



Boat Orientation





Learning Objectives

By the end of this unit, the participant will be able to:

1. Use common nautical terminology.
2. Describe how boats are classified by the US Coast Guard.
3. Describe hull materials, design and uses with advantages and disadvantages of each.



Practical Exercise-Learning Objectives

By the end of this unit, the participant will be able to:

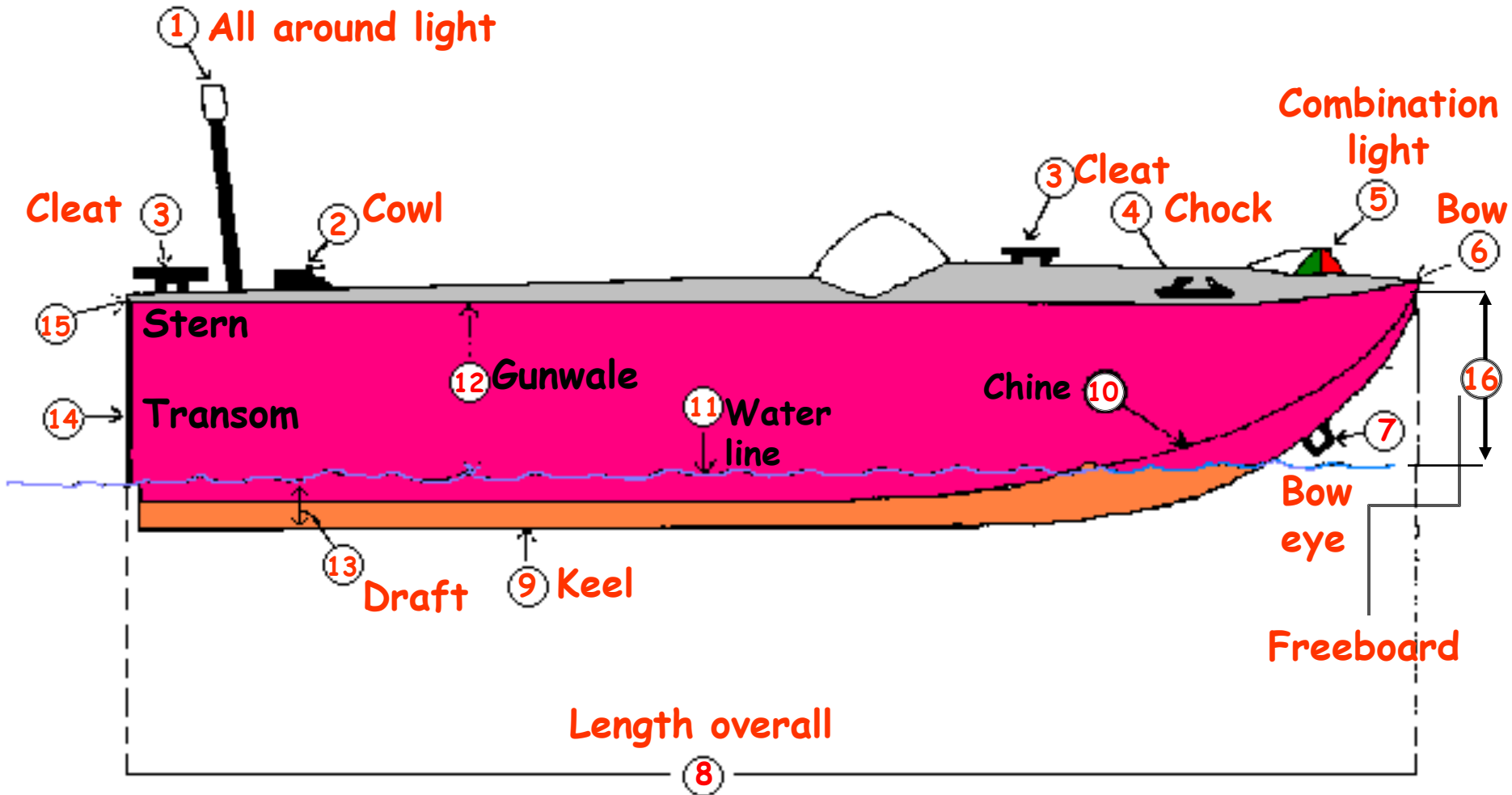
1. Using the "MOCC BOAT ORIENTATION FORM" provided, the participant will describe the key features and components of the motorboats used for the MOCC on water exercises.



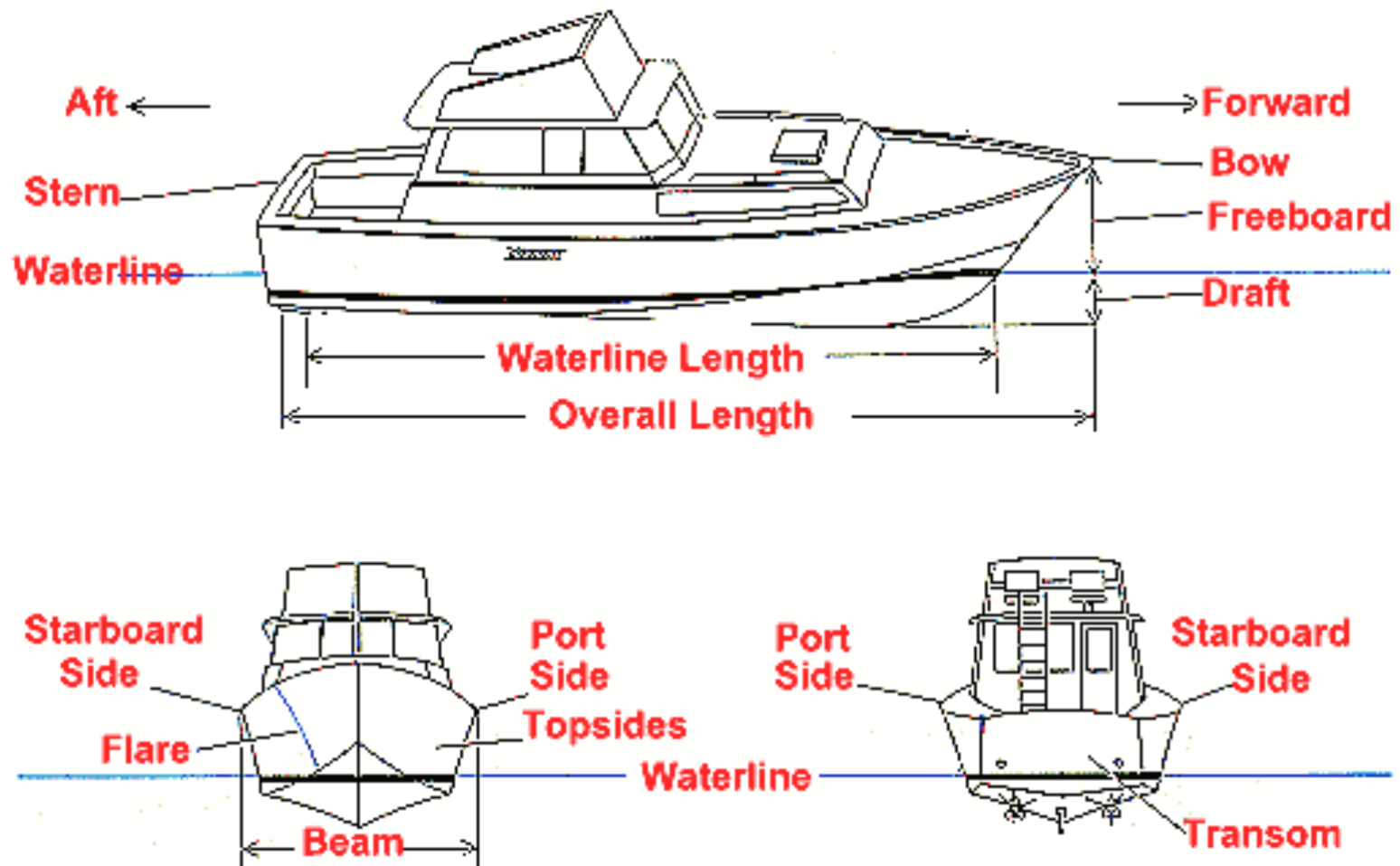
Why Boat Orientation?

- High variability in motorboat design, propulsion, handling characteristics, safety features, intended uses...
- High maintenance is common
- THUS.....
- Familiarizing yourself with each new boat is a must
- Checking components before you depart is a must

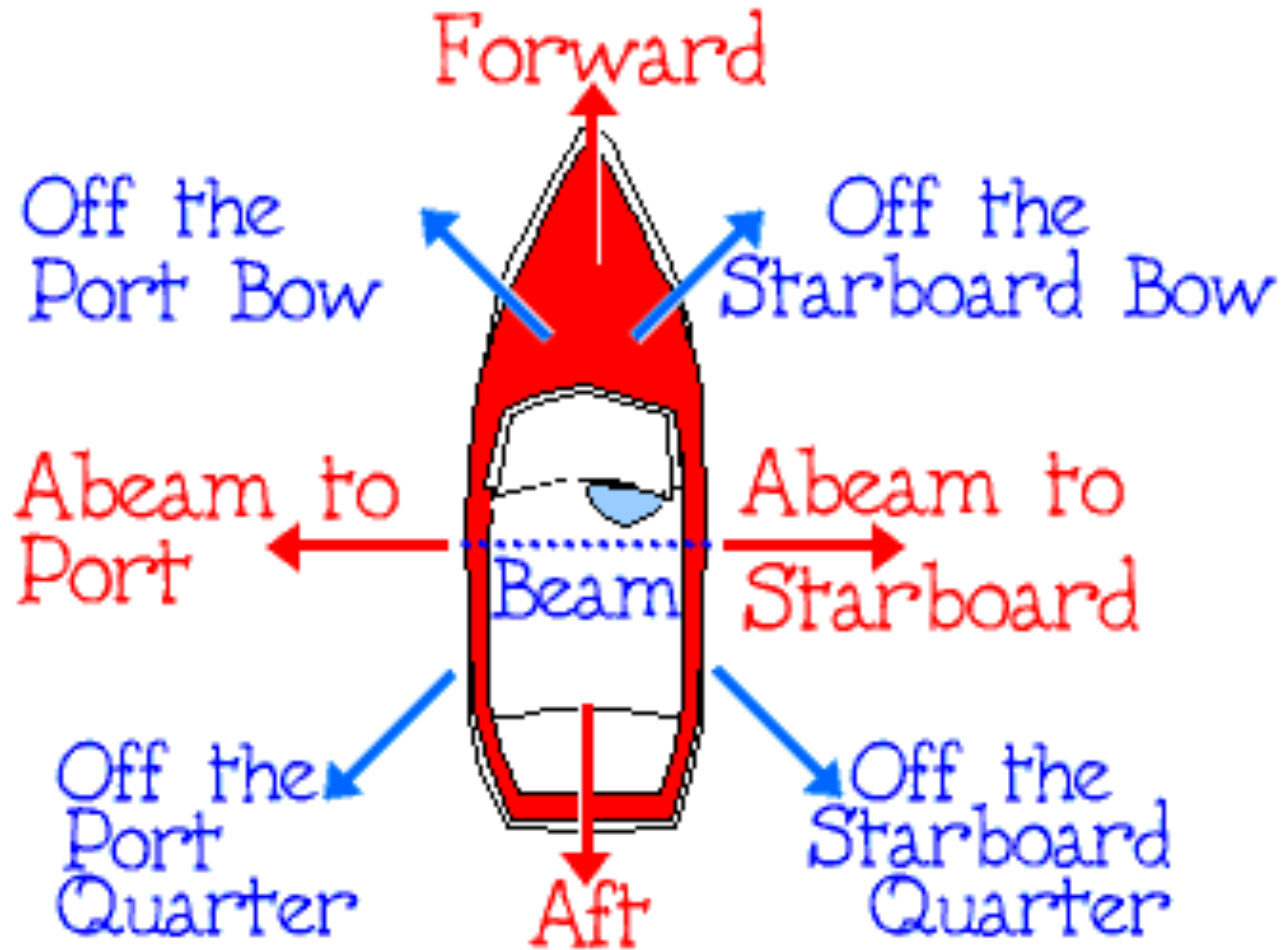
Parts to Know & Review



Boat Terminology



Boat Terminology



Boat Length Categories

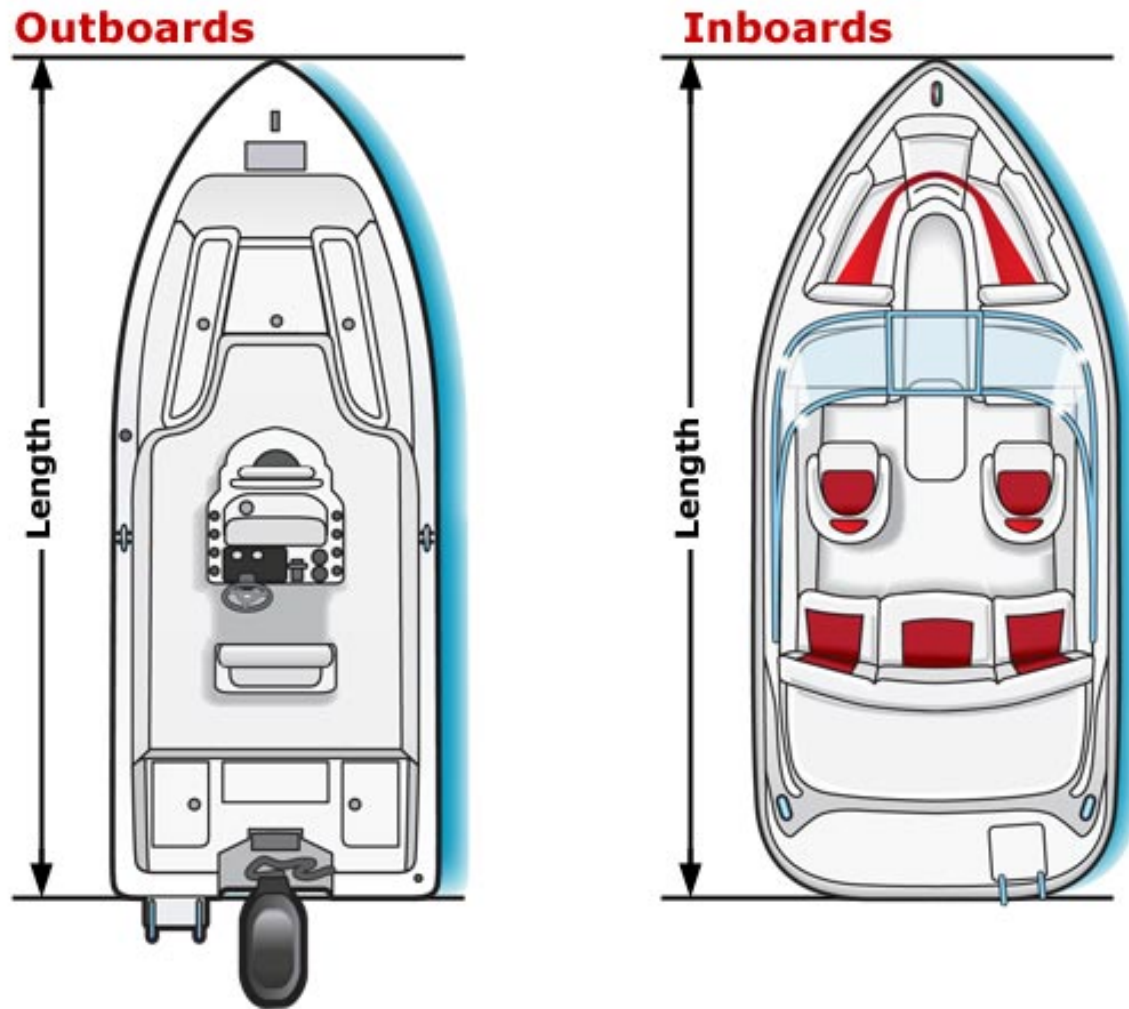
Boat-length determines safety-equipment requirements

- Less than 16 feet
- 16 feet but less than 26 feet
- 26 feet to less than 40 feet
- 40 feet to not more than 65 feet



Overall Length

What is measured:



Boat Capacity

Capacity plate:

(applies to boats less than 20')



Capacity Plates

List three things:

1. Maximum number of persons and their overall weight
2. Maximum carrying weight (lbs) of vessel
3. Maximum horsepower recommended

MAXIMUM CAPACITIES

**7 PERSONS OR 1050 LBS.
1400 LBS. PERSONS, MOTORS, GEAR
130 H.P. MOTOR**

**THIS BOAT COMPLIES WITH U.S.
COAST GUARD SAFETY STANDARDS IN
EFFECT ON THE DATE OF CERTIFICATION**

**ABC BOATS
XYZ MANUFACTURING, INC.
ANYWHERE, USA 99999**

What If There's No Capacity Plate?

(Boat length X width)/15 = approx
number of people the boat will fit
(@ 150 lb per person)



Boats Come in Many Different Configurations...



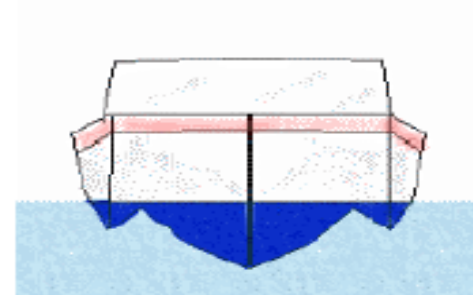
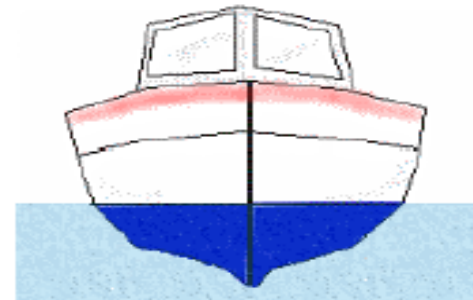
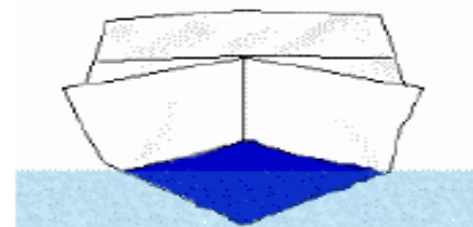
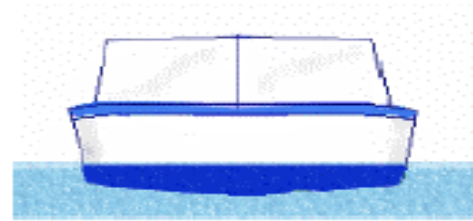
Boat Hulls

Boat hull type and design affects handling, stability and use



Hull Types

- Flat bottom
- Vee bottom
- Round bottom
- Multi-hull



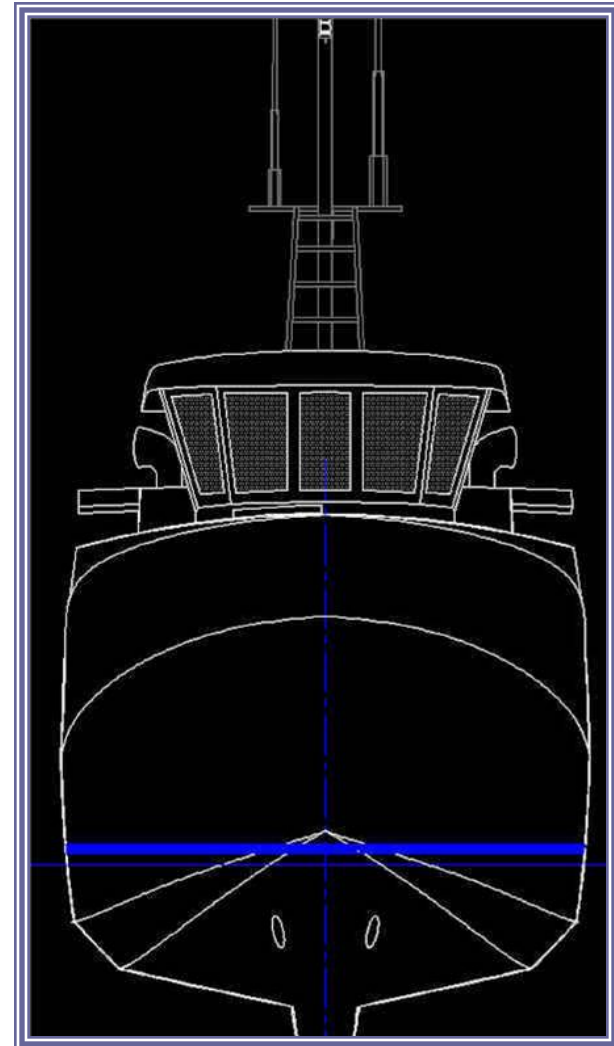
Common Hull Designs

- **Displacement Hulls -**
Designed to move through the water with minimum of propulsion
- **Planing Hulls -**
Designed to rise up and ride on top of water when power is applied



Displacement Hull Designs

- Large underwater profile
- Soft ride
- High load capacity



Planing Hull Designs

- Shallow running
- Increased speeds
- Requires more horsepower



Hull Material

Affects what the boat can be used for
and maintenance needs



Hull Materials

Aluminum:

- + Lightweight
- + Strong
- + Durable
- + Repairs easily
- Noisy



Hull Materials

Fiberglass:

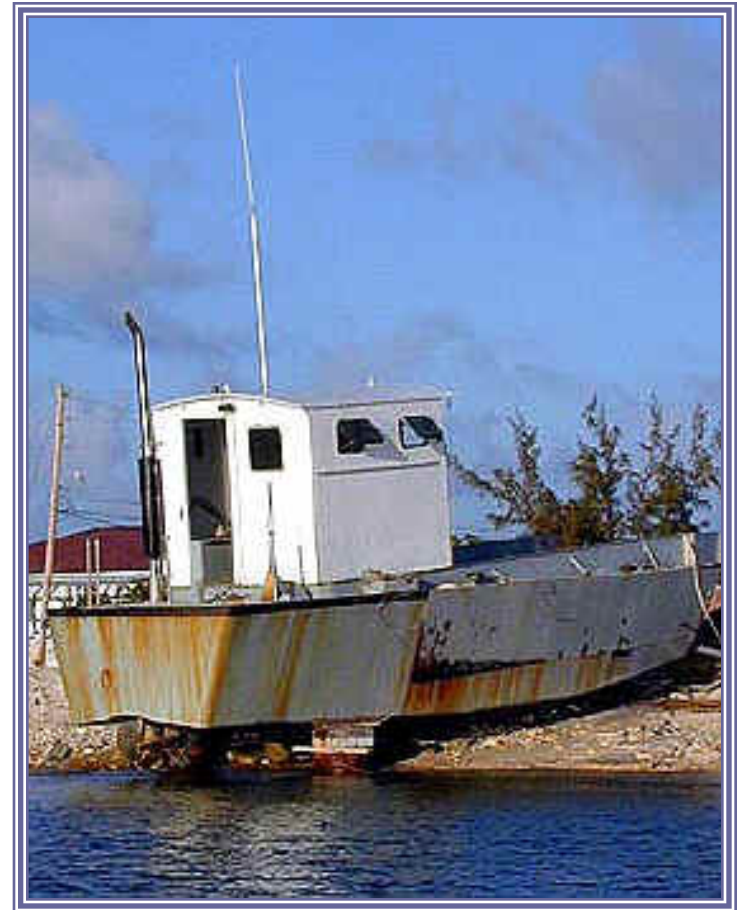
- + Strong
- + Double hull (Boston Whaler) designs are "unsinkable"
- Fragile
- Difficult to repair



Hull Materials

Steel:

- + Strong
- + Durable
- Heavy (makes boat slow)
- Not practical for small motorboats
- High maintenance (Rust)



Hull Materials

Inflatable:

- + Very portable
- + Reduced impact damage
- + Inexpensive
- Tend to be "wet" in heavy seas or wind
- Can be punctured
- One last negative??



-Tendency to get airborne



Hull Materials

Wood

- + Quiet and warm
- High maintenance
- Costly to repair
- Fragile



Hull Materials

Other materials

- Synthetics
- Ferro-Cement





Motor & Propulsion

*Boat motor and propulsion types affect how the boat can be used, performs, handles, and its maintenance needs

Boat Motors

- Outboard
- Inboard/Outdrive
- Inboards

Propulsion

- Propeller
- Jet Drive

***Will be covered in detail during Operating Systems**

Steering Configurations

- Steering wheel
- Tiller arm



Checklists

- Checklists should be used to ensure you don't overlook any critical components of a vessel
 - Develop your own checklists for your specific vessels



Questions?

