Collect Them All!

Off-Roader & Track

Monster Truck & Track

Build A Mega Track!

DISCOVER MORE SETS

For UK

www.vtech.co.uk/
carboardracers

For AUS

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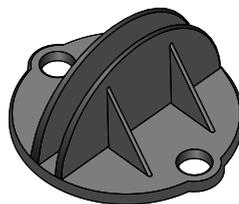carboardracers

vtech®

Starter Set

CAR-BOARD RACERS™

S634

COMPONENTS
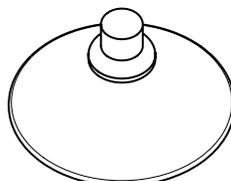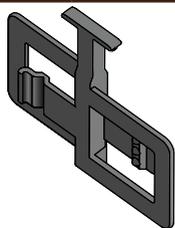

x1

C-02

x10

C-03

x2

C-01

x10

C-04

x4

T-01

x1

T-02

x1

x1

vtech
User Guide Ruler
25° Max.
CAR-BOARD RACERS
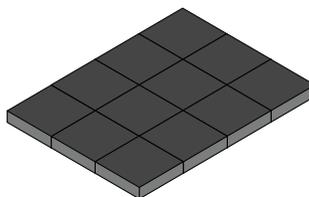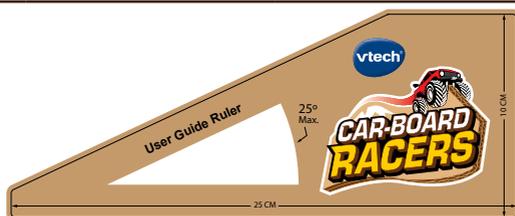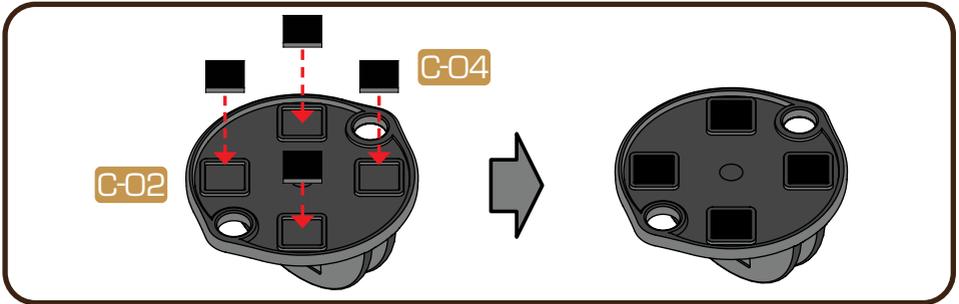10 CM
25 CM

INITIAL ASSEMBLY

ASSEMBLY INSTRUCTIONS

With the **Car-Board Racers**™ **Starter Set**, safety comes first. Adult assembly required. For your child's safety, do not let them play with this toy until the initial assembly steps are completed.

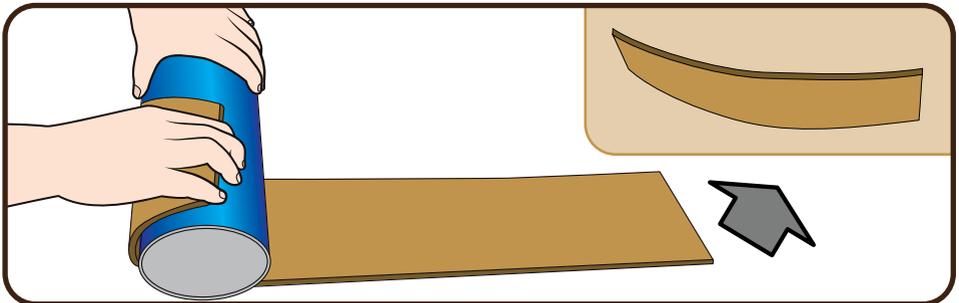### Stick the rubber label under all the stands.

COLOUR THE CARDBOARD.
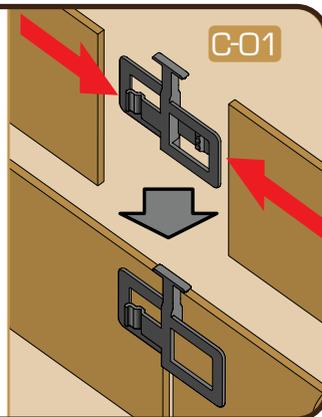

F.P.O

ROLL UP THE CARDBOARD.

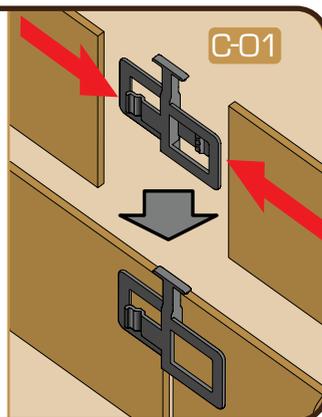**Roll T-01 and T-02** up with a can to make smooth curves.

TRACK ASSEMBLY

BUILDING THE TRACK

1

C-01

C-01

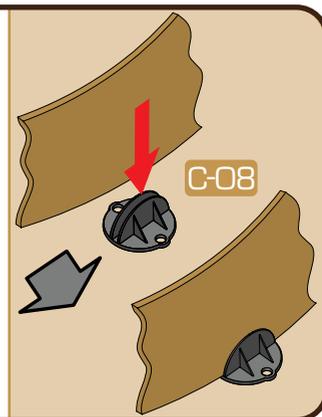T-02

T-01

2

C-01
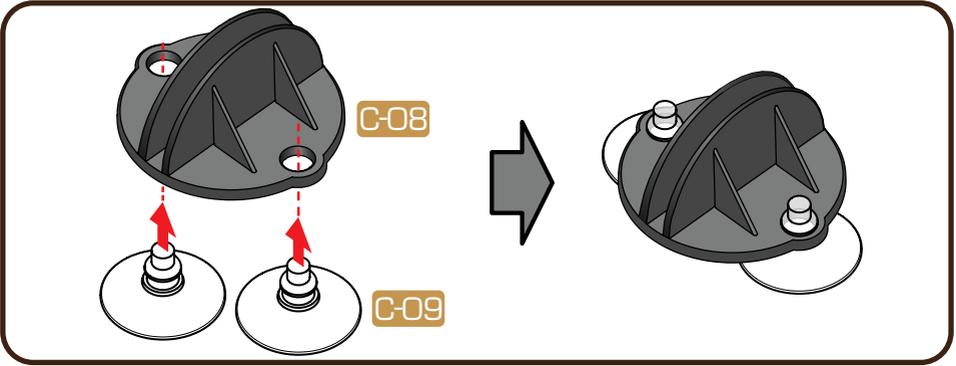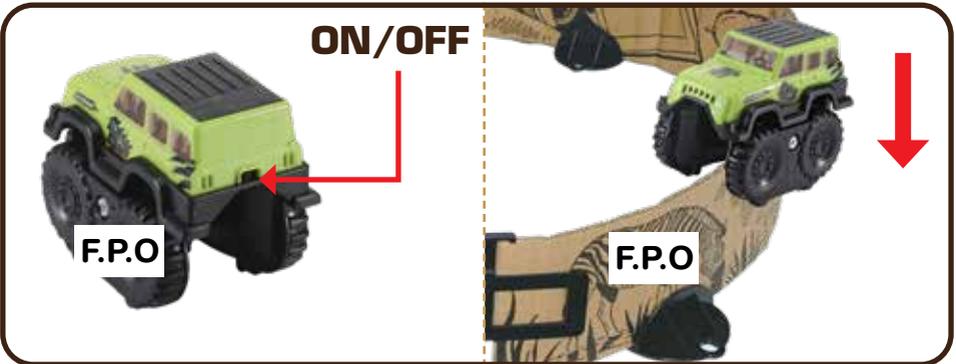
T-02

C-01

T-01

3

C-08

C-02

LET'S GO!

If necessary, add suction cups to one stand to firmly secure it to a smooth floor.

Switch the vehicle on and place it carefully on the track to start the race!

ON/OFF

F.P.O
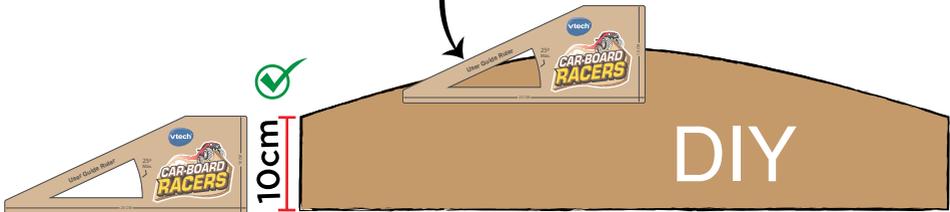
F.P.O

Gather your DIY tools.
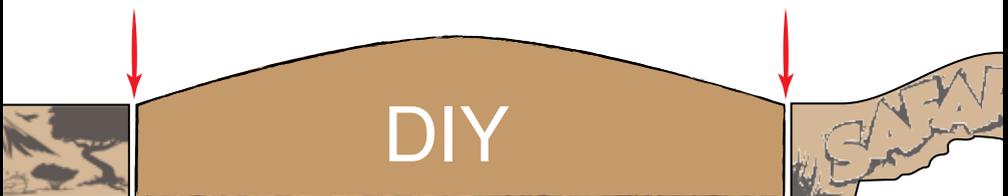
Warning: Adult supervision is required.

Upcycle any spare cardboard with thickness of approximately 6-8mm to make new tracks.

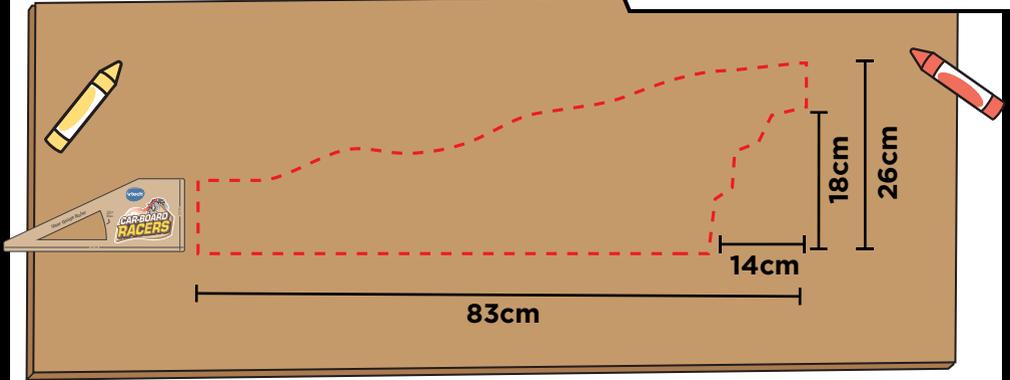Use the included ruler to make sure the height of the cardboard is 10cm.

Not Over 25°

User Guide Ruler
25° Max.
25 CM
vtech
CAR-BOARD RACERS

10cm

DIY

The heights should match on both ends!

DIY

Design some DIY track.

18cm

26cm

14cm

83cm

Make a copy.
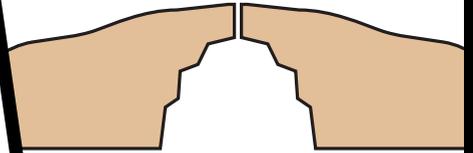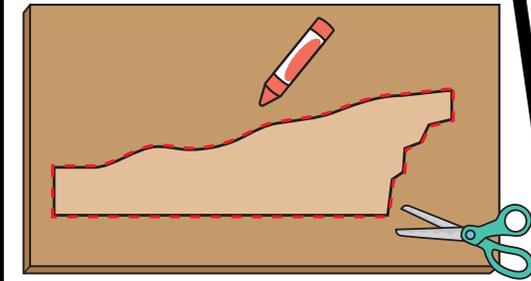
Assemble your track.

Join the tracks with connectors (C-01).

Use a stand (C-02) to stabilise.

Draw

Cut

(min) 18cm

(min) 14cm

Don't forget the stand...

Fold

Tape or Glue

Fold

7

STEAM
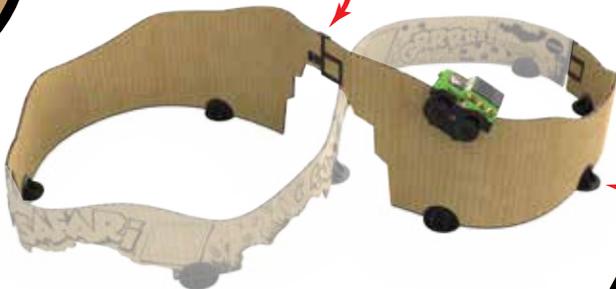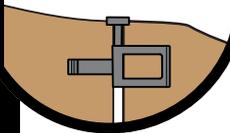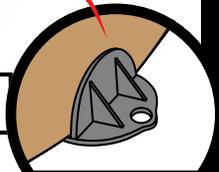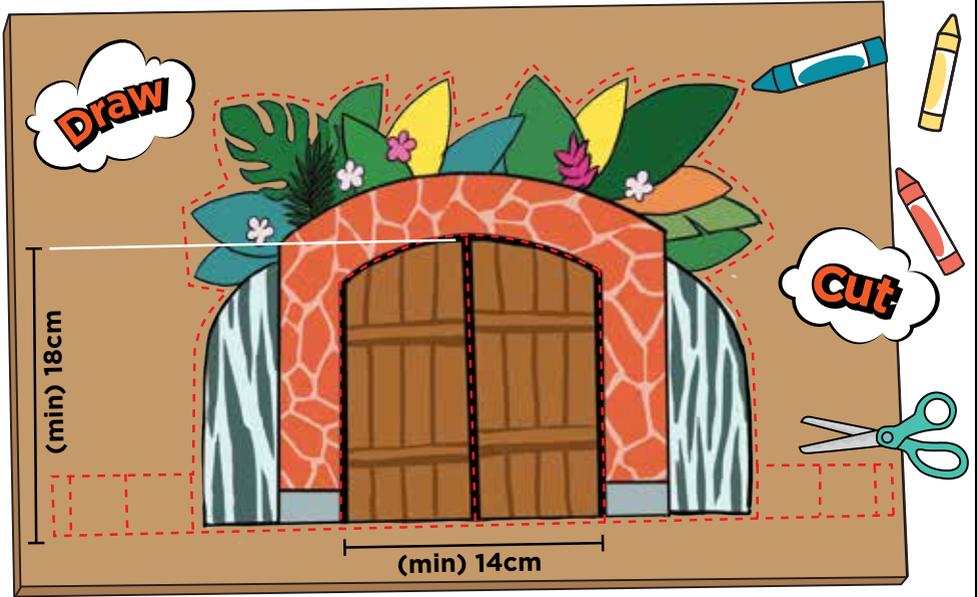## Think Like an Engineer!
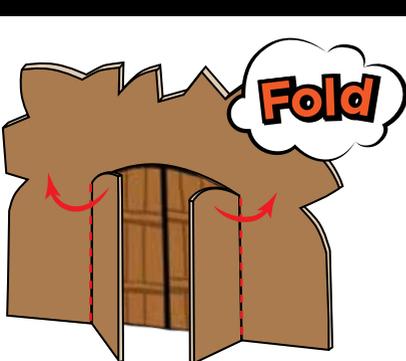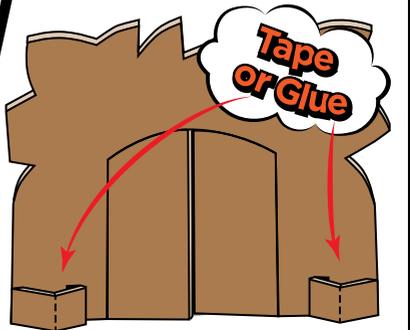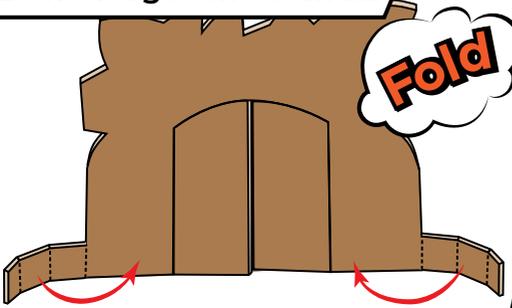
What do Engineers Do?
- Design
- Build
- Fix things

The Engineering Design Process
is a way of thinking to solve problems.
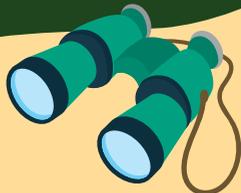
1 Start with a question

? **Example**
How can I make a paper aeroplane that flies across the room?

2 Plan and Design

Start by researching.

Write or sketch ideas.

Pick an idea to try.

There are no bad ideas in brainstorming.

Brainstorm

Different colours of paper

Use thick paper

Change size of wings

Throw plane harder

Try new folding method

Start to build

3 Build

Gather materials & start creating!

It doesn't have to be perfect!

4 Test

Gather testing tools.

- Test your solution a few times.
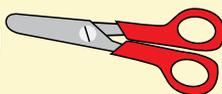- Take notes as you go.
- Set up testing environment.
- Test your solution in different ways.

5 Reflect & Improve

Hmm.. my idea didn't work.
I wonder why...
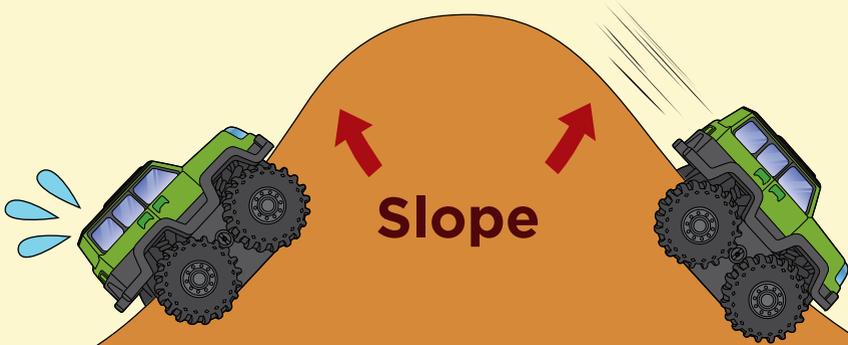
I have an idea to improve it!
I'll try wider wings next time.

? What went well?

? What could you do differently?

- Go back to the Plan and Design phase to make adjustments.
- Use what you learn on your next try.

Knowledge Pit Stop 1

Steep hills have a slope that **rises very quickly**. It goes higher and higher as you move forward.

Slope

Engineering Challenge

1 Start with a question

?

"How steep a hill can this Car-Board Racer climb?"
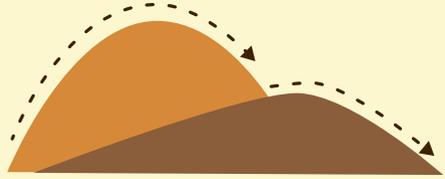
How, oh how, will I get up this hill?

2 Plan and Design

Use this space to sketch out ideas!

A hill is like a triangle. Some triangles are tall and narrow; others are short and wide.

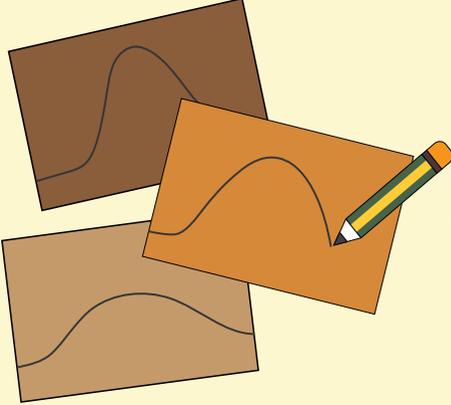Draw three different hills in the Test Table.

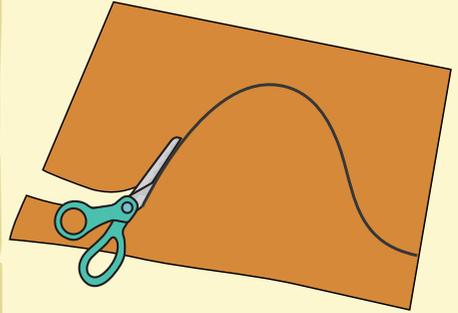Pick an idea you'd like to try

3 Build
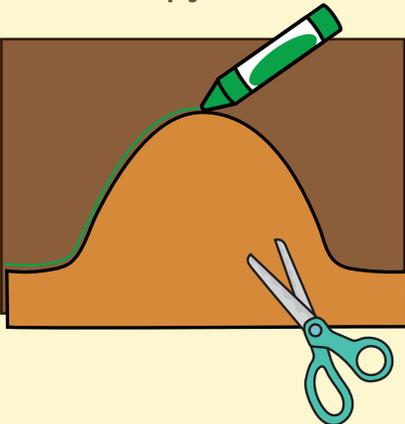
Step 1:
Draw your design
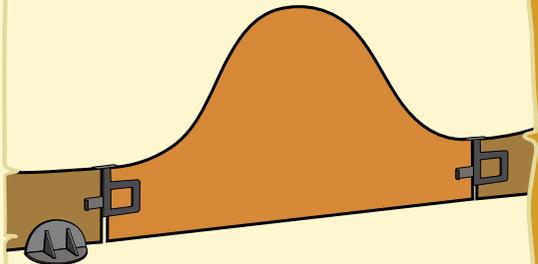
Step 2:
Cut your design

Step 3:
Make a copy

Step 4:
Attach to the track and test

4 Test

Can the Car-Board Racer climb this hill?

Hill A

Hill B

Hill C

5 Reflect

? Can the Car-Board Racer climb all 3 hills?

? Is it easier to climb a steeper and higher hill? Or a flatter and lower hill?

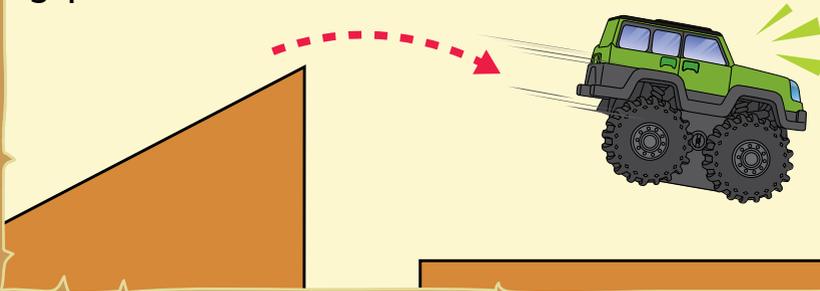**?** Can you adjust the copy to make each hill too steep to climb?

Knowledge Pit Stop 2

The Car-Board Racer builds **momentum** as it moves along the track.

The faster it goes, the greater the momentum.

When a Car-Board Racer leaves a ramp, gravity will try to pull it down.
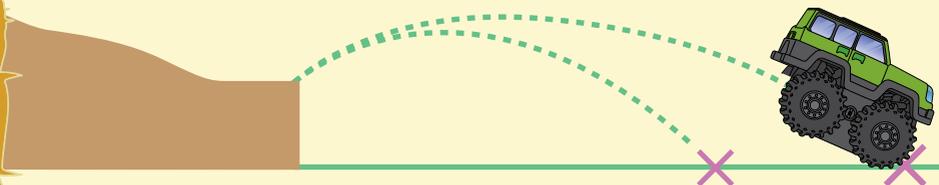But with enough momentum, the vehicle can get across the gap.

Engineering Challenge
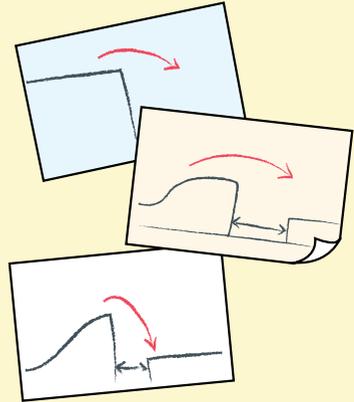
1 Start with a question

? How can I make a Car-Board Racer jump as far as possible?

2 Plan and Design

Use this space to sketch out ideas!

A Car-Board Racer needs to go fast and to be pointed upwards before it can make a jump.
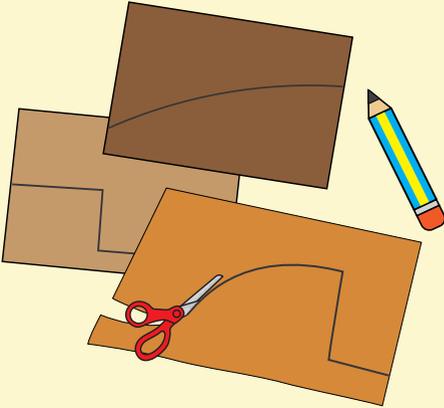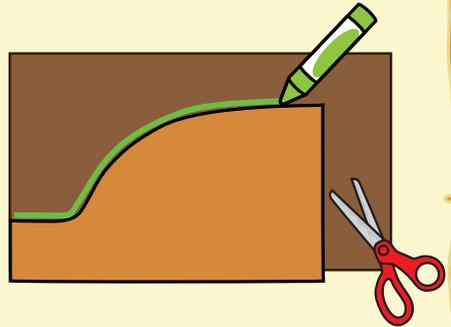
Pick an idea you'd like to try
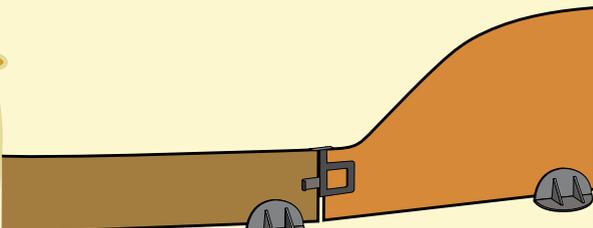
3 Build

Step 1:
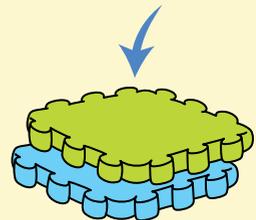Draw and cut your designs

Step 2:
Make a copy

Step 3:
Assemble the track and
prepare a landing zone with a mat

soft materials
example: foam mats

4 Test

Draw different kinds of gaps in the Test Table below.

Gaps (Draw 3 gaps below)	Can the Car-Board Racer jump across safely?
Gap A	
Gap B	
Gap C	

Test your best jump!

5 Reflect

? **Can Car-Board Racer jump all 3 gaps safely?**

? **What kind of ramps can a Car-Board Racer jump?**

Jr. Engineer

Certificate

Awarded to:

vtech®

Awarded by

Date