



# MAGFORMERS®

Intelligent Magnetic Construction Set For Brain Development

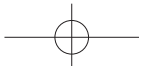
## BRAIN MASTER SET

### GUIDE BOOK



MAGFORMERS INC.







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## Educational value of Magformers According to Age



### Sensitive 1-3 year-old Sensorimotor Stage

A critical period that forms 80% of brain development. Through various sensory stimulation activities and finger movements, the brain and nervous system are developed.

#### Educational Effects

- M
- A
- D
- 
- D

M

A period to passionately explore objects. While operating surrounding objects, curiosity increases. Symbolic thinking is developed, and imaginative and virtual play forms are displayed overall.

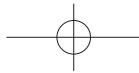
#### Educational Effects

- I
- 
- D

### Curious 3-5 year-old Preoperational Stage







Stubborn 5-7 year-old

### Concrete Operational Stage



A period when self-reliance and independence is developed, which causes behavior based on accomplishment. The ability to think and express themselves is developed, and creative and unique play is possible.

#### Educational Effects

- 
- M
- 
- 
- D

A period that enables concrete thinking about objects and specific reproduction regarding the surrounding world that they experience. In this process, observation and analytical skills relating to objects, and logical thinking are developed.

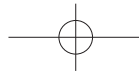
#### Educational Effects

- D
- D
- D
- D
- D
- 

Expressive 7 year-old  
and older

### Formal Operational Stage





# Magformers Brain Master Set

## Modeling

D

## Reasoning

I

D

BRAIN

## Sensory development

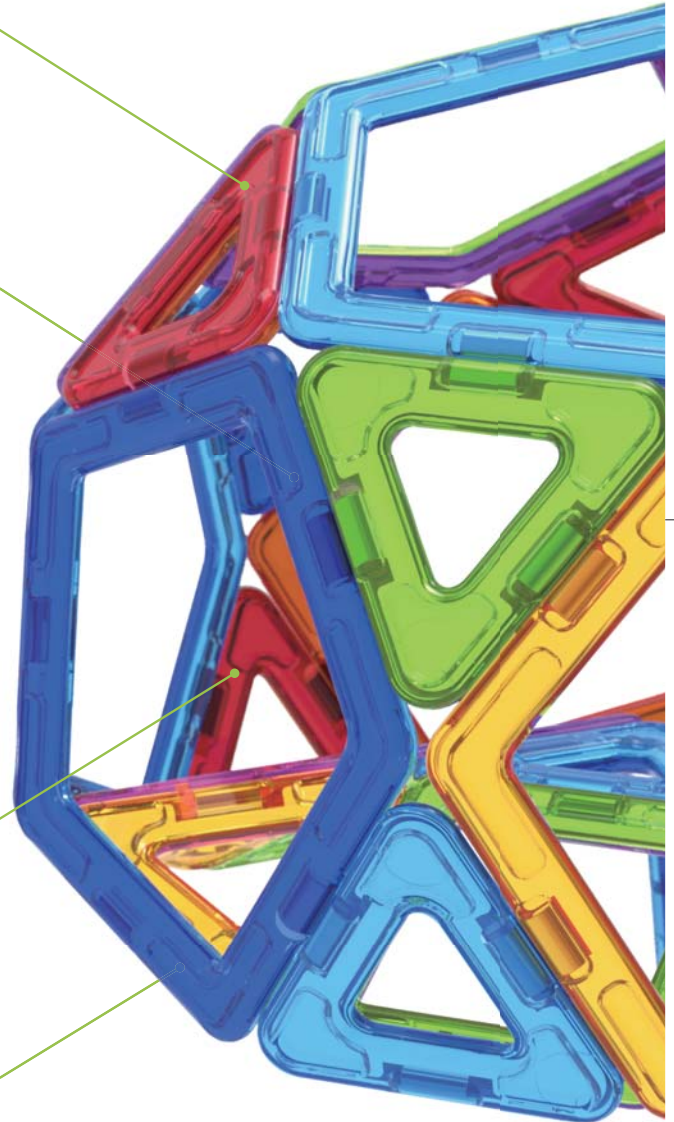
I

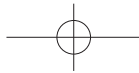
S

D

## Curiosity

E

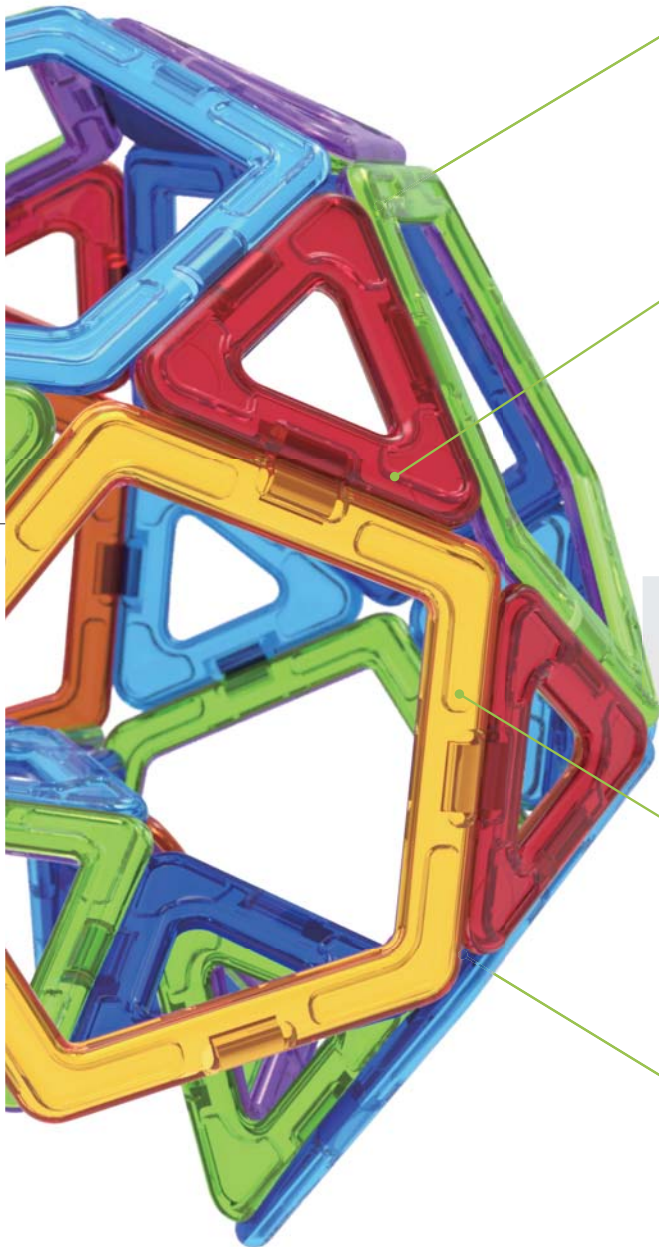




M B M S

I

T M B M S



## Creativity

E D

## Mathematics thinking

D

## Imagination

























## Scientific thinking

I



















MASTER

# Composition of Brain Master Set

## Basic Shape

					
Triangle X 34	Square X 44	Window Triangle X 8	Window Square X 8	Isosceles Triangle X 8	Rectangle X 4
					
Pentagon X 2	Hexagon X 2	Diamond X 4	Trapezoid X 4	Arch X 4	Sector X 8
					
Mini Rectangle X 8	Super Rectangle X 2	Super Triangle X 4	Cone X 4	Super Sector X 8	Super Arch X 4
					
1/8 Mini Sector X 8	1/8 Mini Arch X 4	Super Square X 6	1/8 Sphere X 8	Oval Sector X 4	Oval Arch X 2

## Basic Accessory

					
Boy Square X 1	Girl Square X 1	Princess Square X 1	Astronaut Square X 1	Block X 10	Wheel X 2
					
Propellers X 1	Crane X 1	Pulley Block X 1	Antenna X 1	Triangular Pyramid X 8	New Extension Pyramid X 6
					
Rotate Block X 8	Cards X 20	Bar X 2	Super Bar X 2	Window Single X 5	Window Double X 5














## Basic Accessory

					
Window Grid X 5	Balcony X 2	Brick X 10	Tree X 2	Stairs Block X 1	Door X 1

## Gear Accessory

					
Big Gear X 4	Small Gear X 4	Square Playground X 2	Hexagon Playground X 1	Gear Handle X 1	

## Power Accessory

					
Power Engine Block(RF) X 1	Engine Module 1-way X 1	Engine Watch X 1	90° Female Connector X 2	Walking Block X 1	Auto Sliding Block X 1
					
Big Wheel X 2	Propellers Wheel X 2	Square Auto Connector X 2	Spiral Block X 1	LED Block X 1	USB Cable X 1

E

O

G

T

B

## R/C Accessory

					
R/C Block X 1	Head Block X 1	R/C Front Wheel X 1	R/C Remote Control X 1		

R R

O

G

T

B

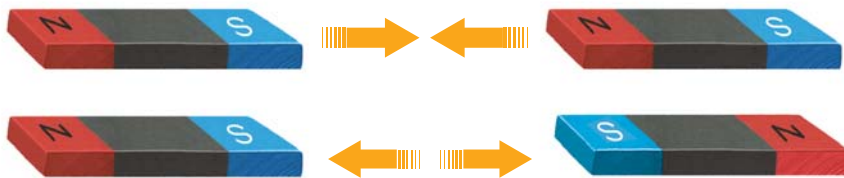
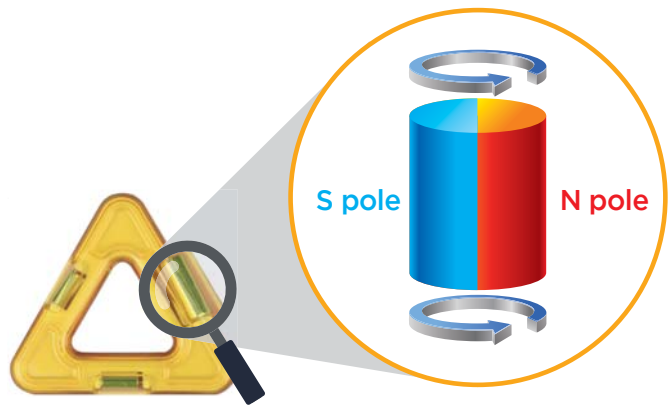
# The Principles of Magformers

T  
I

M

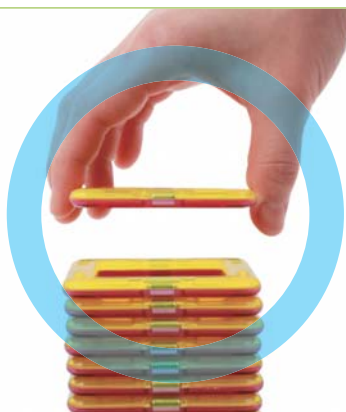
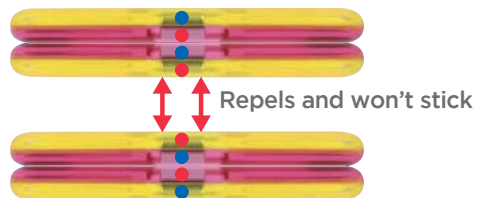
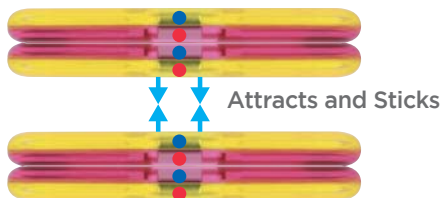
A

T



However, as shown above, if two pieces are stuck together and the magnets cannot rotate, they might repel each other in some cases. That's why it's easier to attach one piece to another. Likewise, when you clean up the Magformers pieces, it's easier to attach one piece to another!

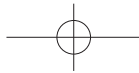
● S pole ● N pole



Correct Example



Incorrect Example



## Tip. How to Make Magformers Easily

T

M

M

D

### Case1 > Combining a 3D piece with another 3D piece

When you combine a 3D piece with another 3D piece, the rotating magnets may be fixed and repel each other. Just like the picture below, attach one edge of a piece to another first and then attach the rest.



### Case2 > Combining a 3D piece with another piece

When you create a 3D shape and add another piece to the edge, attach it to the middle of the edge to fix it well as shown in the picture below. In addition, when you want to attach 2 pieces at once, attach them like the picture below.



## Warnings when Using the Magnetic Block

M

S

D

- Always keep the product away from fires.

I

T

T

K

- When you first open the product, it may smell like plastic, but it is safe to use.

K

T

K

B

D



## 6 Ways to Use Magformers

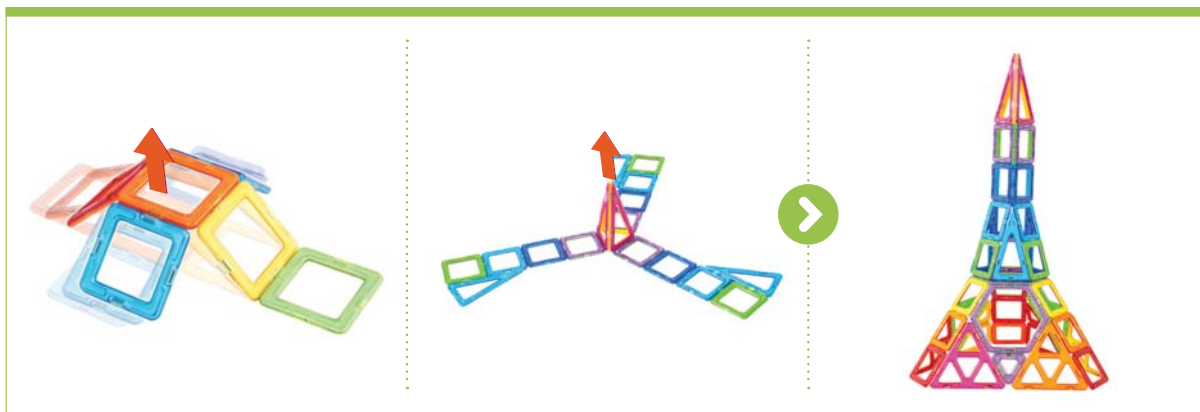
U

M

### 1. Pull Up > A

D

M

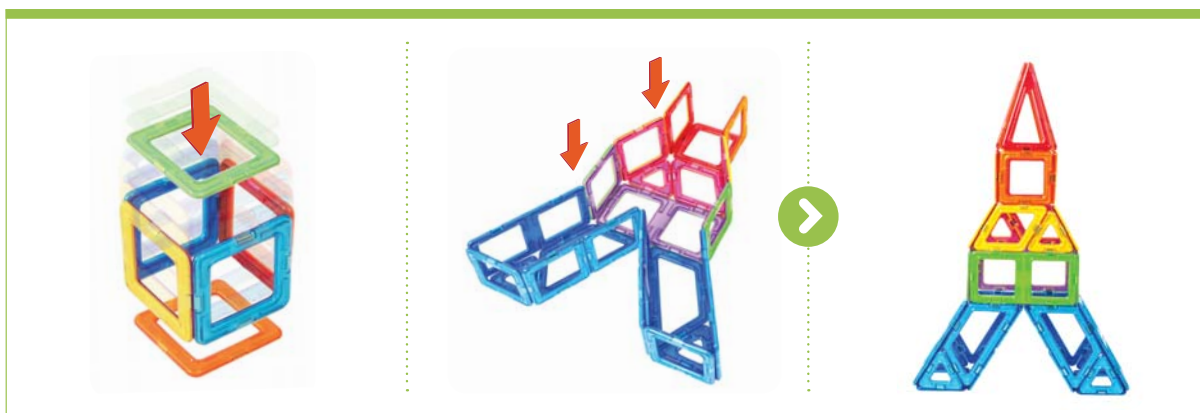


### 2. Build a wall > A

D

D

M



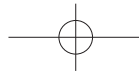
### 3. Roll > A

D

M

D





#### 4. Fold > A

D

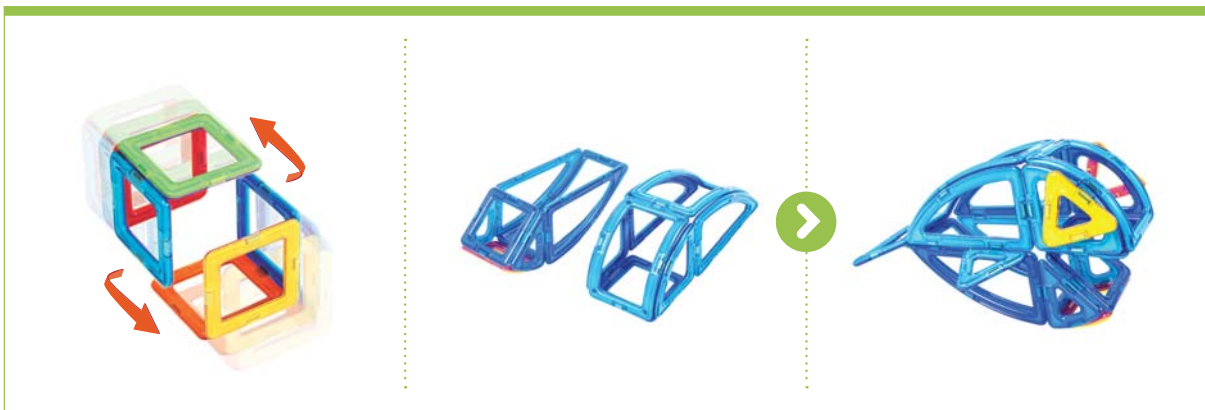
M



#### 5. Combine > A

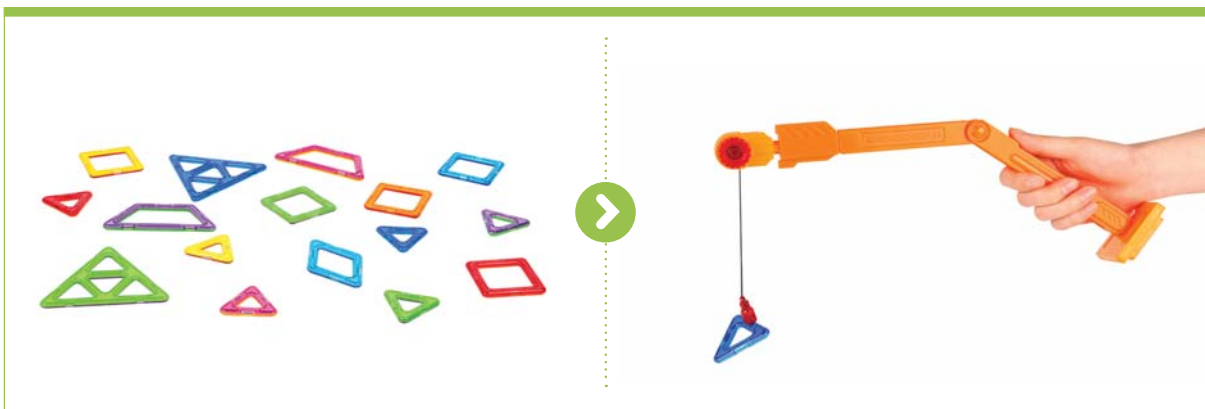
M

D



#### 6.TIP > M

G



# How to Use Magformers Basic Accessories

## Basic Accessories



Wheel



Crane



Pulley



Propeller



Antenna



Window Single

## How to Assemble and Examples

B

M



Wheel



Pulley, Crane



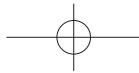
Propeller



Antenna







## Basic Accessories

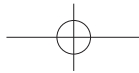


## How to Assemble and Examples

B

M





# How to Use Magformers Gear Accessories

## Gear Accessories



Big gear



Small Gear



Handle



Square Playground



Hexagon Playground

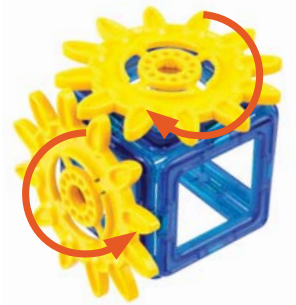
## How to Assemble and Examples



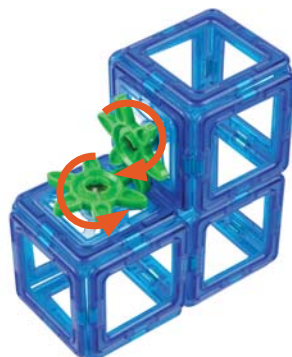
Rotate Block + Gear + Handle



Piece + Playground + Gear



The big gears deliver power to the outer surface.



The small gears deliver power to the inner surface.



The gears deliver power organically.

# How to Use Magformers LED Block

## LED Block



T ED B

B

M

ED B



### How to Use the LED Block

T ED B

E fixe I

Power Button



### How to Charge the LED Block

USB

ED B

. Charging in any way other than the recommended method may cause a malfunction.  
Please use a PC or laptop to charge the product.



LED Block



USB Cable



PC / Laptop

### Warnings for the LED light (This must be read by a child's parent or guardian)

T

ED

ED

D  
D

USB

T

N

USB AB E

D  
D



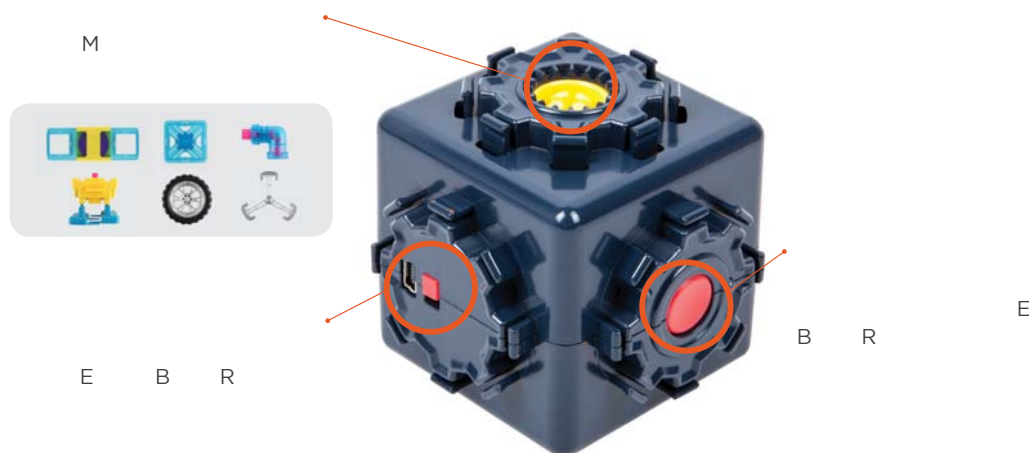
# How to Use Magformers Power Accessories

## Power accessories



## How to Use and Charge the Power Engine Block(RF)

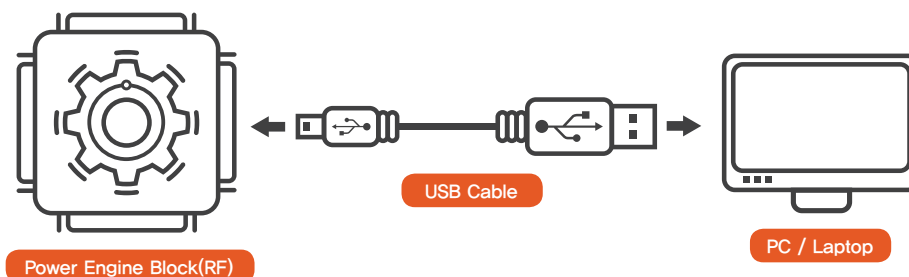
### How to Use the Power Engine Block(RF)



※If the model goes backwards when you control it, turn the Engine Watch button to the opposite direction, or press the power button of the Power Engine Block(RF) once more to make it move forward.

### How to Charge the Power Engine Block(RF)

USB  
T  
Charging in any way other than the recommended method may cause a malfunction. Please use a PC or laptop to charge the product.



# How to Use the Engine Watch and How to Replace Batteries

## How to Use the Engine Watch

When the power switch is turned on, a red light appears on the front. Try to control the Power Engine Block(RF) with the Engine Watch.



T

E

B

R

※

B



T

E

B

R

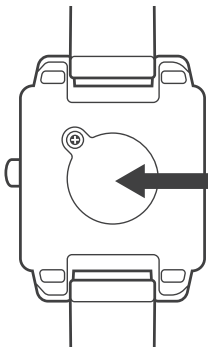
※

B



## How to Replace the Engine Watch Battery

E



Engine Watch

BATTERY  
CR2032 3V



# Warnings when Using the Power Accessories

T  
I

E   B   R  
E   B   R   E

E   B   R

D  
I  
D  
D

USB

USB

D

# How to Use Magformers R/C Accessories

## R/C Accessories

T R B B R R



R/C Block



R/C Front Wheel



Head Block



R/C Remote Control

## How to Use the R/C Block



T

A



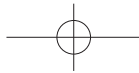
I

R B



You can control the R/C Block and Head Block with the R/C Remote Control!





## How to Use the R/C Remote Control



R B

R B

R R

Power Switch  
Special Button



<p>Forward Button</p>	>		↑	>	 A
<p>Reverse Button</p>	>		↓	>	 The lamps on both sides flash.
<p>Turning Right Button</p>	>		↻	>	 A
<p>Turning Left Button</p>	>		↻	>	 A

## How to Use the Head Block

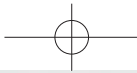
M

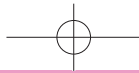
B











# FOR BEGINN

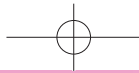
**LEVEL 1.**

M

M

\* The images of models in this guidebook are for illustration purposes. The actual composition and color may vary.





# ER

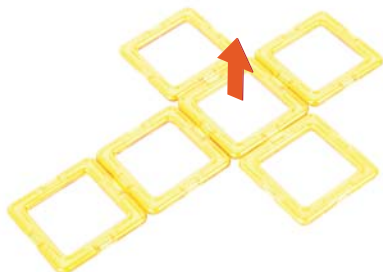




# House

## How to make

1



2



3

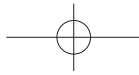


4



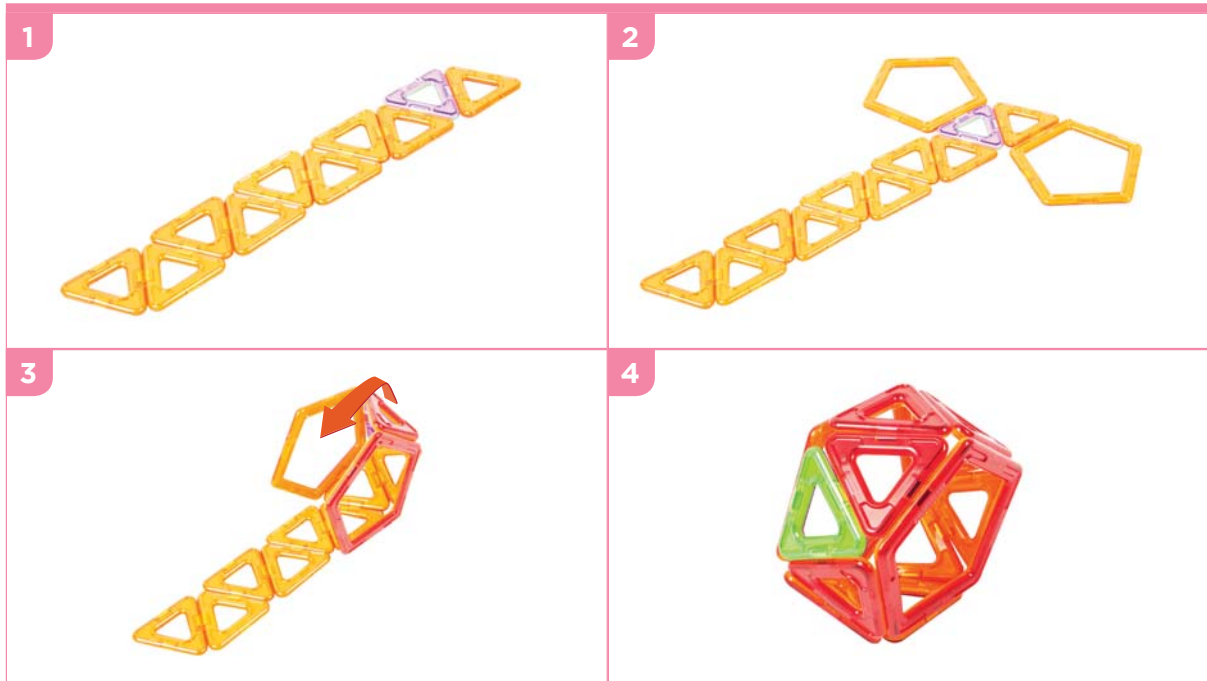
## Composition

 x 2    x 8



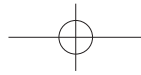
# Apple

## How to make



## Composition





# Car

## How to make

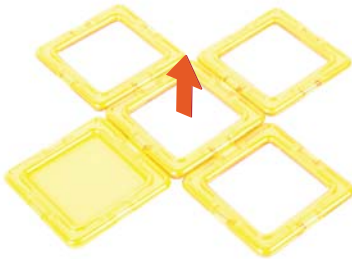
1



2



3

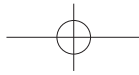


4



## Composition

 X 14    X 1    X 1    X 2



# Bus

## How to make

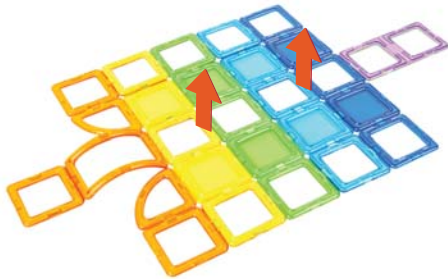
1



2



3



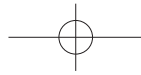
4



## Composition

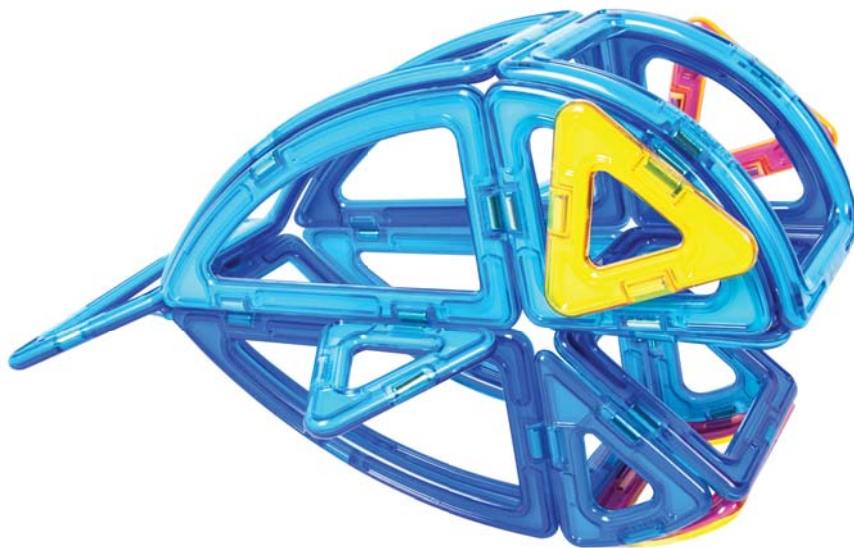
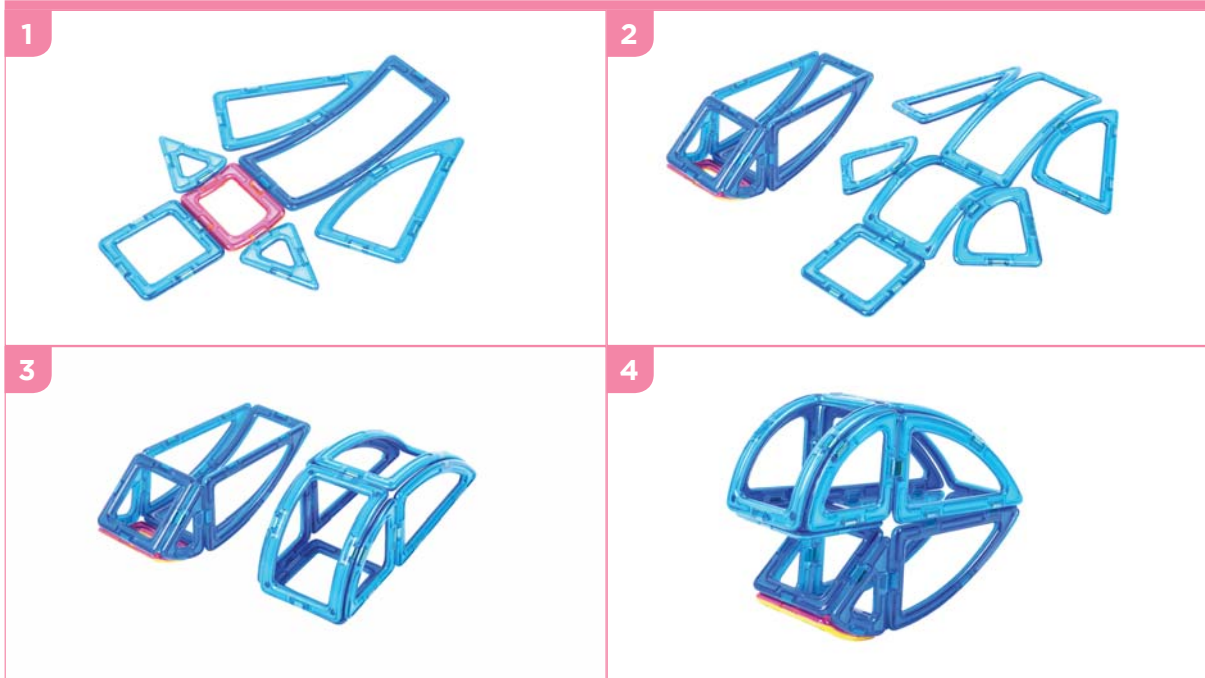




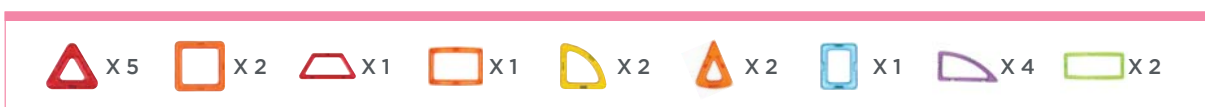


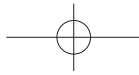
# Fish

## How to make



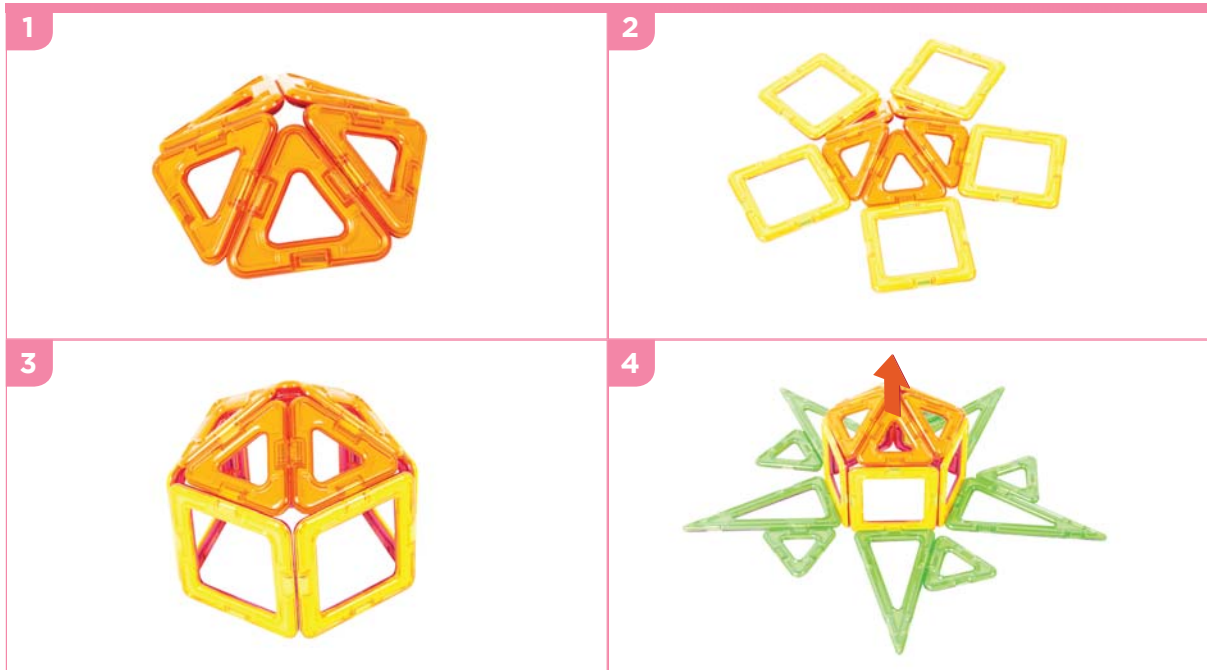
## Composition





# Octopus

## How to make

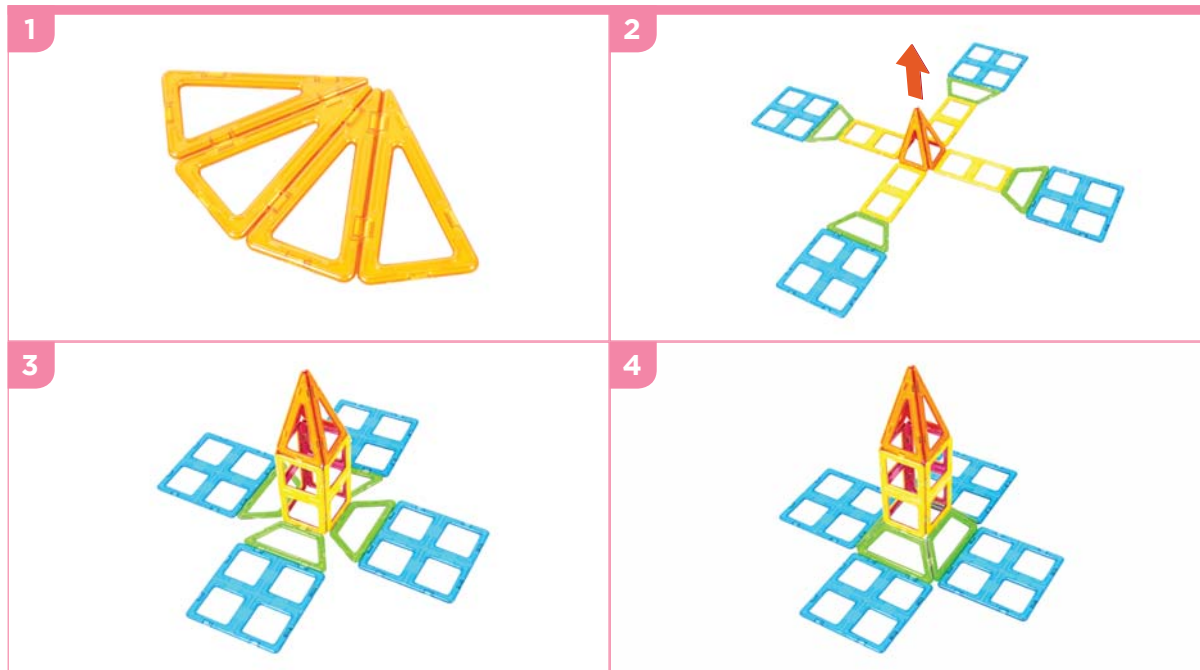


## Composition



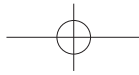
# Building

## How to make



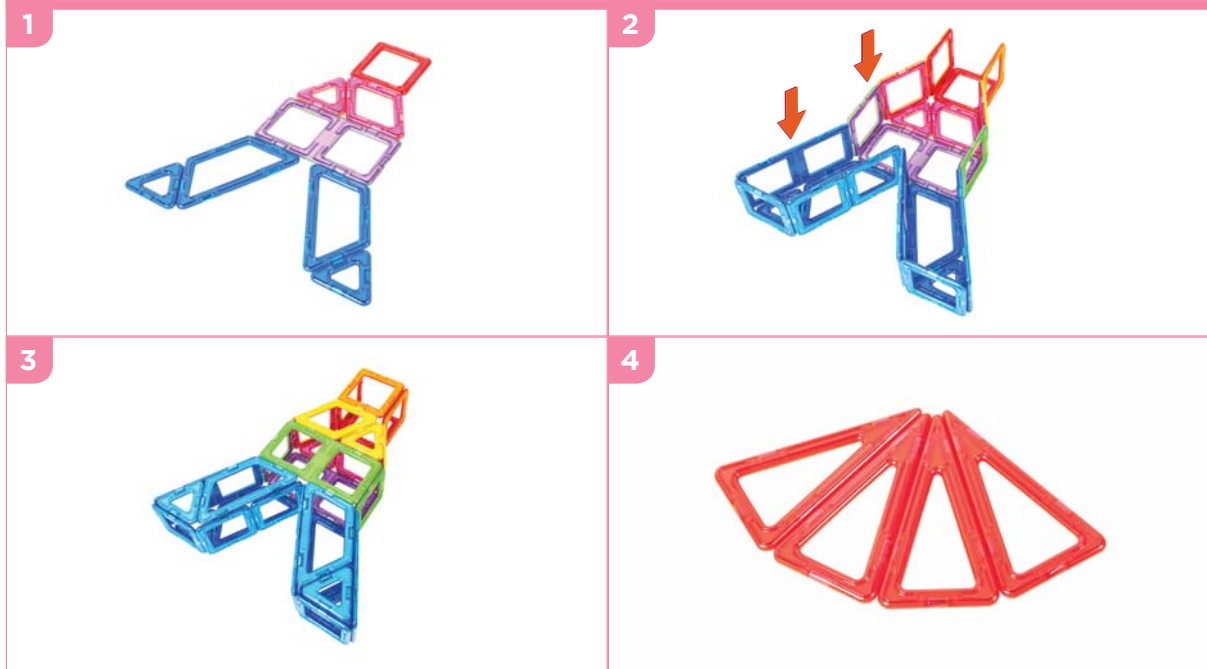
## Composition

 X 4  
  X 4  
  X 4  
  X 4



# Eiffel Tower

## How to make



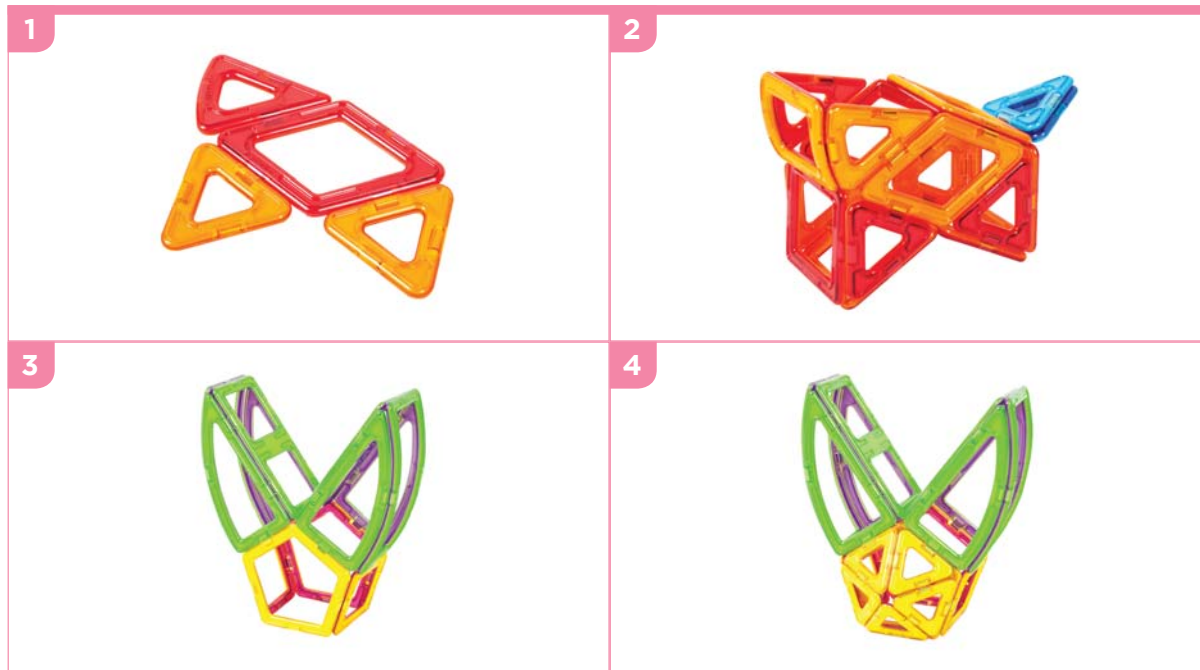
## Composition





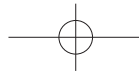
# Desert Fox

## How to make



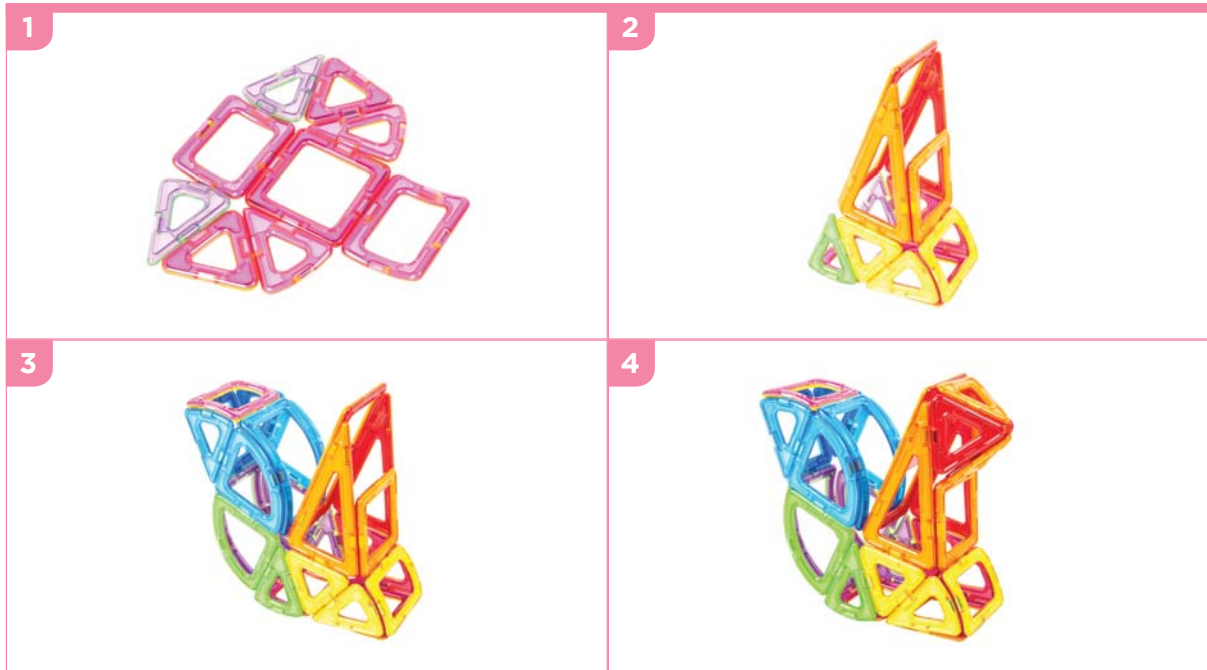
## Composition

 X 11  
  X 7  
  X 2  
  X 2  
  X 2  
  X 2  
  X 1  
  X 4  
  X 2



# Squirrel

## How to make



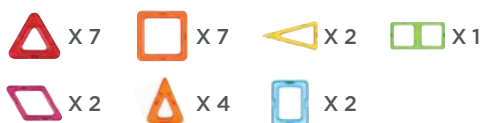
## Composition



## Create simple models with Magformers.



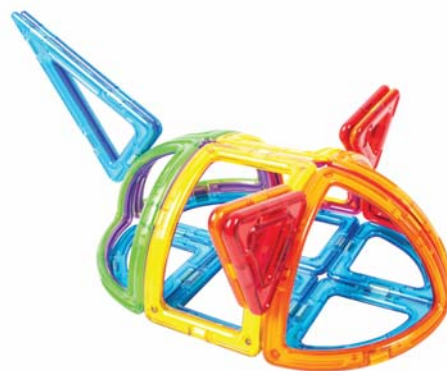
### Giraffe



### Airplane

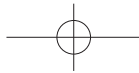


### Dog



### Mouse





**Train**



**Lollipop**



**Diamond**



**Igloo**







# FOR INTERMEDIATE







**LEVEL 2.**

**MEDIATE**

M D

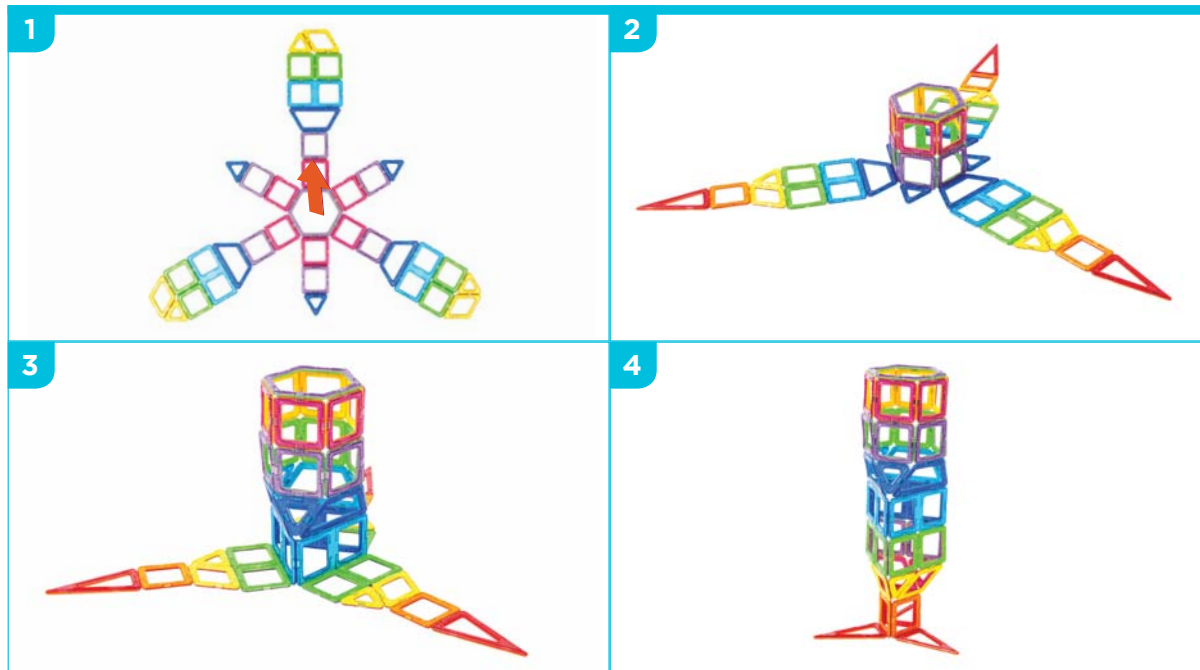
M

D D

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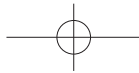
# Tower A

## How to make



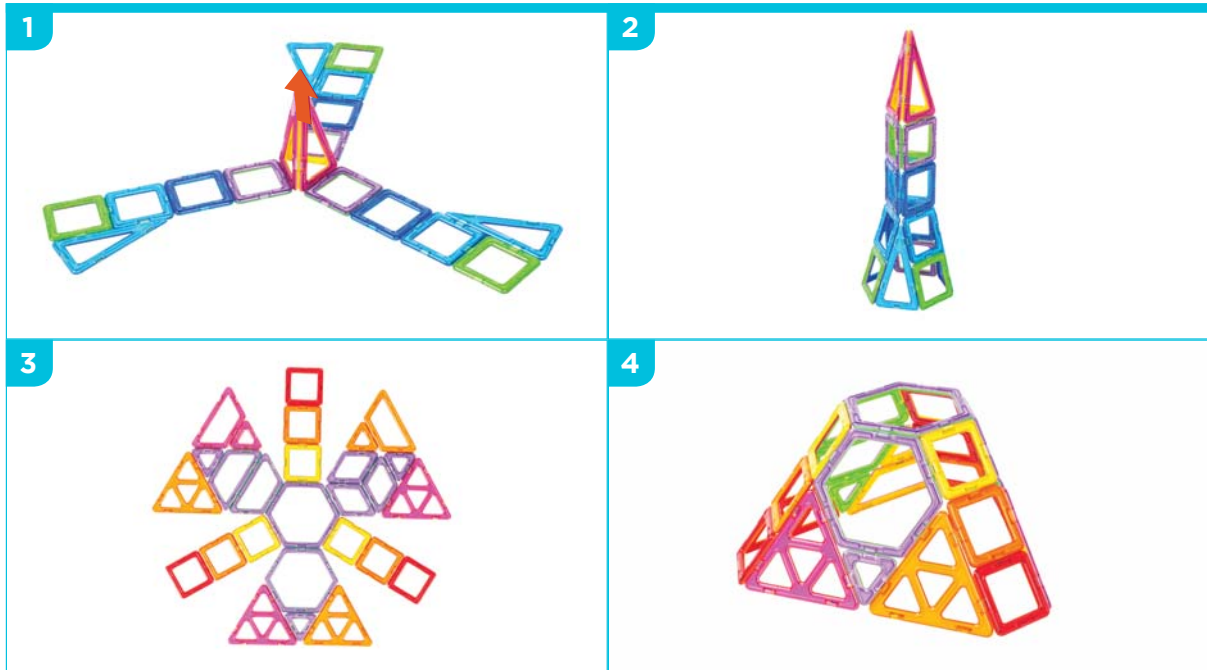
## Composition





# Tower B

## How to make

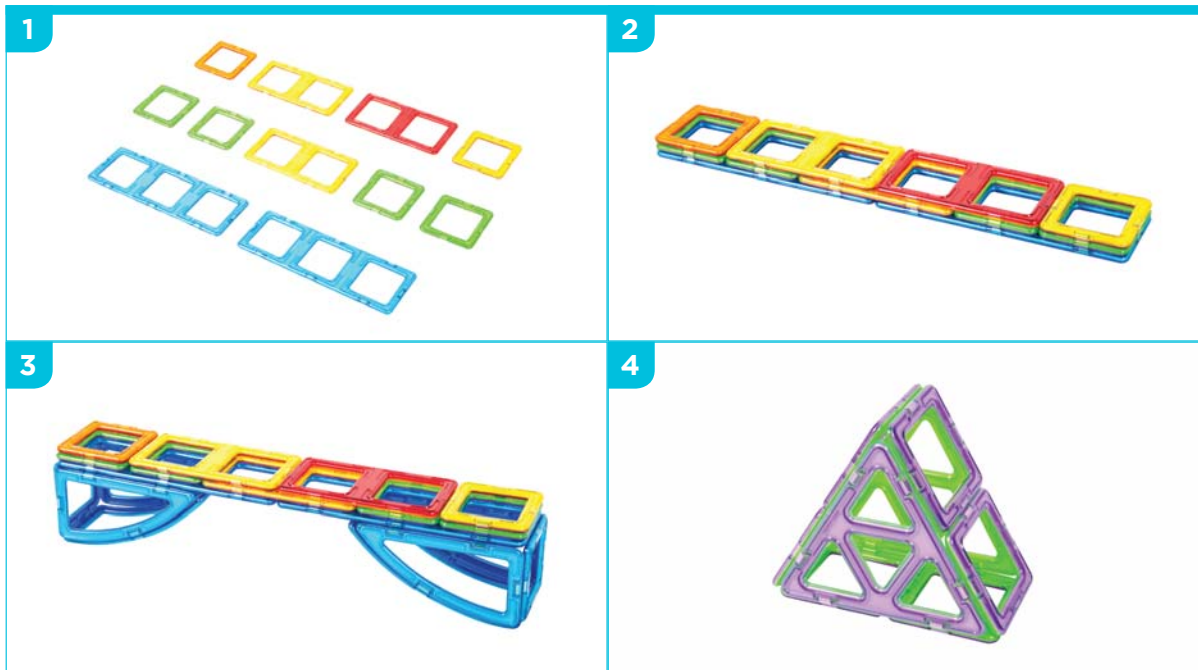


## Composition

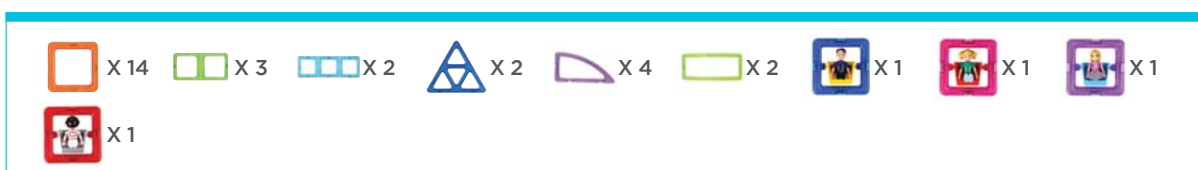


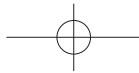
# Seesaw

## How to make



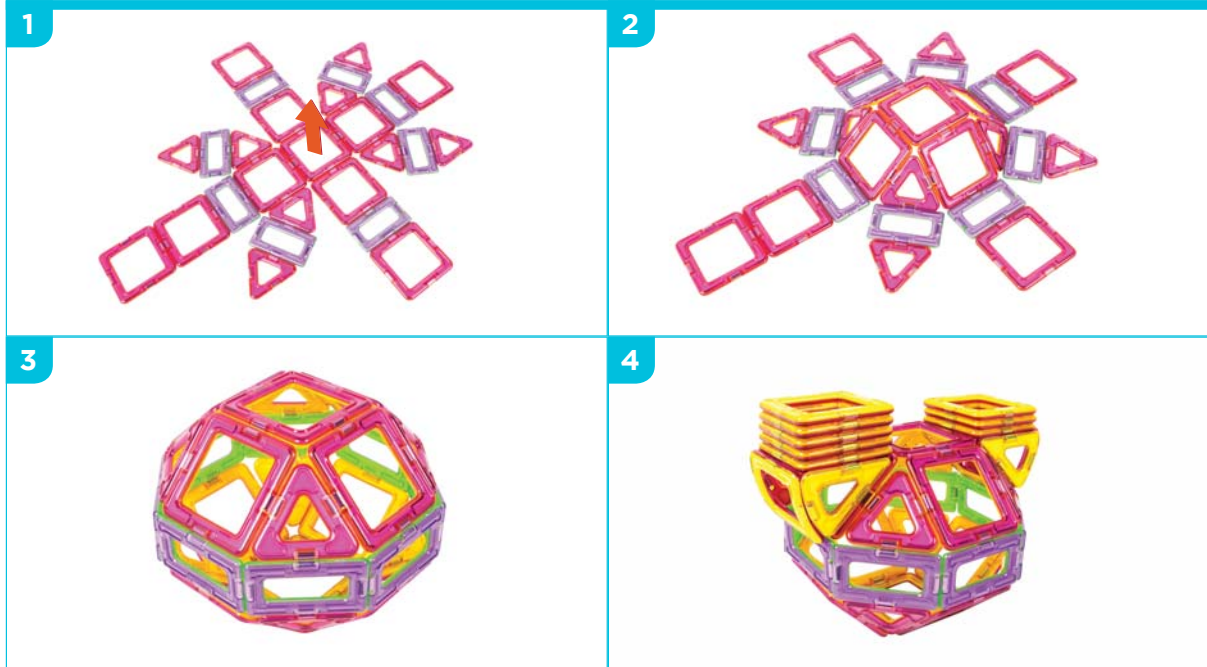
## How to make





# Pumpkin Carriage

How to make



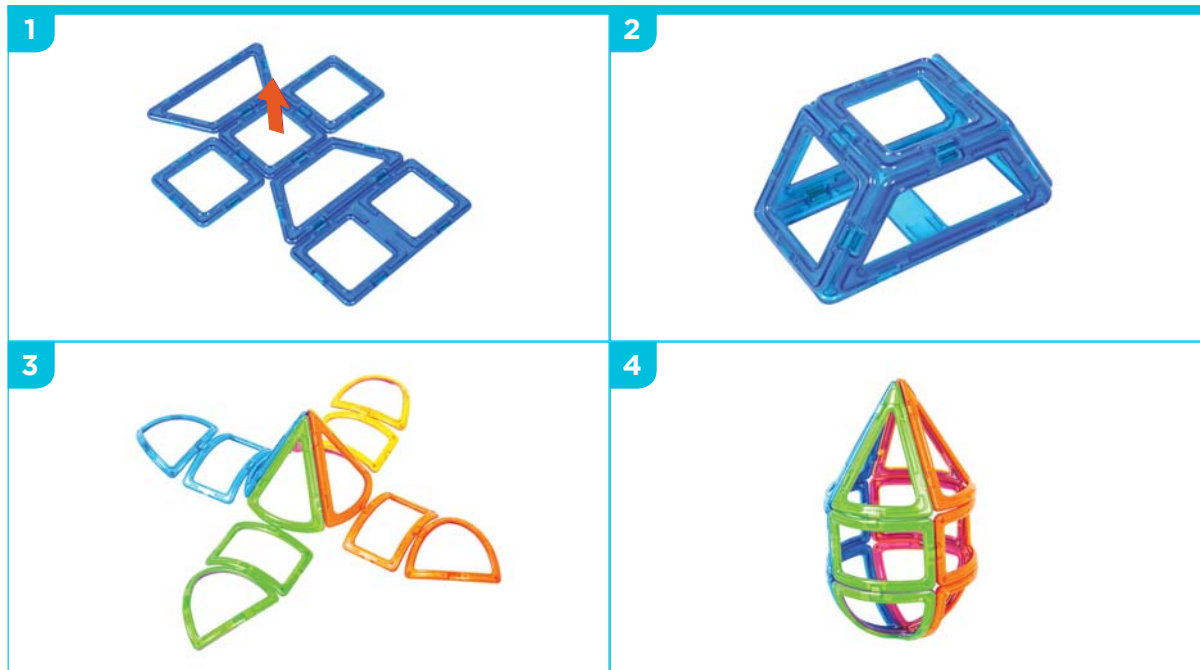
Composition





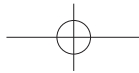
# Mini Helicopter

## How to make



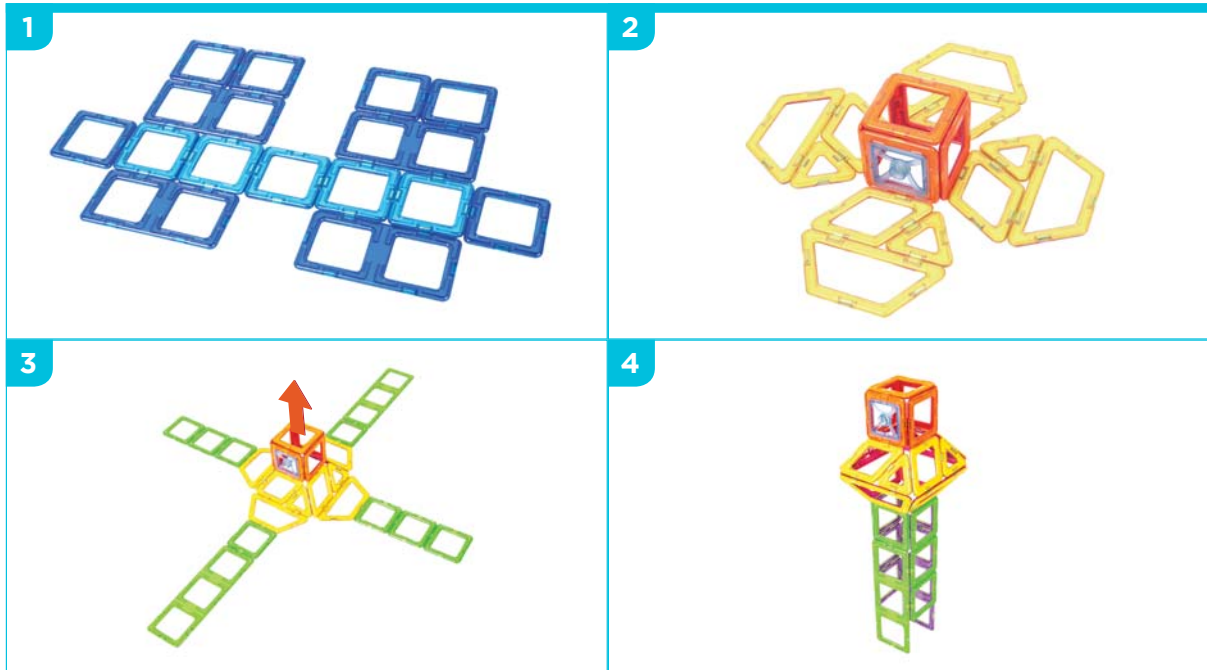
## Composition





# Control Tower

## How to make



## Composition

