

LaQ[®]

Innovative and Creative



EDUCATION PACK

2018 Edition



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OUR VISION

Learning and discovery through playing with LaQ

Creativity

We live in a society which changes at a rapid pace. To keep track of all these changes, and to adapt to changing circumstances again and again, it is important to be creative and to find solutions to new problems. Creativity is one of the most important capabilities of the 21st century! Therefore it is important that schools and education centres that work with children, pay attention to the development of creativity and problem-solving ability in children. There can be no progress without creativity!

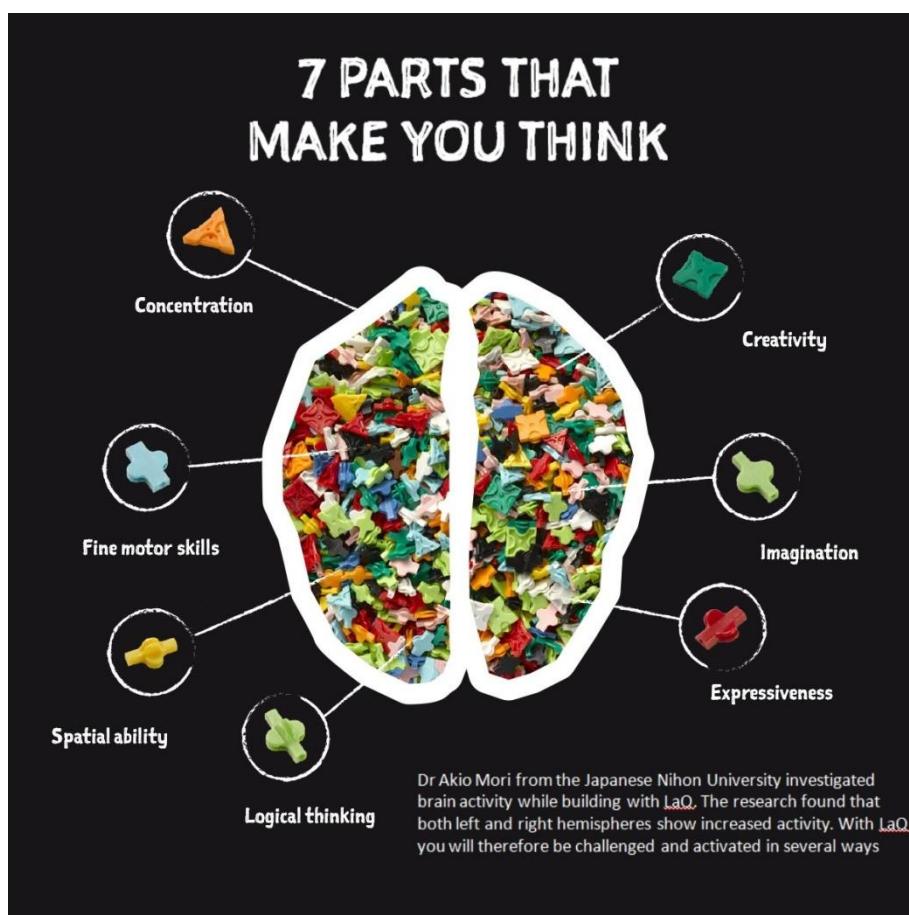
Differentiated intelligence

Each child is gifted or intelligent in different ways (we call this differentiated intelligence), and this determines their preference for certain activities. When teaching children, it is usually not about increasing intelligence but about discovering, harnessing and using it. These talents must be discovered, addressed and challenged. Too often the emphasis is on what someone cannot do. By changing perspective in the learning process on what they can do, and what they can do well, we increase the level of self-esteem and self-respect which in turn drives the pleasure of learning

Talent

Talent comes in many forms. In addition to linguistic and mathematical skills, there are also skills around creativity and problem solving, talents for rhythm and music, for gross and fine motor skills, for social and emotional intelligence, and the talent to lead oneself and other's own development. Each child is talented or intelligent in different ways, and this talent can be only be recognised and developed if it is encouraged in the right way.

Playing with LaQ is a fantastic way to recognise and develop individual talents and preferences in children. Some of the talents are concentration for long periods, use of fine motor skills, spatial ability, logical thinking, creativity, imagination and ability to express oneself. These are 7 talents that, through playing with LaQ, can be identified and encouraged at all levels.



Discover the talents within you and your class!



GETTING STARTED

Using the LaQ Education Pack

A - Arrange for the right group size

Depending upon table and room size, the Basic 2400 is suitable for 6-8 children. The Basic 5000 is suitable for working with 8-12 children. The Basic 2400 has 6 primary colours, while the Basic 5000 has 10 different colours. If using the Basic 2400, you may need to substitute different colours for some instructions. Encourage kids to be creative around colour choices, or to try a different instruction!

B - Introduce the 7 basic types of parts

With the full group of kids together, use the first 2 sheets to explain the 7 different types of parts and how to connect them together. Start with the 2 block parts (square and triangle) and how the 5 joint parts are used. Show that every instruction uses these part numbers. Be sure to explain the difference between parts 3 (narrow) and 4 (wide), and then move onto how parts 5-7 are used. Explain the special Hamacron wheels/shafts and how to connect them together.

C- Introduce the different building techniques

The LaQ Education Pack introduces a number of different building techniques. These start from basic flat 2D models through to 3D and use of the Hamacron wheel parts. With these techniques, children quickly learn all the possibilities of building with LaQ. You can choose to explain these in a group, or let them discover the possibilities themselves – this will be up to the capabilities and age of the children themselves.

D- Provide instruction sheets for model making

At the end of the Education Pack, you will also find instructions, categorised into different levels of difficulty. Each level has its own colour. It starts with flat 2D models, and then progressively become more difficult. Each child should discover for themselves what they can handle, but it's generally best to start with an easier level

E - Monitor progress during play workshops

The speed at which children master the different techniques varies enormously. Each child should determine their own pace, and go through the techniques or drawings from the Teaching Material. Some will want to imagine and make their own creations. Some may want to tackle harder instructions - which can be found at our website.

F - Showcase creations between children

Children will be proud of their creations, and will want to showcase their imagination towards their friends and towards their parents. This act builds confidence, and encourages social development aspects such as learning from their peers, as well as the ability to express themselves. We recommend setting time within the workshop for children to explain and showcase their models

Having fun is the top priority!

LaQ is all about learning through play!



INSTRUCTION SHEETS

These instruction sheets are intended to be used by children in self-directed play. The instruction sheets are not ordered in any sequence, as each page can be used on its own.

Part 1 - 2D Models

These instructions only use the flat parts to make 2D shapes.

They are great for younger age children who are still developing fine motor skills and spatial ability. With a little bit of practice, children easily master connecting and disconnecting parts, but the ability to follow 3 dimensional instructions takes more time to develop.

Part 2 - 3D Models

These instructions use the full range of parts.

They are grouped in 3 increasing levels of complexity (levels 1 through to 3 being the most advanced). Each child should find their own level based upon their confidence and interest in making the models.

In typical workshops, most children will select models and instructions from Levels 1 and 2. After following instructions for several models, most children will be keen to start making their own creations, or take inspiration from what their friends are making.

RIGHT BRAIN THINKING

Often in today's education, there is a tendency to frame questions and activities with only or a limited set of right answers. The instructions provided in this workbook help kids to develop the basic skills and techniques, but these are mostly left-brain thinking.

The real beauty of LaQ is that its simplicity, movement, flexibility and colour palette enables kids to express themselves, to make objects that are part of a story in order to help develop their creative right-brain thinking.

A key next activity for teachers is to form a group within their class, decide on a story and then using LaQ to make aids to tell the story. Teachers can help kids experience the joy of creating a story, being creative through this activity and how LaQ is a very useful education toy and tool.

Education and kindergartens that use LaQ in this manner, do not use specific LaQ instructions guides or workbooks. Their guidance and inspiration comes from the children's imagination - just like an encyclopedia, a picture in a book, or a story that is told.



FURTHER INSPIRATION

What next?

The Education Pack is a great way to get started with LaQ. Even with a small number of part types, children easily learn techniques of how to build different types of shapes, and with this confidence, can build more and more models.

Playing with LaQ expands the possibilities for children to imagine and create their own world. As every child is unique in their thoughts, process and way of expression, they will all learn and play in different ways.

- Some may want to keep **following instructions**
We regularly release a range of models to cater for all different levels. These can be found by going to laqaustralia.com.au and then subscribing to our mailing list
- Some will observe and **build upon what they see** - they will learn from other creations, and try to mimic these without any instructions
Our Instagram feed showcases a wide range of models built by LaQ Master Builders from around the world. These can be found by going to [instagram.com/laqaustralia](https://www.instagram.com/laqaustralia) and following our feed for a range of interactive and amazing models!
- Others will happily imagine and **dream up creations** as part of their stories - see the case study below

Case Study - LaQ in child care centres

LaQ is in over 3000 education centres in Japan, and is used not for 'construction playtime' but a tool to help kids express their imagination and to tell stories. The following pictures come an example child care centre. LaQ is particularly good at making the small detail, because of its flexibility and size, and complements the larger construction toys and props that children might use when engaging in creative play

- All of the following models in the pictures were made by children between 4 and 5 years old.
- There were no instruction sheets, all models were made using their imagination
- Creative play within the child care centre was structured over a week, allowing kids to build and extend their creations every day, safe in the knowledge that it wouldn't get broken up



Storytelling Example - Crow's Cafe - selling delightful treats to buy



More examples of musical playtime



Reindeer



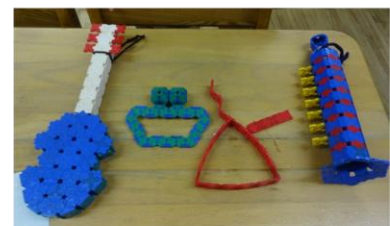
Crows and birds



Birds



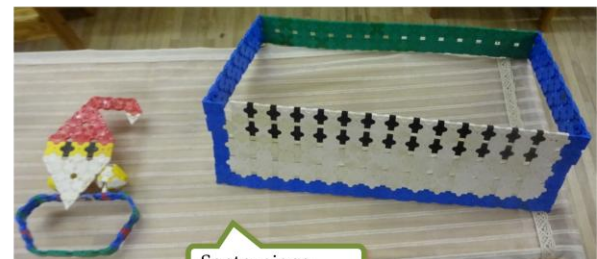
Ambulance



Lion trumpets



Fire engine



Santa, piano



Introduction: The 7 basic parts

With just 7 types of parts, you can build anything with LaQ!
Here is an overview of each of the 7 parts

• Just 7 types of block parts

BASE PARTS



NO.1



NO.2

JOINT PARTS



NO.3



NO.4



NO.5



NO.6

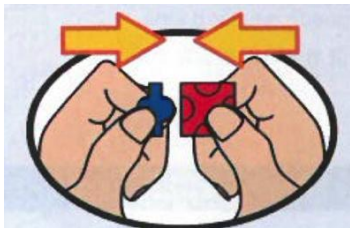


NO.7

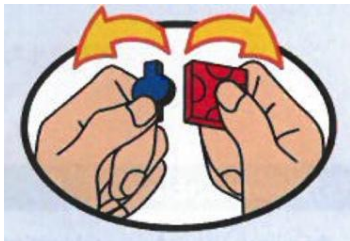
- Parts #1 (Square) and #2 (Triangle) are base parts that snap together with the 5 joint parts
- Parts #3 and #4 are flat joint parts that are used to create flat surfaces
- Part #5 is a 120 degree angled joint part used to make curved shapes and spheres
- Part #6 is a 90 degree joint part to make perpendicular connections
- Part #7 is a tri-directional connector for 3 dimensional building

Connecting and Disconnecting Parts

Here is how you connect and disconnect LaQ parts
It's just a simple Snap! and Click!



Connect a base part (#1 or #2) with a joint part (#3,4,5,6,7)
Just **slide** the parts together. **Listen** for the **Snap!**
It should **feel** solid and firmly connected

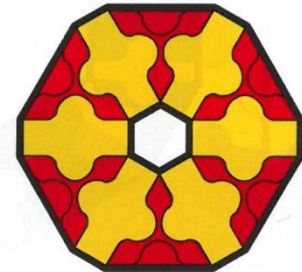
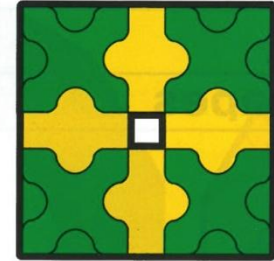
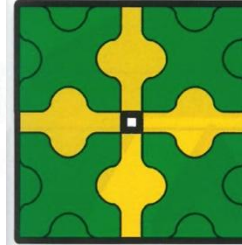


Bend the joined parts at an angle
Each part should easily disconnect from each other.
Listen for the **Click!**

Technique 1: Making flat models

Tip: pay attention to the differences between parts #3 and #4 (narrow and wide)

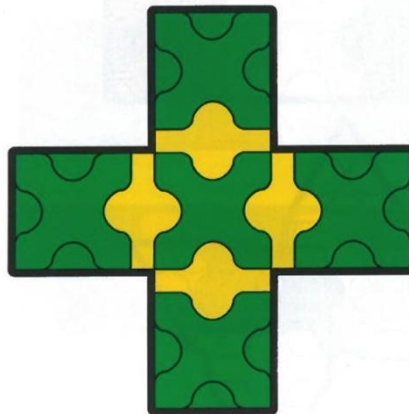
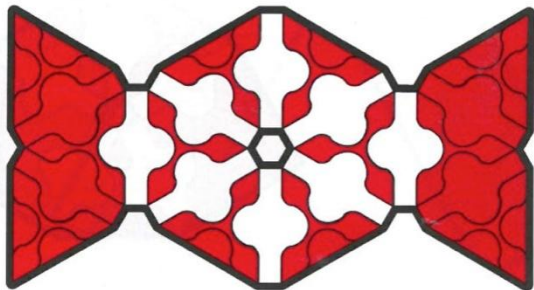
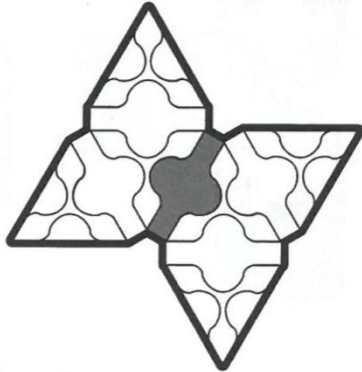
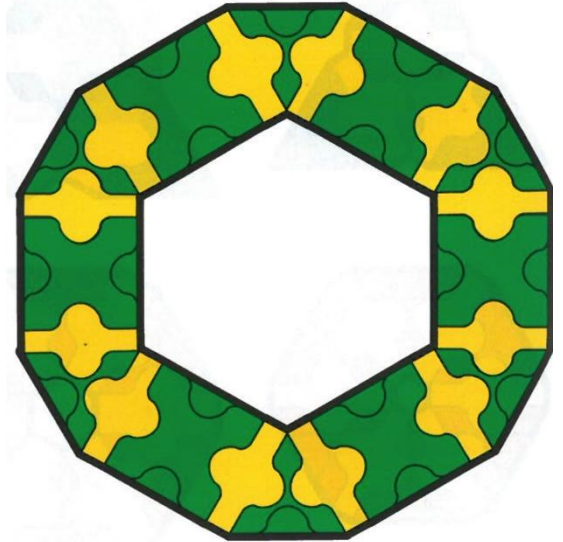
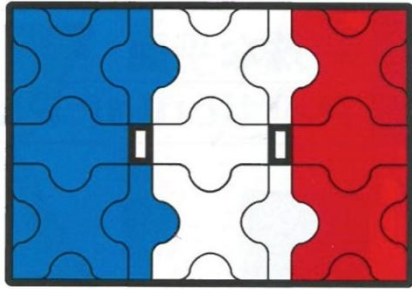
Parts:



Technique 1: Making flat models

Tip: Pay attention to the differences between parts #3 and #4 (narrow and wide)

Parts:



Technique 2: Making flat models upright

Tip: Use part #7 to make the flat models upright

Parts:

#1



#2



#3

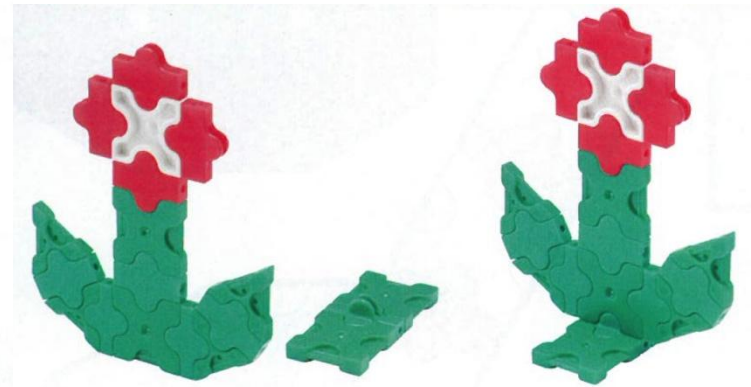
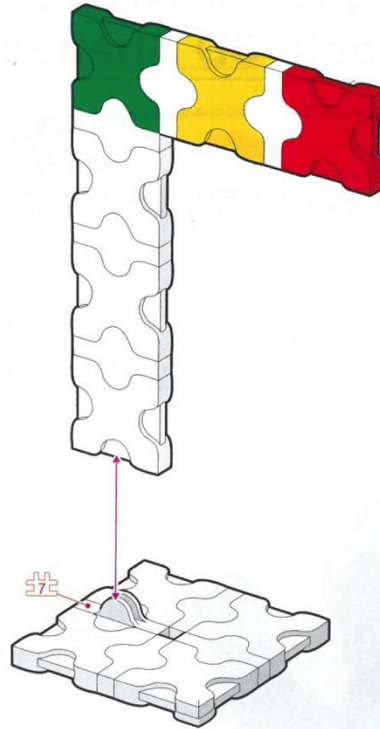
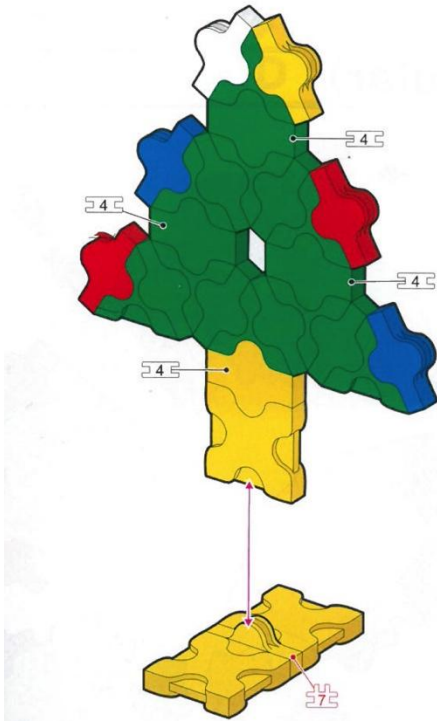


#4



+

#7



Technique 3: Making 3D shapes with part #5

Tip: By using part #5 you can turn flat models into 3D

Parts:

#1



#2



#3

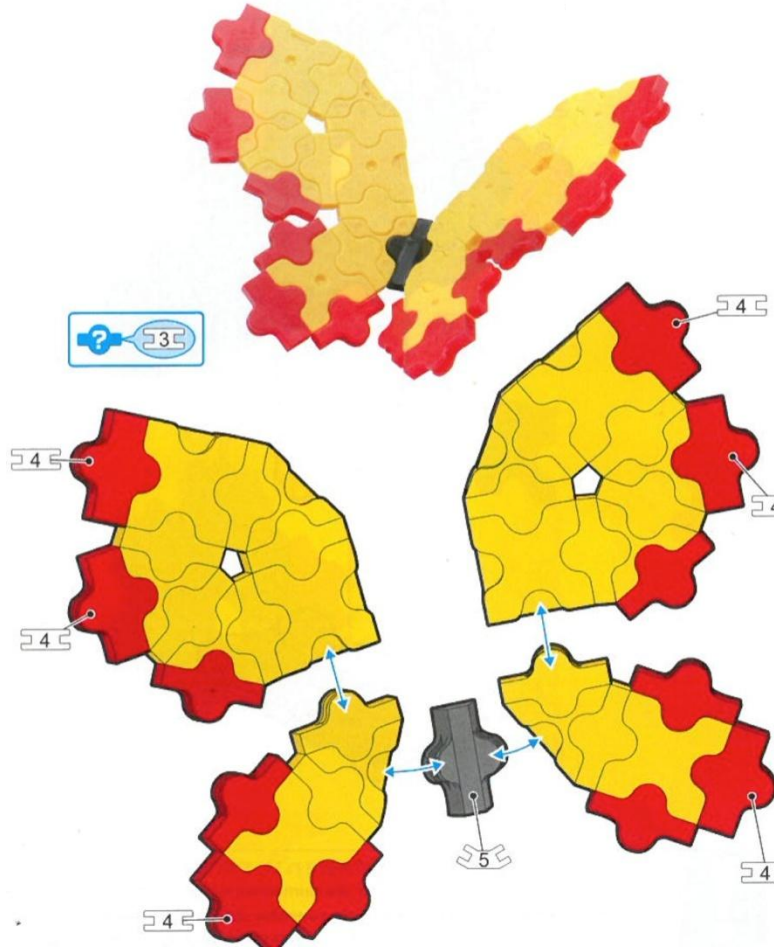


#4



+

#5



Use part #7 for the eyes of the snake

Technique 4: Converting models from flat to 3D shapes

Tip: First make the flat police car and then convert it into a 3D car.

Parts:

#1



#2



#3

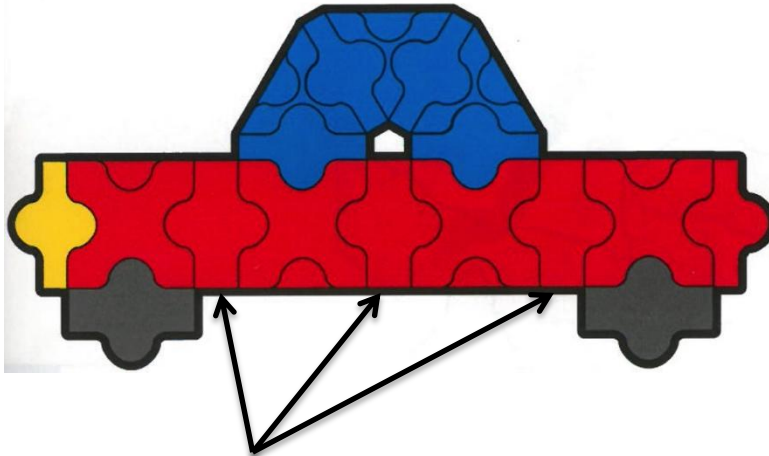


#4

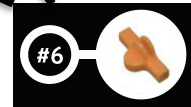
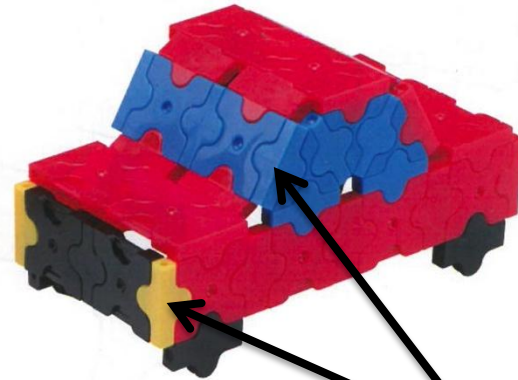


+

#6



Make sure you use part #4 otherwise it will not line up later on when converting the model into a 3D shape.



Part #6 is used to turn this into a 3D car

Technique 5: Making different types of rings

Tip: Use the colors that you like. See how big you can make a ring

Parts:

#1



#3



#5



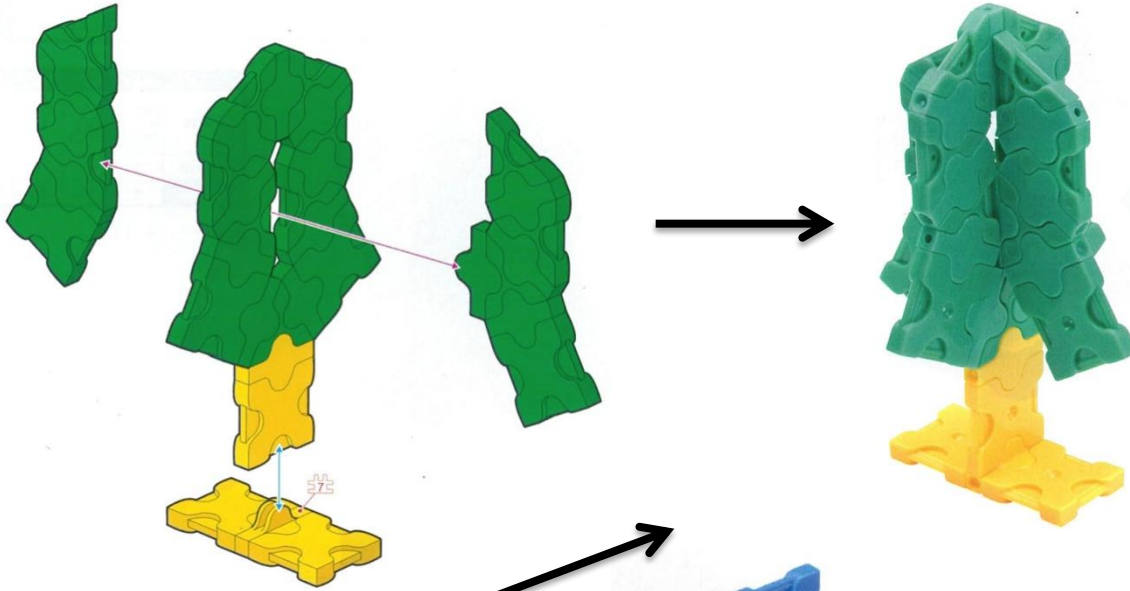
#6



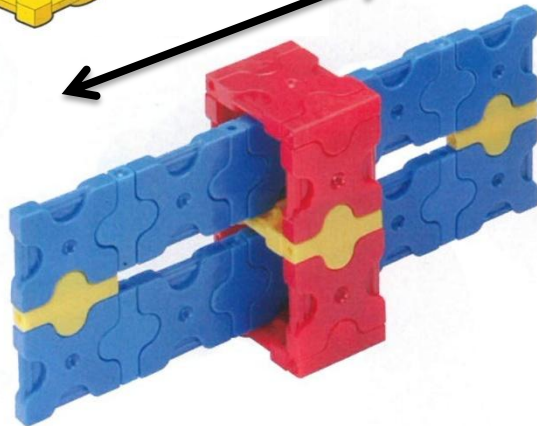
Technique 6: Inserting LaQ parts

Tip: Study the movement first before you finish making the parts

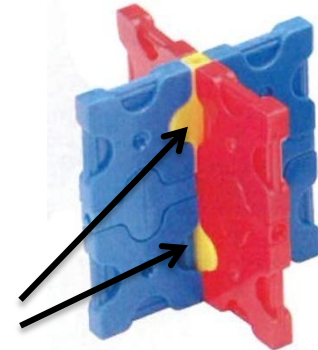
Parts:



The blue part
can move back
and forth



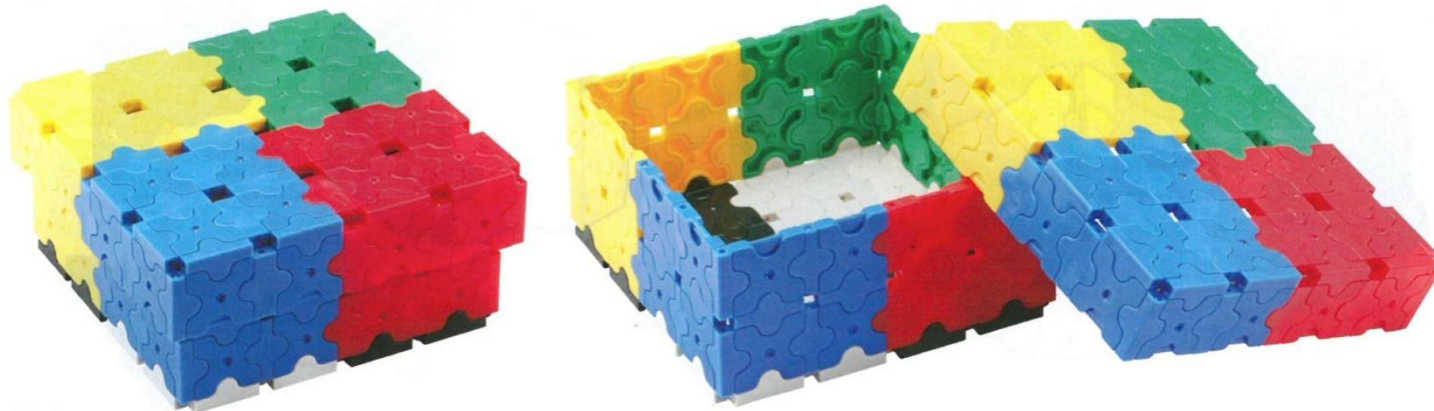
Make sure to
alternate the
direction of the
yellow parts #7



Technique 7: Create 3D cubes and boxes

Tip: Use part #4 for the cover. For the boxes, use part #3 so it's smaller than the lid

Parts:



Technique 8: Making balls

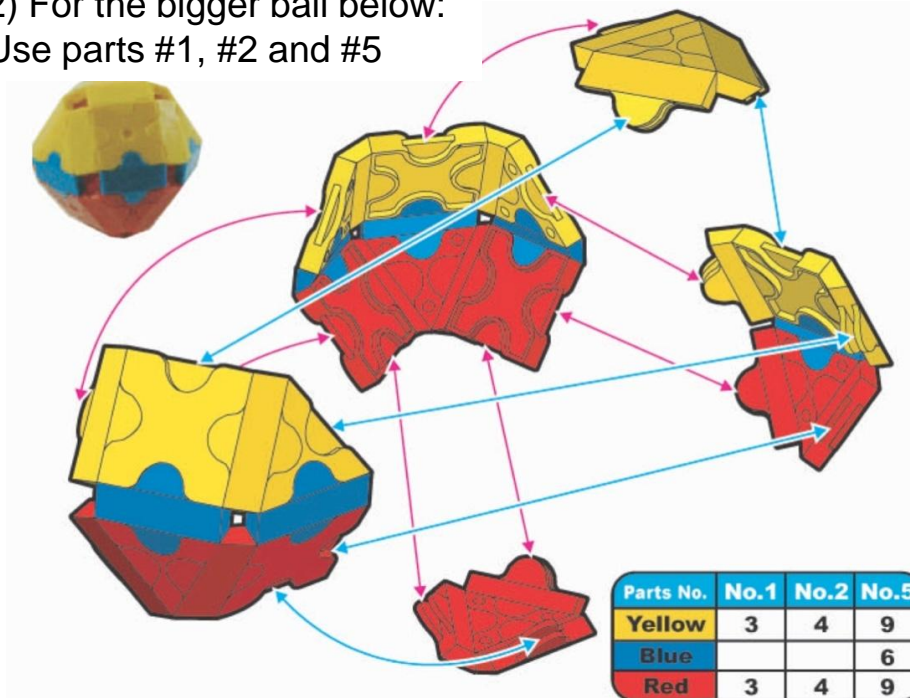
Tip for ball #2: First make all 5 parts separately and then click them together

Parts:



1) For the small ball: use only parts #2 and #5

2) For the bigger ball below:
Use parts #1, #2 and #5

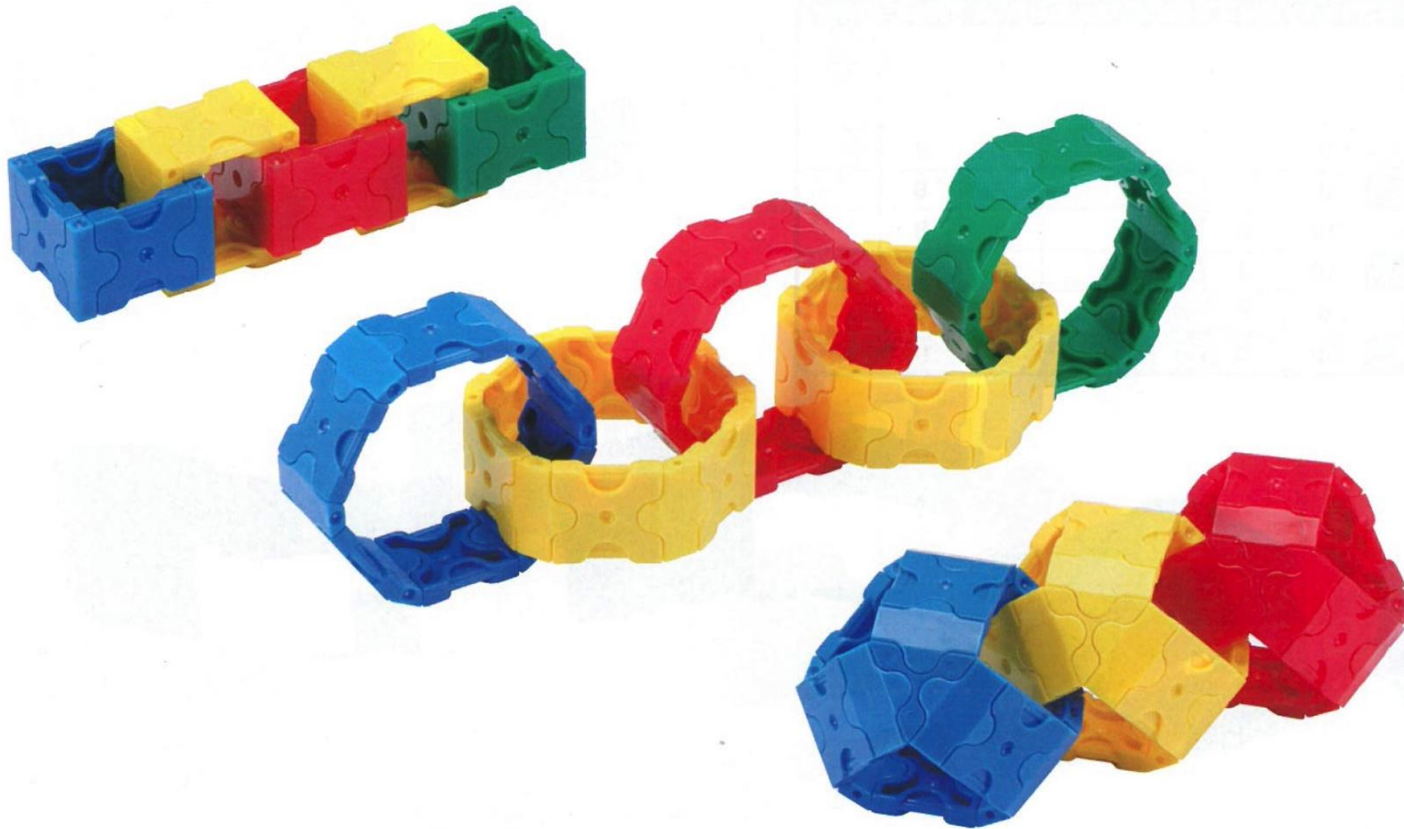


3) Try to make this variant as well. Good luck!

Technique 9: Making LaQ chains

Tip: Put your own colors together. Use all colors of the rainbow

Parts:



Technique 10: Filling boxes

Tip: Start making the cactus and discover how you can make the rest

Parts:

#1



#2



#3



#4



#5



#6



#7



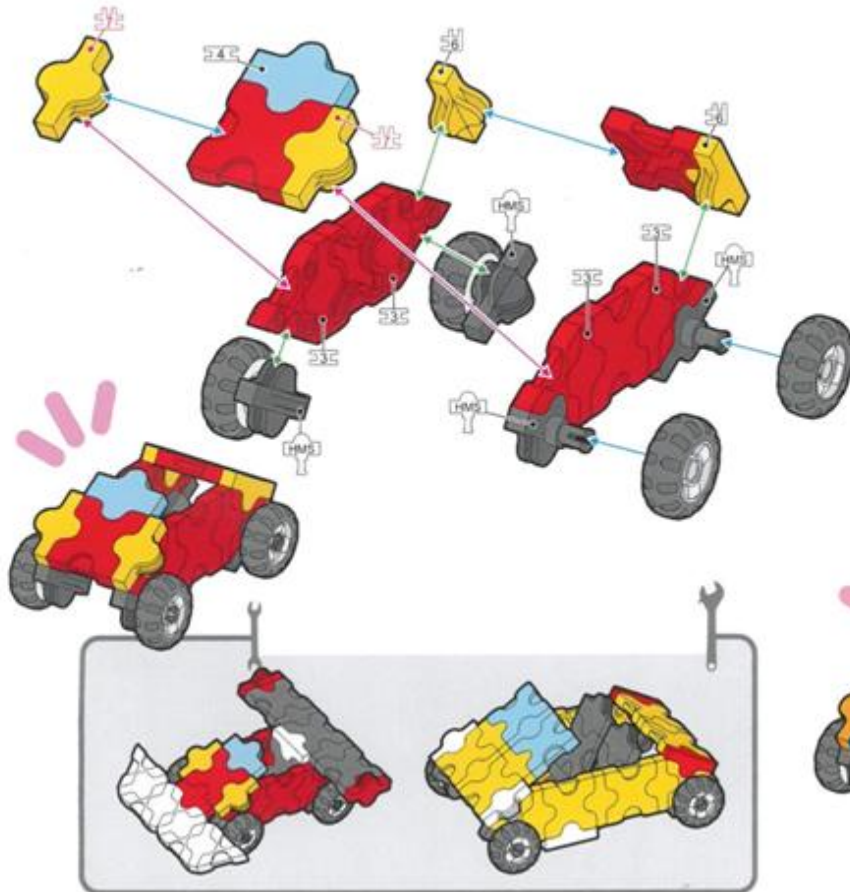
Technique 11: Making vehicles

Tip: Look at the construction drawing. Collect all the parts first before you start!

The Hamacron wheels and shafts are new parts!

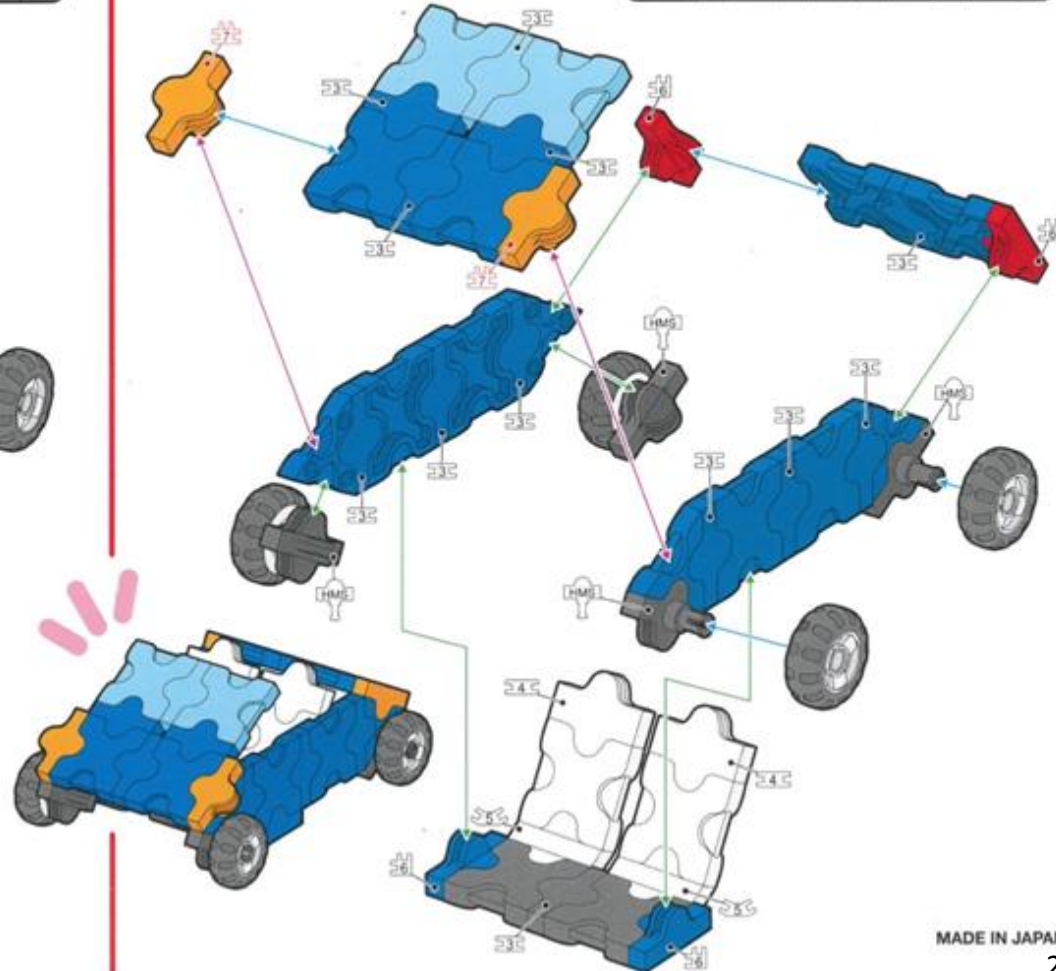
Strandjeep

Parts	No.1	No.2	No.3	No.4	No.5	No.6	No.7	HMFV	HMS
	4	4	4	1		2	2	4	4



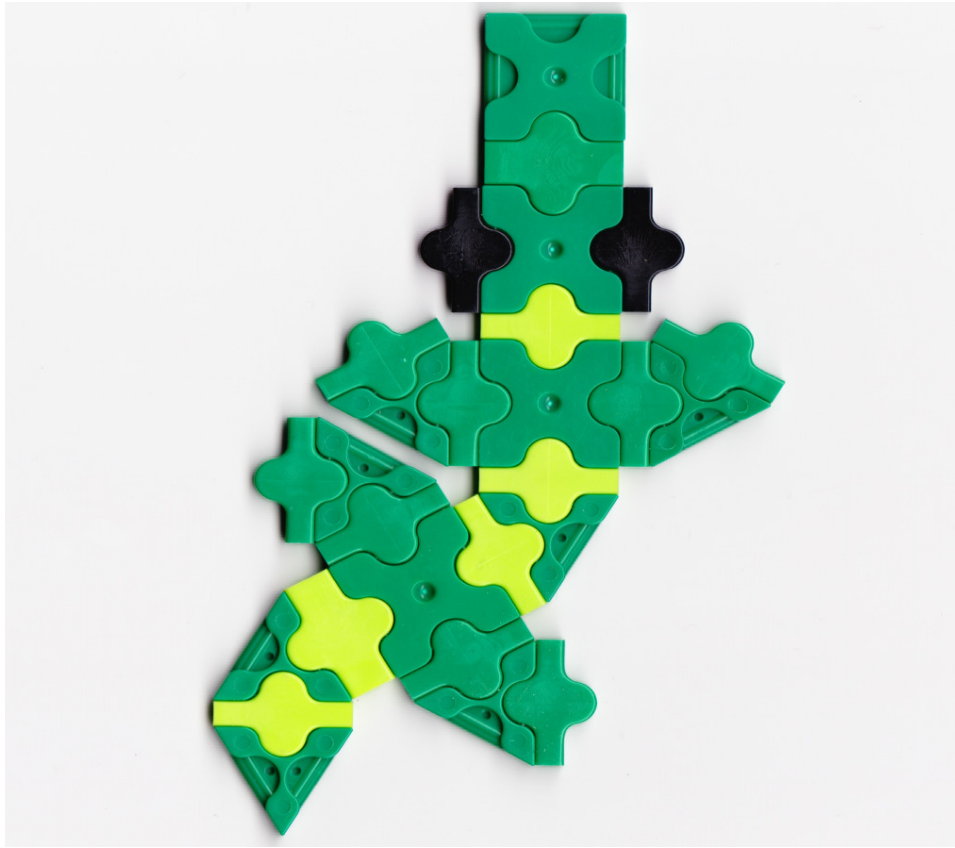
Cabrio

Parts	No.1	No.2	No.3	No.4	No.5	No.6	No.7	HMFV	HMS
	14	4	11	2	2	2	2	4	4



Crocodile

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
4	7	8 4 2	1 1			



Birds

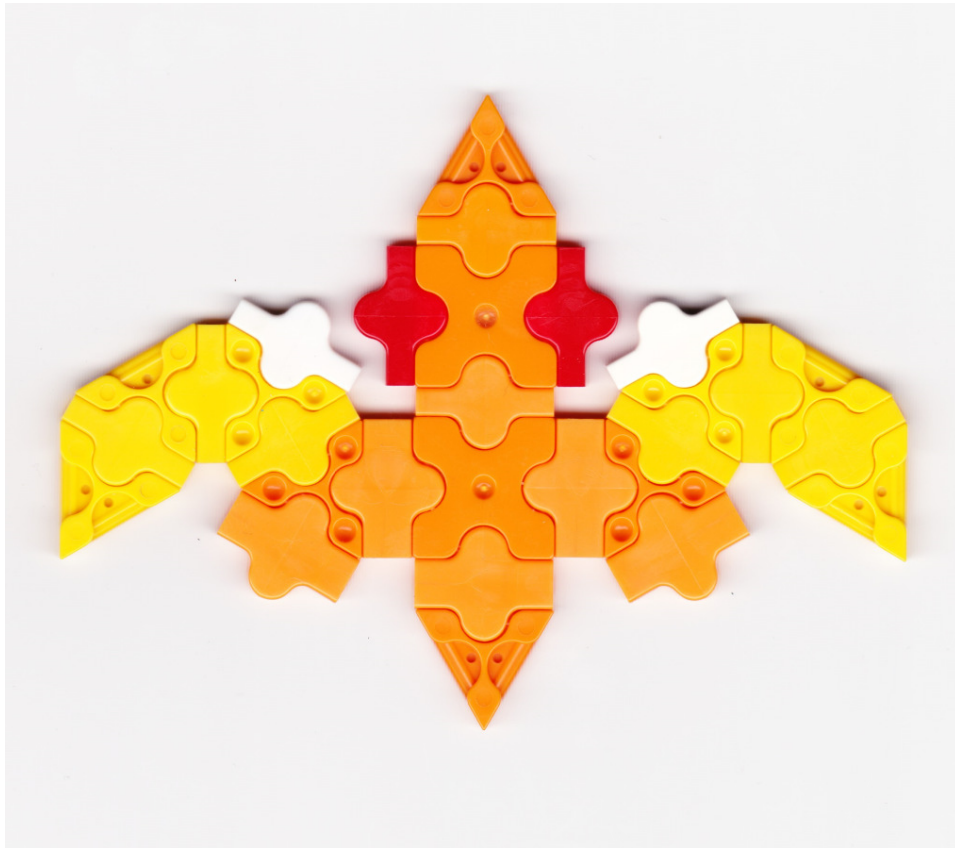
2D

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
2 2 2	2 1 1 1 1	3 3 2 2 1 1				



Pteranodon

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
2	4 6	6 2 2 2	5			



Stegosaurus

2D

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
3 2	6 3	7 4 3 1	1			



Giraffe

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
4	6	7 3 1	1			



Crab

2D

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
4 2	4 4 3	5 5 4 2	2 2 1			



Hen

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
3	6 1 1 1	6 5 3	1			



Lion

2D

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
5 2	4 3	6 6 3 2	2			



Elephant

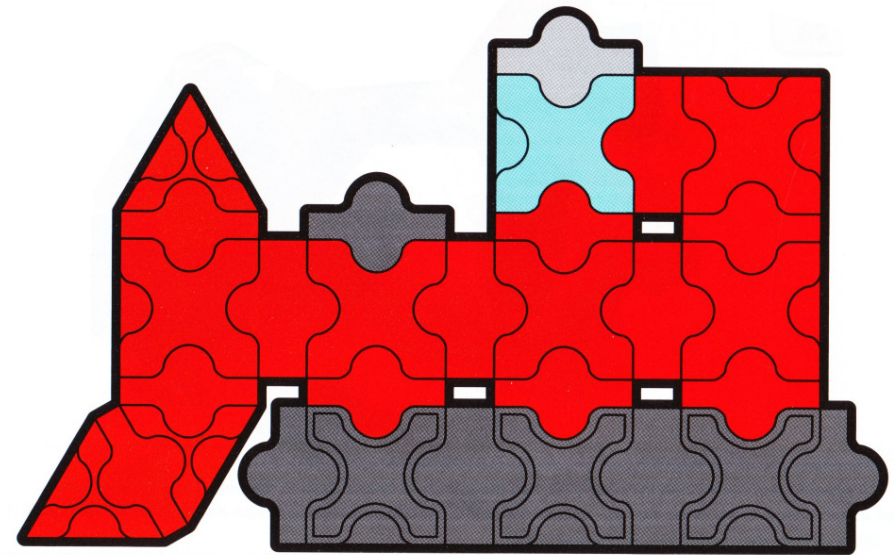
No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
5	5	9 1	1 1			



Bulldozer

2D

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
5 3 1	3	8 3 1	4 2			



Brachiosaurus

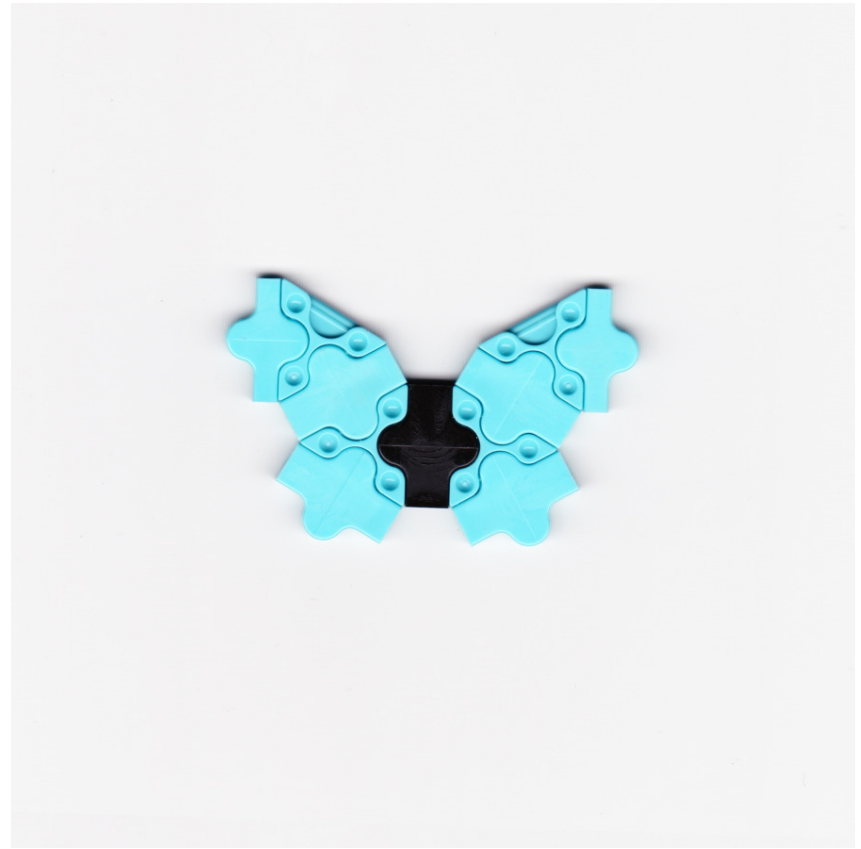
No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
5 4	4 1	7 1	4 2			



Butterfly

2D

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
	4	2	4 1			



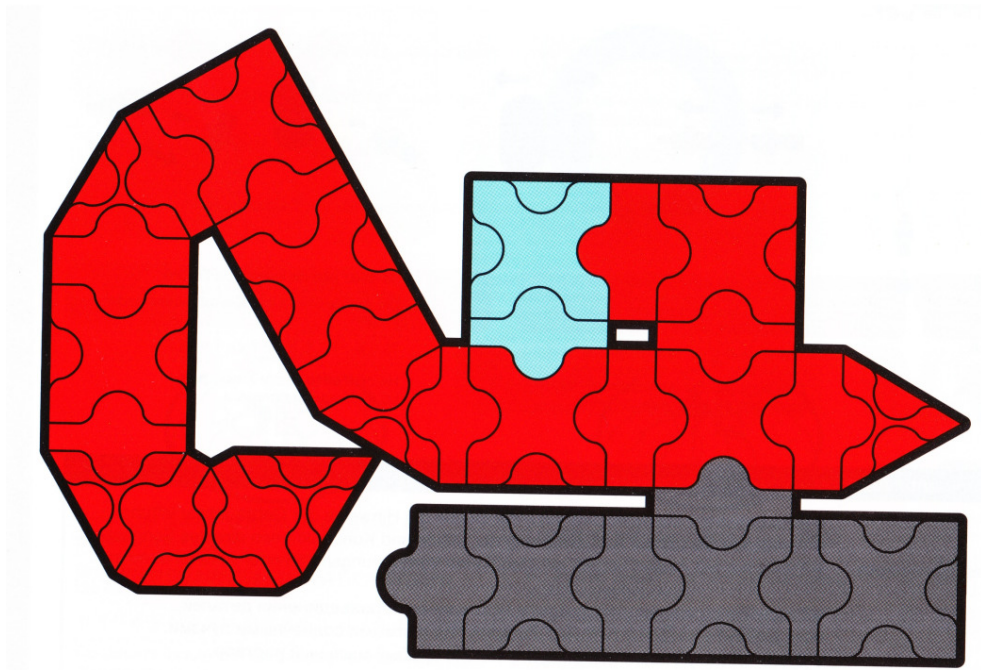
Excavator

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
6 3	6	7 2	5 2			
1		1				

T-Rex

2D

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
5 1	3 1	6 2				
		1				



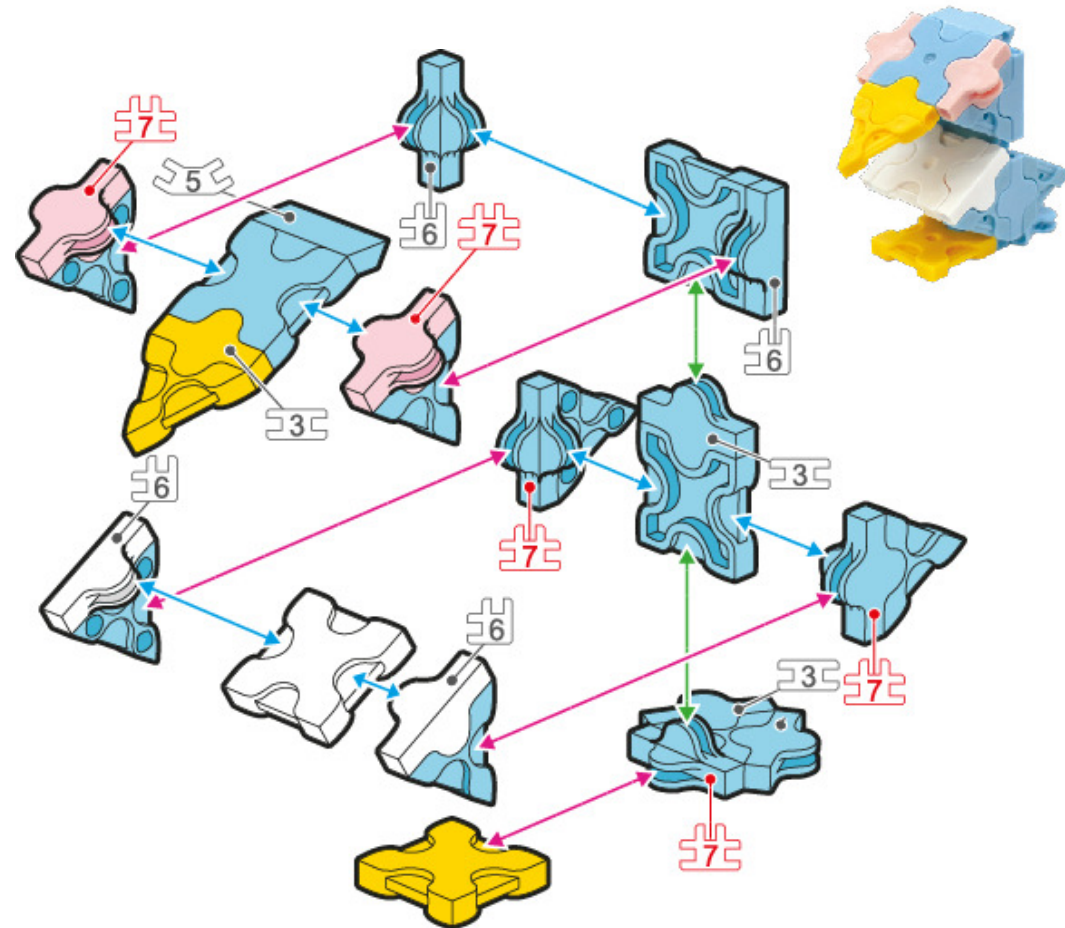
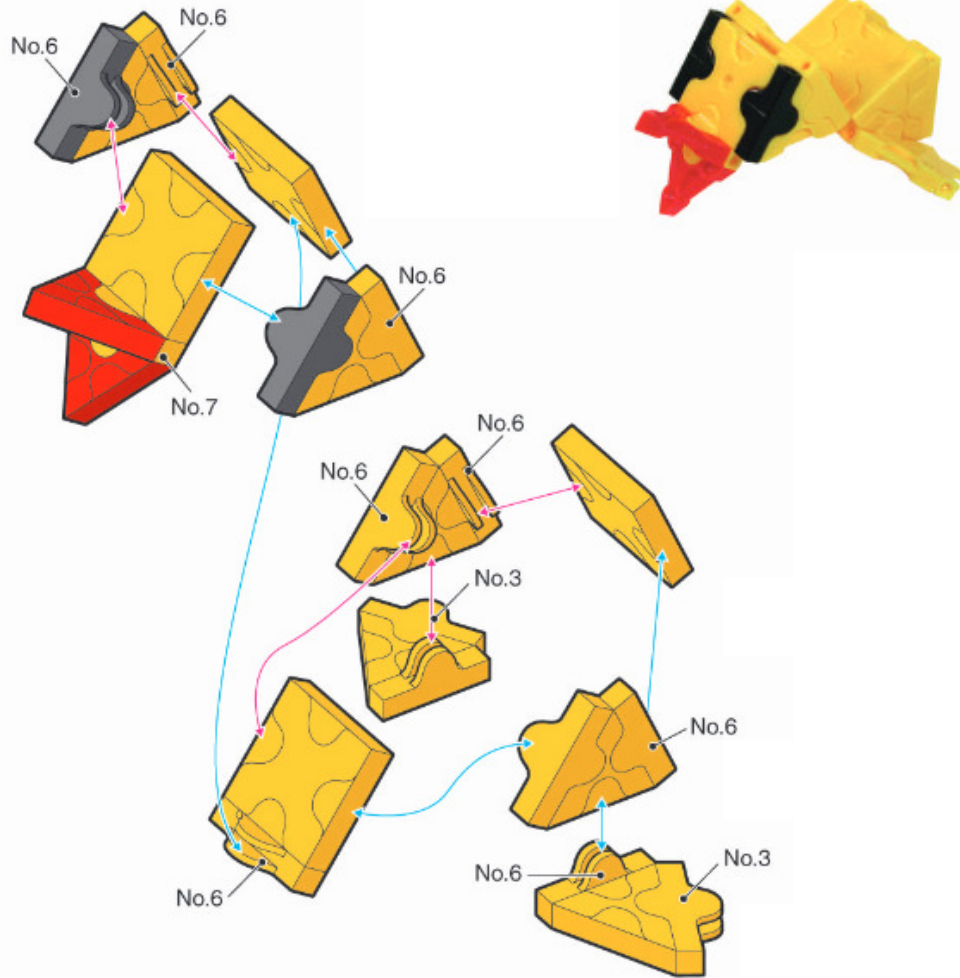
Chick

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
4	6 2	2			9 2	1

Little Bird

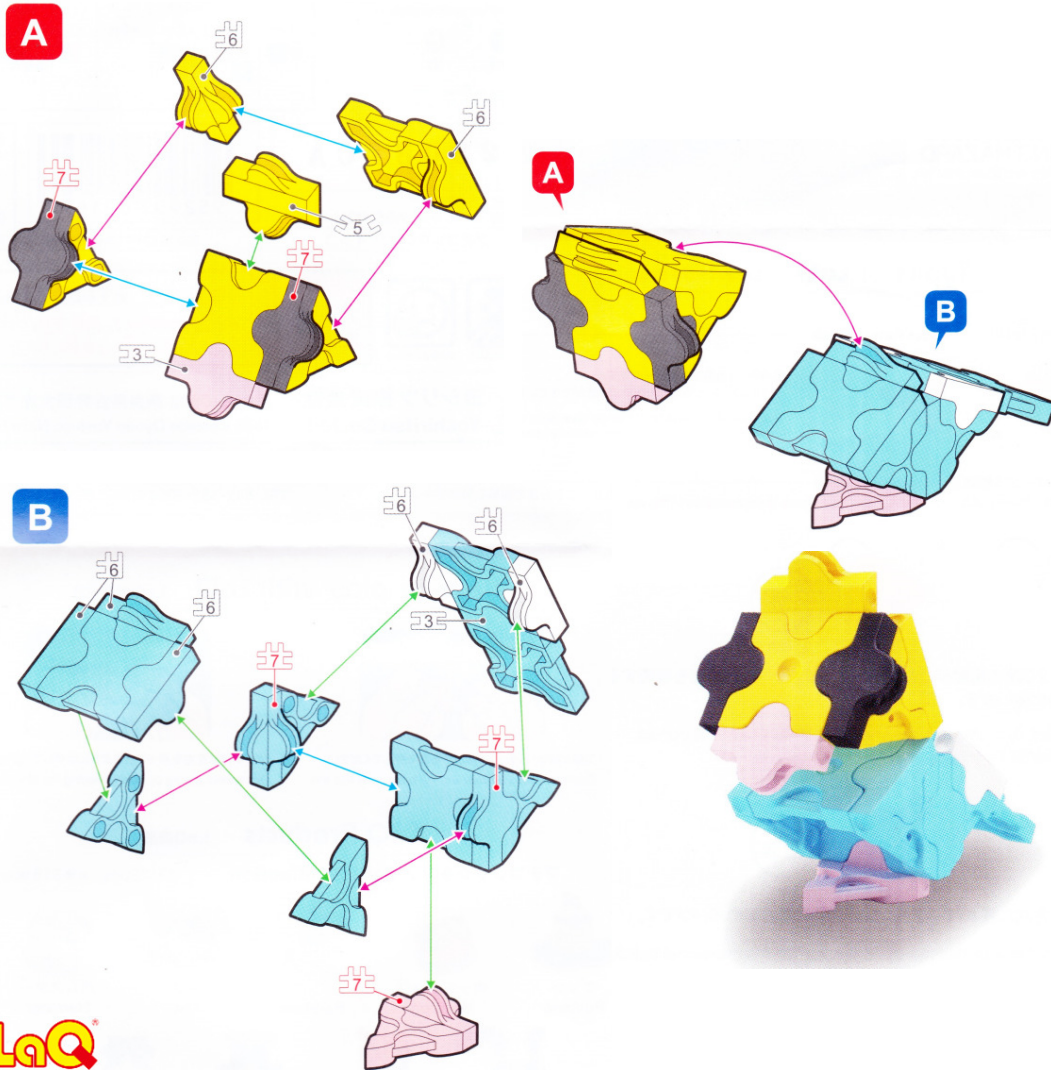
Level 1

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
3 1 1	7 1	3 1		1	2 2	3 2



Parakeet

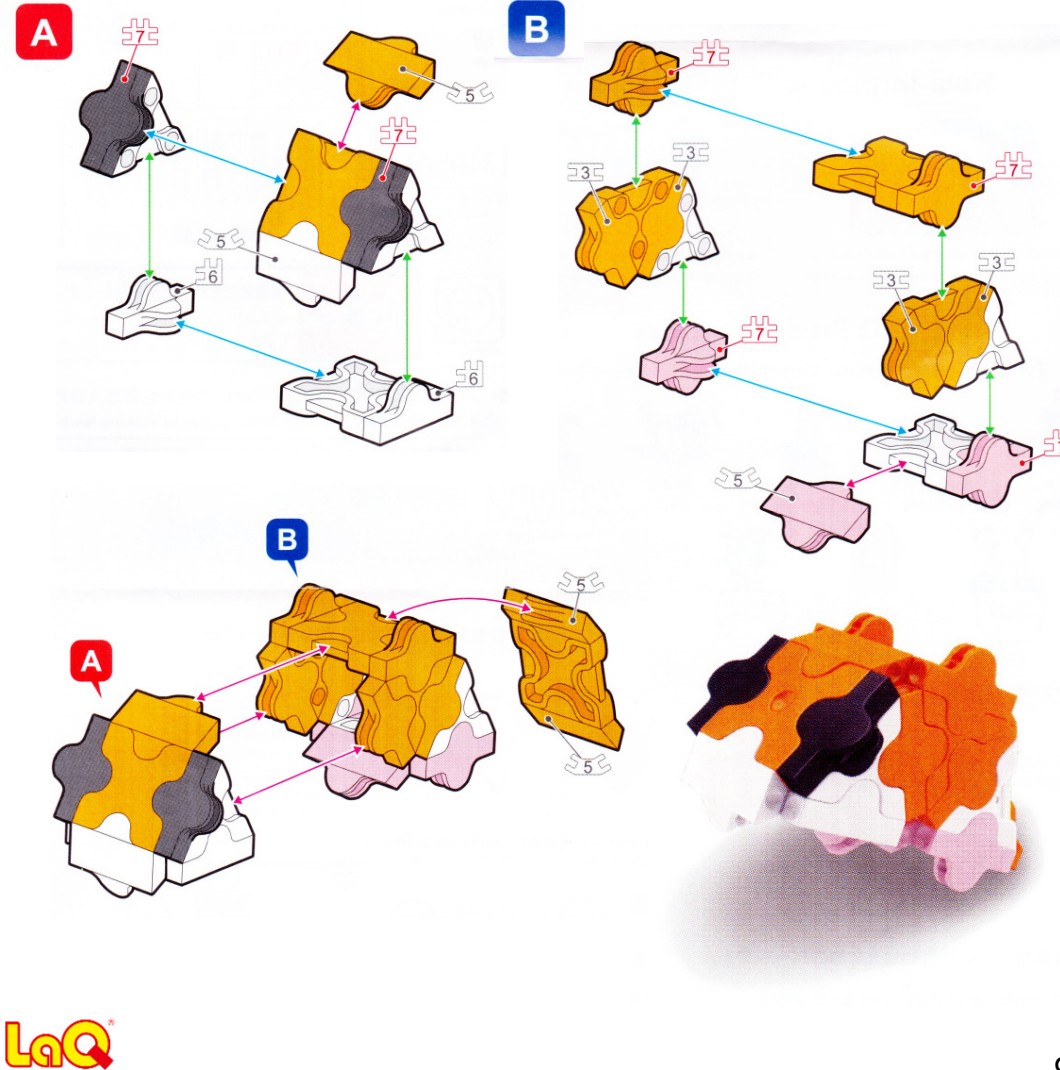
No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
4 2	4 2 1	1 1		1	3 2 2	2 2 1



Hamster

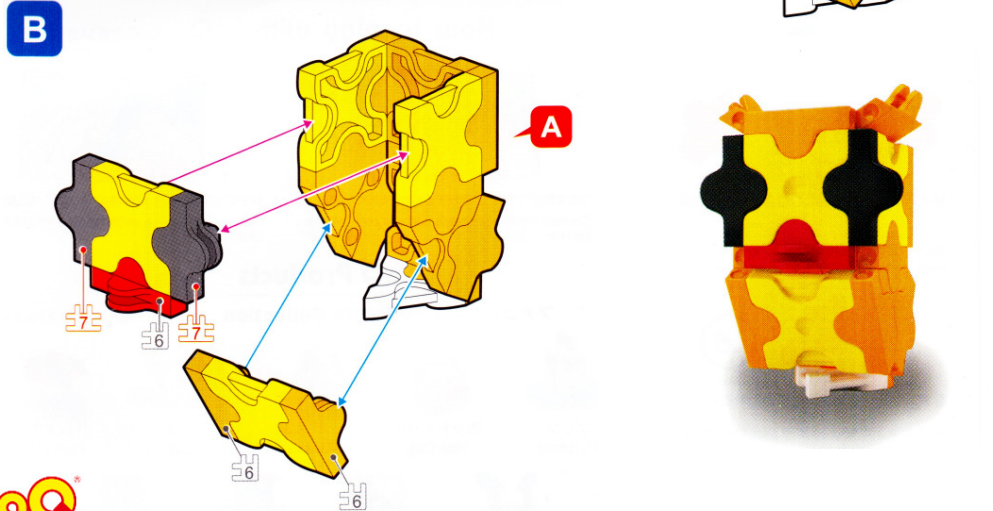
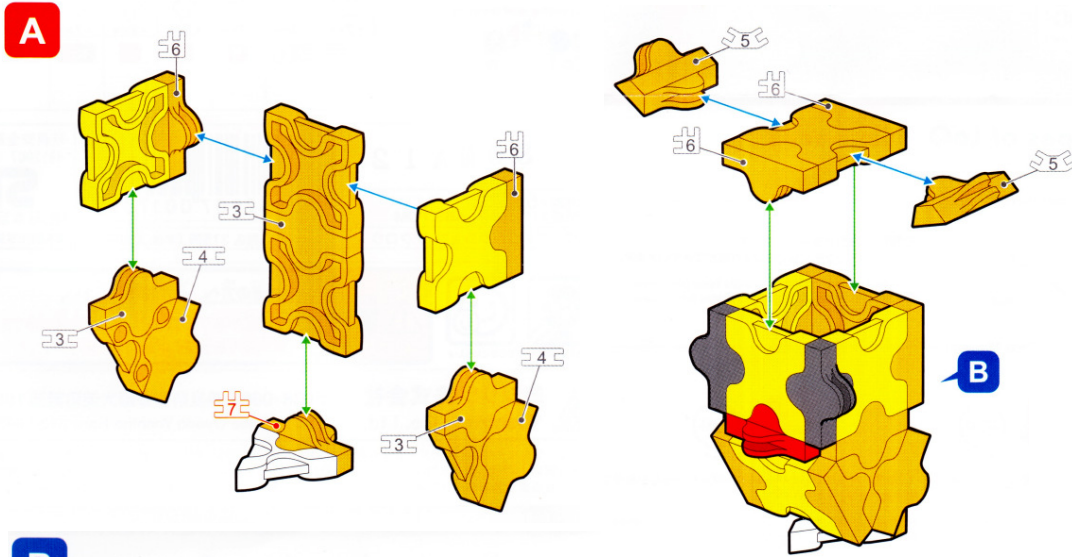
Level 1

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
3 2	2 4	4		3 1 1	2	2 2 2



Owl

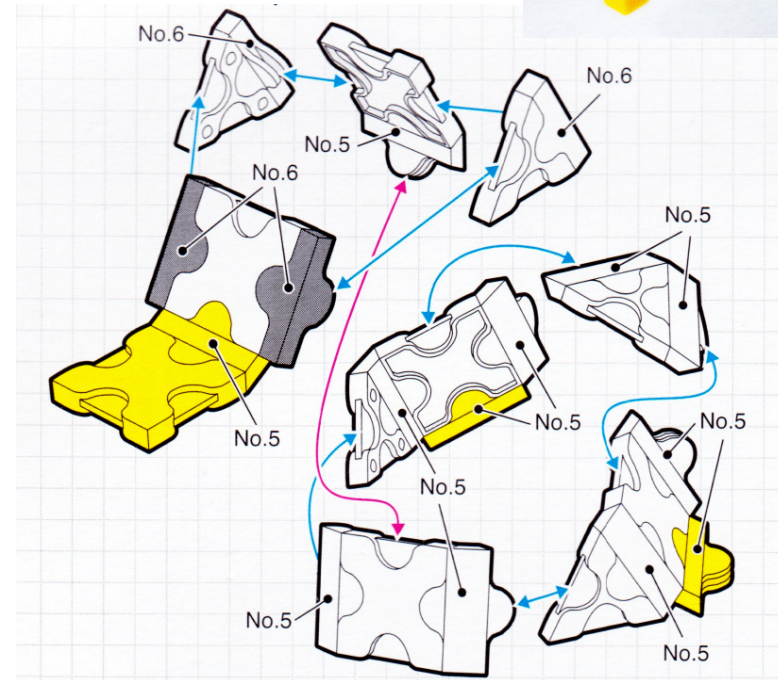
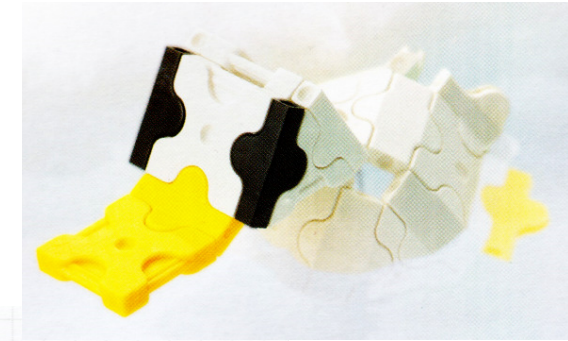
No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
4 3	2 1	3 1	2	2	6 1	1 2



Duck

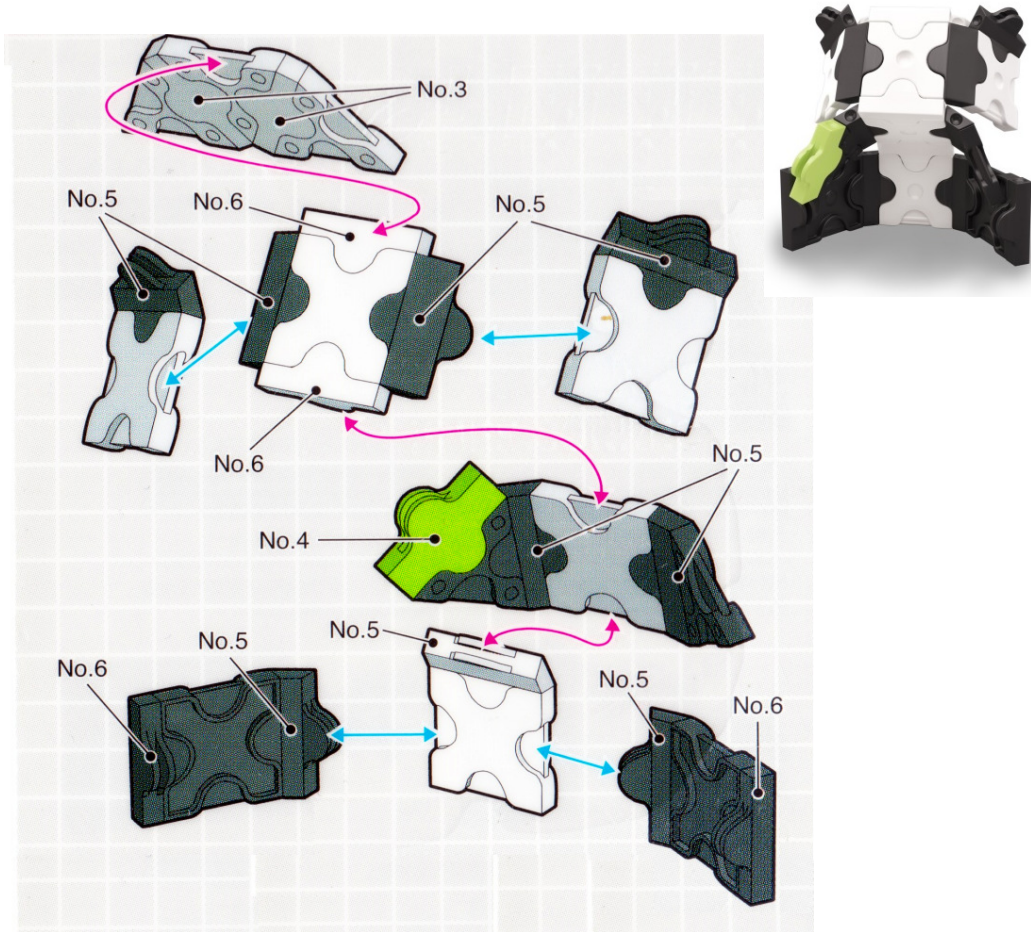
Level 1

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
5 1	5			9 3	2 2	



Panda

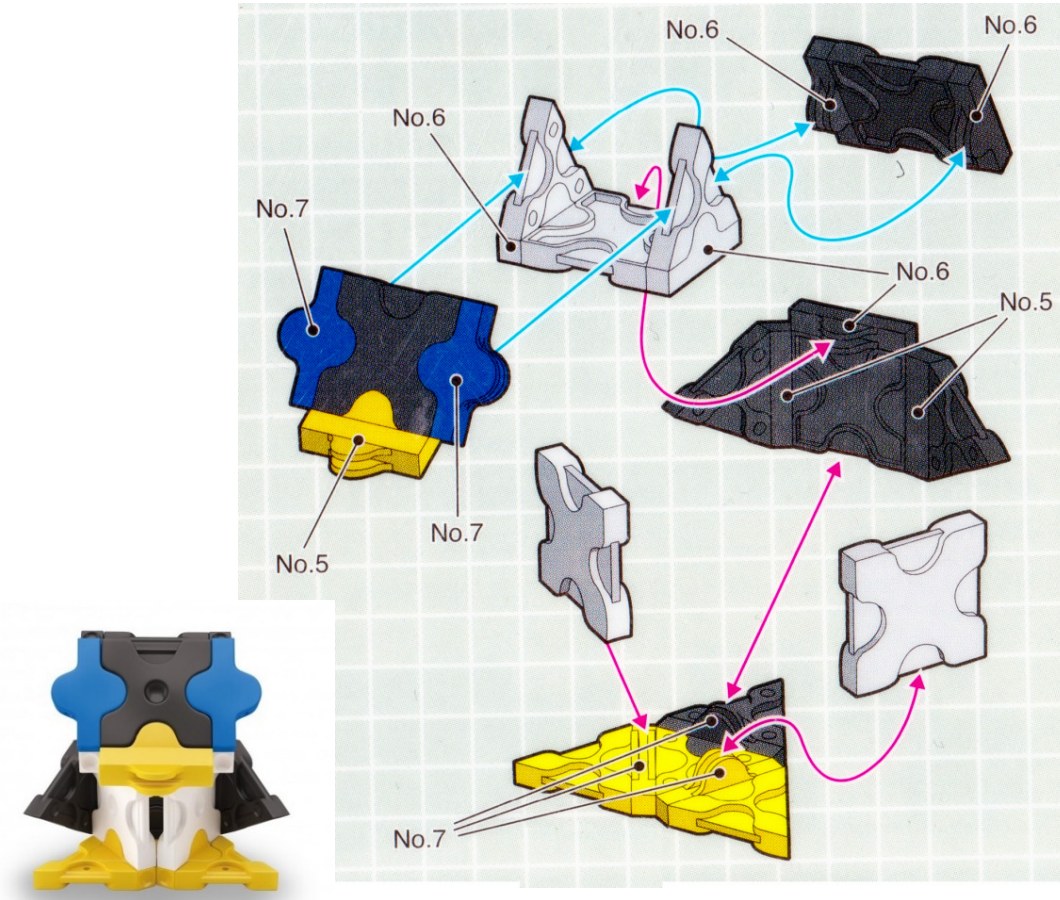
No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
5 2	3 2	2	1 1	8 1	2 2	



Penguin

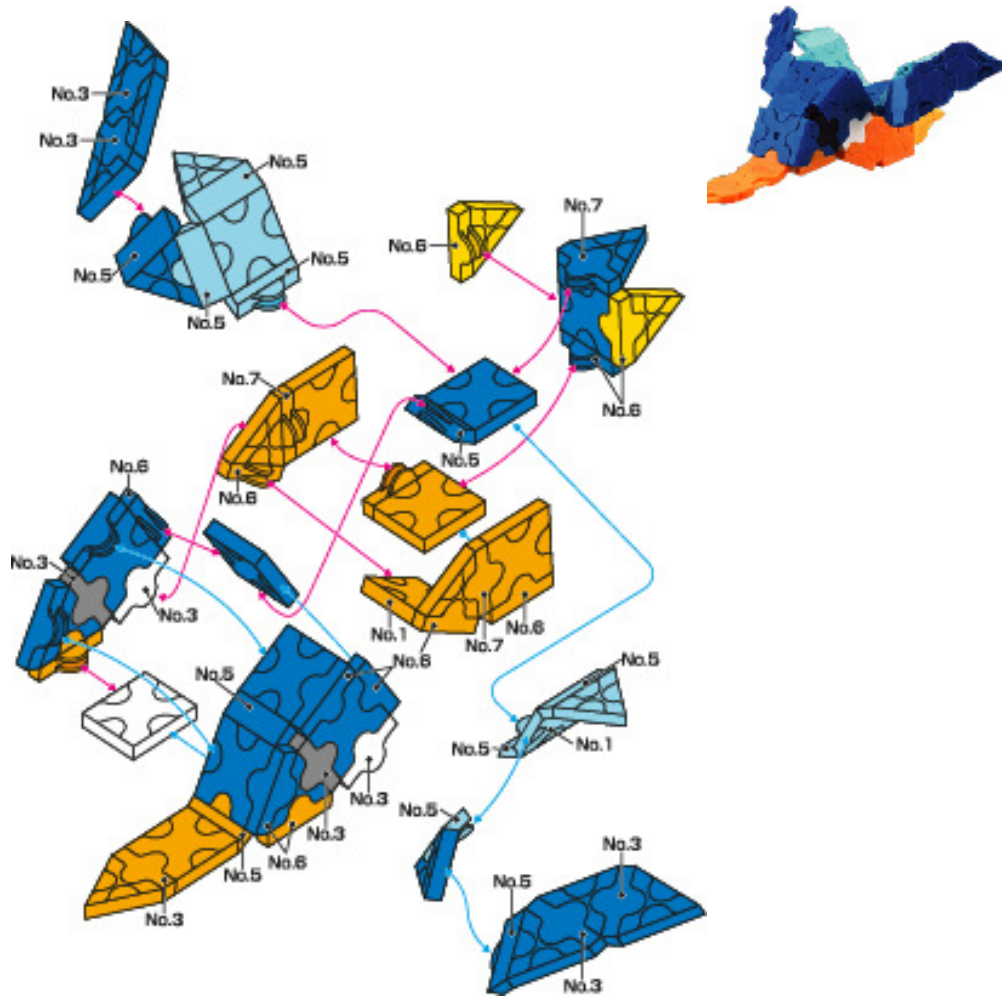
Level 1

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
3 3	3 2 2			2 1	3 2	2 2



Kingfisher

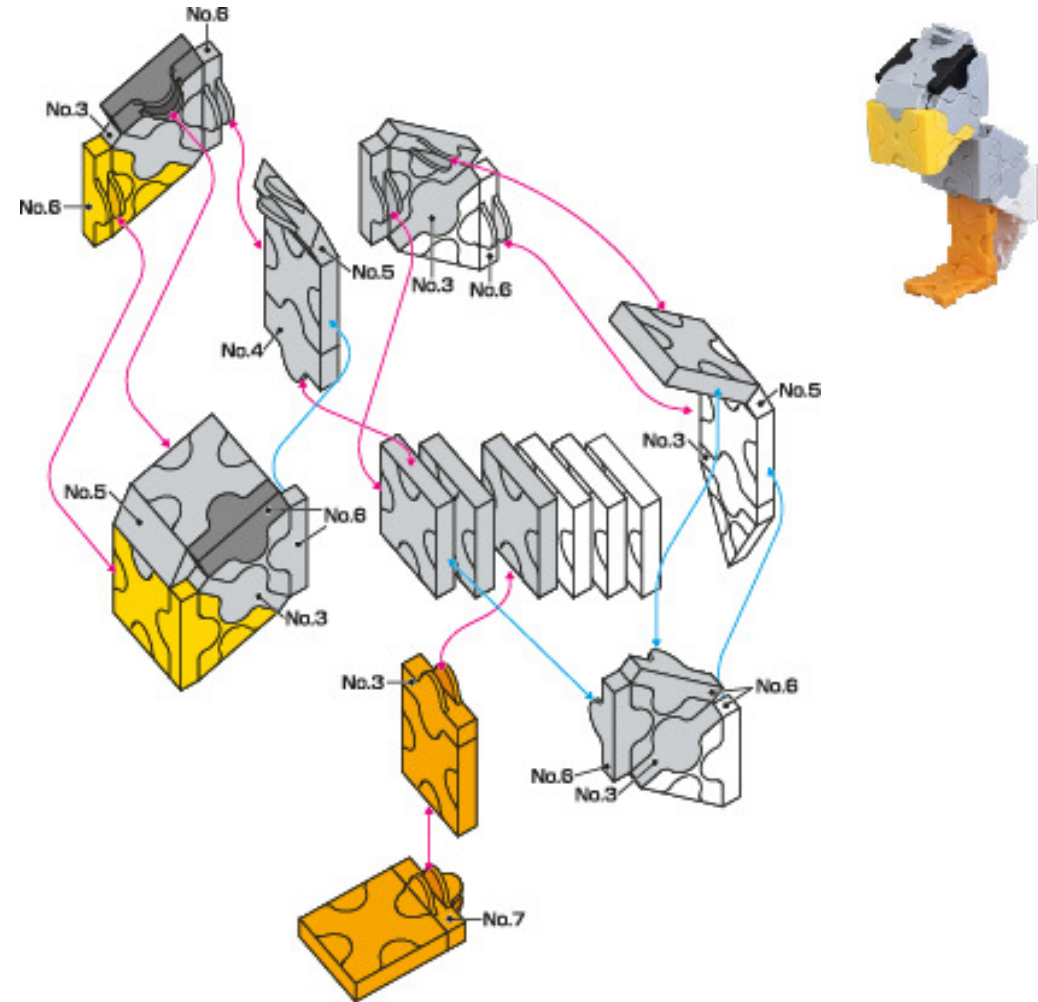
No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
7 5 2 1	11 3 2 2	4 2 2 1		6 4 1	7 6 2	2 1



Shoebill

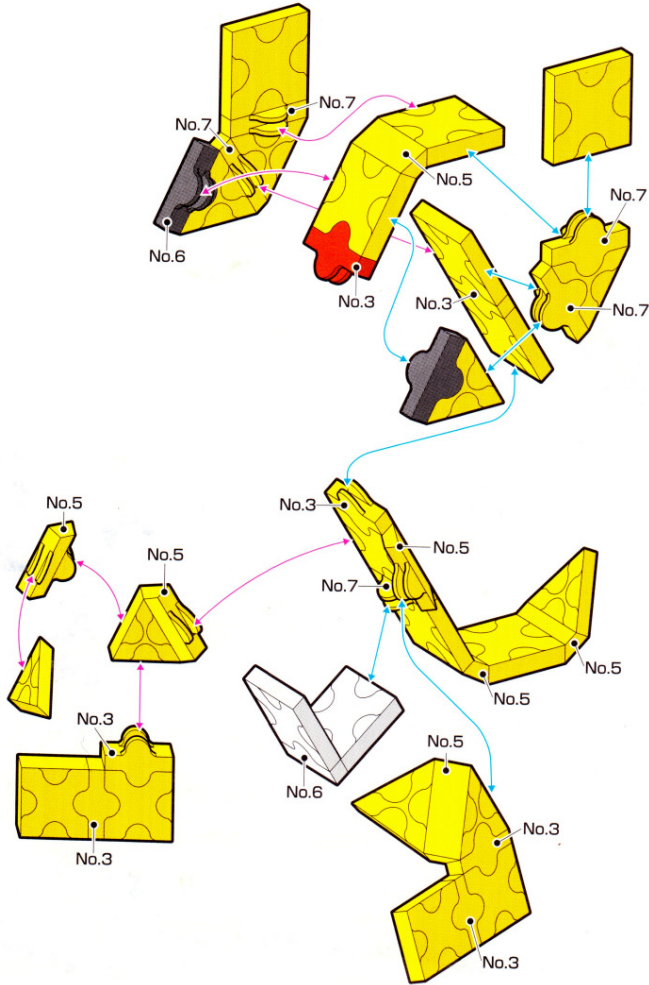
Level 2

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
6 4 2 1	4 3 2	4 1 1	2 1	2 1	6 2 2 2	1



Kangaroo

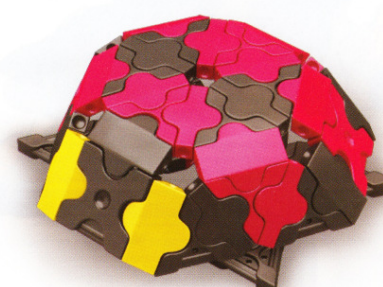
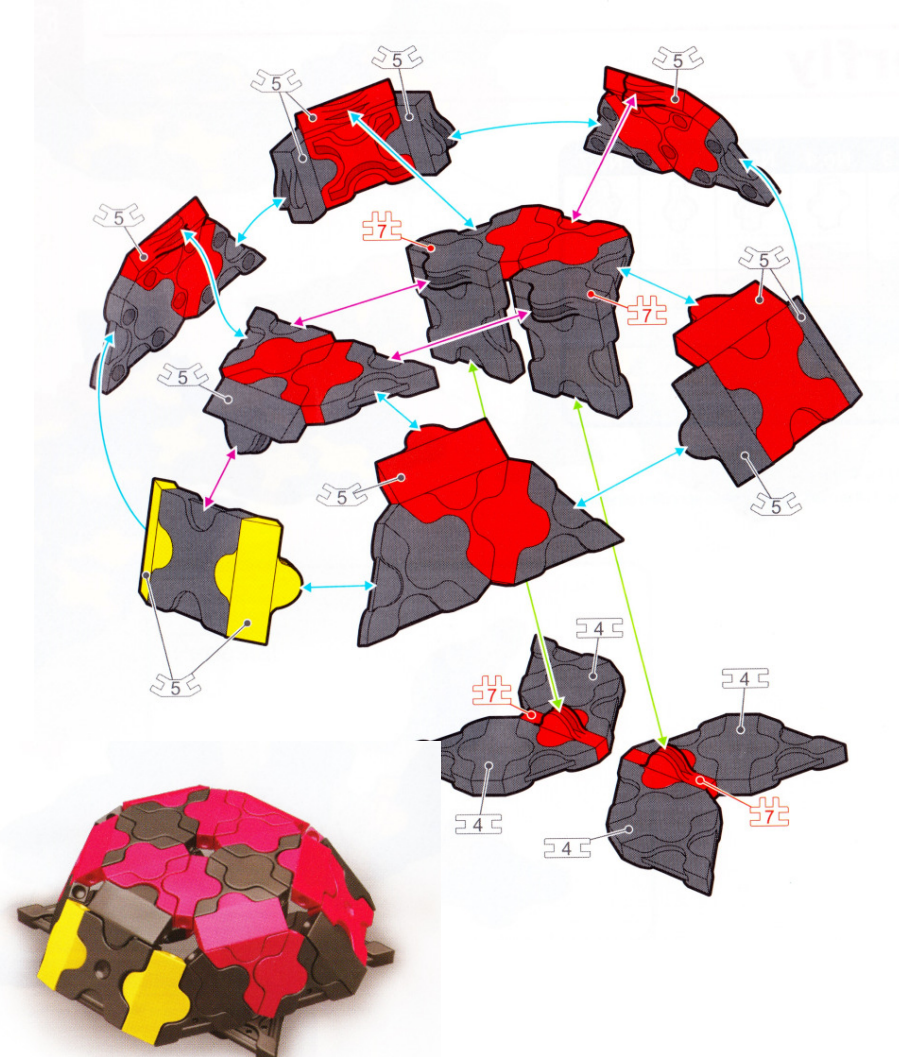
No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
13 2	9	6 1		7	2 1	5



Ladybug

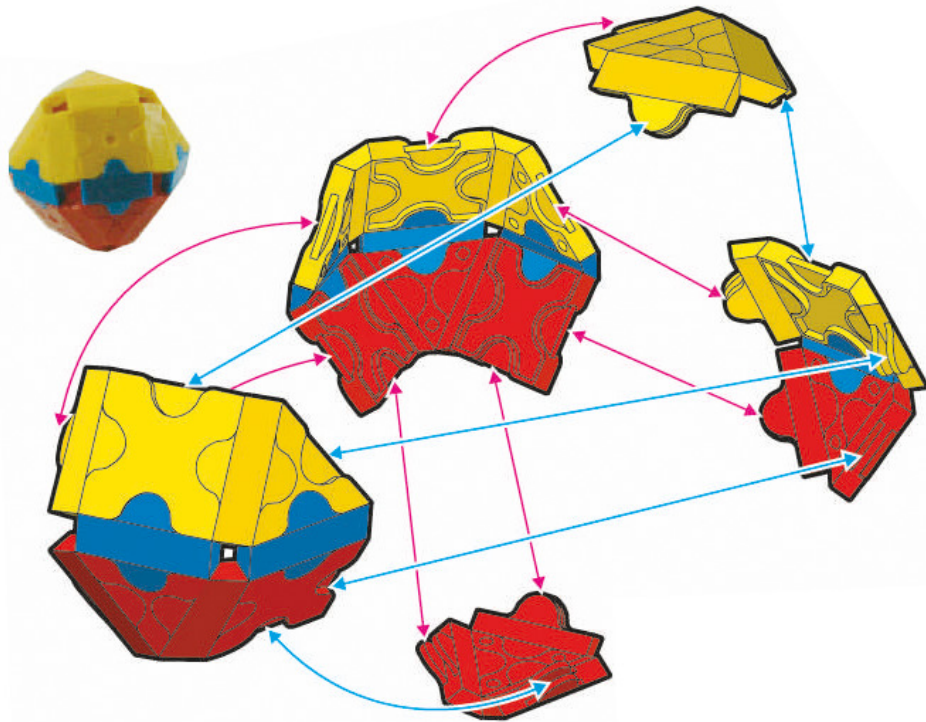
Level 2

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
3 2	18 5	8 2	4	5 5 2		2 2



Ball 1

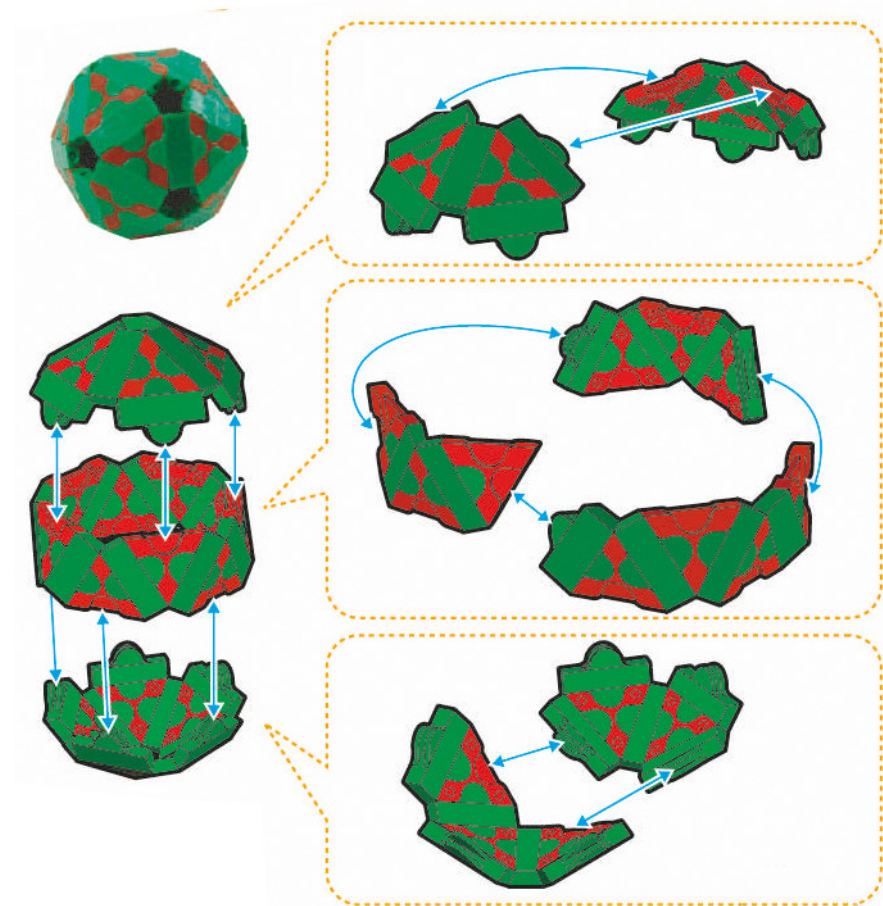
No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
3 3	4 4			9 9 6		



Ball 2

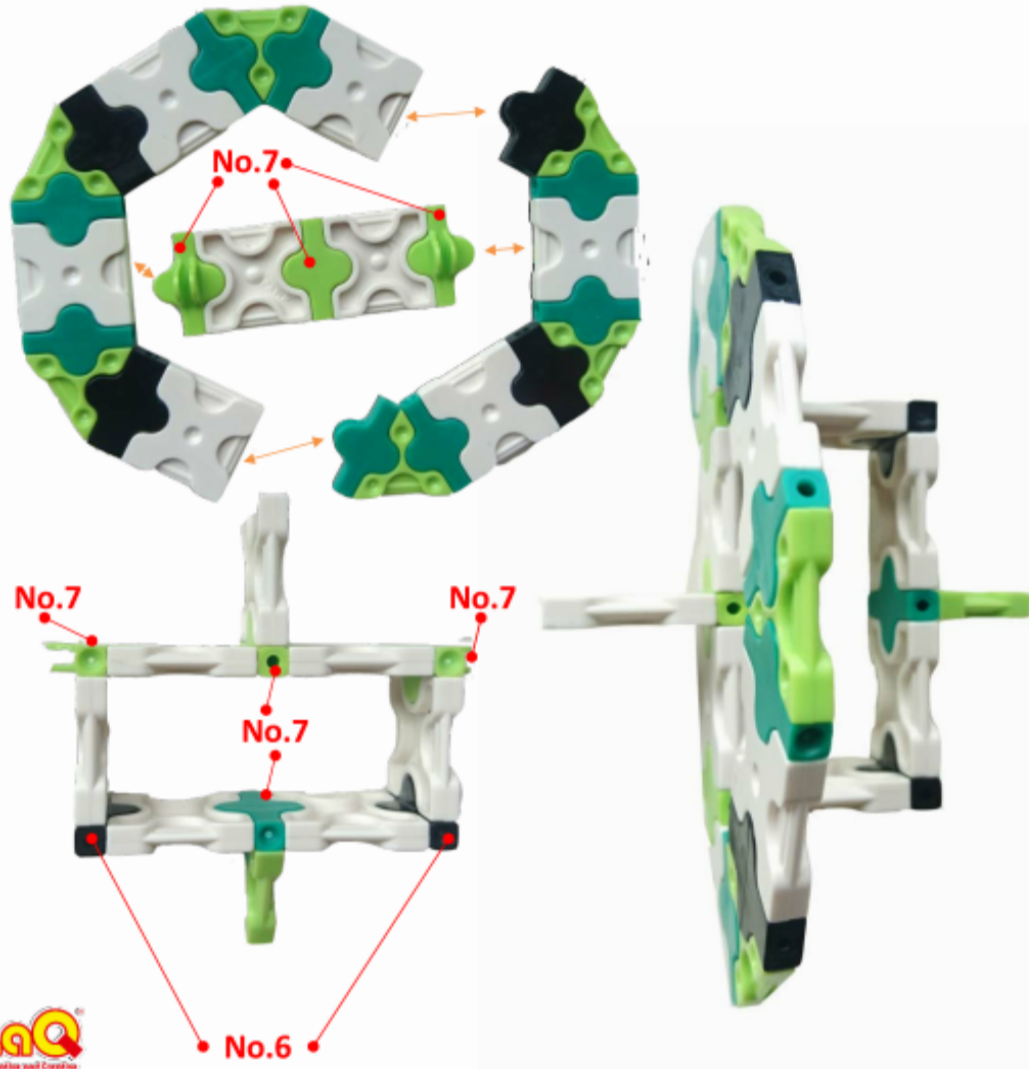
Level 2

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
	20			30		



Top

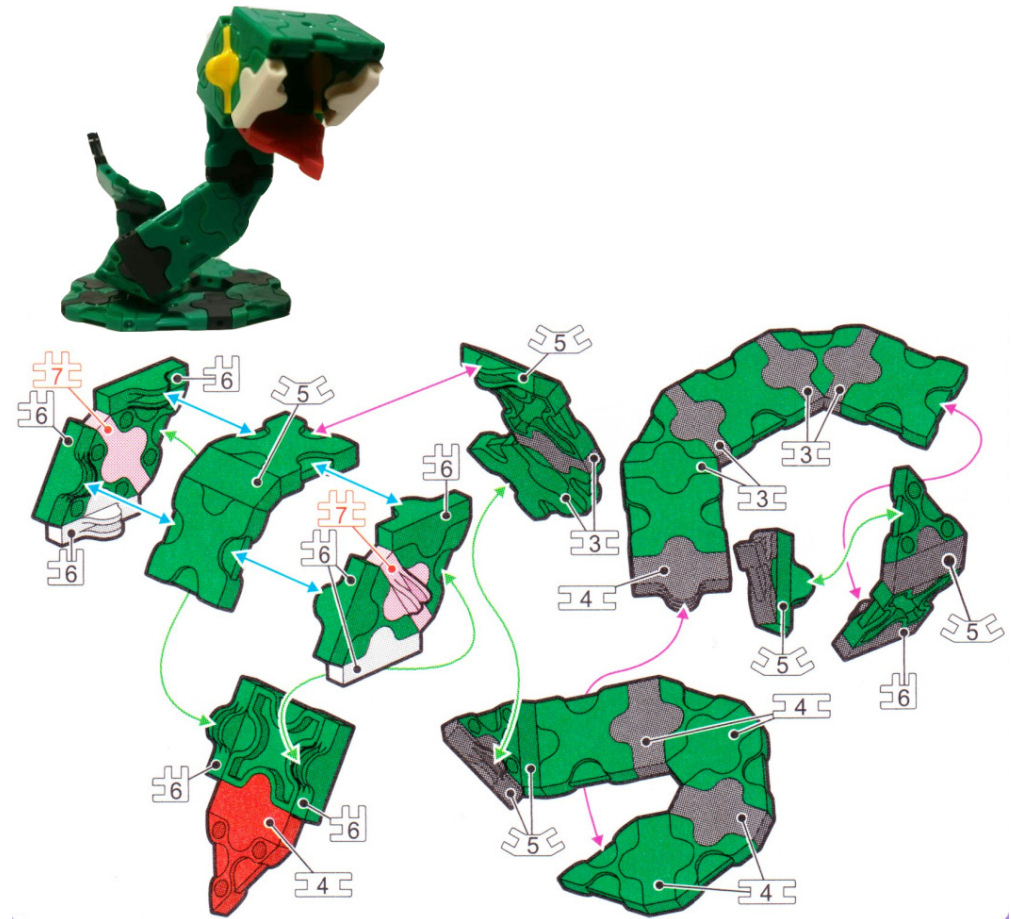
No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
13	7	10	4		2	3 1



Snake

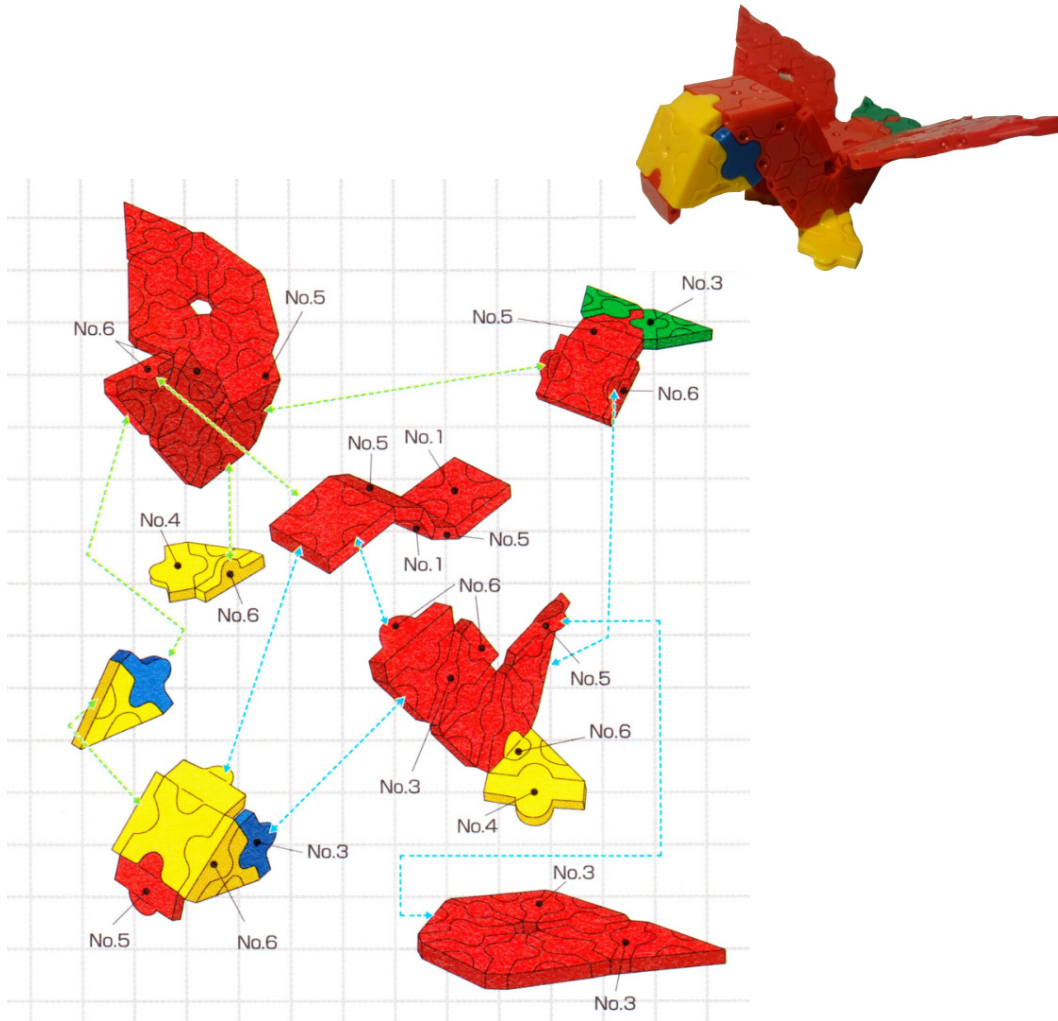
Level 2

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
9	13 1 1	3 2	3 2 1	4 2	6 2 1	2



Bird

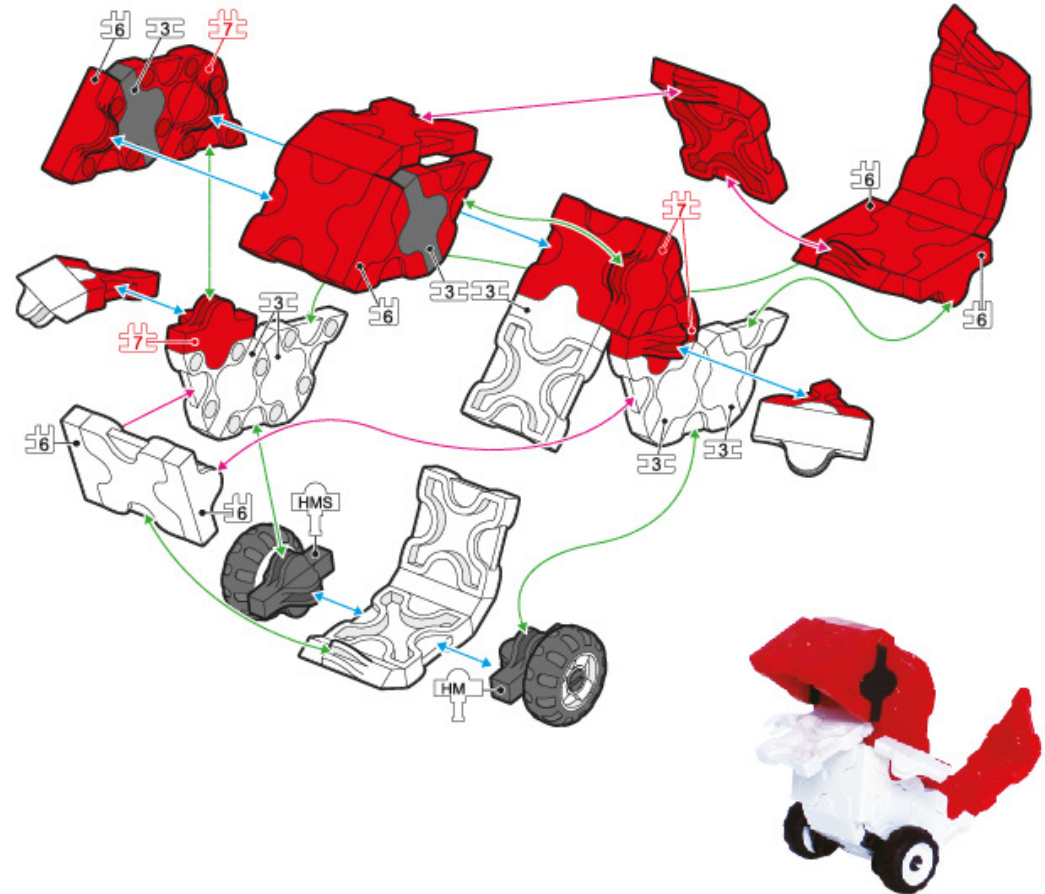
No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
4 1	25 4 2	22 2 2	2	6 1	6 4	



Chibli

Level 2

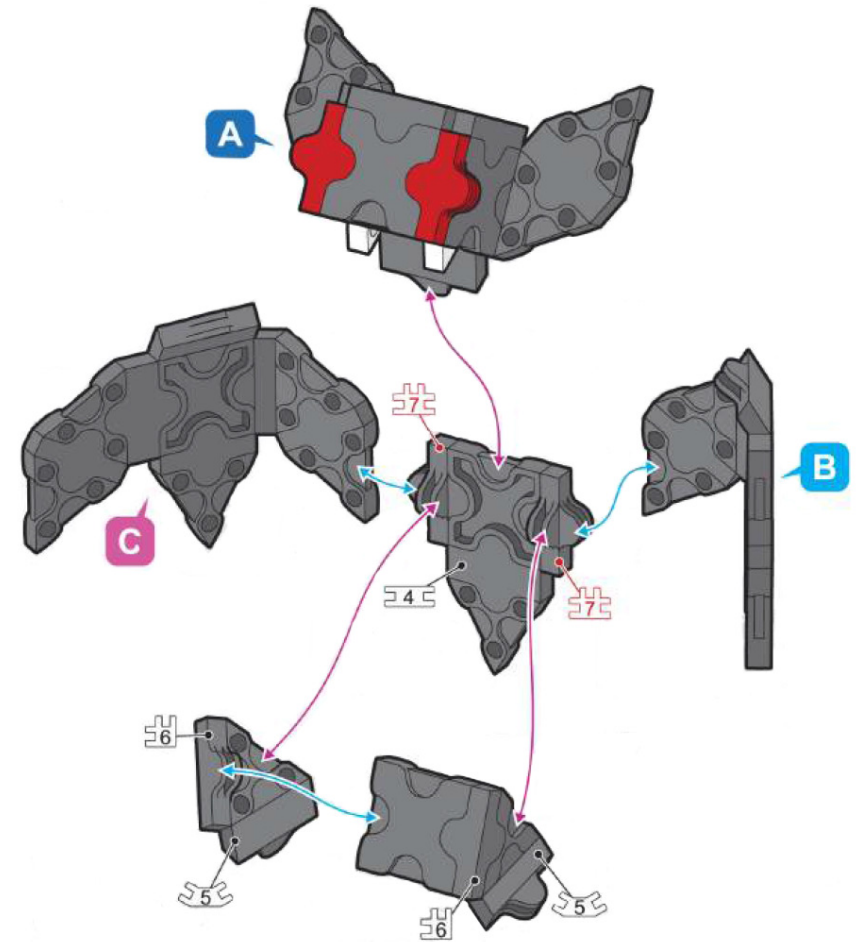
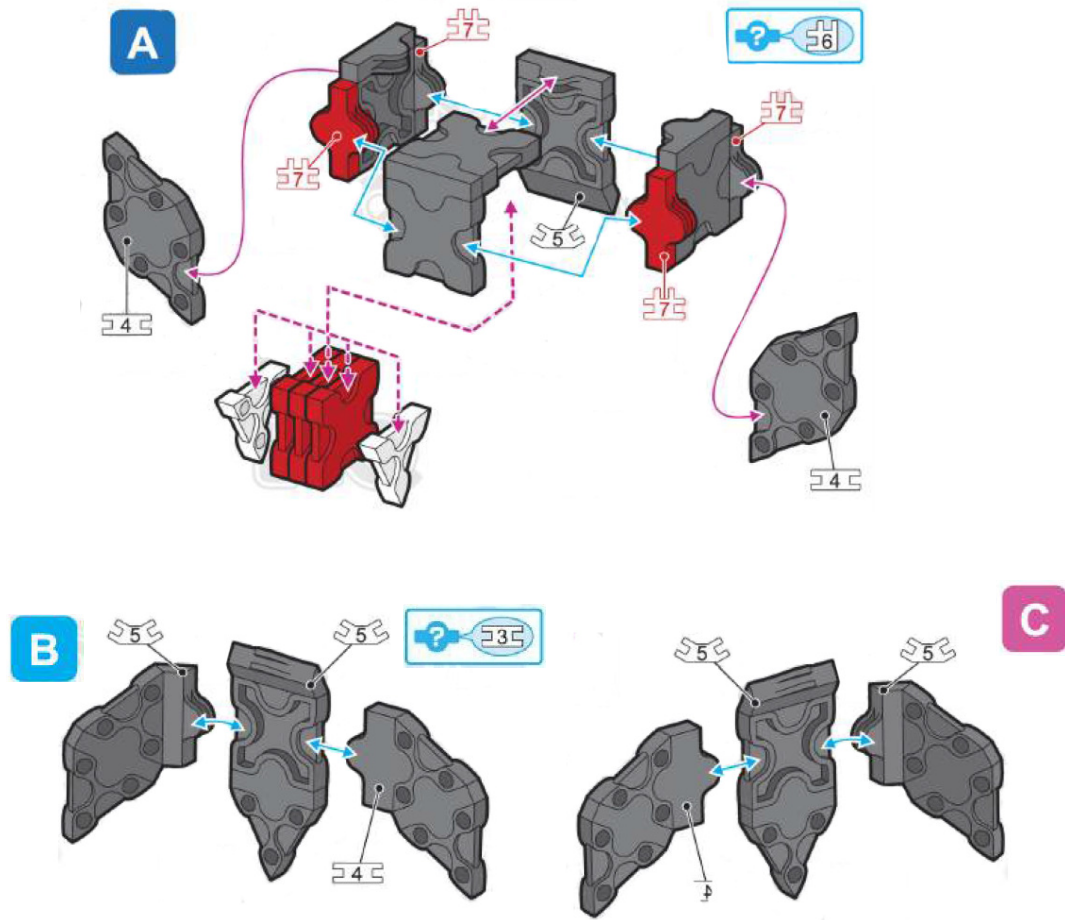
No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
6 4	9 6	5 2		5 4	4 2	4



Bat

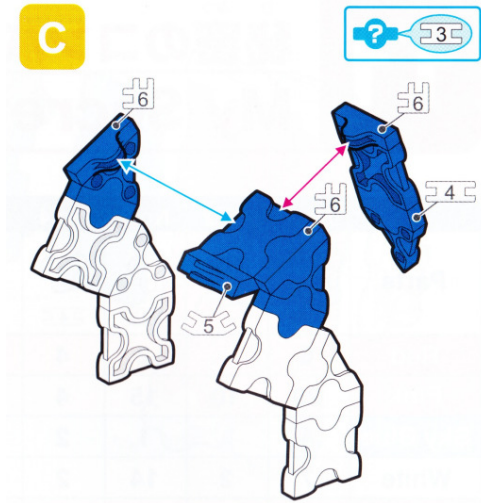
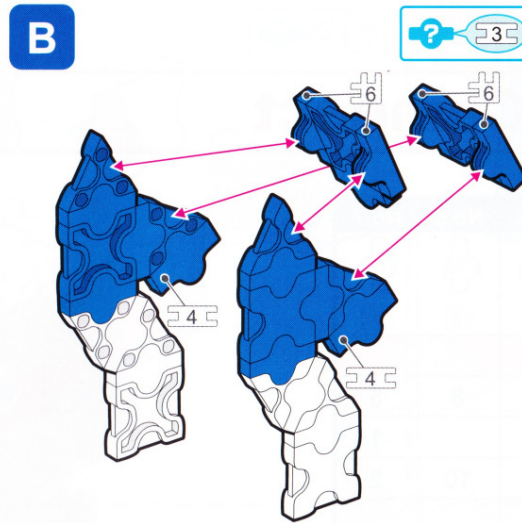
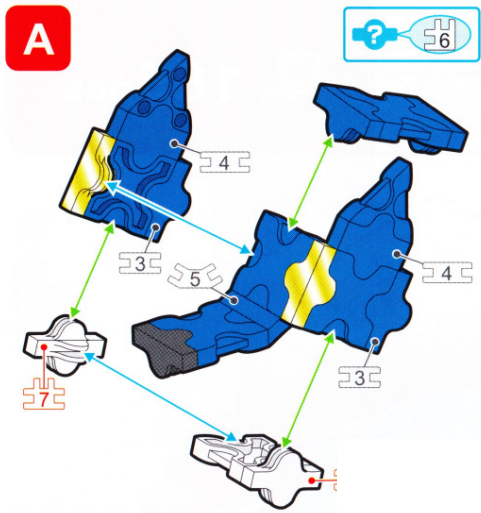
Level 2

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
9 3	17 2	6	5	7	6	4 2

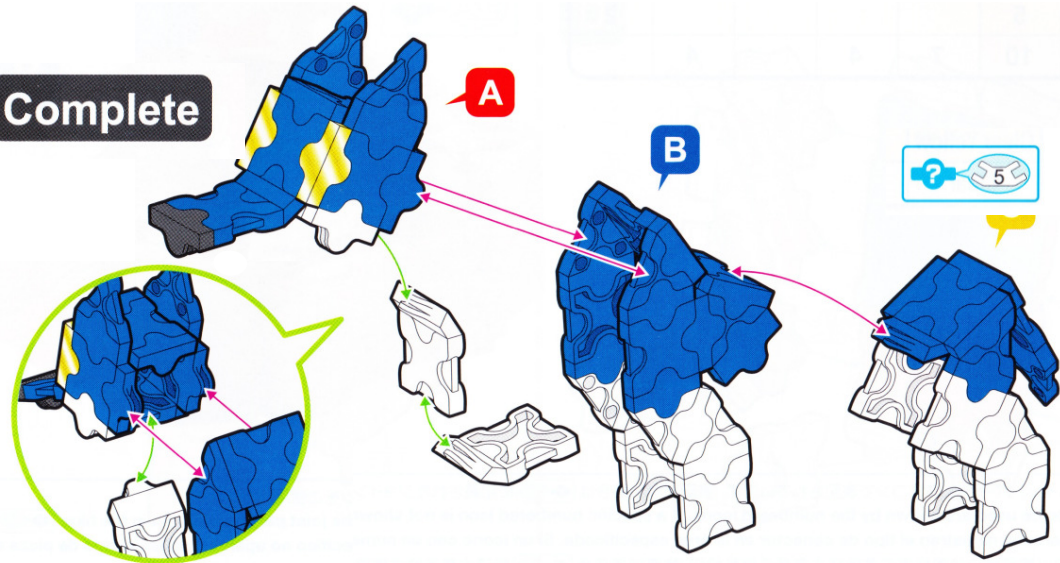


Wolf

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
11 9	9 6	11 8	5	2 2	9 2 1	2



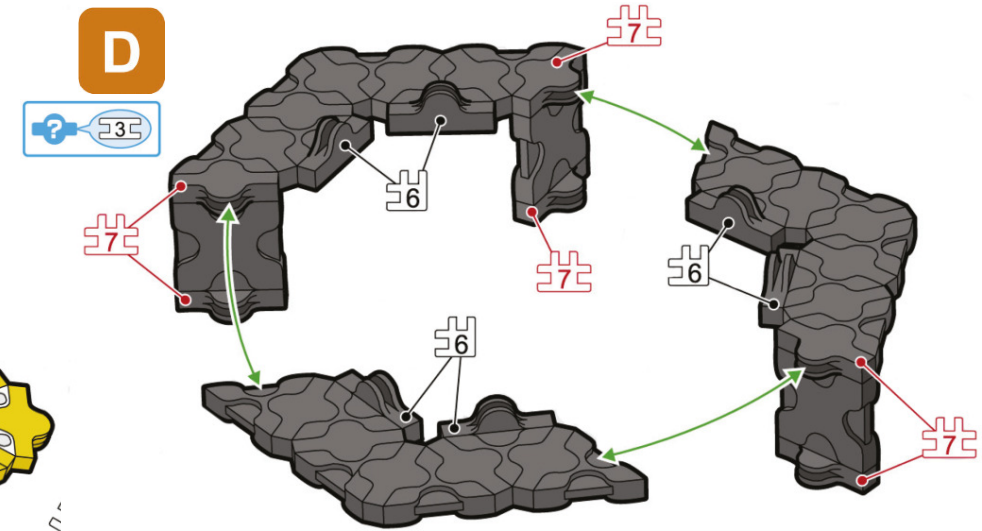
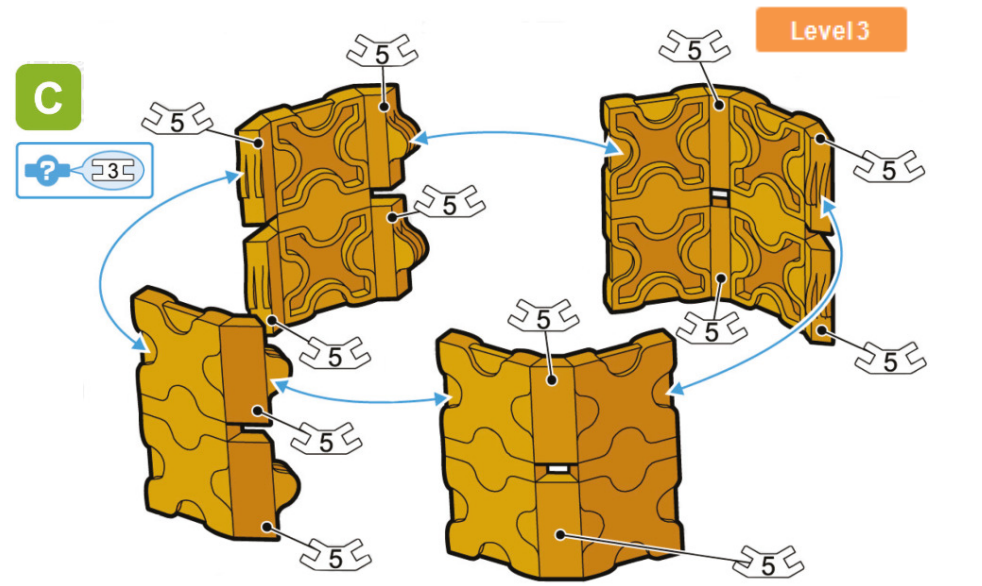
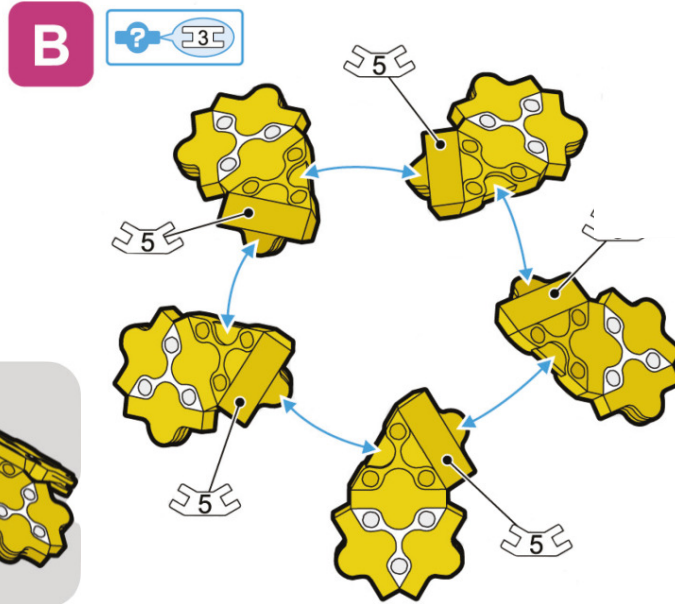
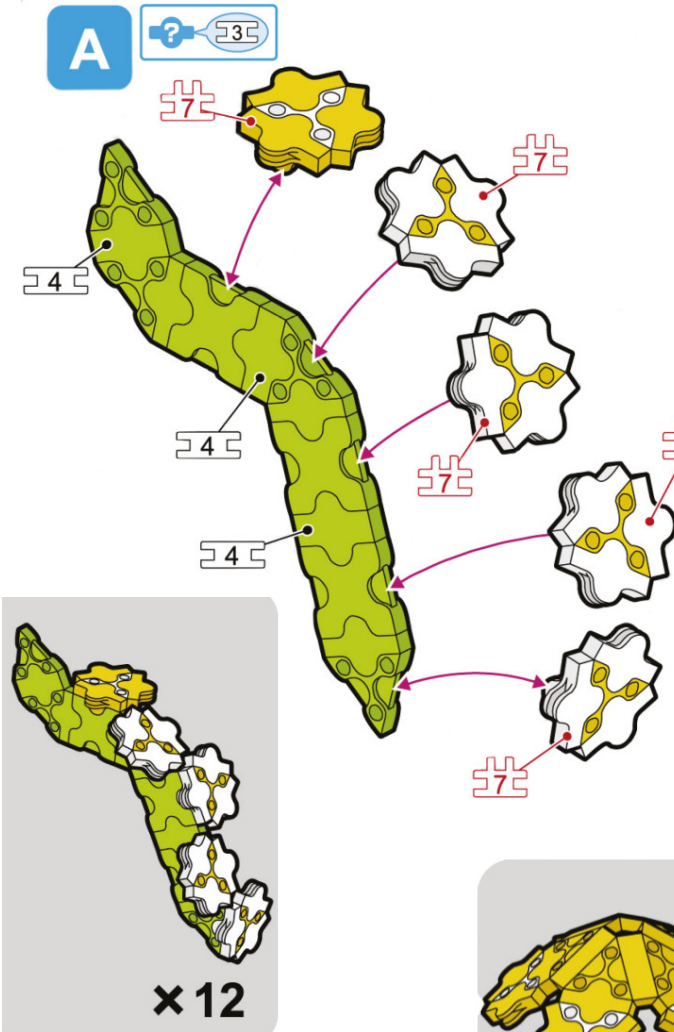
Complete

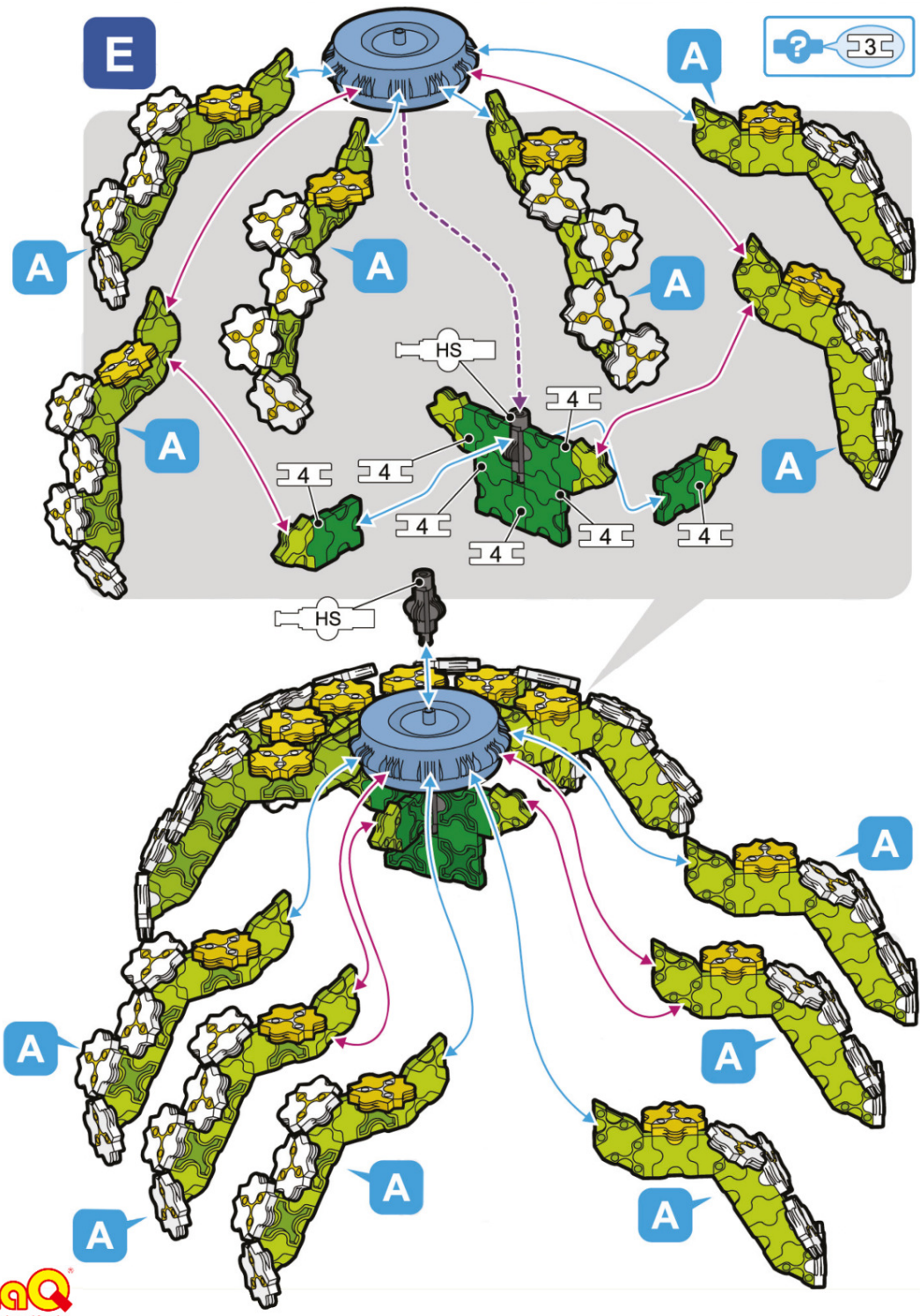


Level 2

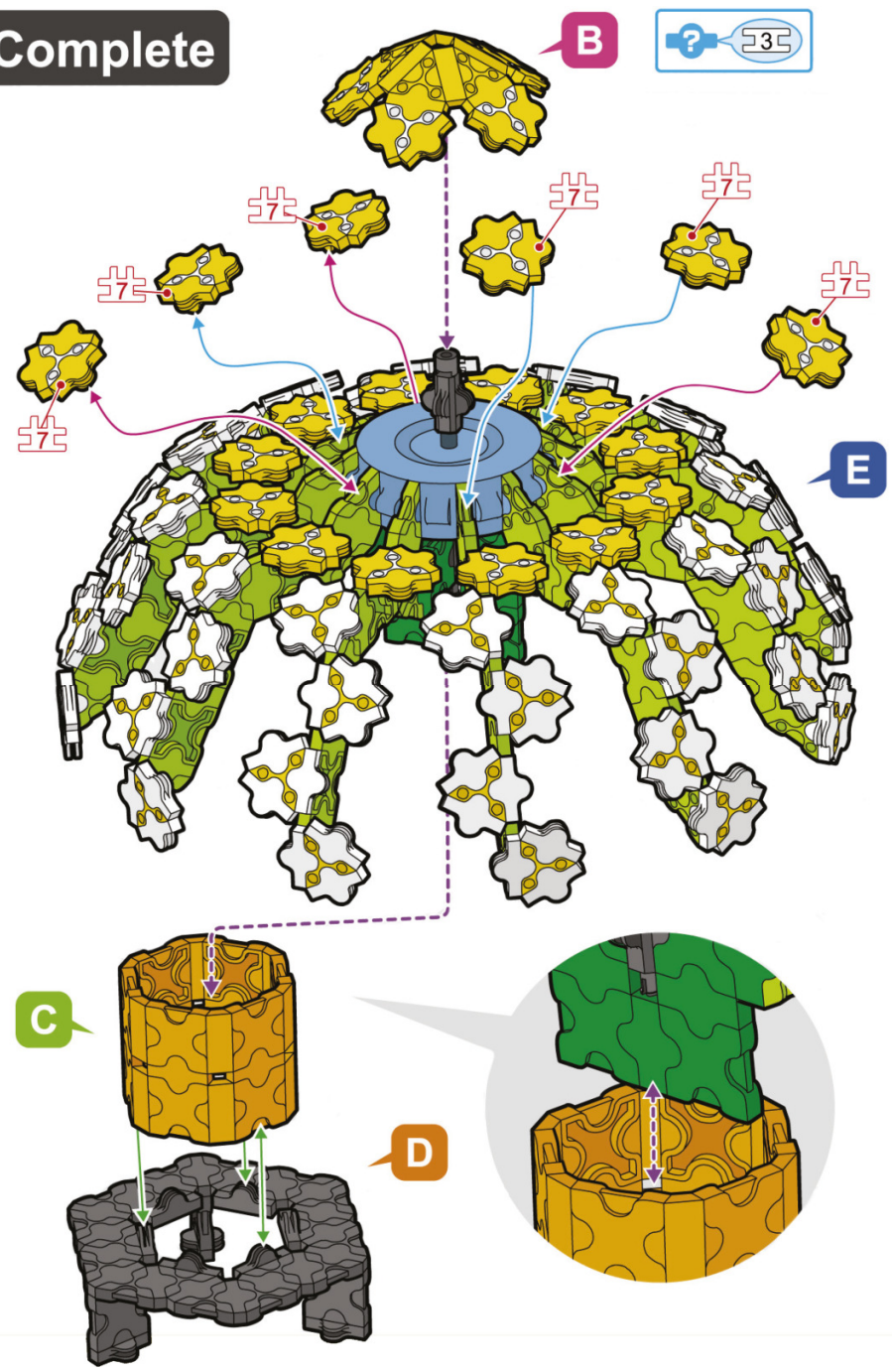
Chrysanthemum

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
36 12 6 3	53 52 23 18	96 51 40 15 6	36 7	12 5	6	48 18 6





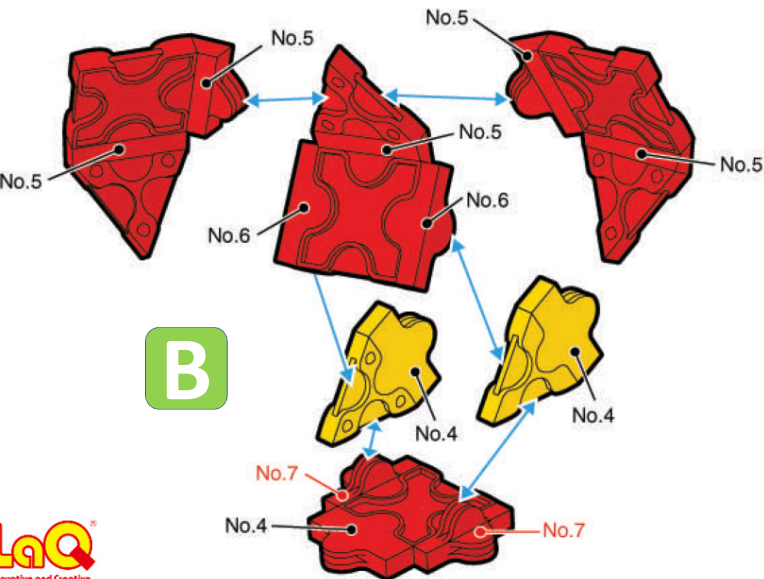
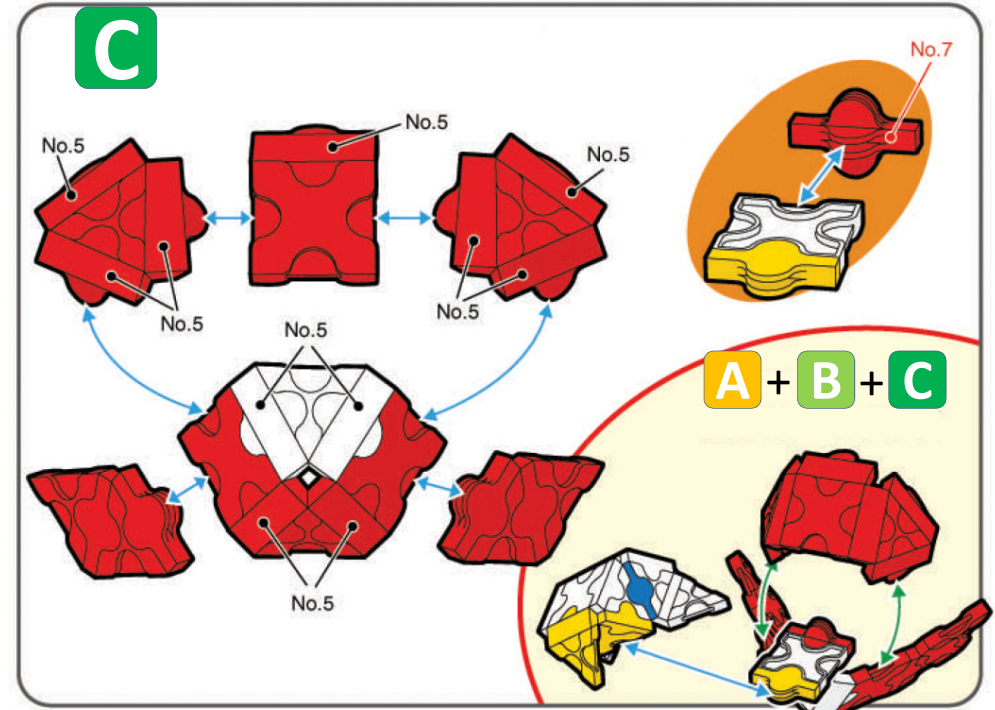
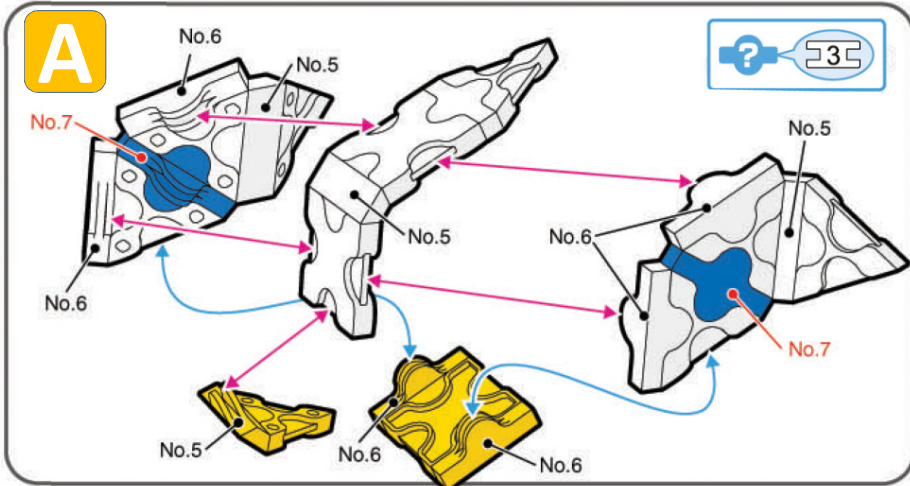
Complete

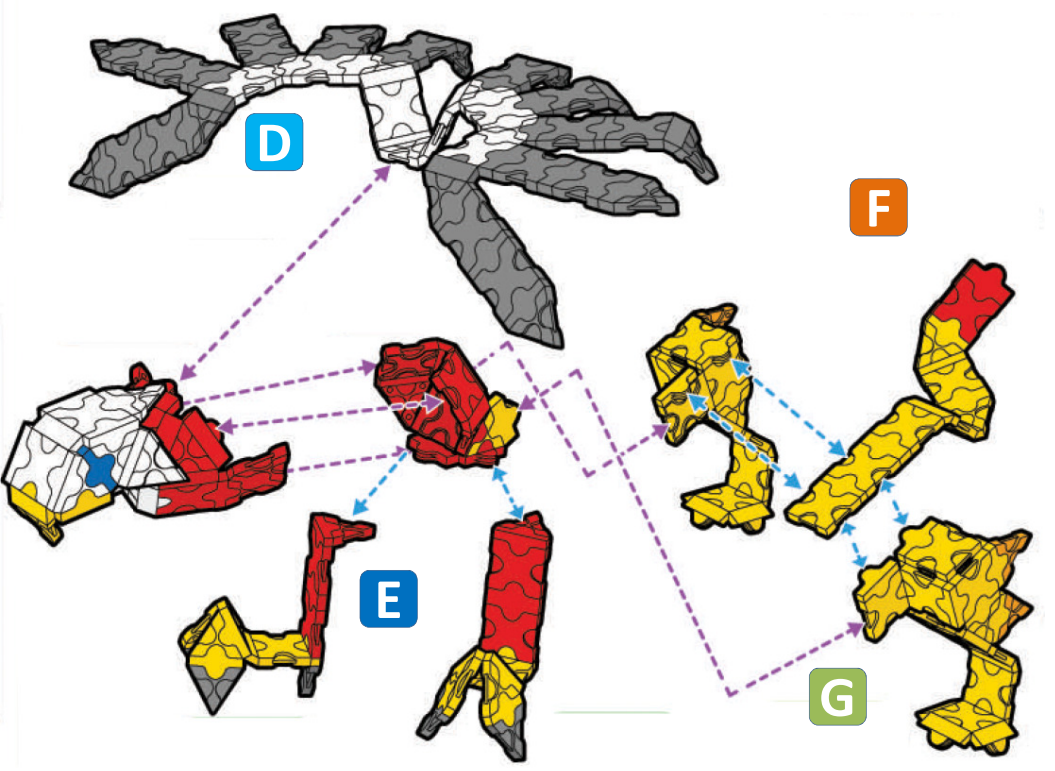
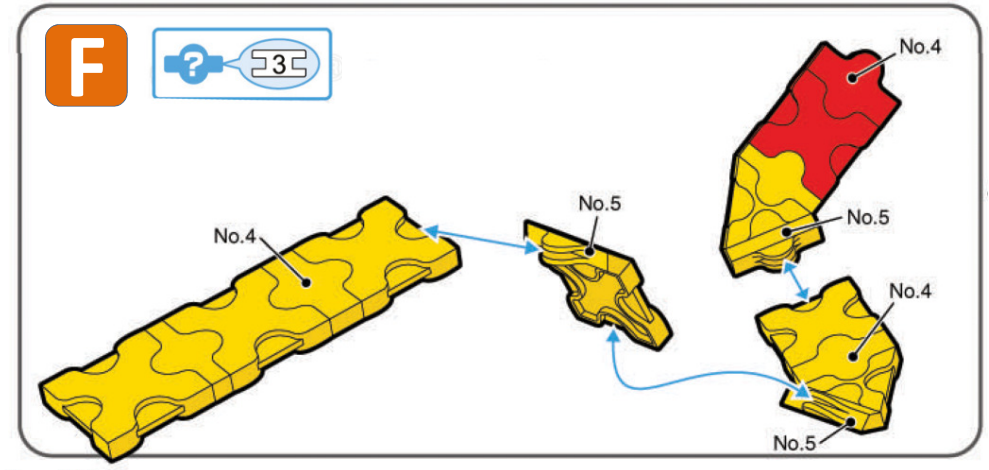
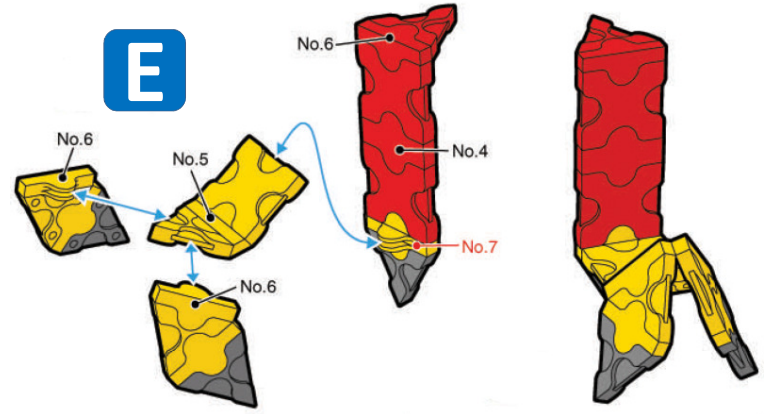
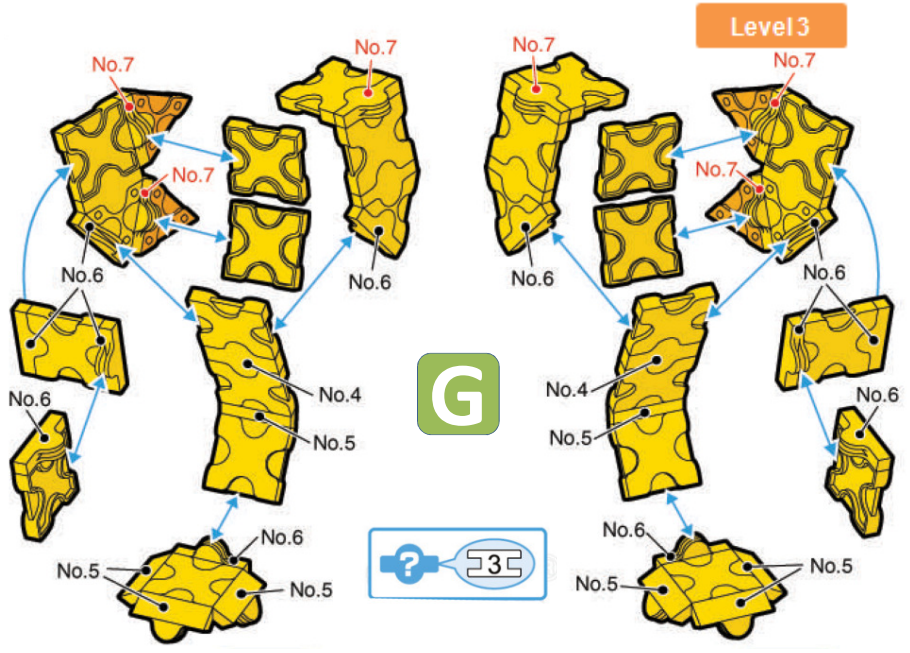
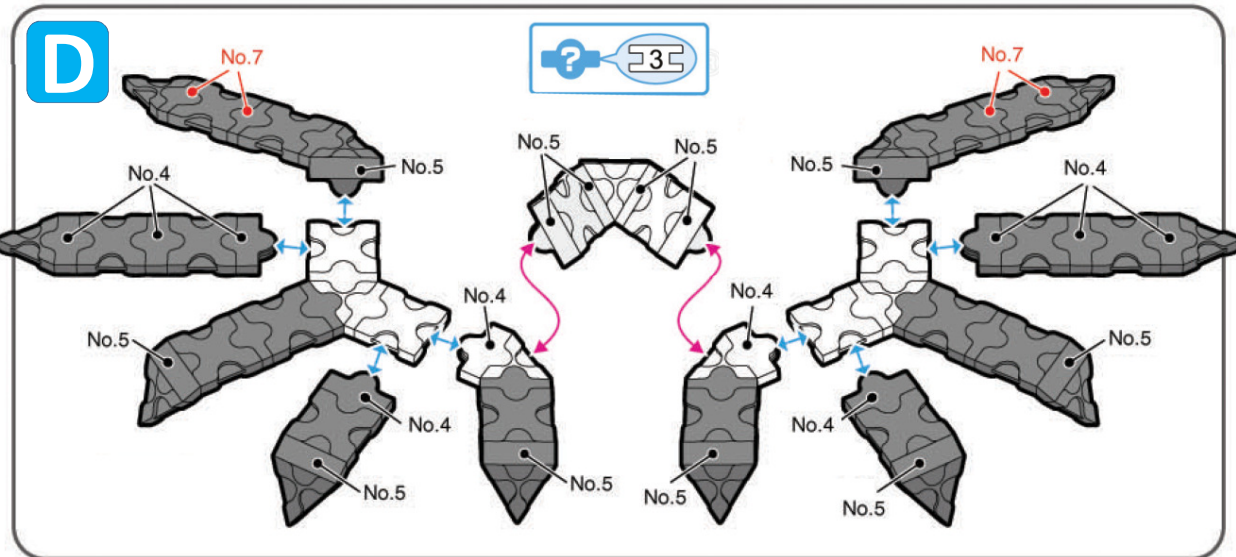


Griffin

Level 3

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
30 12	16 9	11 4	8 4	14 9	18 4	8 3
16 8	15 12	8 4	6 2	14 8	4	4 2
	4					



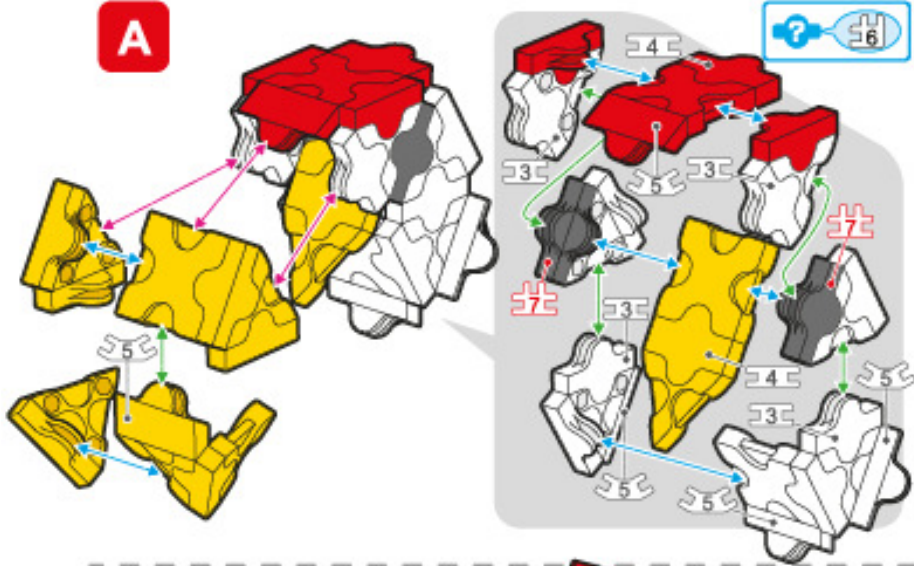


Parrot

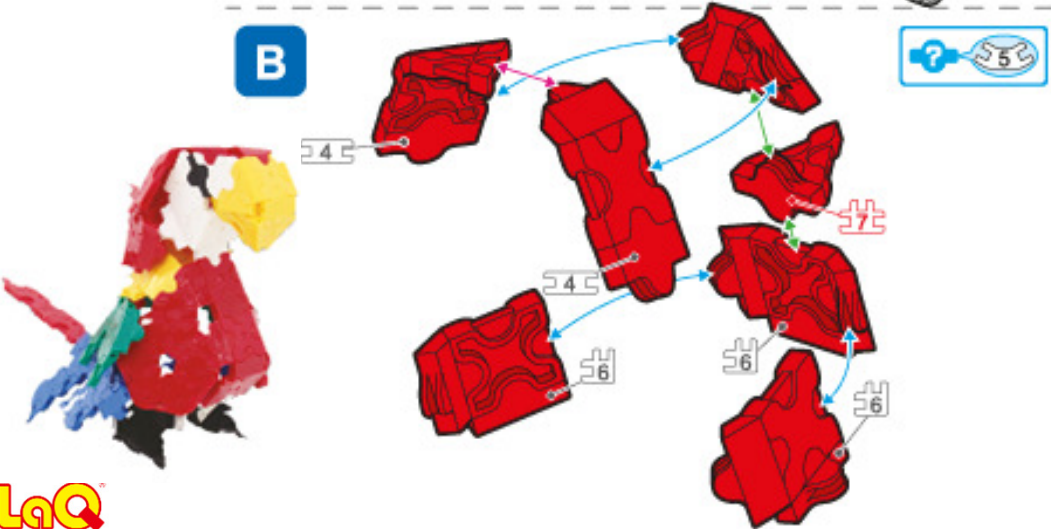
Level 3

No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
13 4	19 18	14 14	8 2	15 7	7 5	2 1
1	10 9	8 4	1	4 4	5 2	
	6 6	2		4 4		

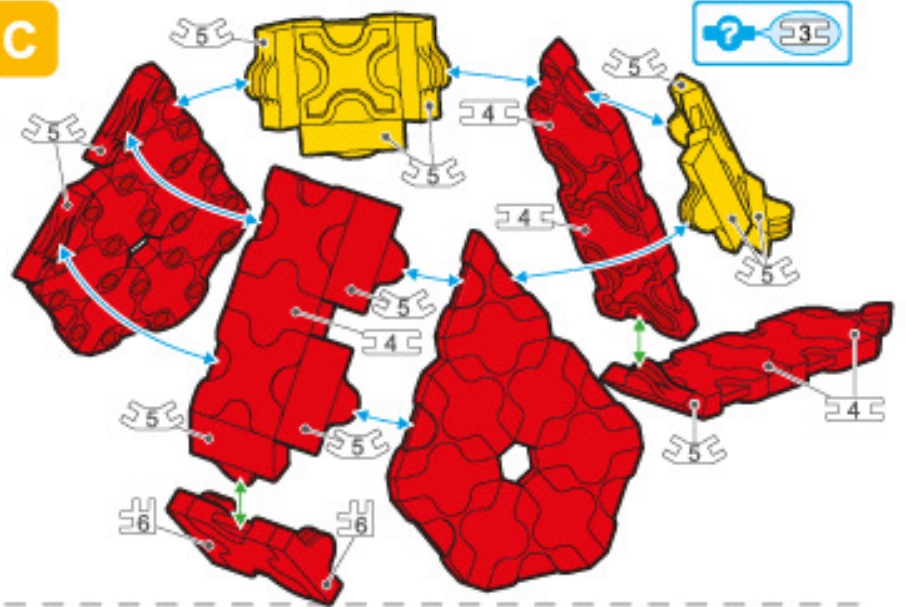
A



B



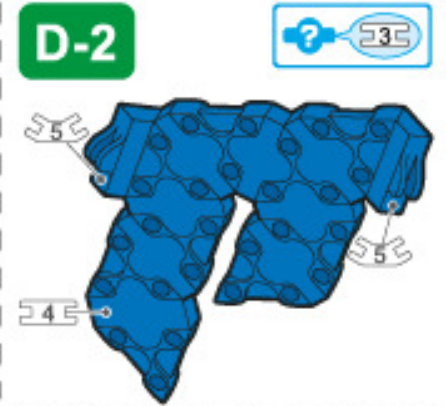
C



D-1



D-2



E-1



E-2



