Thinkfun

Thrill Ride Building Game

ROLLER COASTER Challenge™

Instructions

AGES
6 and up
single player

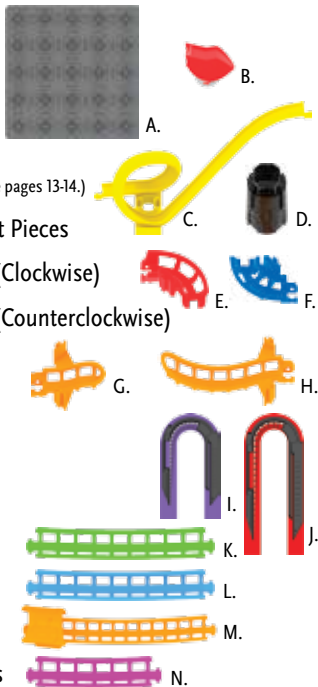# ROLLER COASTER Challenge

Thrill Ride Building Game

Welcome Aboard!

Roller Coaster Challenge is the game where you get to build your very own roller coasters! The 40 challenges will have you creating some thrilling rides. Start easy, flex your engineering muscles, then see if you can stomach the harder challenges. From there, a world of creativity awaits as you design your own rides. Imagine the fastest, steepest, loopiest roller coaster you can—now try to build it! Add twists and tunnels and feel the wind in your face as you watch your car go. It's such fun you won't even realize how much you are learning along the way!

Includes:

A.) 1 Game Grid

B.) 1 Coaster Car

C.) 1 Loop-the-Loop
(Assembly required. See pages 13-14.)

D.) 36 Stackable Post Pieces

E.) 8 Curved Tracks (Clockwise)

F.) 8 Curved Tracks (Counterclockwise)

G.) 1 Start Track

H.) 1 End Track

I.) 1 Purple Tunnel

J.) 1 Red Tunnel

K.) 10 Green Tracks

L.) 6 Blue Tracks

M.) 2 Orange Tracks

N.) 2 Magenta Tracks

40 Challenge and Solution Cards (Easy to Super Hard)

TRACK PIECE GEOMETRY:

Track pieces come in five colors, and have either 1, 2, 3, or 4 dots.

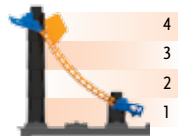The colors indicate how far down the Tracks will drop.

GREEN TRACKS will drop down 1 Post piece.

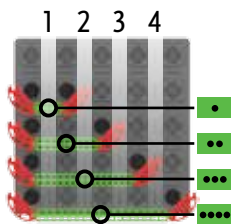**BLUE TRACKS** will drop down 2 Post pieces.

ORANGE TRACKS will drop down 3 Post pieces.

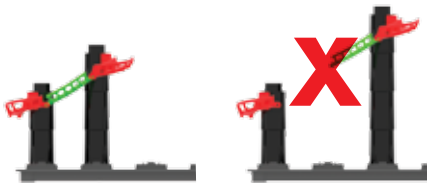The **YELLOW LOOP-THE-LOOP TRACK** will drop down 5 Post pieces.

MAGENTA TRACKS do not drop, but will go straight across between two Curved Track pieces.

The dots on each piece tell you how many spaces across the Grid the Track will go: one dot for one space, two dots for two spaces, and so on. The Loop Track will go across four spaces.

NOTE: Tracks will NOT connect to the Curved Tracks at higher drops or more spaces than intended.

Example: This Green Track will only fit between two Posts that are one unit of height and one unit of distance apart.
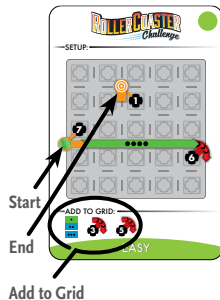
ENGINEERING ALERT:

If a piece of Track does not easily fit between two Curved Track pieces, then it is not meant to go there. Never force a Track to fit. For the best designs, follow the Building Rules on pages 11-12.
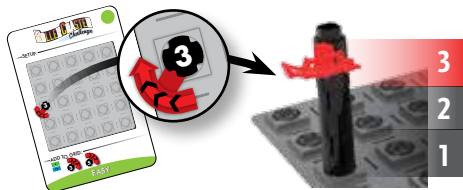
Buckle up and get ready to twist and turn your mind in every way possible as you attempt to solve 40 exhilarating roller coaster challenges. Then... when you're ready for a little free-form play, get creative and use the tracks to build your own elaborate gravity-defying thrill rides!

Object: For each Challenge, use all the Tracks and Posts shown on the card to build a Roller Coaster that will carry your Car from the Start Track to the End Track.
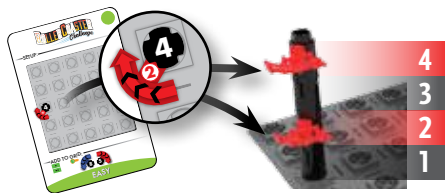
SETUP:

1. Select a Challenge Card.

2. Place the Posts as shown on the Card. The numbers on the Post icons indicate how many pieces to stack. Attach the Start Track, End Track, and any Curved Tracks to the top of the Post stacks in the position shown, with the track angled downward.
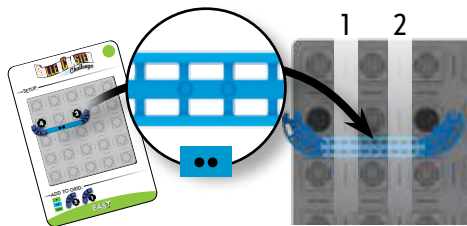

Start
End
Add to Grid

Example: A Post icon with the number "3" indicates that you should build a Post "3" pieces high.

NOTE: It is possible to put more than one Curved Track on the same Post stack. If this is part of a Challenge set-up, it will be shown like this:
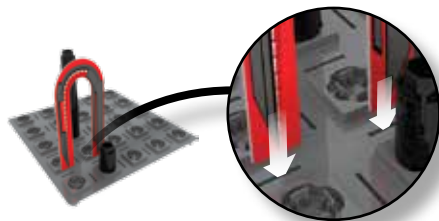

This means that the first Curved Track is attached at the "2" post, and the second Curved Track is attached at the "4" Post.

3. Next, place the Tracks on your Grid to match the Challenge Card (if shown). Make sure you have selected Tracks with the same number of dots as shown on the Challenge Card.
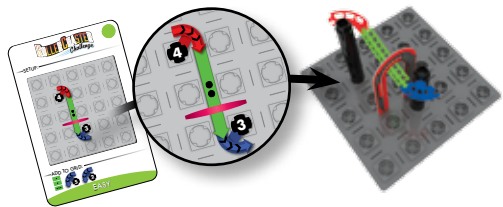

The two dots shown on the blue Track indicate the Track spans two grid spaces across.

4. Add any Tunnels to match the Challenge Card (if shown). Tunnels should be placed in the Grid slots, as shown below.

SAMPLE SET UP OF POSTS, TRACKS, AND TUNNELS:

This sample Challenge Card indicates that a green Track with two dots should be placed between Posts two grid spaces apart, as shown. A Tunnel should also be placed in the second row.

5. Select all the Posts and Tracks listed in the "ADD TO GRID" section at the bottom of the Challenge Card. Any Tracks or Posts not shown on the card will not be used.
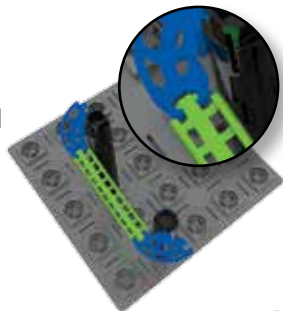
TIP: Build each Post to the height indicated first.
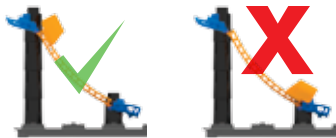
STEPS TO PLAY:

1. Determine where to place all the Tracks and Posts shown under "ADD TO GRID" to build your Roller Coaster.

2. Once you feel you've successfully created a working Roller Coaster track, place your Car at the Start and give it a small push to watch it roll!

3. If the Car rolls along the entire track and stops at the End track – **YOU WIN!**

BUILDING RULES:

1. All Tracks must connect between two Curved Tracks, or between a Curved Track and the Start or End Track.

2. Each Curved Track and the Start or End Track must connect to a Post piece.

3. The tunnel side of the Orange Track must always be at the higher end of the track.

4. Tracks may extend beyond the Grid's borders, but all Posts must be built on the base of the Grid.

5. For any Challenge that contains one or two Tunnels, your completed Roller Coaster must pass under the Tunnel(s).

6. Each Track can only fall and cross a specified number of units. See "Track Piece Geometry" on page 5.

7. The Loop Track must always rest on the Support piece, as outlined on page 14.

BONUS PLAY:

DESIGN YOUR OWN ROLLER COASTERS!

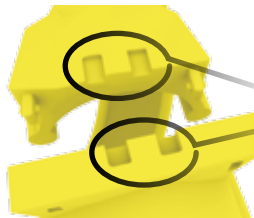Are you ready to construct the next fastest gravity defying thrill ride? Making up your own roller coasters and using the pieces for free-form building can be just as much fun as solving the challenges!

See what wild roller coasters you can come up with! Plus, see if you can make some challenges of your own for a friend to solve!

LOOP TRACK ASSEMBLY:

The Loop is made of 4 different pieces which must be assembled before the Loop can be used in the game. The four pieces can be snapped together easily by inserting the connector tabs at one end of each track piece into the slots in the opposite end of the next track piece.

NOTE: If the connector tabs do not fit into the slots easily, do NOT force them. Check to see that you are connecting the correct pieces in the proper order.
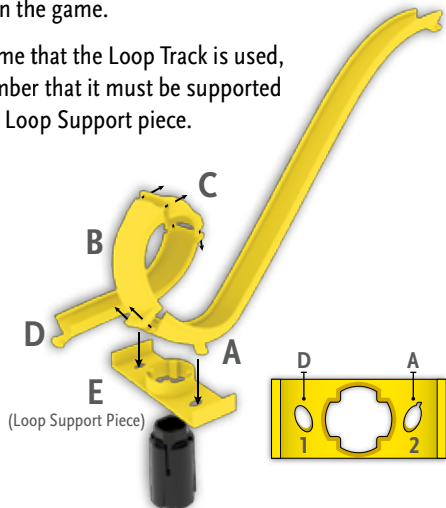

Example of II to II Markings

To check that you are connecting the proper pieces, first look at the outside ends of each track piece, where you will see either 1, 2, or 3 small bar markings. Make sure that the two track ends that you are connecting allow these marks to match up together: **I to I, II to II, and III to III**

Once the Loop is assembled, it is ready to be used in the game.

Any time that the Loop Track is used, remember that it must be supported by the Loop Support piece.

C

B

D

A

E
(Loop Support Piece)

D

A

1

2

Place the Loop Support piece on the top of a stack of Post pieces. Place the Loop on this Support piece.

NOTE: There is only one correct way for the Loop to rest on the Support piece. Piece "A" fits into Hole 2, and piece "D" fits into Hole 1, as shown in the diagram on page 14.

ABOUT THE INVENTOR:

Oli Morris: inventor and model maker by day, game-busting, puzzle-decoding enthusiast by night! To pursue such passions, Oli rarely leaves his man-cave – aka Fuse London Ltd HQ. He's inspired by taking cool things apart and trying to put them back together and experimenting with the 3D printer. Ultimately, such a lifestyle leads to a lot of mess and dirty laundry, but, occasionally the end results are brain-bending creations like Roller Coaster Challenge and ThinkFun's award-winning Gravity Maze. Fuse London Ltd is an established inventing group with over 100 licensed inventions worldwide.

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