

contraptions™

Instruction Manual

Ages 7+

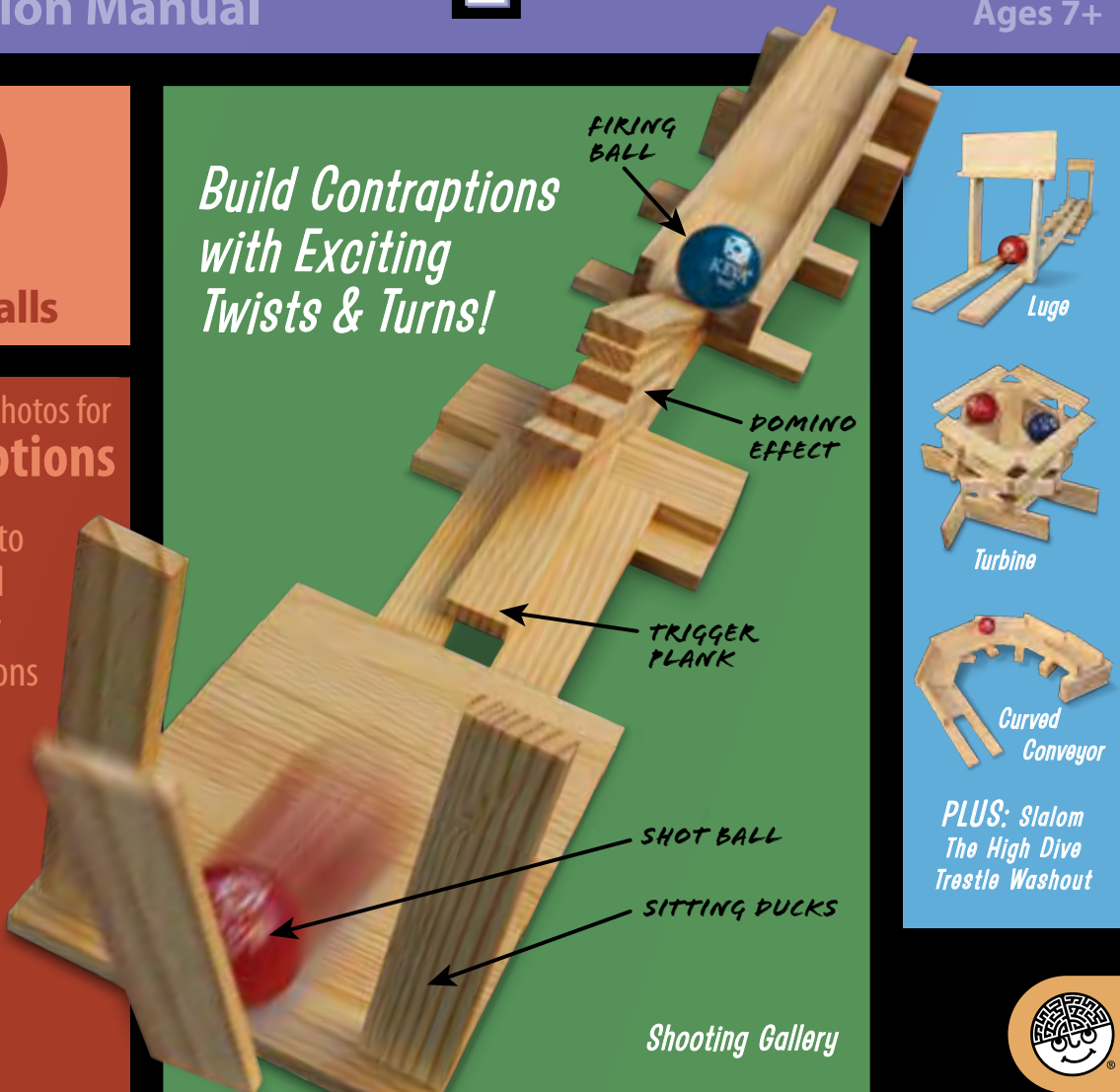
50

Planks &
2 KEVA® Balls

Instructions & photos for
6 Contraptions

Tips and ideas to
get you started
designing your
own Contraptions

*Build Contraptions
with Exciting
Twists & Turns!*



PLUS: Slalom
The High Dive
Trestle Washout



Tips

Trial and Error

Make frequent trials as you build to see if the ball will do what you expect it to do.

Easy Does It

Gentle slopes and slower speeds make it easier to control the ball movements.

Moveable Structures

Build towers on square bases so their position can be easily adjusted.

Like Sandcastles

Remember that Contraptions are temporary. They will eventually fall out of alignment. The goal is to successfully get the ball through the Contraption one or more times.

Design Your Own

Use your imagination to expand the basic concepts illustrated in this booklet.

Table It

Build on a table to gain more height. Try making the KEVA® ball move from the table to the floor.

The Angle Advantage

Upright planks are much more stable if they are angled rather than parallel.

Proof

Take photos or videos to help remember your accomplishments.

Inventing

As children build Contraptions they learn the art of inventing. Inventing is all about problem solving. Whether inventing a new gizmo for a household chore or inventing a lightbulb, it always starts with a problem and creative thought to solve the problem or find a better way.

Building Contraptions creates one problem after another ... yes, problems are good.

Problem: The ball won't move.

Solution: Place the ball on a sloped plank.

Problem: The ball falls off the side of the plank.

Solution: Add sides to the plank (create a chute).

Contraptions invite the builder to work through the invention process to create interesting new structures:

What do you want the ball to do? (*problem*)

How might you accomplish this? (*creative idea*)

Build a structure. (*prototype*)

Try it out. (*experiment*)

Did it work? (*evaluate*)

Revise your plan. (*improvement*)

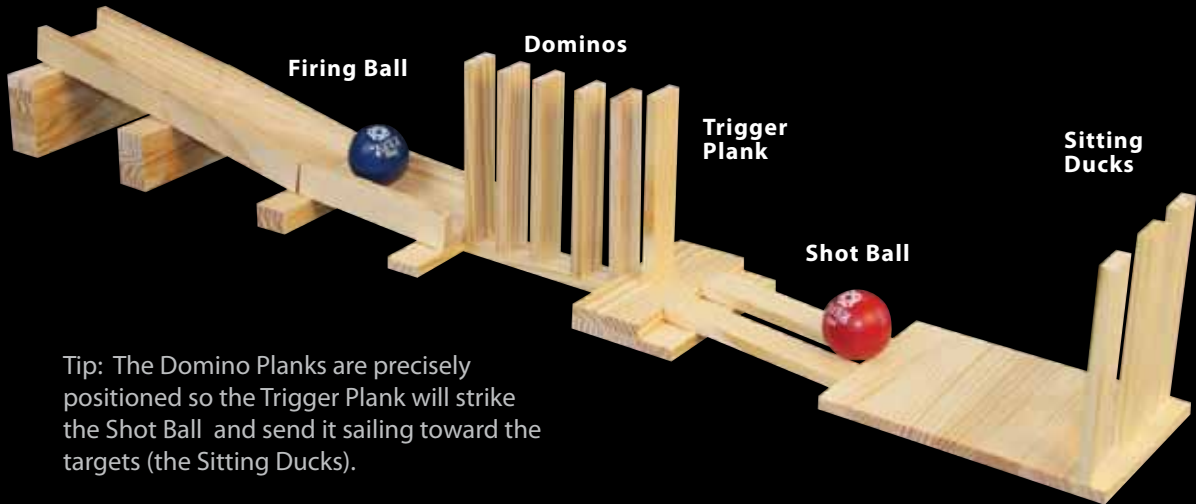
Repeat.

Building Contraptions is just a series of small experiments. The young inventor is learning to solve problems and think creatively ... one plank at a time.

Build A Mind!

Shooting Gallery

An action-packed Contraption that is sure to impress your audience!



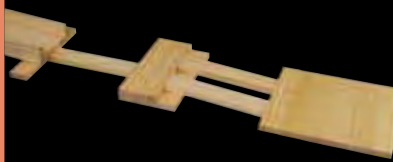
Tip: The Domino Planks are precisely positioned so the Trigger Plank will strike the Shot Ball and send it sailing toward the targets (the Sitting Ducks).

Step 1: Build a ramp with a steep slope.



The ball must have enough speed and momentum to knock over the Domino Planks at the end of the ramp.

Step 2: Add the Shooting Gallery section.



Step 3: Line up the Domino Planks and the Sitting Ducks and load the Shot Ball. It may take some trial and error to determine the perfect position for the Trigger Plank.



Get the Ball Rolling... and Your Mind Spinning

Building Contraptions and experimenting with KEVA® planks gives builders first-hand experience with balance, leverage, geometry and principles of physics. Every time you design, stack, adjust and construct, your brain is expanding along with your creations.

Build a Mind!

Your imagination is the only limit to what can be created with KEVA® planks. Build ball-bouncing Contraptions or switch gears and create towers, tunnels or towns. Imagine the possibilities. What will you build today?



KEVA®
planks



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visit www.mindware.com

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Turbine



The Luge



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Zig Zag
Tracks