WORKSHOP EXTENSION ACTIVITY

Built by The Home Depot Kids Workshop

FIREBOAT

Ages 5–12

MAKE. CREATE. EXPLORE.

#KidsWorkshopExplore

THE HOME DEPOT KIDS WORKSHOPS

Discovery EDUCATION

Have you ever seen a fireboat?

Fireboat

It's probably hard to count how many fire engines you've seen in your lifetime, but what about fireboats? Fireboats are like fire engines in that they also work to fight fire, but fireboats combat flames on shorelines and aboard other ships from the water—not on land!

Think about it: How might fireboats carry their firefighting water while they're at sea?

That was a trick question... They don't have to! One thing fireboats never have to worry about is where they will get their water from, because it's all around them. All they have to do is pump it from the ocean! It doesn't get much easier than that.

Fireboats do have some other tricky factors to take into consideration, though. To help you think about why it may be difficult to firefight on water, use the space below to brainstorm some of the main differences between fires in buildings versus fires on boats.

Now it's your turn to be a Fireboat Chief!

If it helps to create a sketch, go ahead!

One major difference between a burning building and a burning boat is that a burning building is surrounded by land and a burning boat is surrounded by water. Once people, animals and things escape the burning building on land, they're thankfully safe. But once you escape a burning boat, you're likely in the middle of the ocean.

...This is where another important job of a fireboat comes in: **RESCUE MISSIONS!**

Fireboats never have to worry about running out of water – they're surrounded by it!

Fireboat to the Rescue

For this activity, pretend you're the Fireboat Chief. You're out on duty patrolling the ocean, and you come across a boat that has caught on fire and needs rescuing. Below, draw a picture of the boat you come across. Be sure to include the people, animals, or important belongings that will need to be rescued! *(Don't worry: The fire is small and everyone is okay.)*

Now let's see how you'll be able to help.

You'll need...

- Your fireboat
- A sink, bathtub, basin, or bucket filled with water
- Unfinished wooden block set
- Stopwatch (for the Challenge)

Follow these steps to complete your rescue mission:

1. Place your fireboat in the water. Use your imagination to pretend you are in this boat and you're called to put out a fire on a ship nearby. Thankfully, you extinguish the fire easily, but now you need to rescue as much as you can from the ship before it sinks!

2. Place the blocks next to the water and pretend each one stands for something or someone that needs to be rescued from the ship. How many blocks do you think you'll be able to save? _____

3. Place two blocks onto your fireboat. You're already making a difference! Observe how the weight of these blocks affects your boat. Do you want to change your hypothesis? If you don't think you'll be able to save everyone, you'll need to call in a backup rescue ship, so think about this seriously.

   New hypothesis: _____

   _____

   Why did you either change your hypothesis or decide to keep it the same?

   _____

   _____

4. Continue to place blocks on your fireboat until it begins to submerge in the water. Try not to over-fill your boat...The last thing you need is for another rescue boat to have to rescue YOU!

   How many blocks did you fit in all? _____

   Did one part of your boat start to sink first or did the whole boat submerge at once? Why do you think it sunk this way?

   _____

   _____

Rescue Mission, Plan B

1. Though you're doing a great job, there are still people on board who need rescuing. You call the backup ship, but it's pretty far away. What could you do to fit more on your fireboat while you wait for the backup boat to arrive?

2. If you said redistribute the weight or change the way the blocks are placed on your ship, you may be on the right track. Pretend to give everyone a life preserver and remove them from your boat. Then, one by one, carefully place the blocks back on, this time in a different configuration.

   How many blocks could you fit this time? _____

   Did it make a difference? _____

   Why or why not?

3. If you need to, remove the blocks one more time. The people are getting a little tired of being put back in the water, but they know you're doing everything you can to save them all! Redistribute the weight again and see if you are more successful.

4. If you still couldn't save everyone, don't fear. Your backup boat appeared just in time and everyone makes it to shore safely!

Looking for a challenge?

1. Race against time: Predict not only how much weight your fireboat will be able to hold, but also how quickly you'll be able to successfully complete your mission. Grab a stopwatch and time yourself, this time trying to beat the clock!

2. SOS 2.0: Rescue missions come in all shapes and sizes. See what happens when you come across a different boat in distress. Instead of using wooden blocks, this time rescue another material: coins, screw nuts, marbles, etc. Was it easier or harder to fill your boat? Why?