CD HOVERCRAFT

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Step-by-Step Photo Sequence
CD HOVERCRAFT

We had to develop our own hovercraft design using everyday materials, and that's exactly what we did. Using a CD, a balloon, and a few other household items you can create a working hovercraft, too!

Materials

- Compact disc (CD)
- Sports bottle cap (push/pull closure)
- Card stock or thin cardboard
- Balloon
- Pushpin or thumbtack
- Hot glue gun
- Scissors
- Smooth surface

EXPERIMENT

1. Using a pushpin, poke 2 holes near the center of a closed sports bottle cap. Make sure that the tamper-proof ring is removed from the cap and that the holes go all the way through the plastic of the cap.
2. Use the hot glue gun to glue the bottom of the cap to the top of the compact disc. Use as little hot glue as possible, but be sure that there is a perfect airtight seal between the cap and CD. Giving the cap a slight twist when you glue it to the CD can help.
3. Create a collar for the cap by curving or bending a piece of card stock or thin cardboard (2"x6"). Cut two slits, one on each end of the card stock that are 1" from the end. Cut the slits on opposite sides of the collar (think of it as the top and bottom of the collar). Join the slits together to create the collar.

4. Find a clean, smooth surface to place the hovercraft on.

5. Inflate the balloon and twist the opening shut.

6. Pull the open end of the balloon through the collar.

7. Stretch the balloon's opening over the sports bottle cap.

8. Without letting any air out, place the cardboard collar around the base of the balloon and cap.

9. Now let the air out of the balloon.

10. If the hovercraft doesn't slide or spin easily, make sure the CD isn't warped. If it is, you'll need to rebuild your hovercraft. If everything looks normal, try poking larger or more holes in the sports bottle cap.

**HOW DOES IT WORK?**

Hovercrafts work by using air to lift a vehicle off of the ground. The CD Hovercraft is no exception. As the balloon deflates, it is releasing air through the sports bottle cap and beneath the CD. Because of the shape, smoothness, and weight distribution of the CD, the releasing air creates a cushion of air between the CD and the surface. This cushion of air reduces the friction between the CD and surface and allows your hovercraft to move more freely.
CD Hovercraft

Here is what you need:

- A sports cap
- A thumbtack
- Hot glue gun
- A CD
- Scissors
- Card stock
- A balloon
1. Poke a few holes in the top center of the sports cap.

2. Glue the sports cap to the center of the CD.
3. Cut two slits on a piece of 8.5" x 3" card stock. This will allow you to make a ring out of the card stock.
BLOW UP THE BALLOON

TWIST THE BALLOON
PULL THE TWISTED PART OF THE BALLOON THROUGH THE CARD STOCK RING

PULL THE OPENING OF THE BALLOON OVER THE SPORTS CAP
SET IT ON A FLAT SURFACE
AND UNTWIST THE BALLOON

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