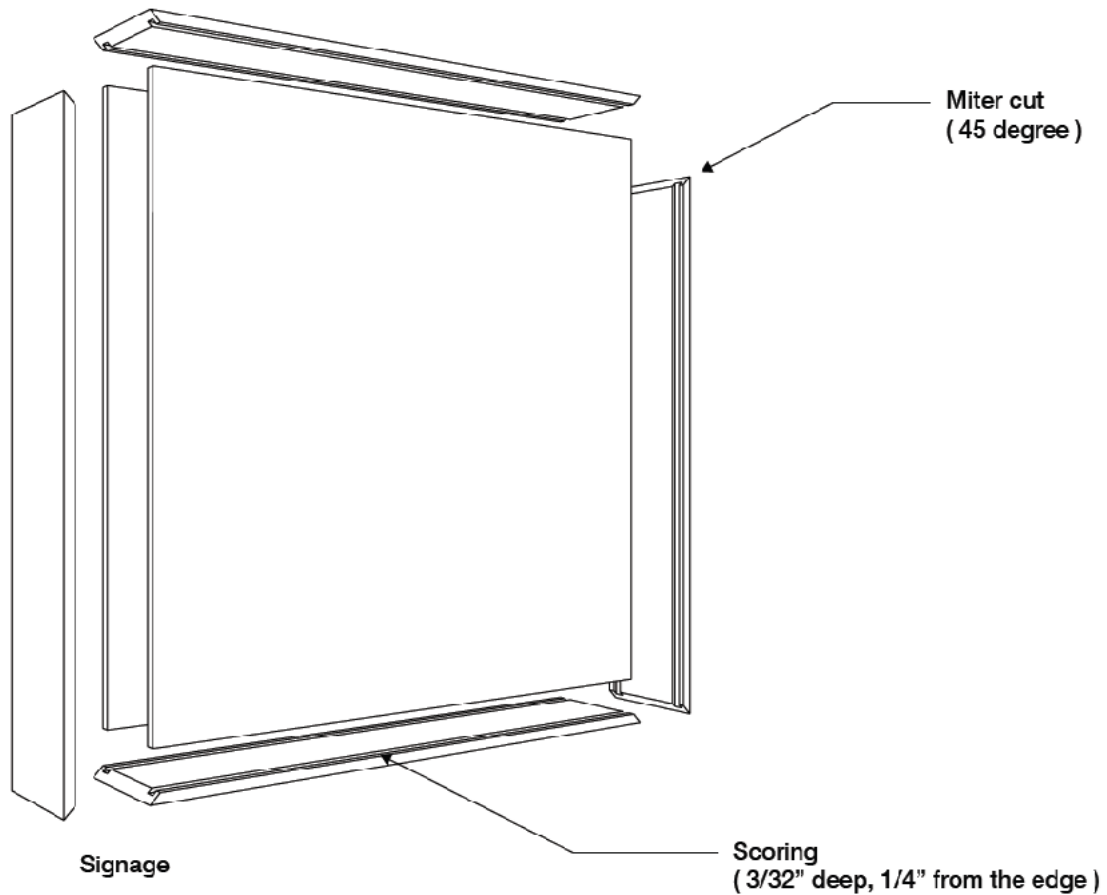
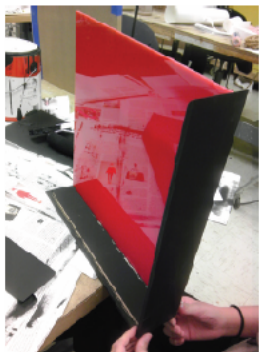
The Partnership

The Spatial Experience Design Program of the Fashion Institute of Technology has been focused on the integration of design and fabrication education for the last thirty years.



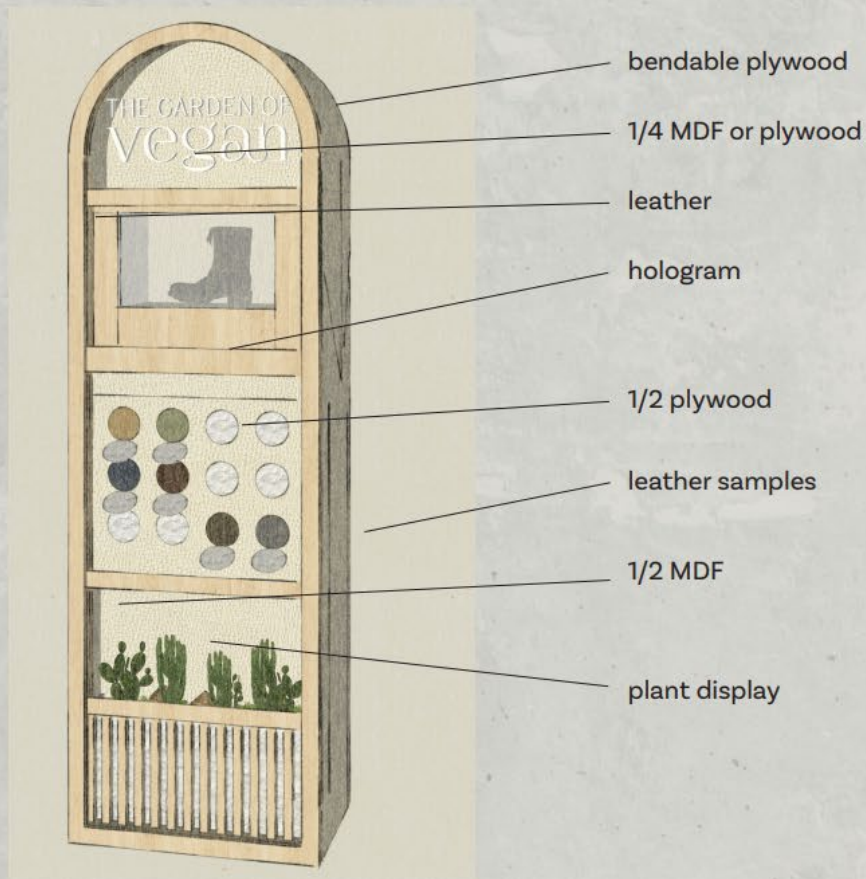
2023
SEGD
ACADEMIC
SUMMIT



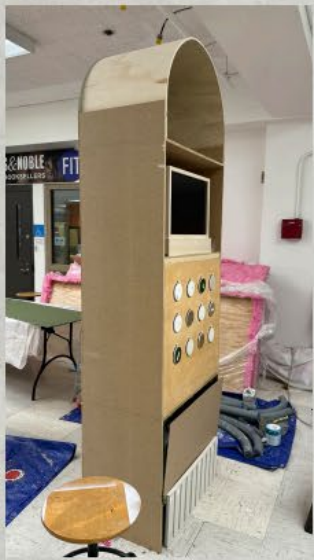








final build material callouts





Two Years of Experimentation

Internship Research

Documenting Educational Program Best Practices

Training Videos

Industry Partnerships

Designers (As Part of a Larger Design Curriculum)

Introduction to EGD and Sign Design

3D Construction and Material Specification

Experiential Graphic Design and Documentation

Small-Scale Fabrication

Large-Scale Fabrication

Lighting/Digital Fabrication

Design/Fabrication Internship

Capstone Project

Industry Introductory Projects: Sign Research Foundation



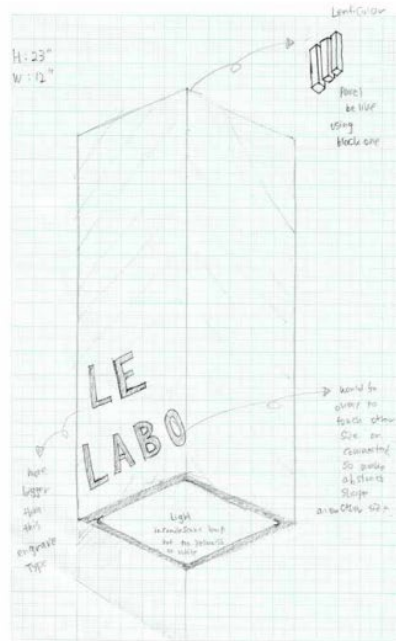


Standard Introduction Class: FIT

Material



Sketch



Sketch Montage



Color



Standard Introduction Class: FIT

LE LABO®
GRASSE - NEW YORK
Making Lightning Banner

Final Model

Proto Model



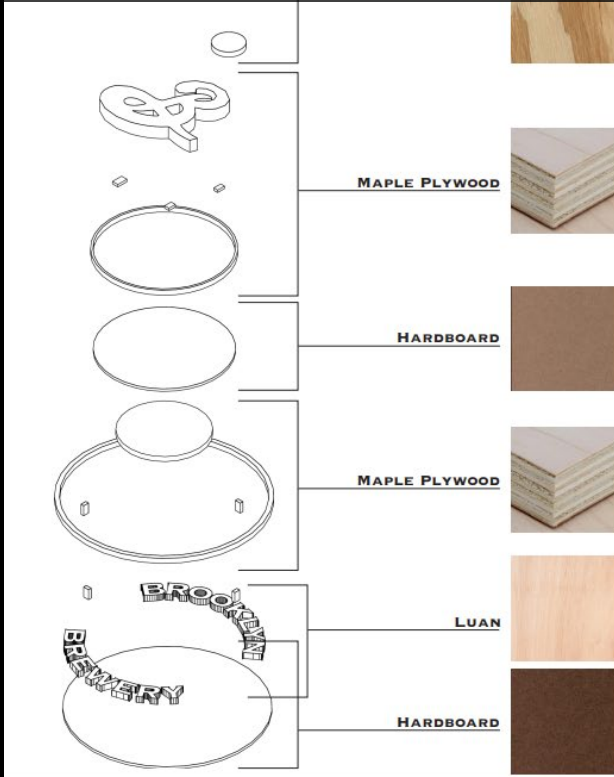
Photo Montage



Process



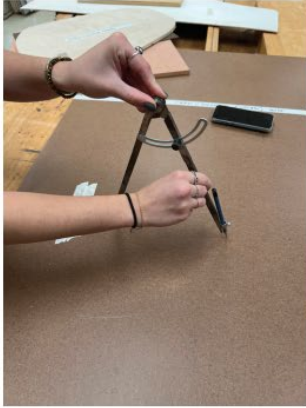
Introduction to 3D Fabrication: FIT



SKETCHES | SKETCH UP




PROCESS PHOTOS

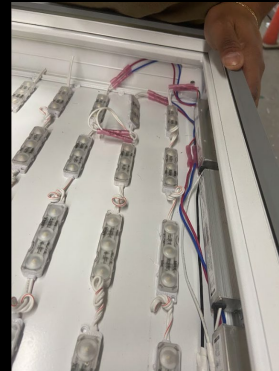
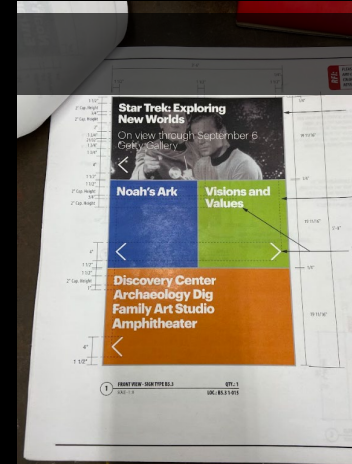


Design and Fabrication Internships: S+D Institute



Design and Fabrication Internships: S&D Institute

- → Morning started with watching the unloading of materials (used dollies and forklifts)¶
- → Watched the use of the accurshear ¶
 - → Used to keep edges clean ¶
 - → Measure twice cut once ¶
- → After drilling hole through metal piece flip over and use thicker drill bit to slightly bevel and smooth out edges (gets rid of the sharp edges created after original drill bit pushes through) ¶
- → When Mr. Singh uses the drill press he pulls the bit down lightly pressing into the material a few times before fully pushing through completely ¶
- → Lacquer thinner can be used to erase sharpie marks from metal pieces ¶
- → Lightbox frames have a channel the threading used to catch the screws ¶
- → Spoolmatic used when welding aluminum ¶
 - → After finger pushes the trigger the aluminum wire start to slowly come out ¶
 - → Keep elevated and hold at an angle ¶
 - → To ensure entire area is covered it is best to move in a wave movement ¶

 - → If you stay in one place for too long the wire will pop and start to burn ¶
 - → Always wear welders mask as the light from welding can burn the eyes retinas ¶
 - → Always wear welders jacket/sleeves and gloves so no skin is exposed ¶
 - → No need to hold the piece being welded just make sure the gun is secure and steady ¶
 - → Keep stance steady with room to move arms and room to keep moving around ¶
 - → When finger releases trigger gun automatically and almost immediately stops ¶
- → Secure washer first before screwing nut into place using hands as much as possible, then use hand held drill till it's tight (drill will skip) ¶
- → Make sure screw go in straight, should be no resistance ¶
- → Never screw one screw in all the way before putting the others in otherwise the material may shift or not line up all the way and cause other screws to not go in right ¶



Project Manager Training (As Part of Larger PM Training) PM. This Includes Account Management

Sign Development from Concept to Implementation

3D Construction and Material Specification

Experiential Graphic Design and Documentation


Sign Fabrication/Processes

Lighting/Digital Fabrication

Project Management Internship/Mentorship

Sign Management Project from Fabrication to Installation

Process Articles: Wayfinder Collaborative and Bluebird



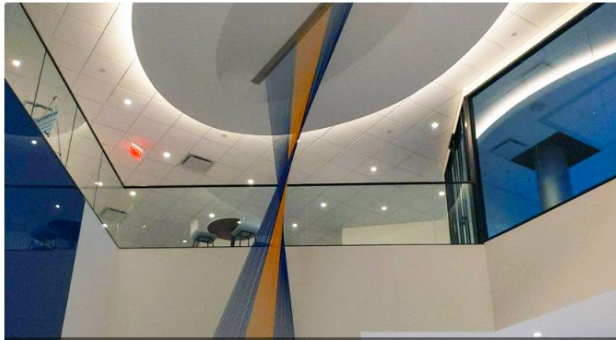
A multidisciplinary community creating experiences that connect people to place

Home About ▾ Awards ▾ Events ▾ Chapters ▾ Xplore ▾ Store ▾


Search

Login / Register

Placemaking in a Corporate Lobby: Olympus Sculptural Installation



Placemaking in a Corporate Lobby: Olympus Sculptural Installation



Read Time: 4 minutes

SEGD member Bill Galligan of Wayfinder Collaborative recently led a team of designers, fabricators, and contractors to create a sculptural installation inside the new North American headquarters of the Olympus Corporation. Read on to learn how this complex project successfully came together through the skillful coordination of schedules and work tasks.

Join | Renew ▾

Education + Research ▾

SEGD Talks | Videos ▾

Members | Toolbox ▾

Jobs ▾

Features Index

EGD Taxonomy for searching the knowledge base of SEG D:

Practice Areas

- Wayfinding
- Placemaking and Identity
- Exhibition
- Strategy - Research - Planning
- Public Installation
- Interactive Experience

Industry Verticals

- Corporate
- Education
- Exhibitions
- Healthcare
- Hospitality
- Industrial
- Recreation
- Retail
- Residential
- Sports and Recreation

Complete Process Walk-Through Document: S+D Institute

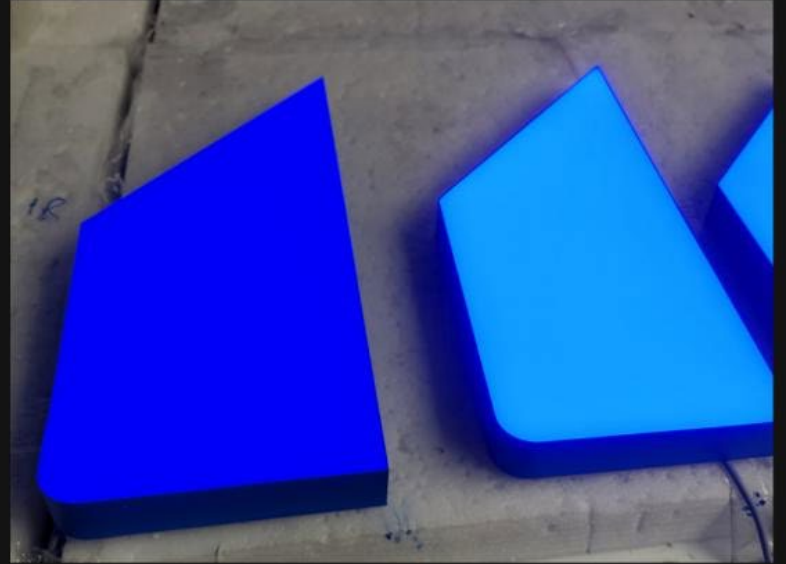
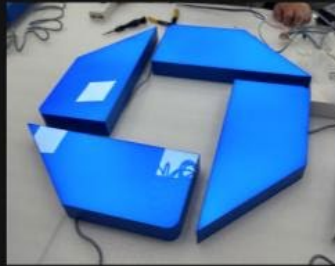
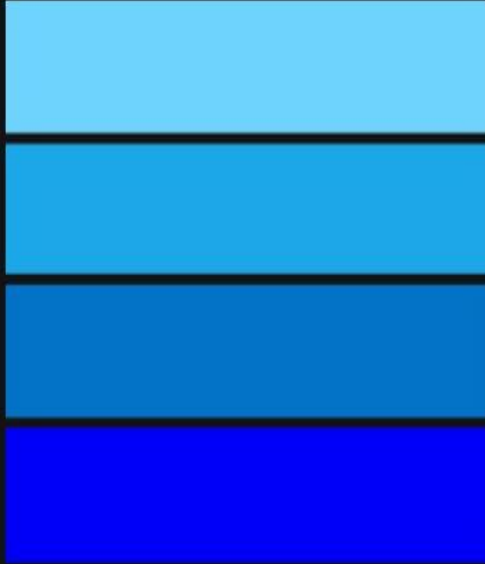
TRACKS 203-204 AND 303-304



GRAND CENTRAL TERMINAL

Formal Manufacturer Training Program: Bitro Group

Color and Lighting



Same acrylic, same LEDs but different light output = Different Results

THE LUX CAPACITOR



Fabrication Training (General)

Sign Development from Concept to Implementation

Sign Fabrication/Processes

Material Specification/Purchasing

Small-Scale Sign Fabrication and Documentation

Large-Scale Sign Fabrication and Documentation

Specialization Training

Fabrication Management Documentation Project

Installation Management Documentation Project

Special Project, Vocational School: Upper Perkiomen



Manufacturing Video/Checklist: S&D Institute



Signs+Decal Training Videos

@signsdecaltrainingvideos3491 11 subscribers 14 videos

More about this channel >

Subscribe

HOME

VIDEOS

PLAYLISTS

CHANNELS

ABOUT



Videos ▶ Play all



Screen Printing

9 views · 7 months ago



Shop Tour

6 views · 7 months ago



Chemical Etched

2 views · 7 months ago



Vinyl Graphic

6 views · 7 months ago



Waterjet

6 views · 7 months ago



Sign Fabrication

12 views · 7 months ago

SIGNS & DECAL INSTITUTE

Academy of Signage & Graphics Technology

Screen printing process

Screen printing is the process of transferring a stenciled design onto a flat surface using a mesh screen, ink and a squeegee.



Combine Training With Talent Marketing: Sign Art Studio



TikTok

@dan_yoder_singuy



TikTok

@dan_yoder_singuy

23kt goldleaf and hand lettering 🤘

One and Two Week Paid Internship: Urban Sign/D2



Preliminary Lessons

Students need to formally document the making process and take part in overall design documentation

Fabrication lessons need to be part of a larger design curriculum on experiential design and placemaking

Iteration through sketching is a fundamental part of the larger making process

Stronger examples of complex process methodologies in design and fabrication

Extensive use of videos and social media support

More documentation that supports the larger educational lessons

Future Goals

Build a Testing System for Key Methodologies

Flesh out Website

Develop Social Media Approach

Fabricator Summit

Develop an Educational Workspace and Studio

Work with Organizational Partners

Compile Best Practices From Industry

Large-Scale Sign Fabrication and Documentation Project

Specialization Training

Fabrication Management Documentation Project

Testing Approach Under Development

FIT Academic Programs (Starting this summer)

Survey of recent working graduates one year from graduation
Student tracking survey of students in the eighth semester
reviewing best practices

S+D Intern and Training Programs

Industry review of work product of interns new employees
Test of retention

Professional Designer Outreach (Steering Committee)

Needs survey
Review of best practices or educational products