

# Boat Project - Activity Guide



**What is your own definition of density or buoyancy?**

- ~ The ability to float
- ~ How heavy something is relative to how big it is

**Circle the objects you think would float. Cross out the objects you think would sink...**





# Quiz



## 1. Why did STIIX-Ville need a boat design in the first place?

~STIIX-Ville is on the ocean and is a port city. They tasked us with building them a boat that can carry as much cargo on it as possible to go out to see with.

## 2. Name at least two uses of boat and/or ships in the real world:

Cargo/Shipping, Sports, Fishing, Naval Warfare, etc.

## 3. What percentage (or fraction) of Earth is covered in water?

3/4 -or- 75%

## 4. Why is shipping a big & important part of the global economy?

From our small business example:

~Businesses around the world rely on materials that are shipped to them. If that somehow gets disrupted, they are no longer able to operate, may have to lay off employees, etc.

## 5. Why will a basketball float and a bowling ball sink? Be sure to use the word density somewhere in your answer.

~Although they are the same size, a bowling ball is much more dense (heavier relative to its size) than the basketball. The bowling ball's density is higher than water so it sinks while the basketball is lighter than water so it floats. This is due in large part to being hollow on the inside.

## 6. Why do we cover cardboard in this project with AL foil?

If cardboard gets wet, it becomes much more dense (heavier) than water, and will sink. If it stays dry, it is a great floating material!

## 7. What did David do for his job? (The engineer we met)

David is a marine engineer for Invincible boats.