

Goobi®

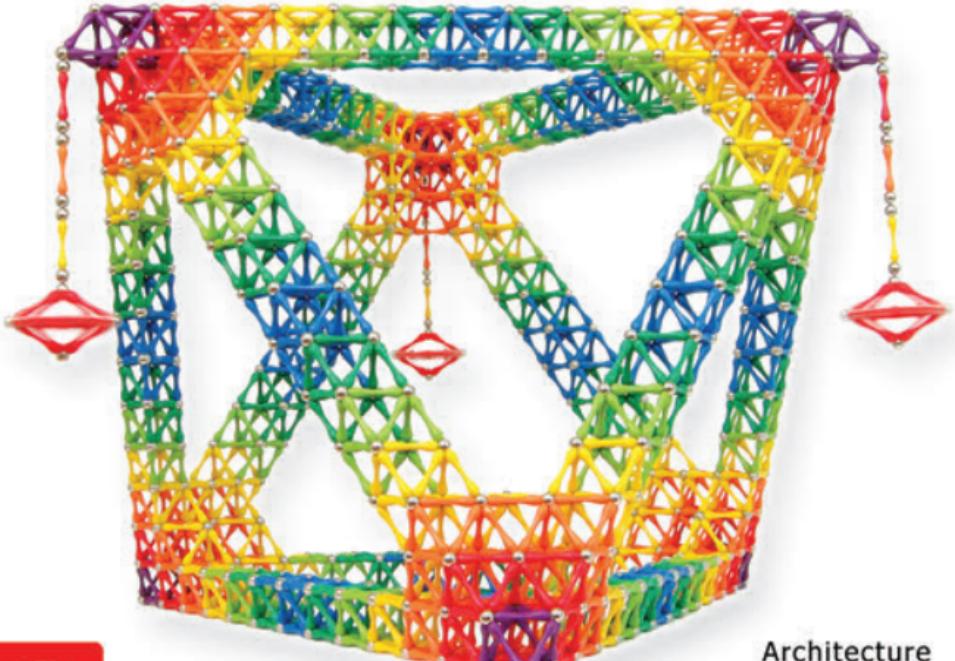
- Simple
- Fun
- Educational

STEM
LEARNING



IMPORTANT: This booklet is an integral part of the product and must be kept at all times.

Long term educational investment.



Architecture



Giant Spinner



Goobi

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What is Goobi?

Goobi is an award-winning educational toy that introduces children to the exciting and fascinating world of magnetics. It helps children develop their creativity and their sense of proportion.

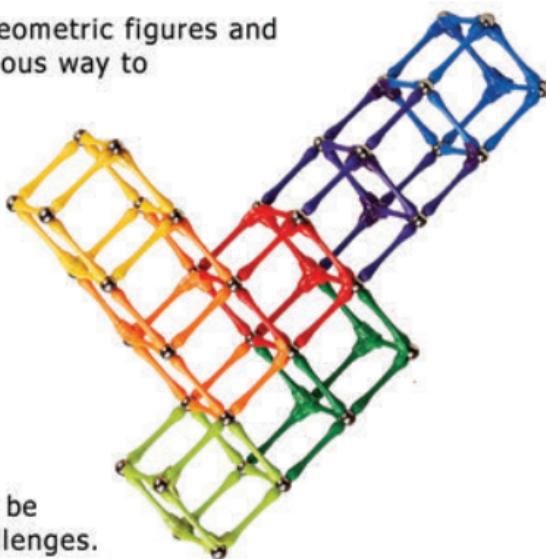
Goobi is an ideal and fun activity for children - to construct almost unlimited 2D and 3D geometric figures and lifelike models of different shapes and sizes. It's a very simple, educational and spontaneous way to learn some basics of geometry, physics, architecture and engineering. Constructing with Goobi enhances children's hand-eye coordination and improves their problem solving skills. The tactile feel of the bars and the visualisation of the structures created enhance the basic conceptual awareness appropriate to all STEM activities.

Goobi Education sets make a valuable component to a STEM Learning Curriculum.

The introduction of the innovative Goobi Tripod makes it possible to build rigid cubical architectural structures and monuments. These creations can be left on display and modified at a later date as needed.



Goobi can also be used as a stress reducer for any age. Moreover, manipulation of the three Goobi elements (bar, ball and tripod) can be very helpful in the rehabilitation of people with fine motor skill challenges.



Goobi

Elements



The remarkable part of the Goobi Magnetic Construction Set is that it consists of only three basic components: **Bars**, **Balls** and **Tripods**.

The Goobi **Bar** is an ergonomically designed plastic part with 2 strong neodymium permanent magnets safely embedded into each end with opposite polarities. The shape and the dimensions (60 mm in length & 9mm in maximum diameter) of the bar are well engineered to be conveniently grabbed by both children and adult.

The Goobi bars are currently available in 7 rainbow colors: *Red, Orange, Yellow, Lime, Green, Blue and Purple*.



The **Ball** is a 12.7mm in diameter nickel-plated steel sphere.



The **Tripod** is a novelty plastic part used to construct rigid cubical structures. It is specially designed for Goobi bars and it adds a new dimension to the Goobi Magnetic Construction Set.

Be prepared for endless fun and creativity.

Welcome to *Goobi World!*



The Very Basics



Figure 1

The simplest Goobi structure is the single bar-and-ball connection. Take a Goobi bar with one hand and a nickel coated ball with the other and bring them together, the magnet will attract the ball and will form the single bar-and-ball connection as shown in *Figure 1*.

The next fundamental connection is the bar-and-tripod connection. Grab a tripod with one hand and a Goobi bar with the other hand and insert one end of the bar into one of the cavities of the tripod as shown in *Figure 2*. Using slight force push the inserted end of the bar towards the center of the cavity while pushing the other end downward as shown in *Figure 2* and snap the bar into the cavity as shown in *Figure 3*.



Figure 2



Figure 3

To dismantle the connection, grab the tripod in one hand and push the open end of the bar upward (or downward) and pull it out.

Using the same method of bar-and-tripod connection, snap in 3 bars to a single tripod and get a 90° connection, which is the base unit in building cubical structures.



Figure 4

After snapping the 3 Goobi bars into the tripod, a steel ball can be added as shown in *Figure 4* to make alternative connections with other magnetic components.



2D Geometrical Shapes

Figure 5A



Figure 5B



Figure 5C



Figure 5D

In general, there are no specific rules to form Goobi structures. However, the following instructions will help to construct using magnets' maximum strength, in the shortest time.

To form a triangle, align three Goobi bars, as shown in *Figure 5A*, and bend the two ends of the line (see *Figure 5B*) to give them the shape of a triangle without even using balls (*Figure 5C*). To complete - just add a ball on each vertex, as shown in *Figure 5D*.

Figure 6 and *Figure 7* show similar analogy to construct squares and pentagons.

Figure 6A



Figure 6B



Figure 6C

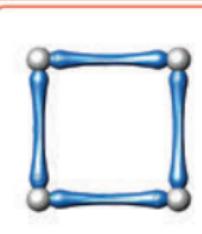


Figure 6D

Using opposite polarities of magnets at their attraction points, and adding an iron ball, provides the strongest stability to the structures.

Almost all other 2D and 3D structures are built on the bases of triangles, squares and pentagons.

Figure 7A

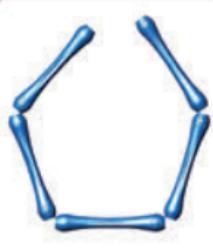


Figure 7B

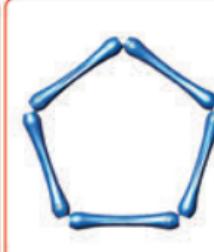


Figure 7C

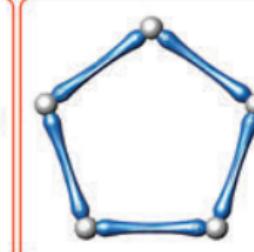


Figure 7D

CONTINUED

2D Geometrical Shapes

Figures 8A to 8H illustrate the steps for building a triangular base structure with maximum stability, within the shortest time.

Figure 8A



Figure 8B



Figure 8C



Figure 8D

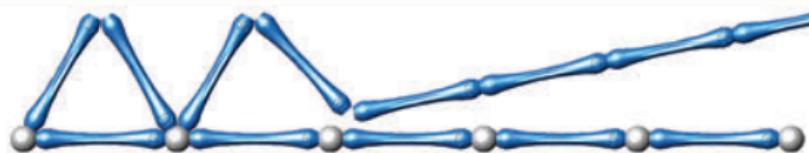


Figure 8E



Figure 8F



Figure 8G

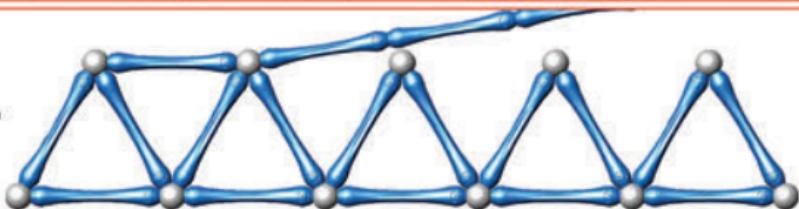
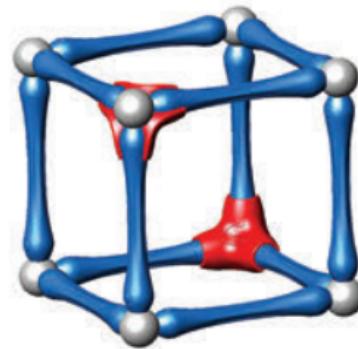
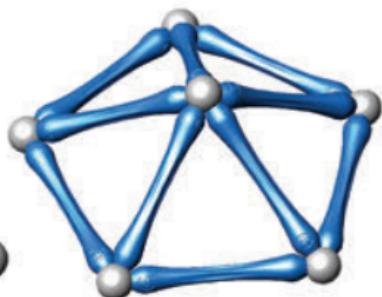
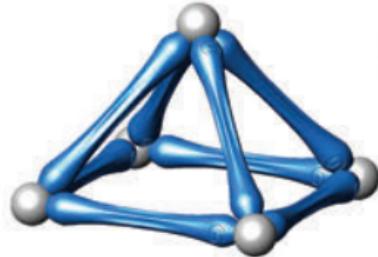
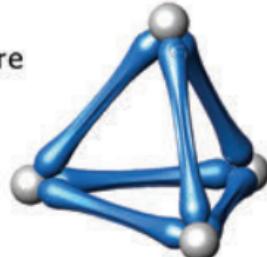


Figure 8H



3D Geometrical Shapes

The following models are the bases of most 3D geometrical and real life structures.



The images below illustrate the steps to build the smallest Goobi sphere, with 30 bars and 12 balls.

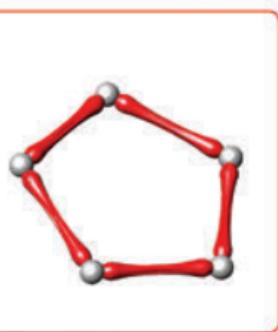


Figure 9A

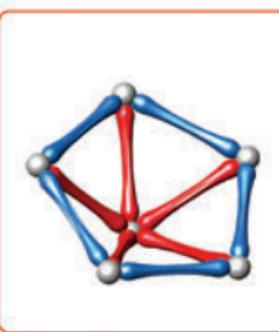


Figure 9B

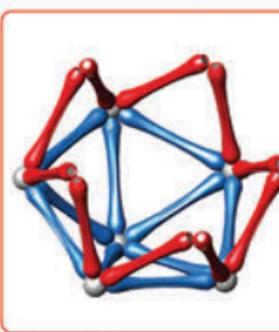


Figure 9C

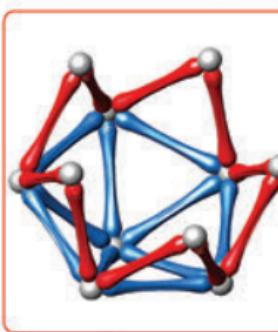


Figure 9D

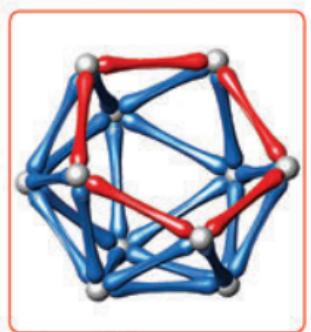


Figure 9E

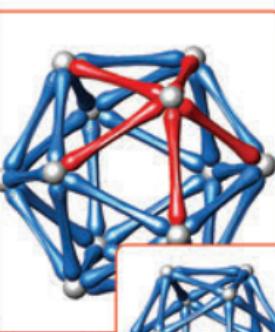
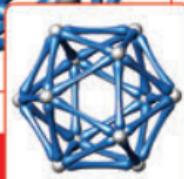


Figure 9F



CONTINUED

3D Geometrical Shapes

Figures 10, 11 & 12 present the steps for building a triangle, square and pentagon base towers, which can be used in various constructions.

The same concept can be used to build many other polygon base towers and skyscrapers. The towers can be used as individual structures (see page 25) or as a part of another complex construction - such us tree trunks (see page 24).

Figure 10A

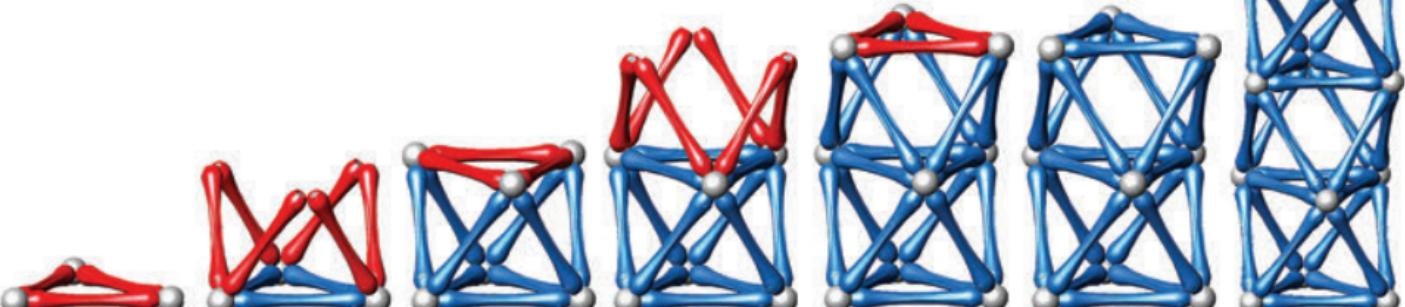


Figure 10B

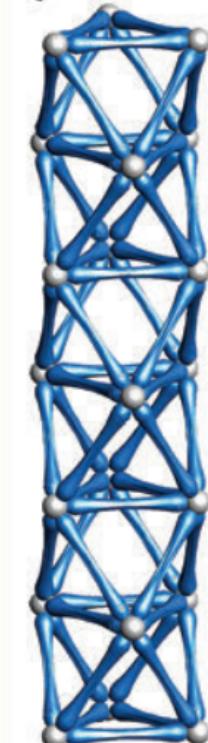


Figure 11A

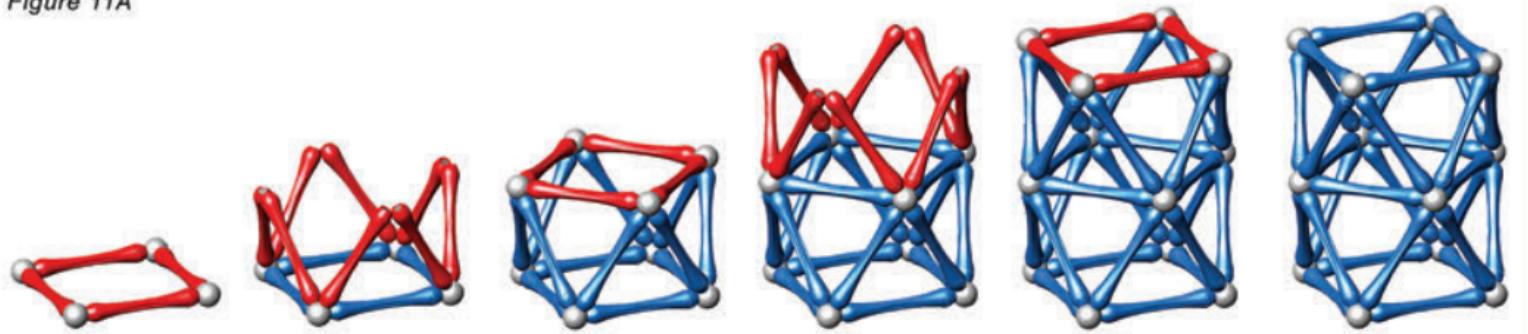


Figure 11B



Figure 12A

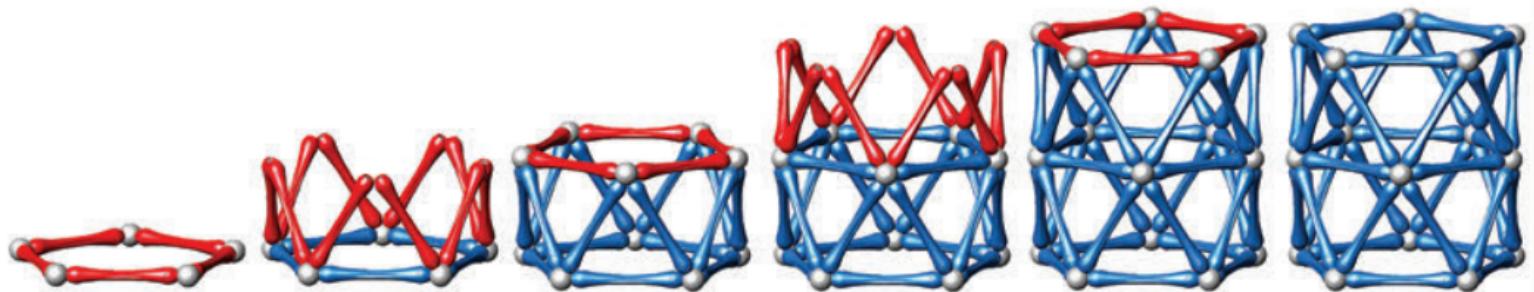


Figure 12B



CONTINUED

3D Geometrical Shapes

The magnetic strength of Goobi bars make it possible to hang and spin a Level 3 Pyramid using an additional bar attached to the top vertex of the pyramid as shown in *Figure 13*.

For hanging/spinning purposes use the same polarity of magnets on the top vertex. Moreover, for longer spinning time use a second ball in between the top vertex ball and the additional Goobi bar.

Figure 14 ('a' through 'g') shows the steps for building a Level 3 Pyramid. By following the basic instructions (see page 6) one can save time in building stronger pyramid structures.

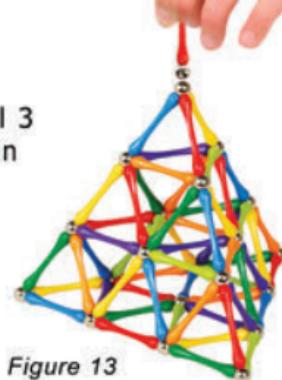
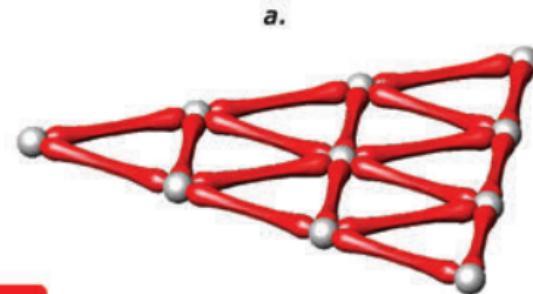
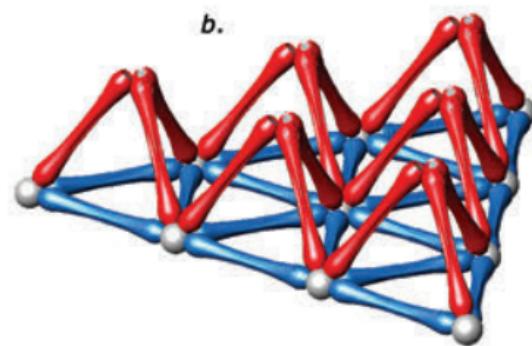


Figure 13

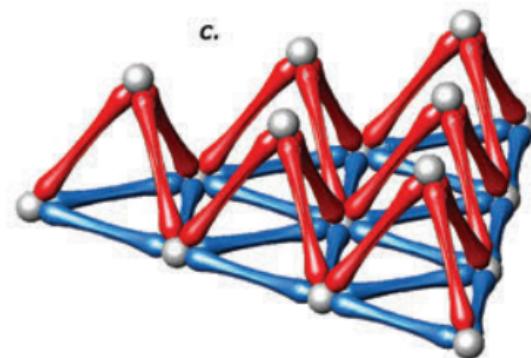
Figure 14



a.



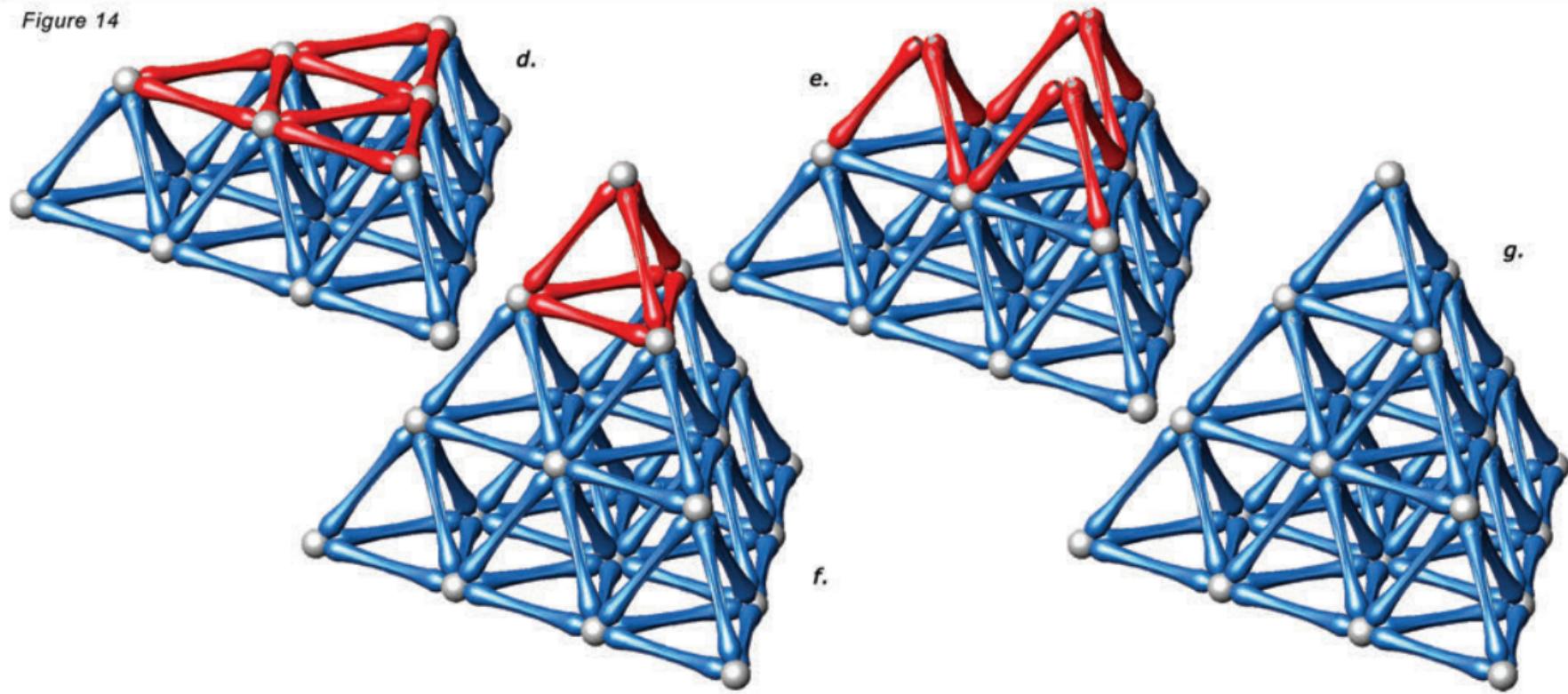
b.



c.



Figure 14



Goobi Packages



GL-40 contains **40 pieces:**
21 magnetic bars,
12 iron balls and
7 tripods.



GL-110 contains **110 pieces:**
56 magnetic bars, 33 iron balls and **21 tripods.**

GL-70 contains **70 pieces:**
35 magnetic bars, 21 iron balls and **14 tripods.**



GL-180

GL-180 comes in a custom designed Goobi storage case.

GL-180 contains **180 pieces**:
84 magnetic bars,
61 iron balls and **35 tripods**.

GL-300 comes in
a larger custom
designed Goobi
storage case.

GL-300 contains **300 pieces**:
140 magnetic bars,
90 iron balls and **70 tripods**.



GL-300

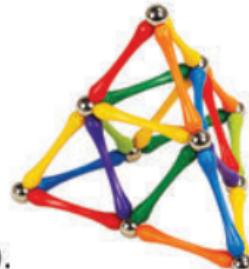
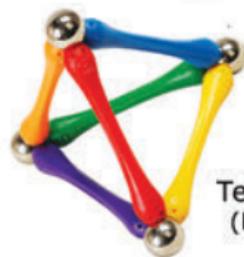
All sets are available in a mixture of 7 assorted colors: Red, Orange, Yellow, Lime, Green, Blue and Purple.

Goobi

GL-40 Constructions

There is no limit to the variations of Goobi structures as there is no limit to one's imagination. GL-40 is the introduction of Goobi construction set and it has enough pieces to build numerous simple structures.

Below are some sample structures that can be built using the GL-40.

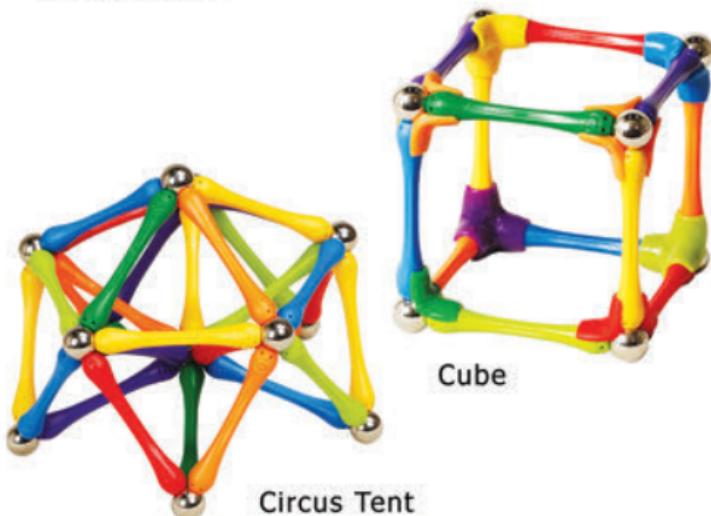


Goobi

GL-70 Constructions

GL-70 increases the possibilities to create larger structures.

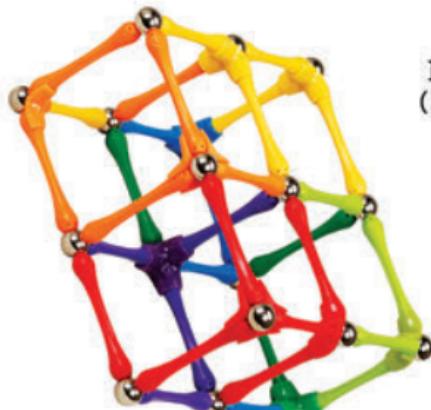
Some of the structures, that can be built using the GL-70 set are illustrated on this page.



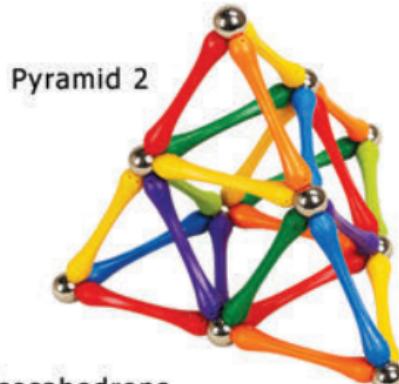
Circus Tent



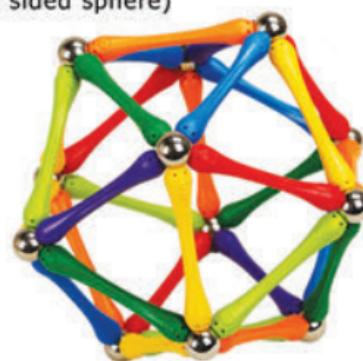
Cube



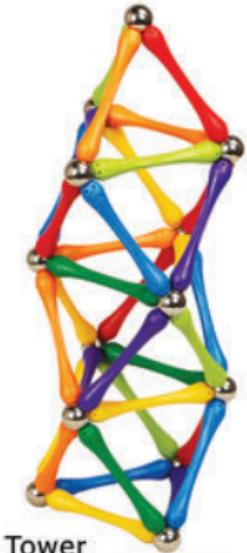
Tiled Cube



Pyramid 2



Icosahedrons
(20 sided sphere)



Tower

Goobi

GL-110 Constructions

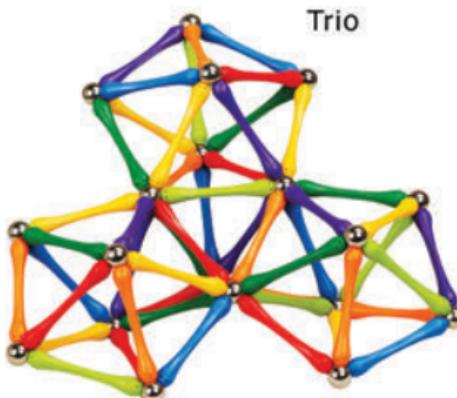
GL-110 brings even more exciting ideas to constructors.

GL-110 has enough pieces to build larger structures including the Level 2 Cube and the Level 3 Pyramid as shown on this page, as well as other decorative creations.

Pictures illustrated on this page are some models of the GL-110 set.



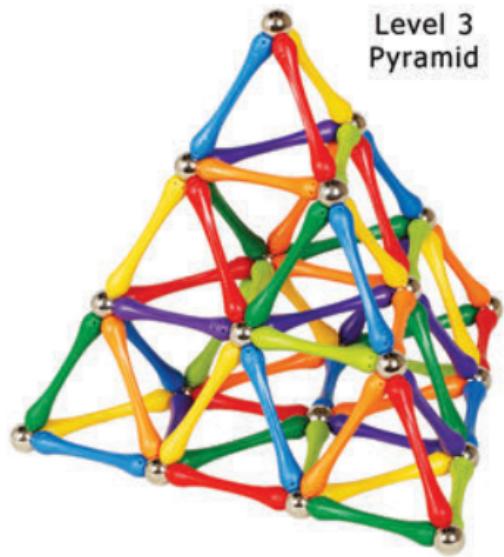
Level 2
Cube



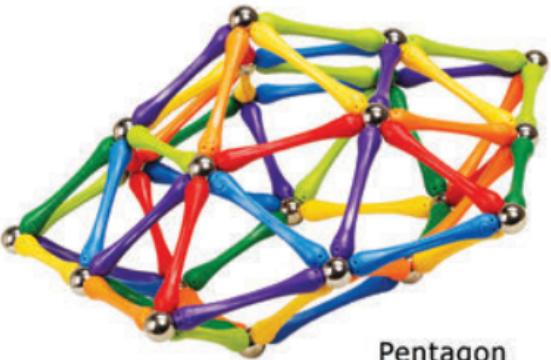
Trio



Playhouse



Level 3
Pyramid



Pentagon
UFO



T-Tower



GL-180 Constructions

GL-180 comes in a custom designed *Goobi permanent box* and gives more possibilities for bigger structures.

GL-180 is also called the *Goobi Travel Companion* to entertain family members during lengthy trips.

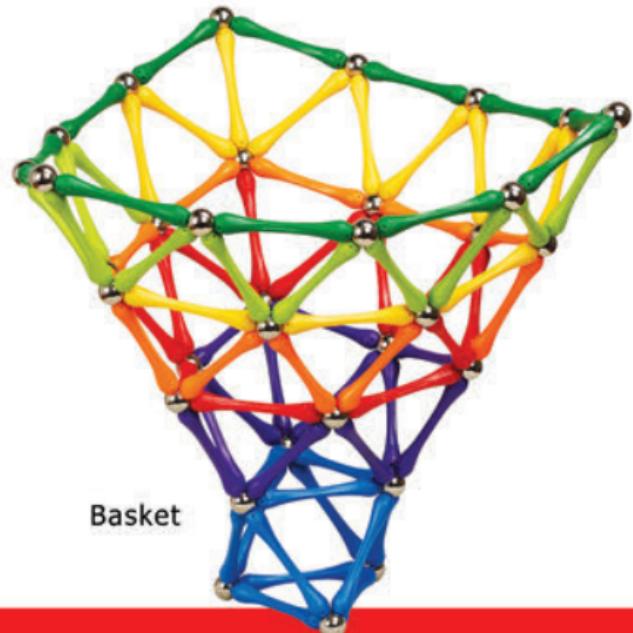


Sphere



Some of the sample structures are illustrated on this page.

Please refer to the Gallery page on www.Goobi.com for more building ideas.



Basket

Table & 3 Chairs



Rainbow Chain



Crane

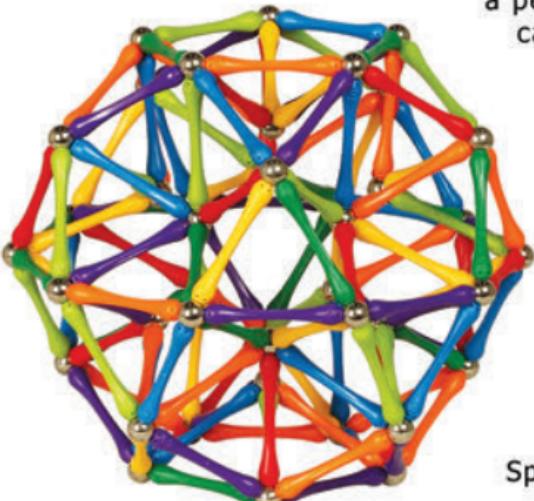


Goobi

GL-300 Constructions

GL-300 comes in a larger *Goobi storage case*.

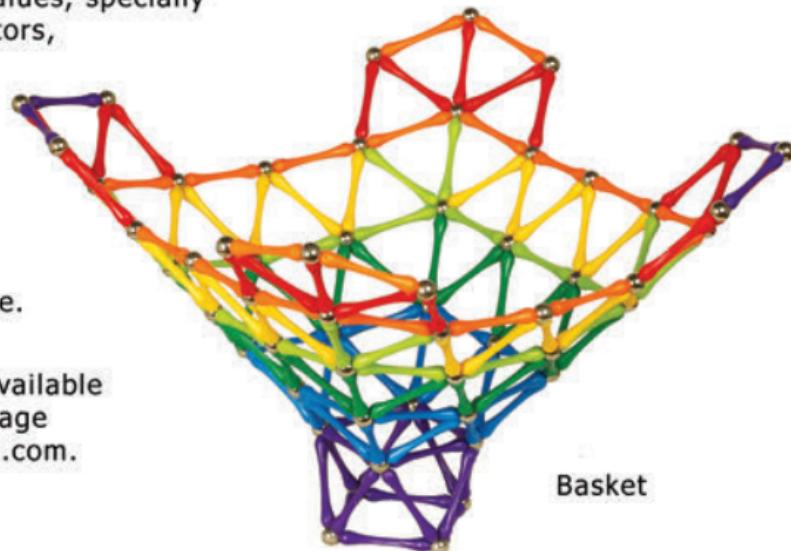
GL-300 also has a **DELUXE CLASS PACK** version featured with added values, specially designed for school teachers and educators, a perfect classroom resource that can be used for group activities to create basic, complex and intricate structures.



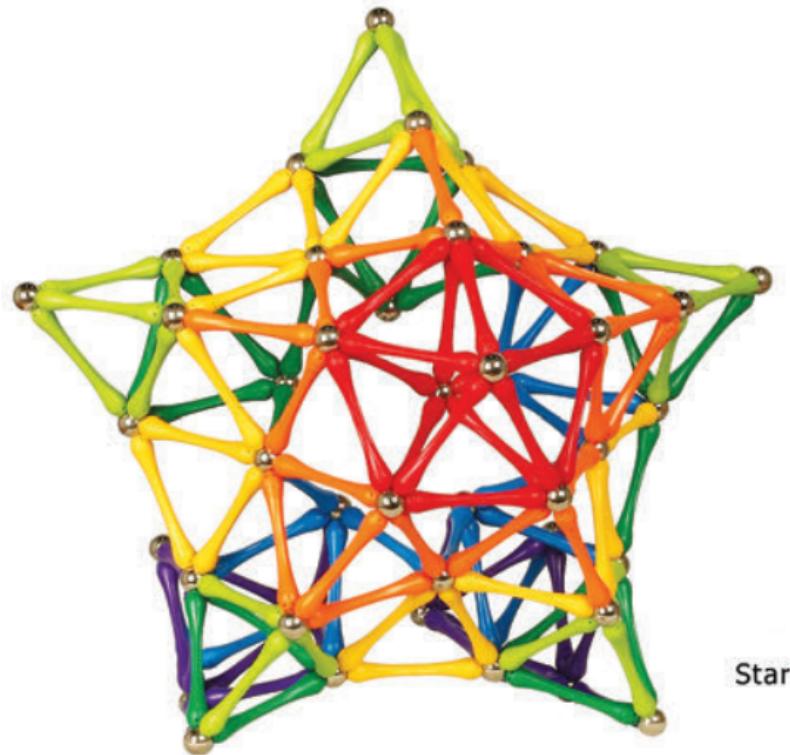
Sphere

Some of the sample structures are illustrated on this page.

More building ideas are available online at the Gallery page on www.Goobi.com.



Basket



Star

Space Shuttle



On the next few pages several larger size structures are illustrated presenting various geometric and lifelike models.



Level 1 Star



Level 3 Star



Level 4 Star

Stars

The simplest star to build is the *Level 1 Star*. Similar pattern is used to build bigger stars.

Spaceship



Spheres

One of the most exciting, fun and challenging tasks of Goobi is to build spheres; and it gets even more challenging while building larger sphere models.



Goobi

Various Structures



Botanical

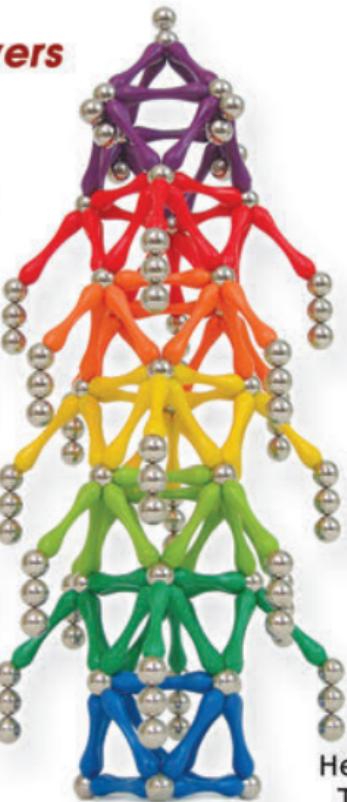
Trees and plants are other interesting objects of which various models can be made using Goobi pieces.

Goobi spheres (see page 23) along with pentagon base Goobi towers (see page 11) can be used to create decorative trees, trimmed hedge plants and more similar models.



Towers

Triangle
Towers



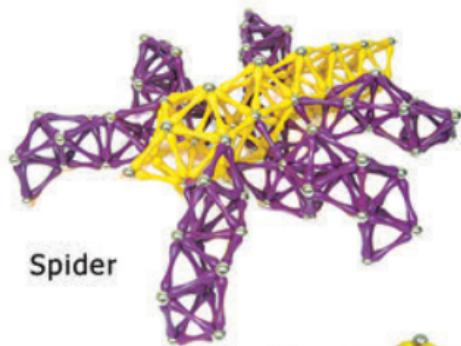
Hexagon
Tower



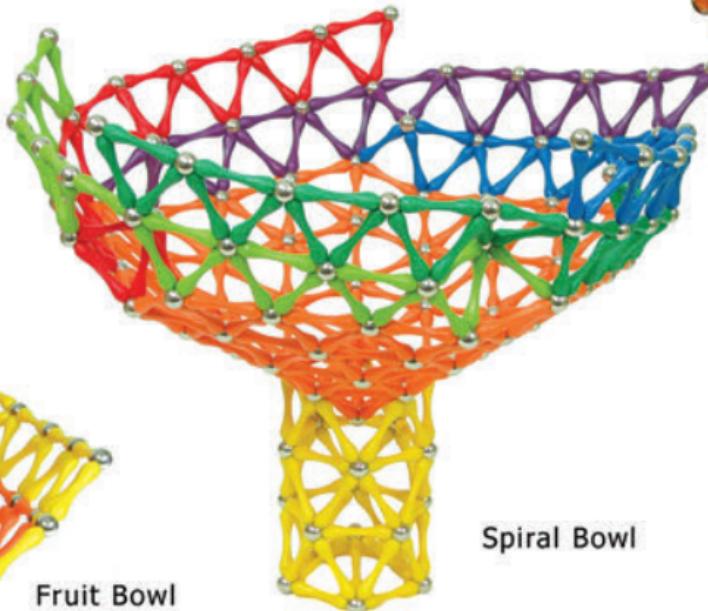
Decagon
Tower

Goobi

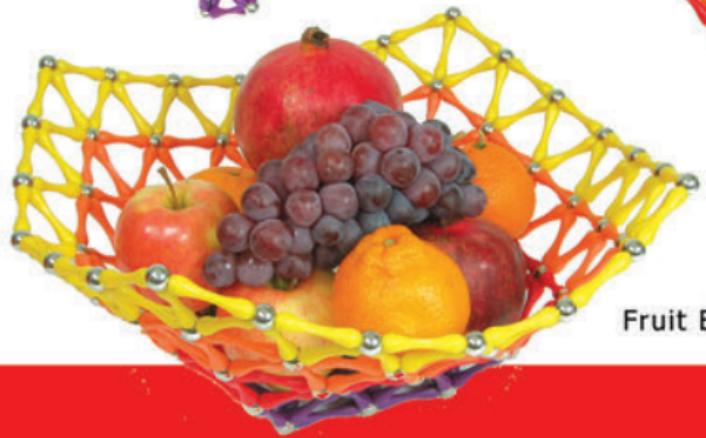
Various Structures



Spider



Spiral Bowl



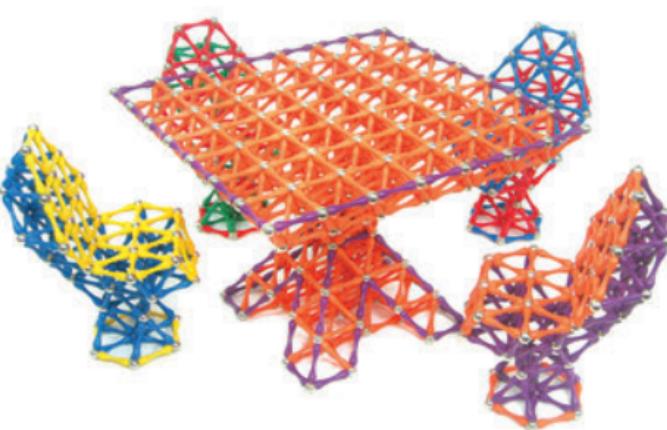
Fruit Bowl



Chinese Tower



Christmas Tree
(Pentagon Base)



Dinning Set



Christmas Tree
(Square Base)

Goobi

Spinning Concepts



You may create various Goobi structures and make them spin on a flat surface or in a hanging position as shown on this page.

30

Spinning is a very interesting and fun feature of the Goobi sets.





The spinning time of a structure is directly related to the weight of the structure.

The more the construction weighs the longer it spins.





www.Goobi.com

Goobi Magnetic Construction Set contains small balls and small parts that may not be suitable for children under certain ages. For updated age grading please refer to the product box or www.Goobi.com. Keep the magnet bars at least 3 inches away from Credit Cards, TV Screens, CRT Computer Monitors, Pacemakers, and other magnetic sensitive data carriers & devices.

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WARNING:
CHOKING HAZARD - Small parts.
Not for children under 3 yrs.



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WARNING:
CHOKING HAZARD - Toy contains a
small ball. Not for children under 3 yrs.

WARNING: This product contains small magnets. Swallowed magnets can stick together across intestines causing serious infections and death. Seek immediate medical attention if magnets are swallowed or inhaled.

PRODUCT DESIGNED
& DEVELOPED IN THE
USA

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