



Spooky Diving Ghost Experiment

Halloween STEM Activities

Love the cartesian diver project? This **diving ghost experiment** is even more fun!

Nothing is spookier than a ghost. Just the thought of a ghost sends chills down the spine.

You wouldn't think the supernatural and science could collide, but in this diving ghost spooky science experiment, science and ghosts combine in a spooktacular Halloween STEM activity that is perfect for October!

Ghost experiments to do at home are so much fun! (and you can do them in the classroom, too!)



Scroll to the bottom of this post for printable diving ghost instructions!

Don't be intimidated by the number of steps in this ghost in a bottle experiment, there are a few things to get right, but if you keep at it, this science experiment really is tons of fun.

I love it because it includes more STEM elements than some science experiments, because you have to build your weight system through trial and error before the ghost will rise and fall.

This ghost diver experiment was one of our favorites because it really looks spooky when the ghost appears to move on her own!

And if you're wondering what is a ghost diver, this is one example.



Diving Ghost

Science Experiment





Diving Ghost Cartesian Diver Experiment

This creative cartesian diver experiment is a fun twist on the classic [cartesian diver science experiment](#). Spooky science at its best!

Here's how to make a diving ghost.

This activity is perfect as part of your [Halloween STEM challenges for middle school!](#)

If you love this Halloween STEM activity, you'll also want to check out:

- [Spooky Halloween STEM Activities for Middle School](#)
- [100+ Fun and Not-Too-Spooky Halloween STEM Experiments](#)
- [Halloween Science Experiments in a Jar](#)
- [Halloween Science Experiments](#)

Cartesian Diver Experiment Explanation



Spooky
STEM!

Diving Ghost Experiment



When you squeeze the bottle, the water level goes up. This causes increased pressure inside the eye dropper, compressing the air.

The compressed air increases the density and mass of the ghost, making her sink to the bottom.

When the pressure is released, Ms. Ghost floats right back to the top! We noticed that our ghost was easier to sink on rainy days.



"I want more Halloween STEM activity ideas!"

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- ✓ 8 Halloween STEM challenges that build logic and problem-solving skills
- ✓ Challenges perfect for elementary and middle school
- ✓ Uses supplies common to every classroom and household!

Send me the FREE Halloween STEM challenges!

[Click here to get your challenges via email!](#)

Diving Ghost Supplies

Affiliate links used for your convenience.



- Plastic pipette eye droppers
- Hot glue gun and glue sticks
- Permanent marker
- White plastic trash bag
- Pennies
- 1 liter bottle (we used SmartWater)

How to Do the Diving Ghost Science Experiment

The trick with this experiment is to add JUST enough water so that when the ghost is placed in the bottle, it barely sinks (see the picture for how it should look).

If it floats too much, it will not sink no matter how much pressure you have on it. Too little water and she'll sink to the bottom no matter what.

The balance is key, and you may have to play around with several versions before you get it right.

Ghost Diver Experiment

spooky science for kids!



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Be patient, and explain that redoing things is what the scientific process and **STEM activities** are all about!

First, cut all but about 1/3 of an inch of the eye dropper stem off. You won't need it. Heat your glue gun while you're waiting.

Next, fill the eyedropper about 1/3 of the way with water (you'll have to experiment with this). We had almost a half a dropper of water in ours. Seal the bottom with hot glue.

While the glue is still hot, stick a penny on it for balance and a little extra weight.



Now for the tricky part. Fill your bottle nearly full of water. Place the eyedropper inside.

If you did it right, the eyedropper will just barely float above the surface. Add or remove water from the eyedropper until it floats.

Screw on the lid and test your diver. It should slowly move to the bottom of the bottle when you squeeze.

Adjust the amount of glue and water until it can do this before adding the ghost part.



Transform your eyedropper into a ghost diver:



FREE
printable!

Ghost in a Bottle Experiment



Cut a circle from your white trash bag that is a little bigger than your eyedropper head. You want it to be big enough to drape so it looks ghost-like.

Glue the circle of plastic over the eye dropper. We did one dab at the top and four dabs of glue around the bottom so it stuck, but could still flow a little.

Draw a face on your ghost with the permanent marker.



Pop the ghost back into the bottle and screw on the lid. Squeeze the sides of the bottle and watch your ghost spookily float inside the bottle.

It's like magic!

Or paranormal activity...





Diving Ghost

How to Make a Ghost Cartesian Diver

prep time: 10 MINUTES

active time: 20 MINUTES

total time: 30 MINUTES

difficulty: MEDIUM

estimated cost: \$5

*Love the **Cartesian diver project**? This diving ghost version is even more fun!*

PRINT

Materials

- Plastic pipette eye droppers

- Permanent marker
- White plastic trash bag
- Pennies
- 1 liter bottle (we used SmartWater)

Tools

- Hot glue gun and glue sticks

Instructions

1. First, cut all but about 1/3 of an inch of the eye dropper stem off. You won't need it. Heat your glue gun while you're waiting.
2. Next, fill the eyedropper about 1/3 of the way with water (you'll have to experiment with this). We had almost a half a dropper of water in ours. Seal the bottom with hot glue.
3. While the glue is still hot, stick a penny on it for balance and a little extra weight.
4. Now for the tricky part. Fill your bottle nearly full of water. Place the eyedropper inside.
5. If you did it right, the eyedropper will just barely float above the surface. Add or remove water from the eyedropper until it floats.
6. Screw on the lid and test your diver. It should slowly move to the bottom of the bottle when you squeeze.
7. Adjust the amount of glue and water until it can do this before adding the ghost part.

Transform your eyedropper into a ghost:

1. Cut a circle from your white trash bag that is a little bigger than your eyedropper head. You want it to be big enough to drape so it looks ghost-like.
2. Glue the circle of plastic over the eye dropper. We did one dab at the top and four dabs of glue around the bottom so it stuck, but could still flow a little.
3. Draw a face on your ghost with the permanent marker.
4. Pop the ghost back into the bottle and screw on the lid. Squeeze the sides of the bottle and watch your ghost spookily float inside the bottle.

Notes

If you like, you can purchase a [cartesian diver kit](#) to make things easier.

The trick with this experiment is to at JUST enough water so that when the ghost is placed in the bottle, it barely sinks (see the picture for how it should look). If it floats too much, it will not sink no matter how much pressure you have on it. Too little water and she'll sink to the bottom no matter what.

The balance is key, and you may have to play around with several versions before you get it right. Be patient, and explain that redoing things is what the scientific process and STEM activities are all about!

Recommended Products

As an Amazon Associate and member of other affiliate programs, I earn from qualifying purchases.

[Plastic Transfer Pipettes](#)

[Smart Water](#)

[Permanent Markers](#)

[13-Gallon Tall Kitchen Trash Bag](#)

[Cartesian Diver Kit](#)

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PROJECT TYPE: science demonstration / **CATEGORY:** Halloween STEM Activities



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By **Brenda Priddy**

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All you need to do is find your supplies, gather your scientists, and let the innovation unfold.

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