

WORKSHOP EXTENSION ACTIVITY

Built by The Home Depot Kids Workshop



FISHING GAME

Ages 5-12

MAKE. CREATE. EXPLORE.

#KidsWorkshopExplore





Did you know that the Earth is magnetic?



That's right! Scientists believe that the spinning molten metals in Earth's core produce a magnetic field! It's not anywhere near as strong as the magnets on your refrigerator, but it *is* the reason why compasses can work!

While the Earth's magnetic force is weak, we can see stronger magnets at work around us every day. What do you know about these types of magnets? Where can you find them? How do they work? Jot down your ideas below...



Magnet Hunt

Let's see if you *really* listed everywhere you can find magnets. Chances are high that there are more magnets around your home than you realize, so let's go on a hunt!

All you'll need is **one heavy duty block magnet**. Then the rest is up to you! Slowly explore your home and yard in search of other magnetic materials. If you think something may be magnetic, that's where your heavy-duty magnet will come in handy. Put it close to the object in question and see if you can feel a magnetic force!



Use [#KidsWorkshopExplore](#) to share pictures of your creative use of magnets to catch fish.

Magnetic fields are everywhere. Can you find them?

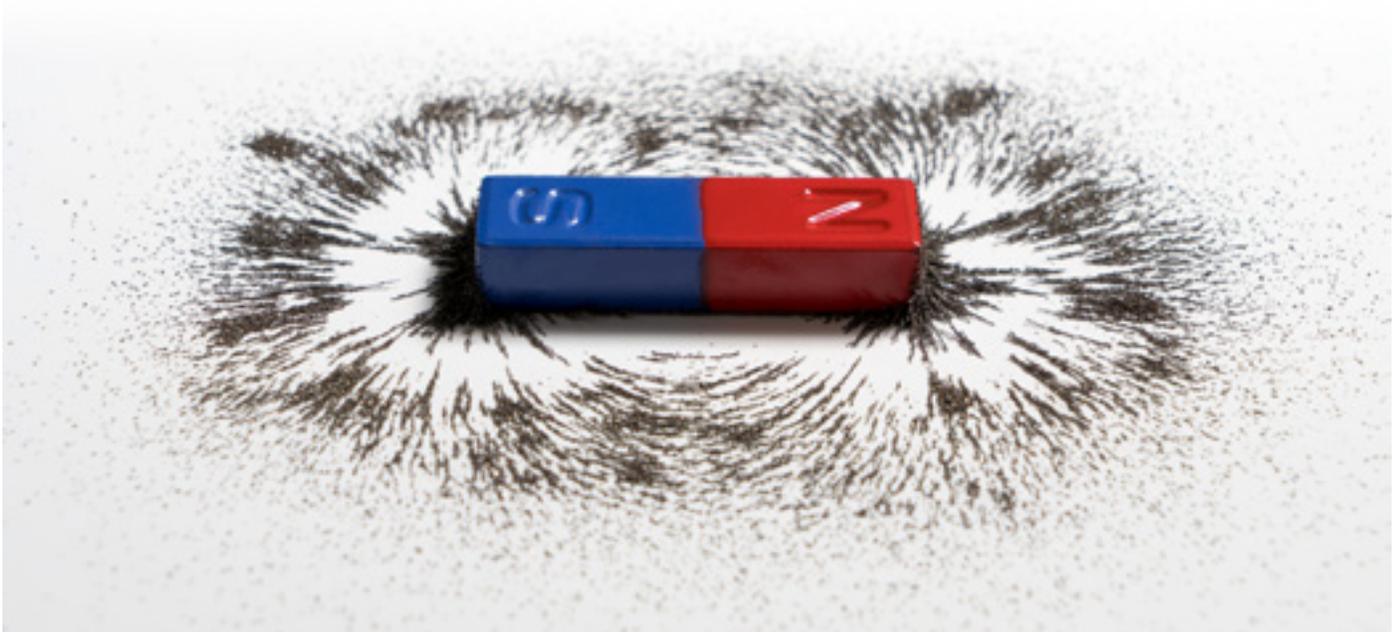
Important warning: Keep your magnet away from electronics. Many electronics use magnets to function and putting another magnet close by can cause harm!

A Magnetic Overview

Once you've completed your magnet hunt, take another look at what you said you knew about magnets above. If you can add anything that you learned from your hunt, do that now!

Then before moving on, let's make sure you understand a few facts about magnets:

You may have heard the saying that opposite attract, and this is certainly true for magnets as well. Just like Earth, every magnet has two poles: a north pole and a south pole. The opposite poles on two different magnets (north + south and south + north) are attracted to each other. When you place two magnets close to each other, the pulling you may feel is this attraction. You may also feel a force that feels like pushing when you put two magnets near each other, which is what happens when two poles repel each other. The same poles on different magnets (two north poles or two south poles) will push each other away. An invisible area of magnetism exists around magnets, and the size of this area varies depends on how strong the magnets are. This invisible area is called a magnetic field!



Back to the Fun...Let the Games Begin

During your Magnet Hunt, did you find any magnetic toys? There are lots of games and activities that use magnets: from magnetic board games, to building sets and toy trains.

Today you're going to use magnets to make a game you may recognize even *better!*

You'll need...

- Fishing Game
- Magnets of various shapes and sizes
- Double-sided tape
- Masking tape
- Marker
- Ruler
- Pencil

It's one thing to catch a fish in this game the traditional way, but — now that you know more about magnets — how about using a magnet to do it? Follow the steps below to find the winning combination of magnets to make this fishing game a piece of cake!

Tip: *Grab a family member or friend to work on this together...or create a friendly competition to see who can fish best!*

1. Stick a tiny piece of masking tape on every magnet. Then use your marker to draw a different label on each magnet: It could be a letter, number, design or symbol. You'll use these labels to keep track of your magnets and tell them apart!
2. Choose one fish to be your tester and put the others aside.
3. Use the double-sided tape to attach one magnet to the fish and another magnet to the hook, and then give the game a try. Remember, your goal is to make this fishing game as easy as possible... Rather than struggling to get a fish on your hook, you want the fish to practically jump to you!
4. Use the chart below to keep track of the magnets you tried so you can remember which combinations worked best. Once you've tested one set of magnets, continue to swap them so you can try many different combinations.



5. As you make your observations, think about:

- a. How strong is the magnetic force?
- b. How big is the magnetic field? (Hint: Use the ruler to measure the distance your fish can “jump!”)
- c. How easy or hard was it to catch your fish?

Fish Magnet Symbol	Hook Magnet Symbol	Magnetic Observations

6. When you're confident you've found the best magnet combination for catching your first fish, move on and experiment with the other two fish.



Master Fisher

Once you're catching your fish easily, it's time to really put your fishing (and magnet) skills to the test. Give these challenges below a try and see how you do!

1. How high can you get one fish to "jump" to catch your bait? How about more than one fish?

2. Can you use magnets to catch all the fish at once with one hook?

3. Is it possible to catch a chain of fish?

4. Thinking about other materials that are magnetic, can you create more magnetic fish to add to your pond?

5. Design your own challenge:



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