

# Fish Tank Project Platform Fabrication

EAS 199B Portland State University  
Mechanical and Materials Engineering

# Learning Objectives for these Slides

After this presentation you should be able to

- ❖ Describe the safety precautions necessary for working in the lab
- ❖ Follow the safety precautions necessary for working in the lab
- ❖ Follow the assembly instructions for the wooden platform
  - ▶ <http://web.cecs.pdx.edu/~eas199/B/howto/fishtank/platform/>
- ❖ Complete the assembly of the wooden platform

# Follow these Safety rules

1. Do not operate any machine unless you have
  - ❖ Completed the hold-harmless form (Fall 2012)
  - ❖ Been trained to operate the machine
  - ❖ Been authorized to do so by the instructor or teaching assistant
2. When using rotating equipment such as milling machines, drills and lathes
  - ❖ Securely tie long hair back to remove the possibility of it falling below your face
  - ❖ Do not wear loose clothing
  - ❖ Remove lanyards or jewelry hanging from your neck or wrist

## Follow these Safety Rules, continued

### 3. When using any power tools like milling machines, drills and lathes

- ❖ Clamp the work piece in a vise or chuck before drilling or cutting
- ❖ Do not hold or restrain the work piece only with your hand
- ❖ Make sure safety guards are in place before turning on the machine
- ❖ Never leave a running tool unattended

### 4. When working in the lab

- ❖ Always wear approved eye protection
- ❖ Take common sense precautions and avoid “horse play”
- ❖ Keep the work area clean and organized
- ❖ Never use your own power tools
- ❖ Only use lab facilities for activities required for EAS 199A, 199B, 199C
- ❖ Report damaged equipment, unsafe activities and accidents to the instructor

## Follow these Safety Rules, continued



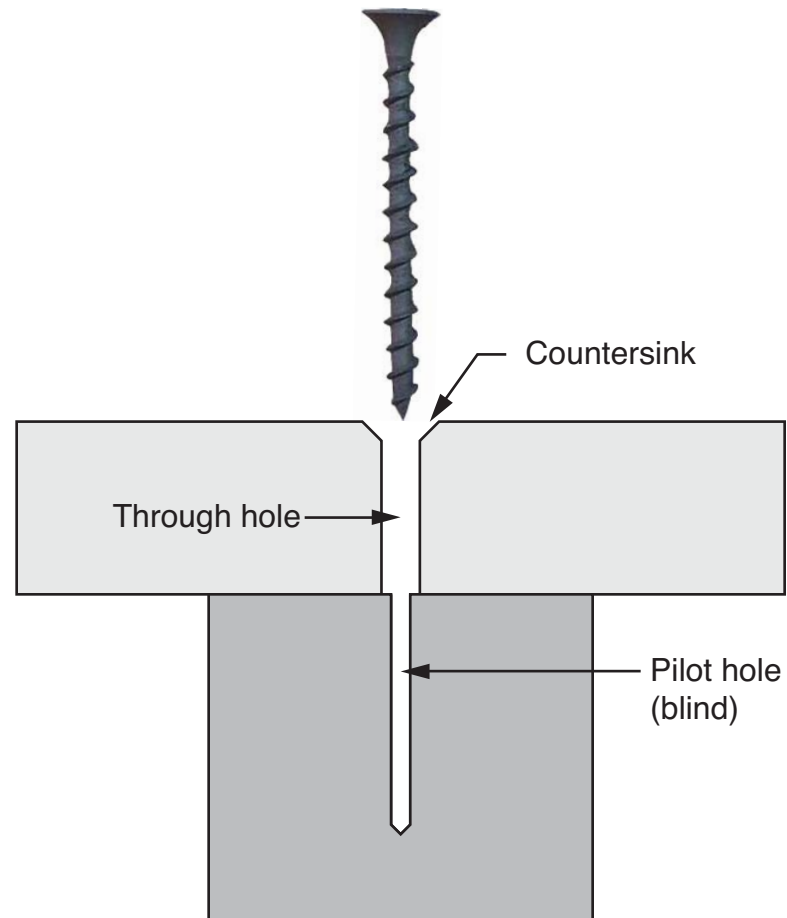
Do not begin to fabricate your fish tank platform until you have carefully read the operating and safety instructions above and agree to operate the equipment in a responsible manner. *You must sign the safety contract before beginning fabrication.*

## Start with the structure

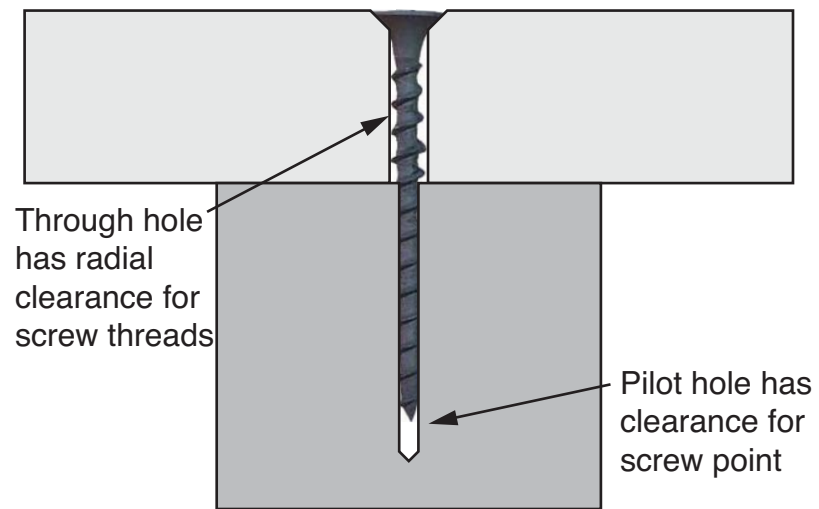
1. Materials are provided
2. Finish fabrication today
3. Have painted by next week
4. See:
  - ❖ <http://web.cecs.pdx.edu/eas199/B/howto>



# Follow instructions for basic joint construction



# Follow instructions for basic joint construction





# To-do list for Class Meeting 2

1. Sign hold-harmless form
2. Sign-up your group members
3. Fabricate the fish tank platform
  - ❖ See <http://web.cecs.pdx.edu/~eas199/B/howto/>
4. Prepare for next class
  - ❖ Paint your fish tank platform — finished by next class meeting
  - ❖ Read instructions for fabricating the salinity sensor
  - ❖ Start homework
  - ❖ Visit D2L web site
  - ❖ Start purchasing items on your shopping list
    - ▶ <http://web.cecs.pdx.edu/~eas199/B/equipment/>