



## Master Builder

Try these fun building challenges.

**This week's activities: Build it to Float – Build it to Fly**

## Build it to Float

What does it take to float a boat? Try creating an aluminum foil structure that can carry small items found around the house.

### Suggested Materials:

- Aluminum foil
- Bathtub, sink or large bowl of water
- Coins, small rocks or candy



### Make an aluminum boat

1. Cut a large piece of aluminum foil and fold it in half. Fold foil in half again. (This makes your boat's base strong.)
2. Carefully fold the outer edges of the foil in toward the middle. Connect the outer edges together by folding and molding the foil together.
3. Add some water. Fill your sink, bathtub or large bowl with water and place boat inside.
4. Add your coins, small rocks, or candy.



### Challenge Yourself:

- Does your boat float? If not, what changes can you make to help it float?
- Try adding objects with various weights and see how many fit inside your boat.
- How many objects can you add to your boat before it starts to sink?
- Try shaping your boat in various designs and see if it floats. Which design works best?

# Build it to Fly

It's a bird. It's a plane. It's a paper helicopter. Learn how to make a paper helicopter at home using household items.

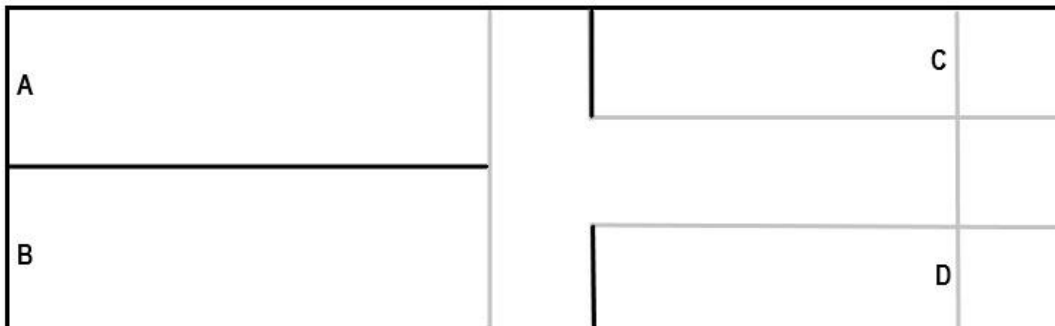
## Suggested Materials:

- Cardstock (regular paper works too)
- Scissors
- Tape
- Paper Clip
- Crayons or markers, stickers (optional)



## Directions:

1. Copy this template to a piece of paper – try many sizes to see what works. Decorate it.
2. Cut the black lines. Do not cut grey lines (they are for folding).
3. Fold section A toward yourself. Fold section B away from yourself.
4. Fold section C and D toward each other so they overlap.
5. Fold bottom edge of sections C and D toward you and tape down.
6. Attach paper clip to taped end.

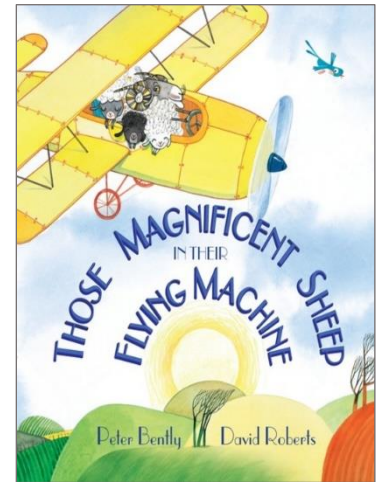
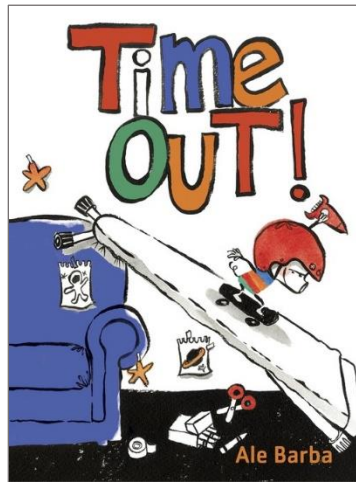
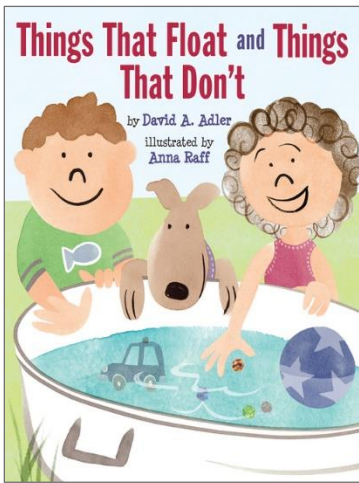


## Challenge Yourself

- Try taping a world map or landmarks onto the floor. Drop your helicopter and try to land on different landmarks.
- Try dropping your helicopter from different heights.
- Try adding weight to your helicopter (egg cartons work well) and see how it works and what adjustments you need to make.

## Links to eResources:

Check out our [eBooks](#) on these topics:



[Buoyancy and Floating](#) | [Airplanes](#) | [Flying](#)

Learn how real helicopters are made and more on *Curiosity Quest* on KanopyKids!

Learn all about the planes at the [Canadian Warplane Heritage Museum](#).

You can get a library card [hpl.ca/online-registration](http://hpl.ca/online-registration).

*If you would like to share one or all your creations, please take a picture and post it to social media using the hashtag, #HPLmakesomething.*



#HPLmakesomething

[hpl.ca/kids](http://hpl.ca/kids)

