

inventomania



72 cards
1 12-page booklet
Box, 1.625 x 6.5 x 7 inches



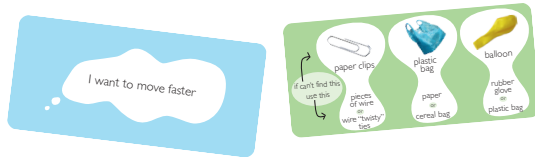
Inna Alesina
Ellen Lupton



How to play the game

This booklet will inspire you to think with materials and invent new things with everyday stuff you can find around your house. Reading the booklet will help you play the game better; the book also includes many fun projects and ideas to try on your own.

1. Each player picks two cards, one with a challenge and one with materials.



Use three materials shown on the picture, or find the substitutes listed on the bottom. You are not limited in quantity of material. Also, you don't have to use all of your materials, but you cannot use other materials.

2. Each player finds needed materials.



You can use just one bag or even part of it or use as many bags as you need. The same is true about the rest of your materials.

3. To win the game, you have to generate the most number of different solutions to your challenge.



sled



sail



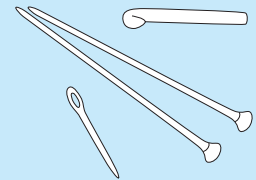
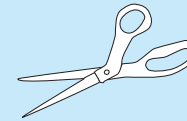
shoes

Here are the examples of different ways to solve the challenge (make someone to move faster). Plastic bag was used as a structure (sled made by packing bags tight), surface (sail) and fastener (shoes made from knitting strips cut from bags).

If you come up with an idea that is too big to make, or you don't have enough materials, make a model of it. The model is a small sketch of an idea. See the model-making chapter in the book for more details.

You can use tools and elements

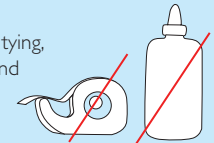
Use air, water, heat, or cold as well as your own body to your advantage.



examples of tools

You cannot use glue or tape

Use your materials to attach things together by tying, weaving, making holes and slots, sewing, fusing and otherwise interlocking them.



Be safe

Get an adult to help you, especially when cutting difficult objects such as cardboard or soda bottles.

Set up a "safety zone" so you can work on your project without destroying furniture.

Protect yourself by wearing goggles, especially when working with sharp objects or testing your inventions.

Brainstorming

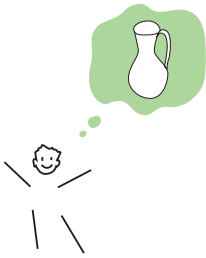
Brainstorming is getting ideas.

Two designers were asked to create an object to carry water in. See how they thought about the challenge and how they came up with different results. Can you tell why?

See how both designers were thinking about the problem. Why do you think they invented such different things?

Design a water bottle.

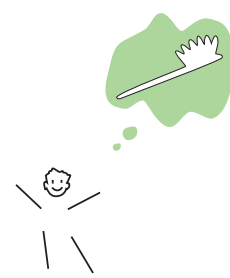
(This designer is thinking about what he or she already knows.)



Sports bottle

Design a toothbrush.

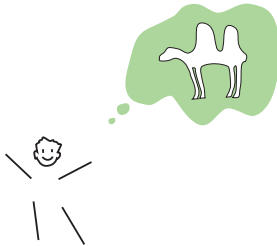
(old thinking)



Toothbrush

Imagine a way to drink on the go.

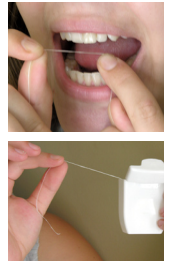
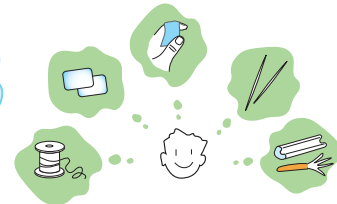
(This designer is thinking about what he or she doesn't know yet.)



Camelback hydration system
is like a backpack filled with water. You can drink from it with no hands.

Imagine a new way to clean your teeth.

(new thinking)

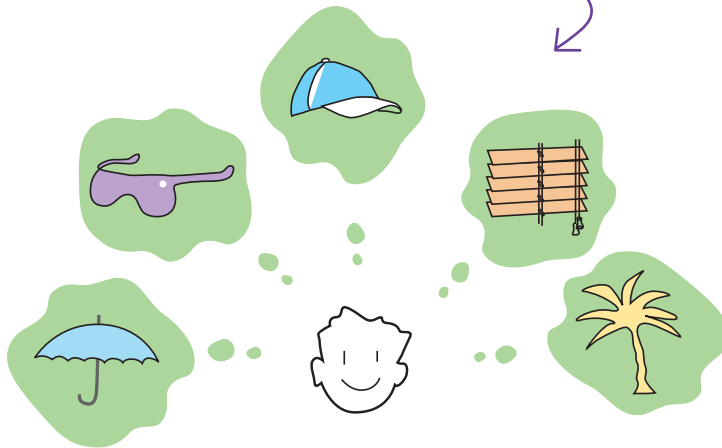


Floss

When you brainstorm, try to imagine new ways to approach the problem. Forget about what exists, and dream about what it could be.



Pick a challenge card and think of different ways to solve the problem. Think of something no one thought of before!

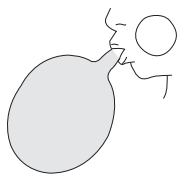


See how the same challenge could be solved differently with different materials. Can you match the materials shown above with the objects below?



Rubber balloon

A balloon is a big bubble. It is waterproof, translucent, and it floats. You can blow it up to an enormous size, yet it doesn't get heavy. Invent new uses for this everyday material.



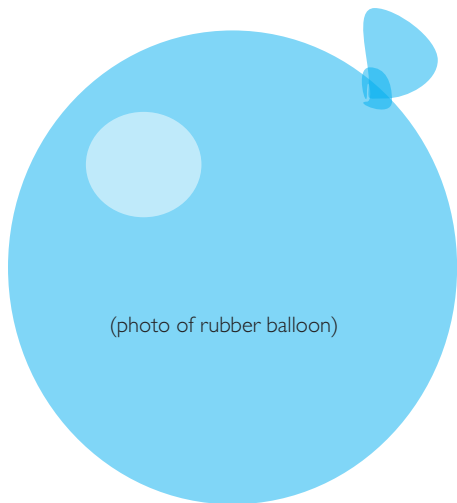
Inflated balloon

Translucent (see-through)

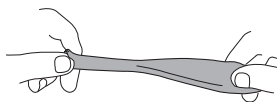
Strong but light

Floats

Waterproof



(photo of rubber balloon)



Balloon without air

Stretchy

Strong

Waterproof



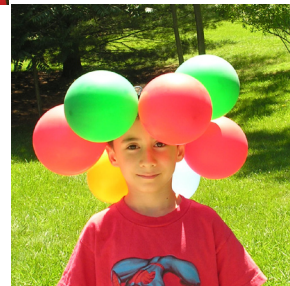
Fill it with sand or water.



Fill it with water and freeze it.

Things to do with rubber balloons

Stretch it.



Build with it.



Cut it into flat strips.



Make holes in it.

Rubber bands

Rubber comes from the roots of the rubber tree. Goo from the tree is heated (vulcanized) and then dried and pressed into sheets. The sheets are made into rubber bands and other products.

Rubber band

Stretchy

Strong

Colorful

Waterproof

Soft

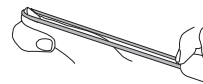
Stores energy when twisted



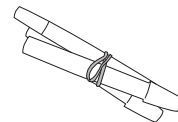
Rubber band chair
Designed by Tom Dixon



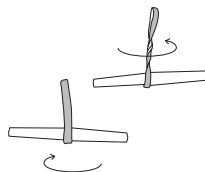
Shoot it across the room.



Hold things together.



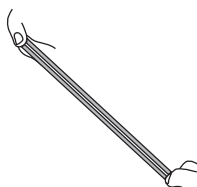
Twist it to power a toy.



Make it into ropes and balls.



Clean with it.

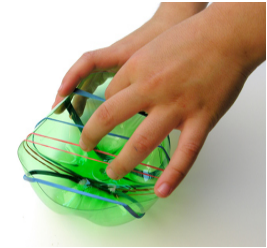
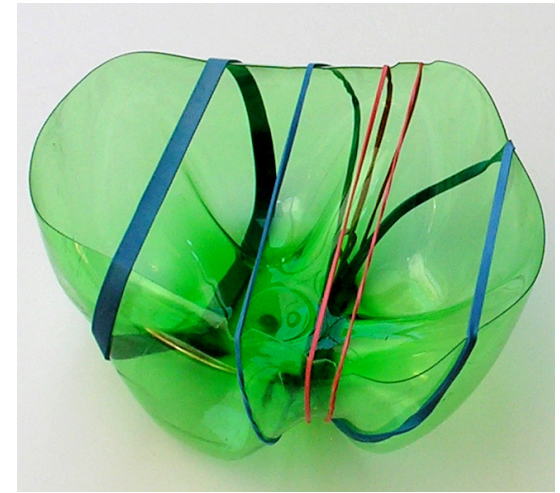
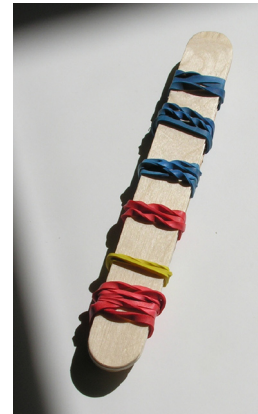
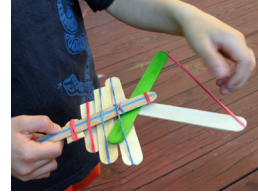




Desk accessories

To make this great looking picture frame, you will need a picture, an old flat book, and lots of rubber bands. Different colors and sizes look the best. Stretch 4 rubber bands over the book on 4 sides. Insert the picture. Keep adding rubber bands until you have the look you want.

Wrap rubber bands around objects like pencil holders and lamps to hold and organize your cards, notes, and small objects.

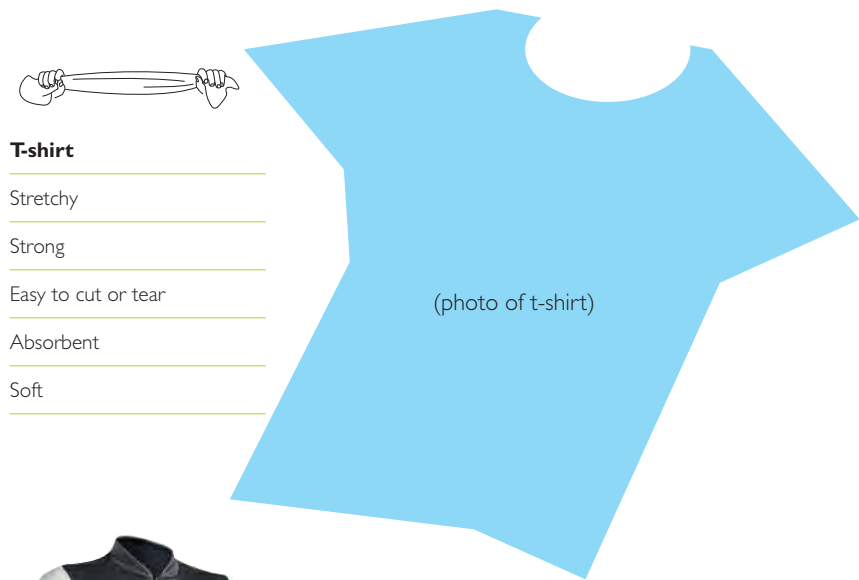


Musical instruments

Rubber bands make different sounds when they are stretched over different objects. What kind of sound do you think objects shown here make? Invent your own instruments with their own sounds.

T-shirt

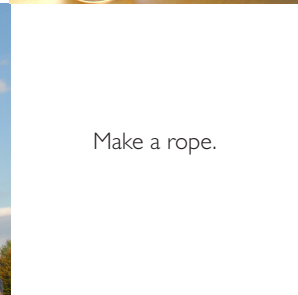
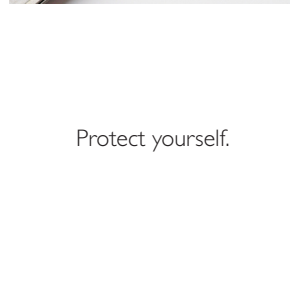
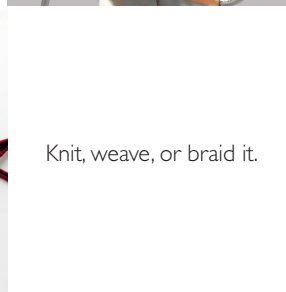
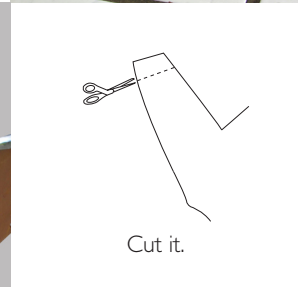
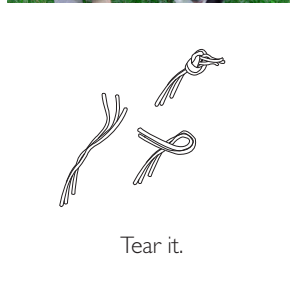
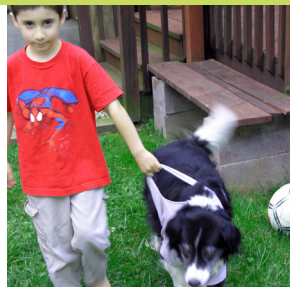
An old t-shirt is one of the most reusable objects in the house. This soft, absorbent material is ideal for washing cars and cleaning up spills. It can be cut, ripped, sewn, and tied to be make new objects.

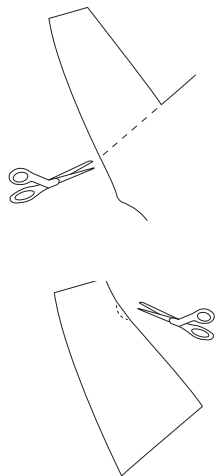


Many new materials are invented for use in sports clothing. Silver threads can make your t-shirt smell good even after a long run. Silver has antimicrobial property and kills smell-causing bacteria. Another material makes the T-shirt feel dry even when you sweat a lot.

A standard t-shirt is made of cotton, but polyester tread mixed with cotton makes the moisture (sweat) go away from your body and evaporate, so you will feel dry. All t-shirts have one thing in common they are all knitted, which means they stretch a lot.

Things to do with a t-shirt

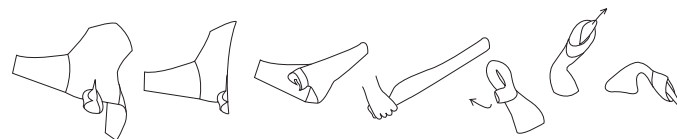




Hand-warmers

Keep your hands warm with an old t-shirt, or keep your hands clean while you do dirty work.

Cut the sleeves off from long-sleeved shirt. Make a one-inch thumb hole four inches away from the edge. You can use a sewing needle and thread to make it fit better. Trace your hand on the sleeve and hand stitch it. Cut extra fabric off. T-shirt will stretch and fit your hand.



Ball

Tie the shirt in a knot and throw it.

This project is the great way to experiment with aerodynamics. Try to tie one or more long-sleeved t-shirts into a somewhat round ball. If your ball is not flying the way you like, try to make it more compact by tucking in extra fabric or by tightly wrapping it around with a string made from "noodles" or torn strips of t-shirts. It should fly differently now.



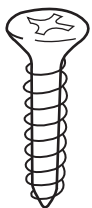


Decorate with rust

You will need some rusty objects (such as screws) and a light-colored shirt. Place an area of the shirt over a plastic plate. Make sure that only one layer is on top of the plate, so you won't stain the back of the shirt.

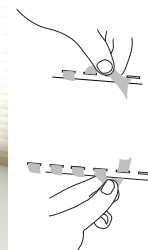
Arrange the rusted objects on top of the shirt. Pour water over it. You might get an imprint in as little as 20 minutes, but we recommend leaving the objects on the shirt overnight.

If there is no imprint in 24 hours, try sanding the objects with sand paper or rubbing them against the sidewalk to remove their protective surface.



Bag

First make a cut about one inch away from the edge and tear a strip of t-shirt fabric. It will curl into a "noodle". Use your noodles to knit or crochet the shoulder strap. You can also stitch a strap from four-by-four-inch square pieces of colorful t-shirts. Make front and back of your bag from another favorite t-shirt and sew the strap around it.



Pillow

We made this pillow with scissors as the only tool. First, cut two identical halves of your pillow. Make noodles by cutting and tearing one-inch strips. Cut holes in the sides of the pillow and stitch it using noodle as a thread. Before completing the second side, we filled it with shredded paper. Tassels make it fun.