

# Guide to using Kid K'NEX with children aged 3 to 7

...including 12 Kid K'NEX instruction  
Cards



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## 1. Introduction

The traditional K'NEX construction kit has been used successfully in the UK since 1995, in the home, in schools and other educational settings. K'NEX is mainly used with children aged 5 and upwards. The lower age limit of 5 exists because:

- Some three and four year olds do not have enough strength in their fingers to use traditional K'NEX effectively
- Traditional K'NEX contains some very small pieces, such as little green rods, with which there is the potential for younger children swallowing them.

However, children aged 3 and 4 do generally have the skills and understanding needed to use a rod-and-connector construction kit. To assist them to gain the enjoyment that traditional K'NEX gives to older children, in 2003 K'NEX Industries brought out a bigger version of K'NEX called **Kid K'NEX**.

Kid K'NEX has quickly become popular across the UK, in many settings for 3 to 7 year olds, including:

- The home
- Nurseries
- Primary schools
- Children's clubs
- Childcare schemes
- Family Learning

The purpose of this short guide is to explain how Kid K'NEX can be used to best effect in all the above settings.

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Author Andy Shercliff of the K'NEX UK User Group, a not-for-profit division of 4children2enjoy Ltd

Email [info@knexusergroup.org.uk](mailto:info@knexusergroup.org.uk)

Website [www.knexusergroup.org.uk](http://www.knexusergroup.org.uk)

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## 1.1 Who is this guide for?

This Guide has been written for everyone who is involved with the education of children aged 3 to 7, including:

- Parents
- Teachers
- Nursery Nurses
- Classroom and Learning Support assistants
- Nursery staff
- Club leaders
- Family learning practitioners

## 1.2 Background to K'NEX and Kid K'NEX

K'NEX and Kid K'NEX are together one of the most successful construction kits in the world, second in popularity only to Lego. They are both based around a series of "rods", which can be joined together by "connectors". Once they have mastered using these simple components, children and adults alike can use their imagination to make potentially millions of different working models.

It is ease of use and versatility that make K'NEX and Kid K'NEX such a good investment for educational purposes. Kid K'NEX (see photo) is ideal for children aged 3 to 7, and from age 5 children can then go on to use traditional K'NEX as well.

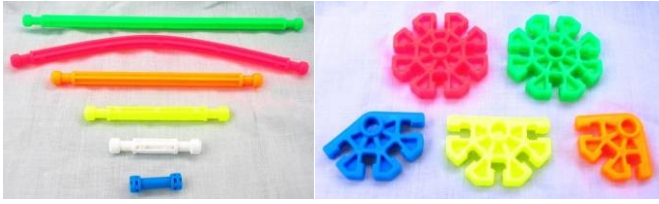


Building K'NEX and Kid K'NEX models helps both children and adults to understand subjects such as structures, forces and simple machines, in the way that Meccano educated an earlier generation. However, Meccano was aimed and advertised exclusively at boys, whereas both girls and boys find K'NEX and Kid K'NEX easy and enjoyable to use. K'NEX and Kid K'NEX can also be used effectively with adults, for instance in a family learning setting.

A further strength of K'NEX is that it can help both children and adults to develop skills such as innovation skills, problem-solving skills and team-working skills. These are skills that are much sought after by employers. It is also worth remembering that even though educational organisations use K'NEX and Kid K'NEX because of their high educational value, children and adults enjoy using them simply because they are fun. This makes K'NEX and Kid K'NEX good vehicles for engaging hard-to-reach pupils, such as disaffected pupils and pupils with behavioural and emotional difficulties.

## 2. What is Kid K'NEX?

Kid K'NEX is a version of K'NEX with large, chunky rods and connectors that children aged 3 to 7 can easily join together. The basic components of Kid K'NEX are the rods and connectors shown below.



Small Kid K'NEX sets can be bought in the shops, but the best value sets are the *Kid K'NEX Education sets*, that have been designed for schools and other educational settings.

There are four Kid K'NEX education sets available, namely:

- Kid K'NEX Classroom set
- Kid K'NEX Group set
- Kid K'NEX Creatures set
- Kid K'NEX Transportation set

The bright, almost fluorescent colours of the rods and connectors are very appealing, but undoubtedly the most attractive feature of Kid K'NEX is the extra components found in each set, as the photos below show. Appendix B provides more detail on each set.

### 2.1 Kid K'NEX Classroom set



The set contains rods, connectors, eyes, ears and feet. The eyes can be made to look in any direction by swivelling them, and as the ears are also moveable, children can make Kid K'NEX characters with a whole range of expressions, as shown below.



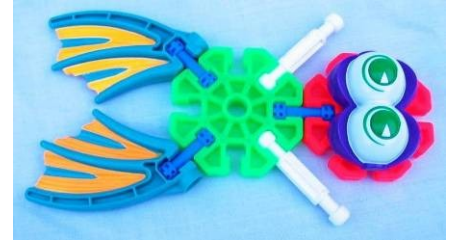
### 2.2 Kid K'NEX Group set

The Kid K'NEX Group set is similar to the Classroom set, but it is smaller, and does not contain the large feet.

### 2.3 Kid K'NEX Creatures set

The set contains rods, connectors, various types of eyes, tails, talons and flippers, plus instructions to make creatures that include:

- Ant
- Spider
- Tadpole
- Frog
- Sea Monster
- Octopus
- Fish
- Dragonfly
- Seahorse



### 2.4 Kid K'NEX Transportation set

The set contains three different sizes of wheels, and can be used to make vehicles that include:

- Cars
- Diggers
- Trucks
- Helicopter



## 3. Kid K'NEX at home

Many thousands of children enjoy making Kid K'NEX models at home. You can buy lots of different Kid K'NEX sets in the shops, to make a wide range of different models.

Once their child has become familiar with Kid K'NEX, parents often want to try and ensure that their child gains maximum educational from playing with it. This can be achieved by reading sections 4 to 8 of this Guide; trying out some of the suggestions they contain (eg Themes in section 5), and asking their child to complete some of the instruction cards in Appendix A.

If you are looking to provide larger amounts of Kid K'NEX for your child and their friends to play with, or if you want them to have more of the special Kid K'NEX components shown in section 2, you might also consider buying one of the Kid K'NEX education sets described in Appendix B. These can be purchased by credit card via our on-line shop at [www.knexusergroup.org.uk](http://www.knexusergroup.org.uk).

## 4. Kid K'NEX in nurseries and schools

Primary schools and nurseries confirm that the new Kid K'NEX fully upholds the K'NEX tradition, of being a product that children love to play with, but from which they can also gain significant educational benefits.

The skills that Kid K'NEX can help enhance include:

- Number skills
- Colour and shape matching skills
- Problem-solving skills
- Spatial relations
- Strength and coordination
- Self-direction and self-esteem

Kid K'NEX is especially valuable when children play with it in small groups. This helps them to develop skills such as:

- Language skills
- Cooperative skills

Kid K'NEX characters can also be used to link into literacy activities that the age group enjoy, such as:

1. Reading a book such as the Hungry Caterpillar, and asking the children to make some of the story's characters out of Kid K'NEX.
2. Asking children to build some Kid K'NEX characters, creatures or vehicles, and then make up and enact a story about them

One of the biggest strengths of Kid K'NEX is that a single large set can be used to build hundreds of different models. This makes it in our view more versatile than any other construction kit available, and means that any educational organisation that invests its time and money into Kid K'NEX can get a significant return on that investment.

All Kid K'NEX sets come with full-colour instruction cards. The instruction cards for the simpler models show the pieces at life size. This enables children to build the model simply by placing the Kid K'NEX pieces in the correct place on the card.

Once the children have used these cards to become familiar with Kid K'NEX, staff can allow "free play", or guide the children towards specific objectives such as:

1. Build a house for the Kid K'NEX creatures you have built.
2. Make a table and chair for the Kid K'NEX creatures to use.
3. Make a Kid K'NEX garden.
4. Make a Kid K'NEX bus.

Section 5 also contains some Themes for Kid K'NEX play, and Appendix A contains some Kid K'NEX instruction cards that you might like to try with your children.

There is also a Kid K'NEX Photo Gallery on the Instructions page of our website.

## 5. Kid K'NEX in children's clubs and childcare schemes

Kid K'NEX is also proving to be very popular for educational organisations that provide children's clubs and childcare schemes for children aged 3 to 7, such as:

- After-school clubs
- Lunchtime clubs
- Beavers and Rainbows
- Playschemes
- Crèches

Kid K'NEX can be used successfully in these settings as a "free play" resource, that children can use as and when they like. Increased educational value, and enjoyment for the children, can be gained if staff on occasion give them Kid K'NEX activities such as the ones in Appendix A, or get all the children building their own Kid K'NEX models within a theme such as:

- Creatures or mini-beasts
- Vehicles
- The sea
- Birds
- Dinosaurs
- Houses
- Gardens and parks
- Playgrounds
- Shopping
- Shapes, colours and patterns

## 6. Kid K'NEX in family learning

Kid K'NEX can also be used very effectively in a *family learning* setting, with children aged 3 to 7 building Kid K'NEX models, with the help of their parents, grandparents and other adult family members.

The following are some of the reasons why Kid K'NEX and K'NEX are so popular for family learning:

- Children, parents and grandparents, both male and female, all enjoy working with Kid K'NEX.
- Many family learning practitioners say they have a problem in attracting fathers into their family learning sessions. Kid K'NEX can help overcome this.



- Providing K'NEX and Kid K'NEX activities can also be a good way of attracting hard-to-reach families.
- K'NEX can also be used very effectively alongside other forms of family learning, such as family literacy, family numeracy and family IT.
- Once a family learning centre has invested in sufficient Kid K'NEX to meet their needs, the equipment can be used over and over again, with different Kid K'NEX activity each time.
- Kid K'NEX and K'NEX are portable enough to be transported around a number of Family Learning centres, or to family events, in the boot of a small car.
- A range of Kid K'NEX activities can be provided within a Theme (see section 5).

The User Group has written a £5 20-page "Guide to using K'NEX for Family Learning", which will assist you if you considering running a Kid K'NEX Family Learning event. Details are available on our website.

## 7. Children with special educational needs

Many schools and nurseries have found that K'NEX and Kid K'NEX can assist some children with special educational needs to develop essential skills. This is not always the case. Every child with special educational needs is different, but we have been told about different K'NEX and Kid K'NEX projects in which children with special educational needs have done well, and on occasion exceeded the expectations of their teachers.

The following notes may assist:

1. We suggest you start by assessing whether each child is physically able to make use of K'NEX or Kid K'NEX. For instance, some children with visual impairments, or cerebral palsy that affects their arms, or severe learning difficulties may find K'NEX too difficult to use.
2. If you decide you would like to try using K'NEX with a child, we suggest that you use Kid K'NEX for children aged 3 to 7, because less strength is needed to put the pieces together. For children aged 7+, it is usually better to use K'NEX rather than Kid K'NEX, but this is not always the case, and some children with special educational needs may prefer to stay with Kid K'NEX.
3. You should then think carefully about how you introduce the K'NEX or Kid K'NEX set to the child. Start with easy tasks that are within the child's capability, and give as much assistance as is needed. Early failure may cause the child to reject the whole idea, even though by starting with simple tasks and then gradual development onto more difficult tasks, the child could have achieved excellent results.
4. If you find that the child does enjoy using Kid K'NEX, you might then think about purchasing one or more of the Kid K'NEX education sets specifically for him or her. Prices start at £29 (see Appendix B).

5. Some children will not wish to develop beyond the stage of building the models in the instruction book you receive with the set, but if they do, you might like to start building the models from the Instruction Cards in Appendix A, and then progress onto working within themes (section 5).
6. We suggest you also consider encouraging your child to build Kid K'NEX models in a team of two or three children. Such an approach can help develop the communication skills and team-working skills of all the children participating.

Note that not only can Kid K'NEX help children with special educational needs develop the curriculum skills shown in section 2, but achieving success with Kid K'NEX can also help to develop self-esteem and confidence.

## 8. Gifted and talented children

Schools, nurseries and parents also report that Kid K'NEX activities can be an excellent way of developing the skills and experience of gifted and talented children.

Some of the reasons why Kid K'NEX activities can work well with such children are:

- Completing Kid K'NEX activities will help broaden the education of gifted and talented children. This will help to keep them interested, and may help them to discover new interests and talents.
- Setting challenging Kid K'NEX activities to gifted and talented children will help stretch them to the limits of their ability.
- Completing K'NEX challenges helps gifted and talented children to develop "life skills" such as problem-solving skills, creativity skills and team-working skills. These will be essential in the children's later life, whatever career they eventually follow.

## Appx. A – Photocopiable resources

Kid K'NEX handy hints, plus instruction cards for:

- Bridge
- Windmill
- Ferris Wheel
- Chloe Chicken
- Freddie Flying Fish
- Harry Hover fly
- Hannah Hedgehog
- Dog and kennel
- Sophie Sausage Dog
- Quad bike
- Skateboard
- Bertie Bus

## Appx. B – Kid K'NEX Order Form

- Overview of Kid K'NEX Education sets
- Kid K'NEX Order Form



## Handy Hint K1 - 4 ways to connect rods and connectors

There are four ways to connect Kid K'NEX rods to Kid K'NEX connectors: End-on, Side-on, Through the hole in the middle (green connectors only), and Into the part-hole in the middle (other colours of connectors).



To make an End-on connection, put the connector on the table, position the rod over the side of the slot in which you wish it to go, and push down gently.

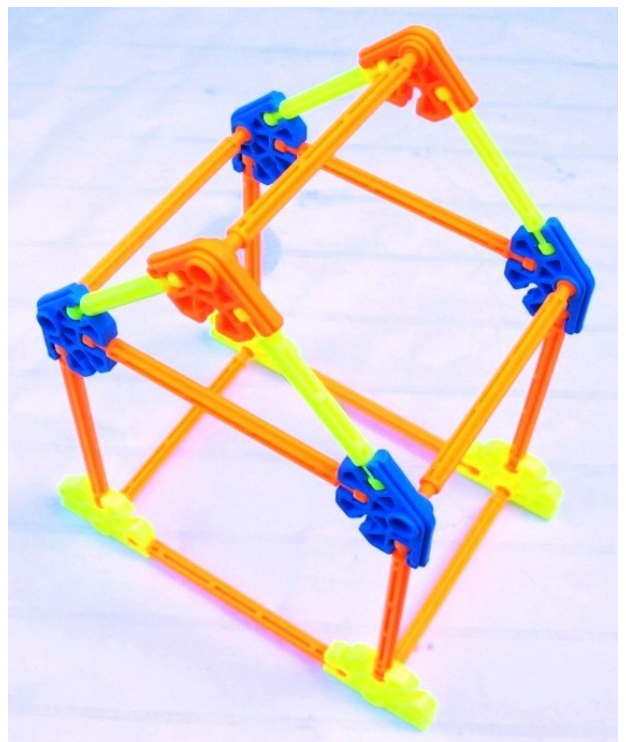


## Handy Hint K2 – Strong Kid K'NEX structures

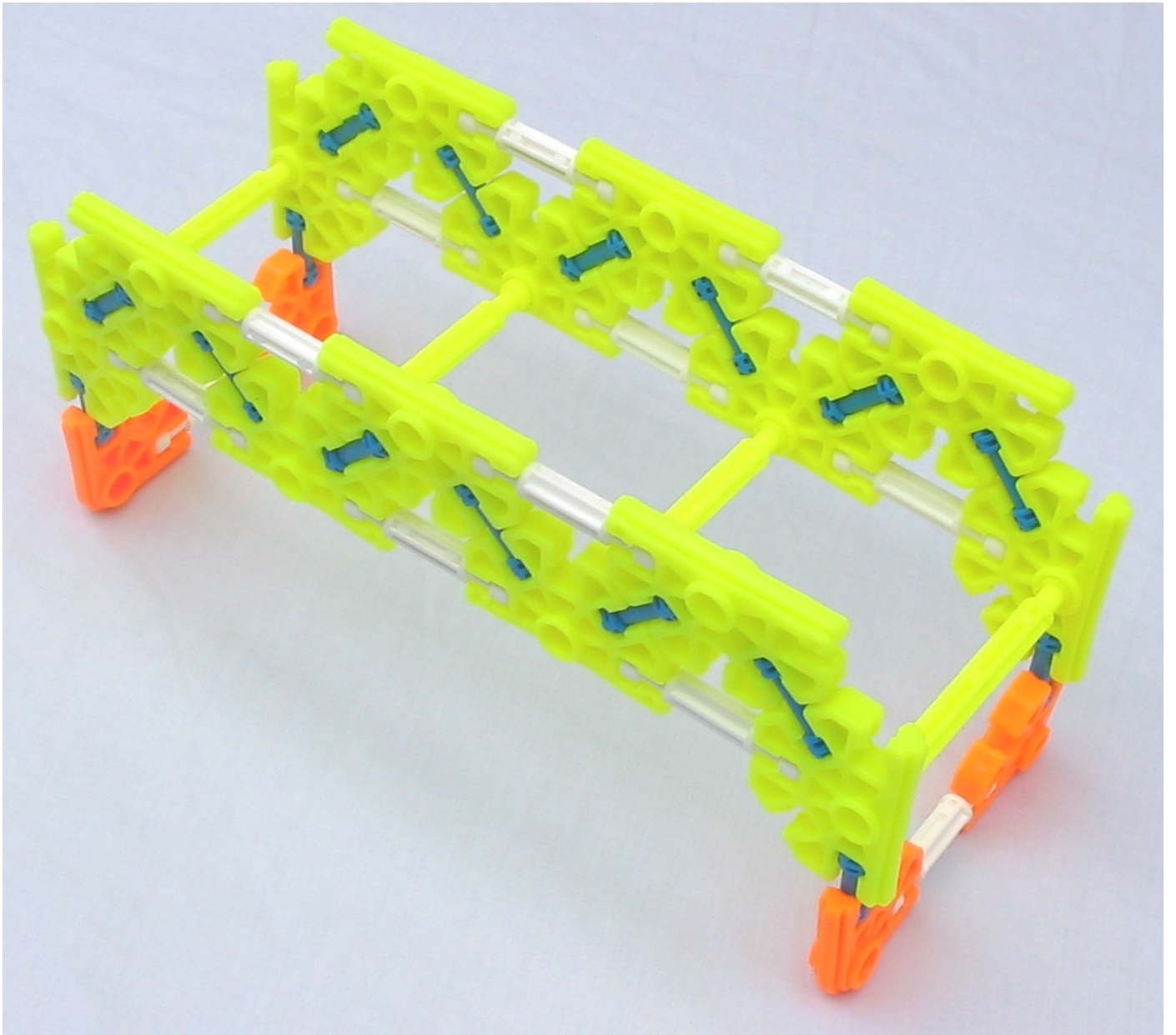
Strong structures are best built with Kid K'NEX by using squares and right-angle triangles.

We recommend using the connectors without holes in the middle to build in three dimensions.

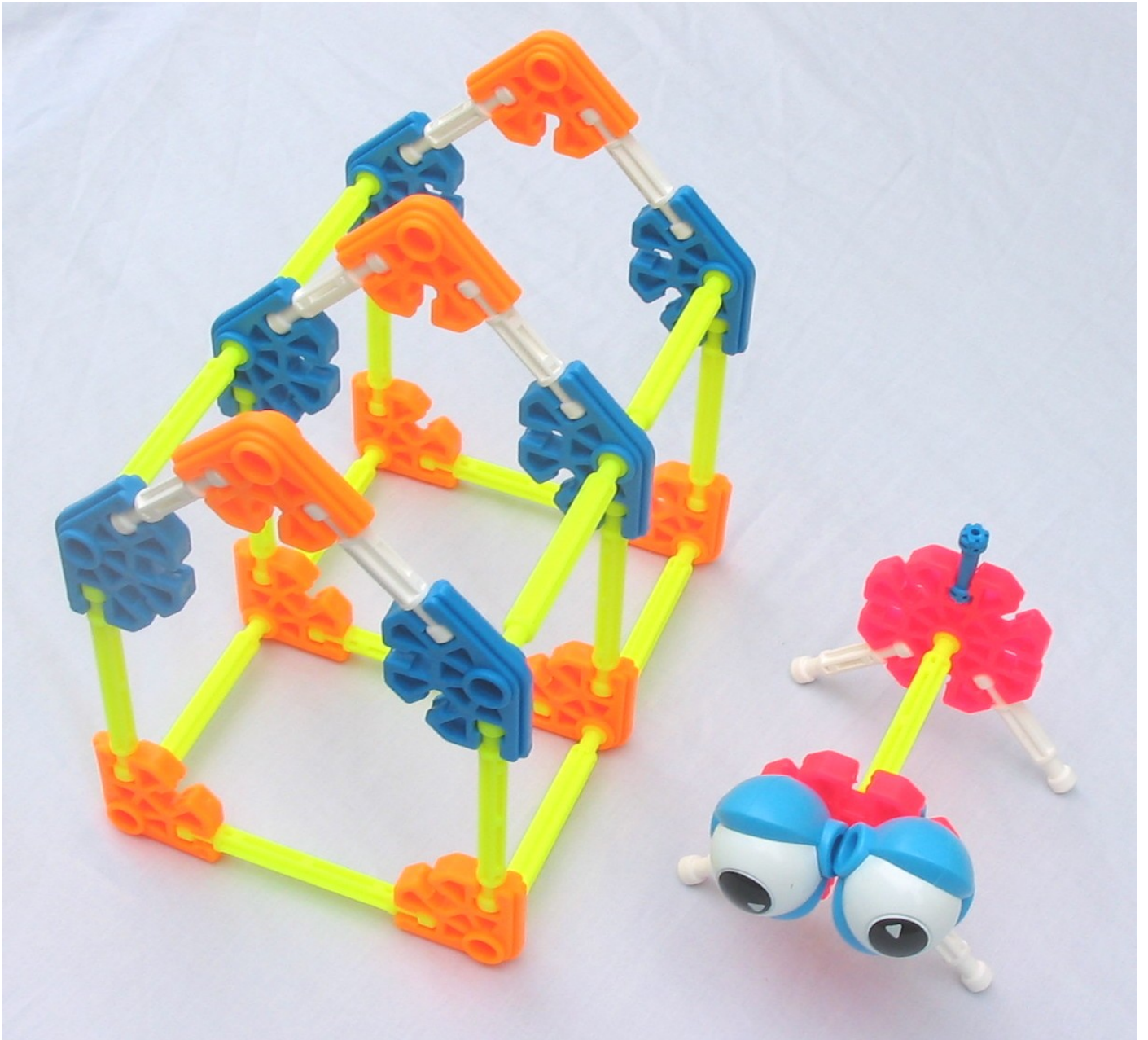
Side-on connections can also be used, but young children may find these difficult.



# Bridge

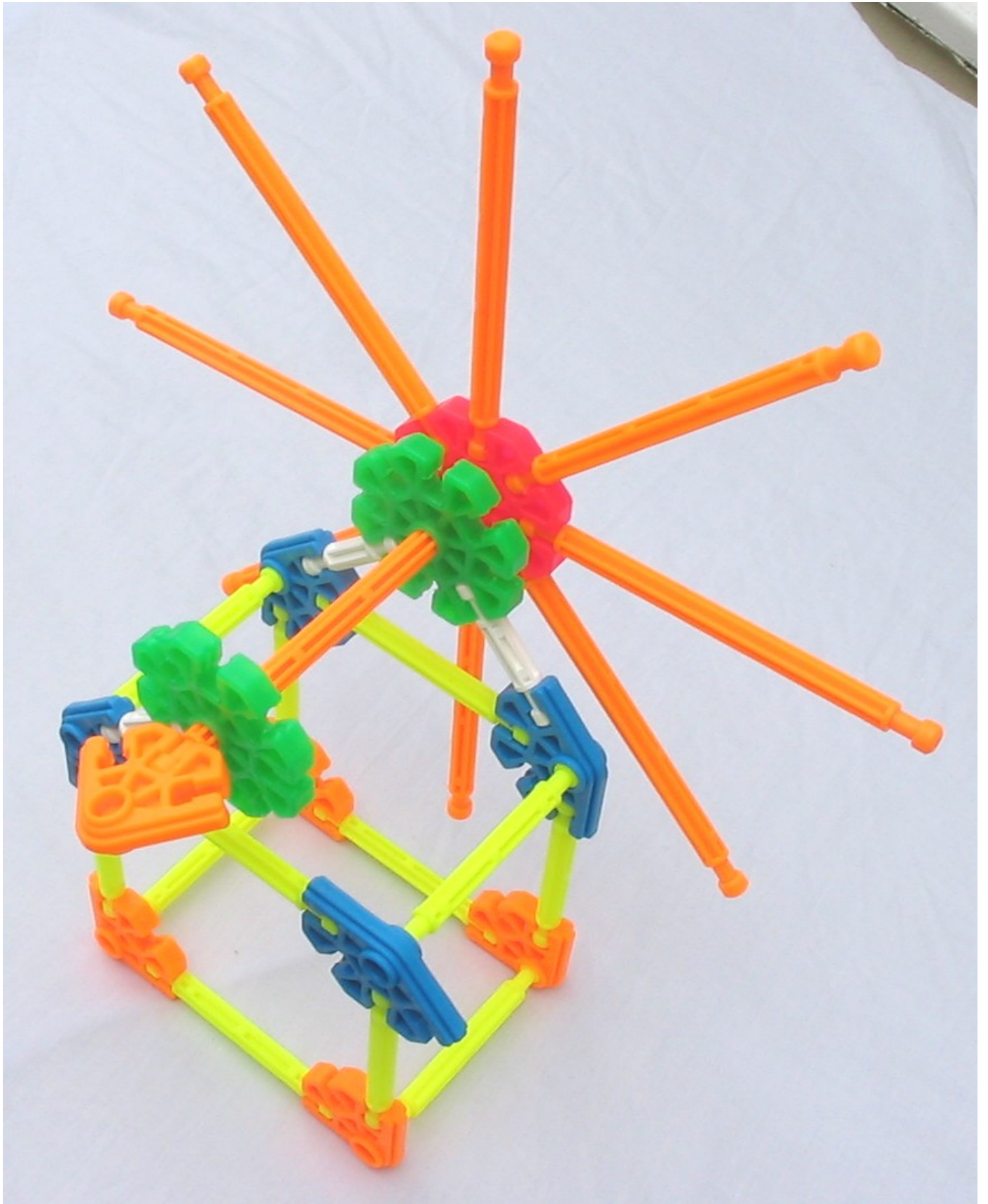


# Dog and kennel

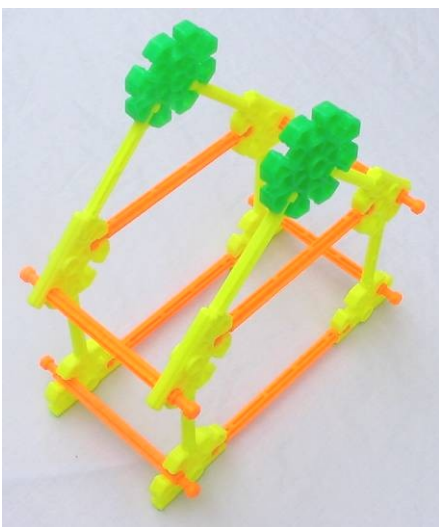
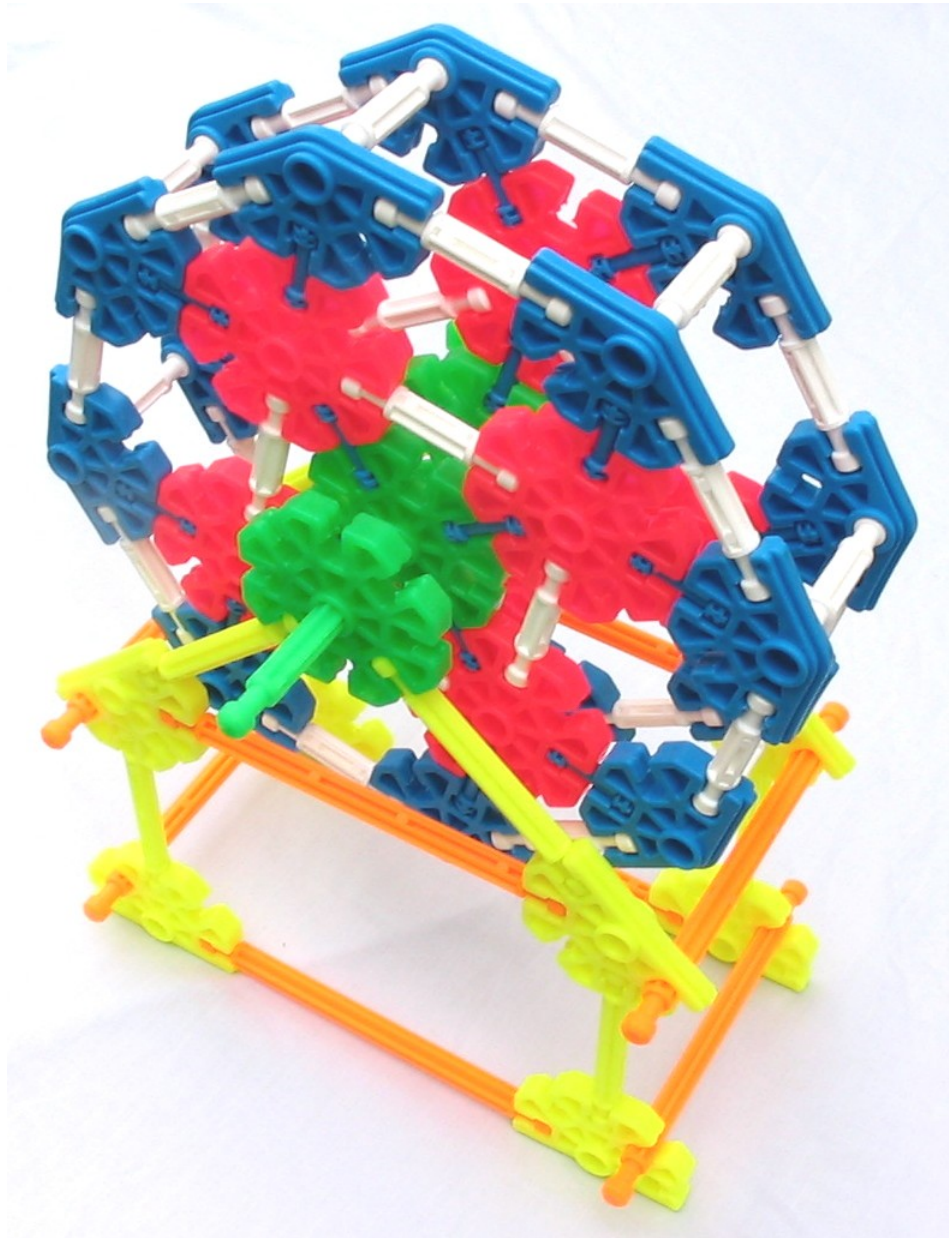




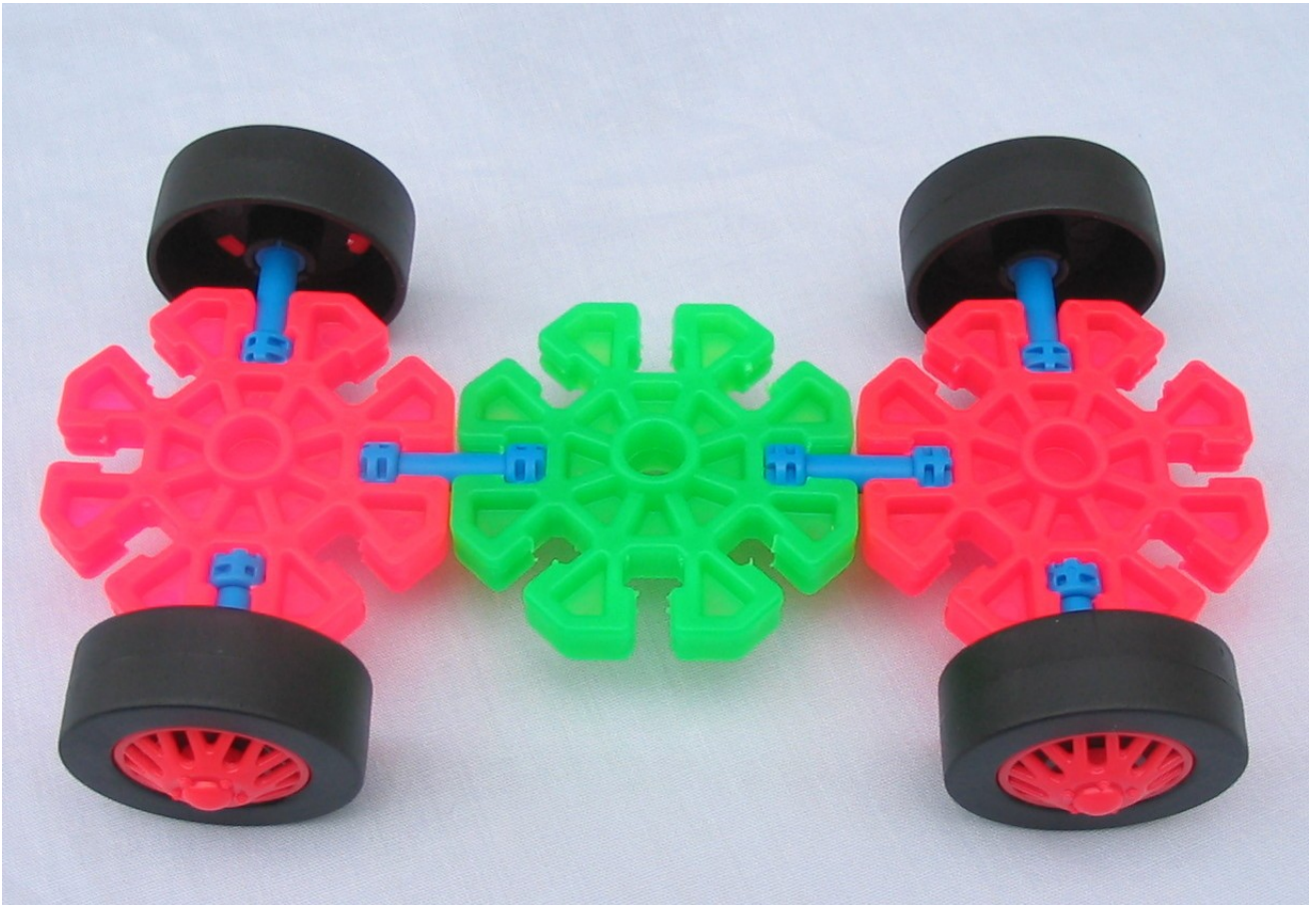
# Windmill



# Ferris wheel



# Skateboard



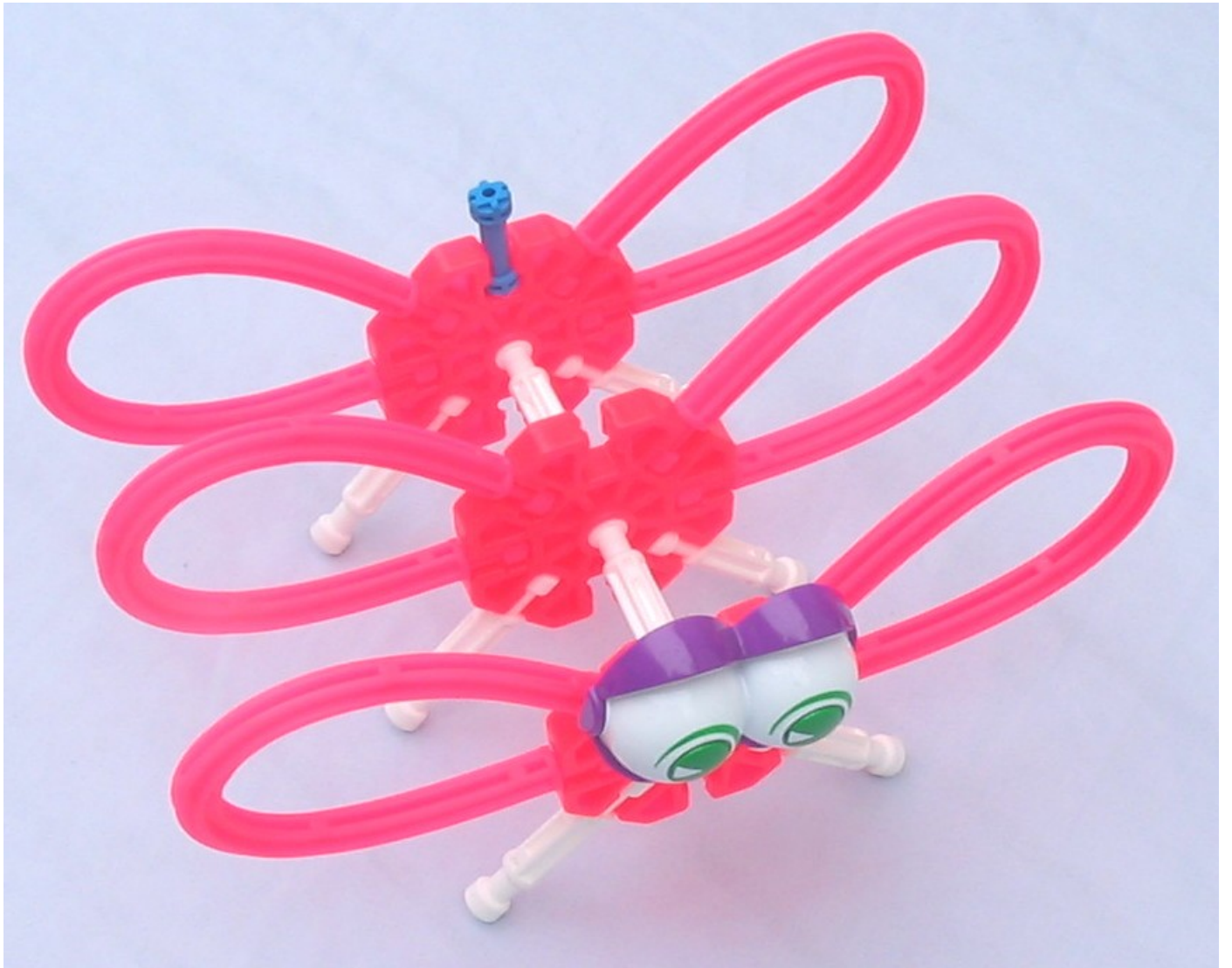
Chloe Chicken



**Freddie Flying Fish**



# Harry Hover Fly



# Hannah Hedgehog



Sophie Sausage Dog

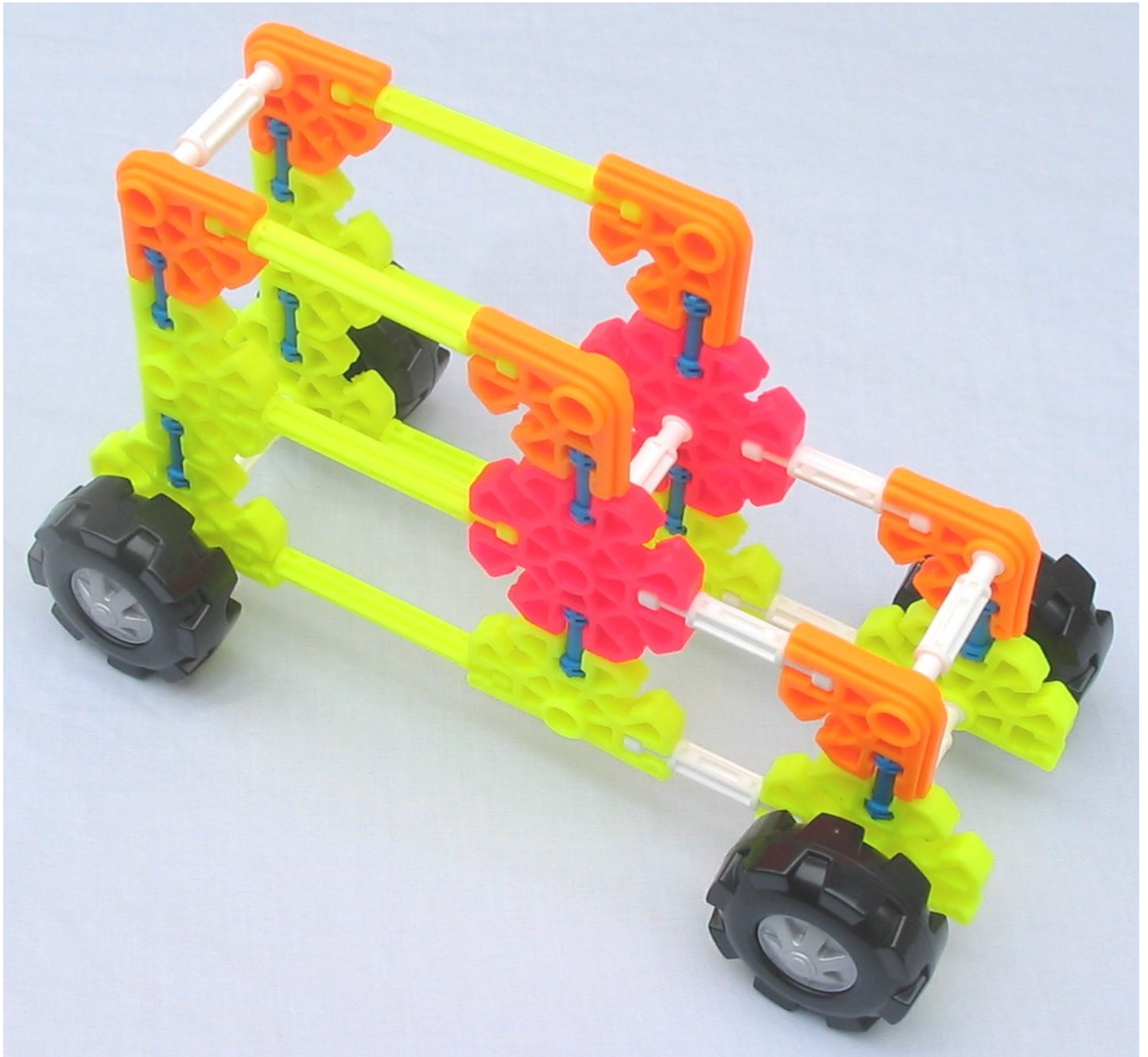




## Quad bike



# Bertie Bus



# Appendix B – Kid K'NEX set reviews and Order form

## Kid K'NEX Models that Move set



This popular 270 –piece Kid K'NEX set features 13 moving models, 8 of which can be built simultaneously.

The building cards included in the set feature:

- Ferris Wheel
- See-Saw
- Swing
- Swing Ride
- Windmill
- Crane
- Racing Car
- Spinning tops
- Puppets
- Pin Wheels
- Gearing

Suggested age range: **3 to 7**

## Kid K'NEX Life Cycles set



213 parts in a storage box, to build 9 models from eight 1:1 correspondence cards - Tadpole, Frog, 2D Caterpillar, 3D Caterpillar, Butterfly, Moth, Egg, Chicken, Flower. Build all 9 models simultaneously.

Life cycle diagrams and extra large photos of real life creatures included on the reverse side of each card. Perfect for science and nature curricula.

Suggested age range: **3 to 7**

## Kid K'NEX Creatures set



A Kid K'NEX set that enables children to build a range of "creatures". Build any 8 of 13 different models simultaneously, from full colour building cards.

The set includes:

- 245 large, chunky Kid K'NEX pieces, including 14 eyes, 11 fins and 4 bird feet
- A large storage tub
- Six 2-sided full colour pattern cards

Suggested age range: **3 to 7**

## Kid K'NEX Transportation set



A Kid K'NEX set that includes wheels for making a range of vehicles, including cars and diggers. Builds 6 models from full colour building cards.

The set includes:

- 149 large, chunky Kid K'NEX pieces, including 10 super-sized wheels, 6 truck wheels and 8 car wheels
- A large storage tub
- Six 2-sided full colour pattern cards

Suggested age range: **3 to 7**





# Kid K'NEX Order Form

To use this order form, please print it out, and fill in every field marked with an asterisk. Then fax to **(0208) 196 2248**, or mail to *K'NEX User Group, 87A Newton Road, Mumbles, Swansea SA3 4BN*.  
 If you have any queries on completing this form, please email us via [info@knexusergroup.org.uk](mailto:info@knexusergroup.org.uk)

*Date ordered		*Your purch order ref.	
*Organisation			
*Address			
		*Postcode	
*Telephone		*Email	
*Name		*Position	
*Signature		(Order not valid unless signed)	

Kid K'NEX education sets		Price	*Quantity	*Value
K78990	Kid K'NEX Models that Move set			
K78820	Kid K'NEX Creatures set			
K78830	Kid K'NEX Transportation set			
K78690	Kid K'NEX Classroom set			
K78790	Kid K'NEX Life Cycles set			
K60032C	101 Kid K'NEX Instruction cards on CDROM			
			<b>*Nett total (excluding delivery and VAT):</b>	

All orders are subject to our Terms and conditions, which may be found at:

<http://www.knexusergroup.org.uk/acatalog/tandc.html>