

WITH





Maker Education Initiative

EVERY CHILD A MAKER

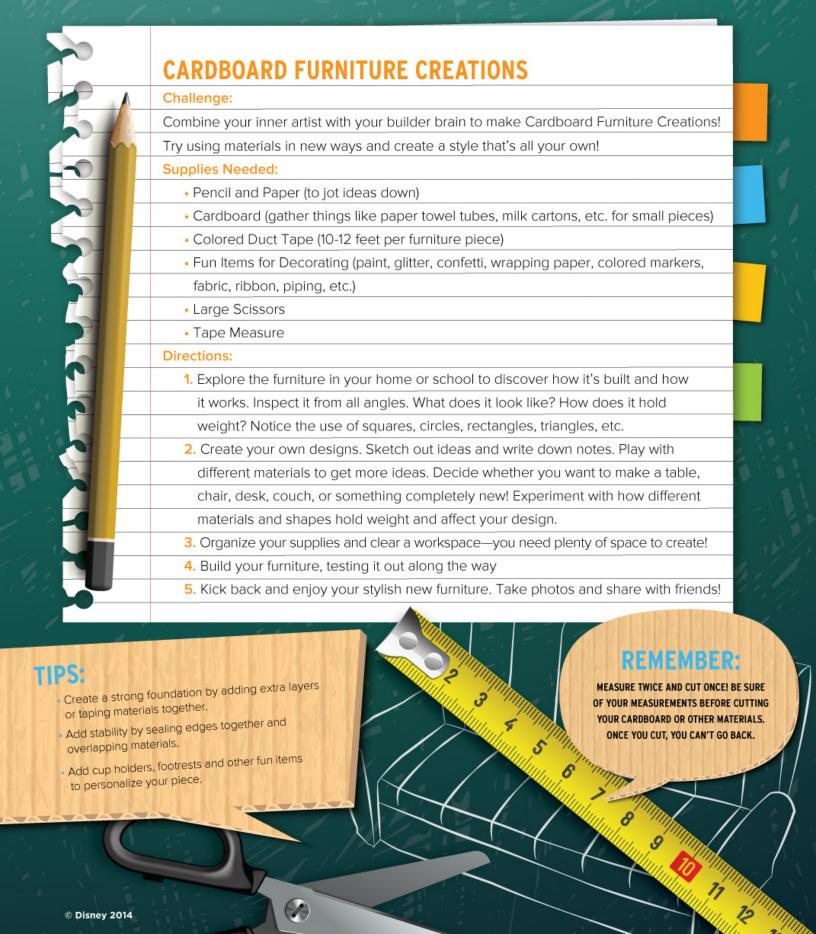
Do you like to try new things, have fun and share your ideas with friends? If so, you can be a maker! What's a maker? A maker is someone who creates things! Whether you like art, crafts, robots or computers, you can be a maker of anything! Just use the creative process!



## WHERE DO YOU BEGIN?

Start by meeting other makers. Makers are everywhere!
Chances are there are makers in your neighborhood. You can find makers at events, festivals and fairs, at museums, and libraries, in clubs and youth groups, and even right at home through friends and family!

Want to get making right away? All you need is your own imagination and some basic supplies. Starting is simple with these fun activities:



## **AERODYNAMIC GLIDERS** Challenge: 2 9 2 2 2 2 2 2 2 Design and build an Aerodynamic Glider. First make a prototype from paper, then use cardboard and weights to create your Glider extraordinaire! Supplies Needed: Pencil and Paper (to jot down ideas) Cardboard (recycled cereal boxes work well) · Recycled paper or magazines Tape Measure Large Scissors Masking Tape For weight, gather small items like marbles, pebbles, paper clips, washers, or coins For decoration, gather items like ribbon, paint, colored tape, fabric, markers, and foil Directions: 1. Start by making paper airplanes with your recycled or magazine paper. Experiment with different folds and different angles. Fly and fly again, taking note of how different shapes work. 2. Get ready to make gliders with cardboard using what you've learned from your paper airplanes. First, ask yourself what real airplanes and other aircraft look like. What shape are the wings? Where are the wings and tail located? What does the nose and body look like? 3. Sketch out some ideas and play with your materials for inspiration. 4. Build your glider. Then, change it and rebuild it. And rebuild it again! 5. Fly away! Note how changing materials, placement, weight and angles change the flight of your glider. TIPS: **CONGRATULATIONS!** Change only one thing at a time before testing again. Think about energy efficiency and aerodynamics. YOU'VE GOT WHAT IT TAKES TO MAKE! Make what you like and follow your interests. less energy efficient than a hot air balloon?

Being a maker can take you far!

- What are the shapes of aircraft you see flying around? Are some faster than others? How is an airplane more or

