



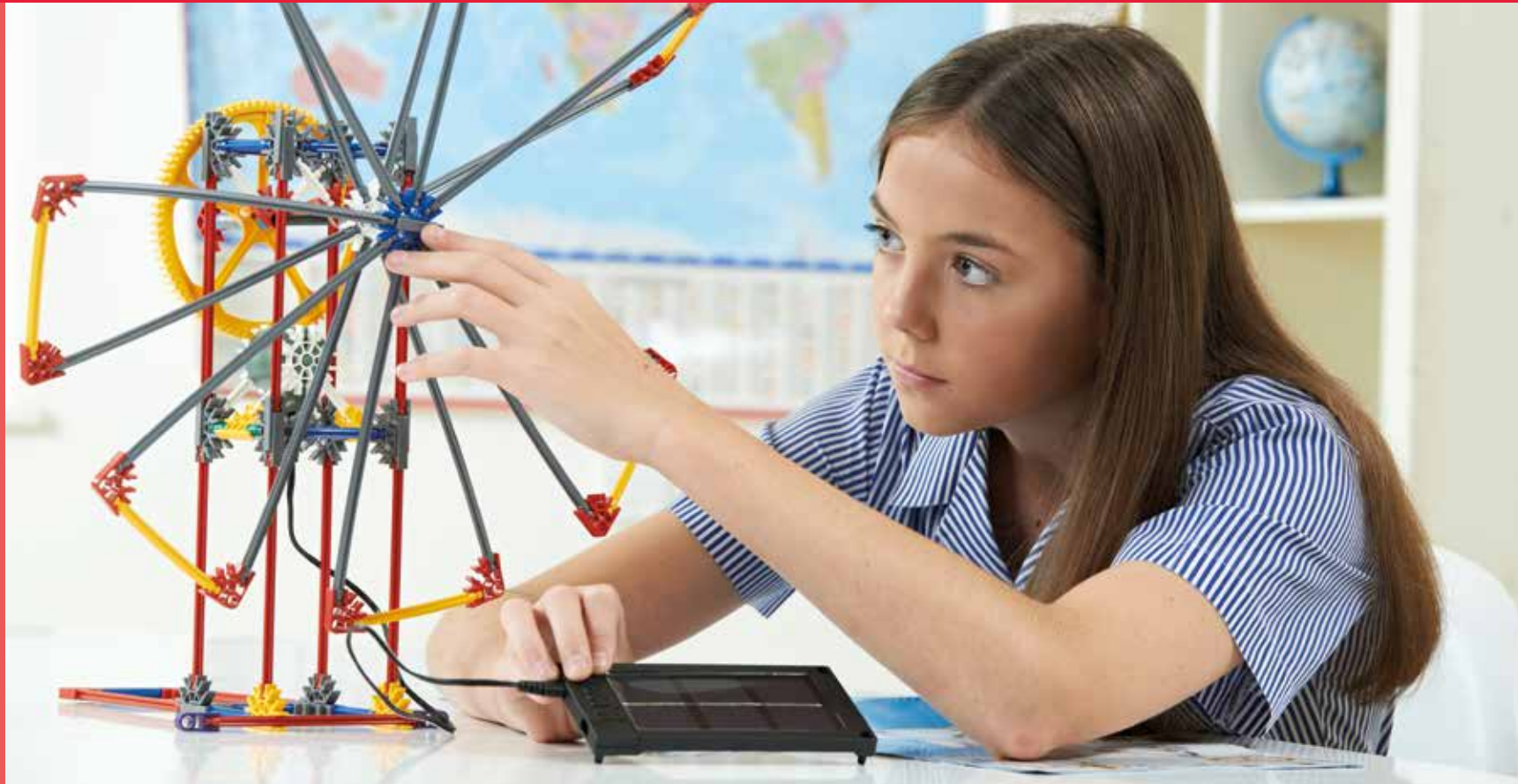
WHY K'NEX®

The K'NEX Education® range has been designed to maximize student engagement in today's busy classroom.

Sets have been designed for school use and teach today's young Scientists and Engineers key science, technology, engineering and math concepts by constructing real world models.

Most products in the K'NEX Education line comes with a comprehensive Teacher's Guide, with lesson plans and extension activities.

Easy to follow, color coded instructions make it possible for students to work independently or in groups.



FEATURES AND BENEFITS

DYNAMIC MODELS

Engage, excite and motivate students to learn. Encourage scientific inquiry, investigation, and experimentation through active participation.

REPLICAS OF REAL WORLD MACHINES/STRUCTURES

Help students to relate concepts to the world they live in.

EDUCATION STANDARDS ALIGNMENTS

Aligned to National Science, Technology, Engineering and Math curriculum.

INQUIRY BASED CURRICULUM

Challenges students to apply problem solving and troubleshooting techniques.

ROBUST AND EASY STORAGE

Easily constructed and deconstructed within lesson timings and compact to store.

RESPONSIBLY MADE IN AMERICA

All parts are manufactured in an environmentally friendly facility and held to the strictest quality standards.

GROUP SET

ITEM NO. 78750

The KID K'NEX range has big, soft chunky pieces, and can be used by children with varying manipulative skills.

Models are easily assembled, stay together during play and can be quickly dismantled and stored in sturdy snap on lid tubs.

Vibrant colors and component designs appeal to both boys and girls and reinforces color and shape recognition, sorting and patterning problem solving skills.

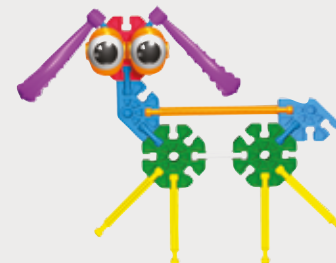
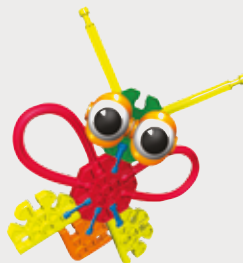






DOG

FIREFLY

SPIDER

LAMB




-  3+ YEARS
-  8 MODELS
-  8-10 STUDENTS
-  131 PIECES

- Builds eight models, four at a time
- Suitable for small groups of eight to ten children building simultaneously
- Set includes 131 KID K'NEX parts, including eyes, ears and wings.

KEY CONCEPTS

- Color and shape recognition
- Sorting and patterning skills
- Encourages manual dexterity and fine motor skills



 **WARNING: CHOKING HAZARD** – Small parts. Not for children under 3 years.

ITEM NO. 78690A

CLASSROOM COLLECTION



- + **3+ YEARS**
- 📖 **23 MODELS**
- 👤 **8-10 STUDENTS**
- 🧩 **225 PIECES**

- Builds 23 models, eight at a time
- 1:1 correspondence cards to aid building
- Supports eight to ten children building simultaneously
- Includes 225 KID K'NEX pieces and blocks

KEY CONCEPTS

- Color recognition
- Stacking sorting and sequencing
- Pattern recognition and copying
- Fine motor skill development & practice
- Characters and props for role play

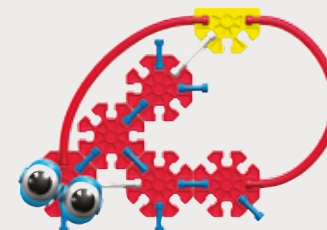
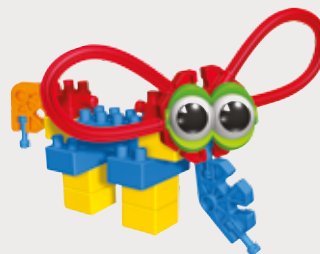
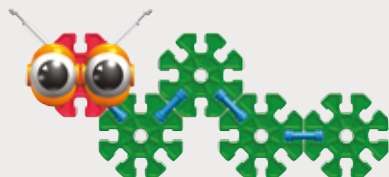
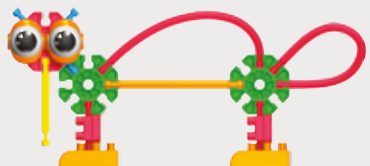


BEAVER

CATERPILLAR





ELEPHANT

LADYBUG



WARNING: CHOKING HAZARD – Small parts. Not for children under 3 years.

ORGANISMS AND LIFECYCLES ITEM NO. 79580

-  3+ YEARS
-  18 MODELS
-  14 STUDENTS
-  232 PIECES

- Builds 18 models, 14 simultaneously
- Includes 232 KID K'NEX rods, connectors, fins, tentacles, beaks and eyes
- Includes eight 2-sided 1:1 correspondence cards

KEY CONCEPTS

- Characteristics of organisms
- Sorting and sequencing
- Environments
- Food chains and food webs
- Fine motor skills

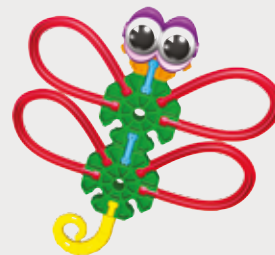


BIRD

DRAGONFLY

FLOWER

MOUSE





- 3+ YEARS**
- 13 MODELS**
- 8-10 STUDENTS**
- 229 PIECES**

- Builds 13 models, nine simultaneously
- 1:1 correspondence cards to aid child's building of exciting vehicles
- Supports eight to ten children building simultaneously
- Includes 229 KID K'NEX pieces, including 36 wheels, ten of which are 'super sized' and six are truck wheels

KEY CONCEPTS

- Color and shape recognition
- Sorting and sequencing
- Encourages manual dexterity and fine motor skills

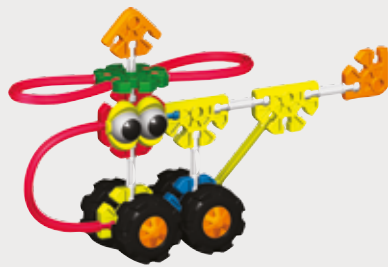


DUNE BUGGY

HELICOPTER

SAIL-BOAT

TOW TRUCK



Children of all ages love to build...

Whether free form, or following instructions, K'NEX construction sets allow students to build and power models, helping them understand how they work.

K8 CONSTRUCTION SET ITEM NO. 79818



MOTOR PACK ITEM NO. 78910

Add more motors to your sets and bring them to life with this pack of two battery operated motors.



RACING CAR



BATTERY POWERED MOTOR





- + **5+ YEARS**
- 📖 **80 MODELS**
- 👤 **8-12 STUDENTS**
- 🧰 **1315 PIECES**

- Includes two color coded instruction books to build 80 models
- Builds eight dynamic motorized creations
- Packaged in two strong, stackable storage trays with snap on lids.
- Contains 1315 K'NEX rods and connectors, one spring motor and a power pack motor.
- Supports up to 12 students building simultaneously in teams of two to three

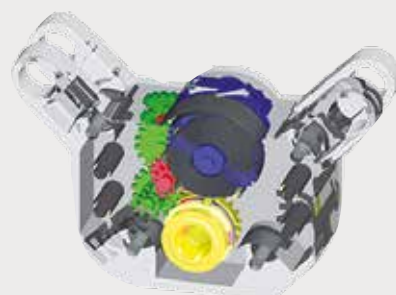
KEY CONCEPTS

- Understanding how structures are made
- How to change and improve design of models
- Impact of materials on the robustness of structures
- Velocity and movement of vehicles

FERRIS WHEEL

SET SPRING MOTOR

HELICOPTER





Designed to inspire. Creative building, invention and exploration in the classroom.

Why not make some space in your classroom or library to encourage creative design and students hunger for the knowledge of 'how things work'.

The new range of Maker kits are designed to encourage free play and open ended design. The sets come with ideas booklets to get students started but you will be amazed at the scale and diversity of the builds.

Each set has handy storage boxes and a full range of model ideas can be found on our website by simply looking up the product code.

MAKER KIT LARGE

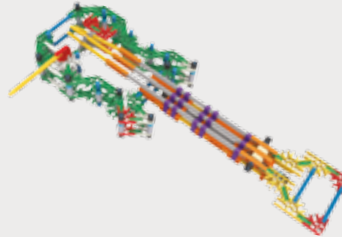
ITEM NO. 78497



AMBULANCE

GUITAR

SHUTTLE



- 6+ YEARS**
- 100 MODELS**
- 6-12 STUDENTS**
- 863 PIECES**

This set allows up to 12 students to work together and has storage dividers for easy selection of parts. The perfect starter kit for your maker's space!





KEY CONCEPTS

- Understanding of how structures are made
- How to change and improve design of models
- Impact of materials on the robustness of structures

This set includes a 64 page ideas booklet and can build up to 100 models.





-  **6+ YEARS**
-  **50 MODELS**
-  **2-6 STUDENTS**
-  **408 PIECES**

The perfect starter kit for the classroom. This set allows up to six students to work together and has a handy storage tub for parts and instructions. With a mix of standard and micro parts, this set allows students to explore different scales of model whilst building.

KEY CONCEPTS

- Impact of scale of parts on a models performance.
- The robustness of models when combining parts of differing scale
- How to change and improve design of models

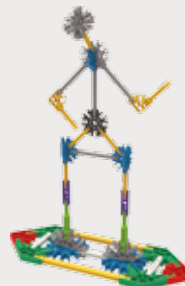
This set includes 408 parts and comes with a 28 page instruction booklet with 50 building ideas.

T-REX

AIRPLANE

SNOW BOARDER

OFF-ROAD ROVER



MAKER KIT WHEELS ITEM NO. 78498

- + **8+ YEARS**
- 📖 **11 MODELS**
- 👤 **8-12 STUDENTS**
- 🔧 **442 PIECES**

This set includes rods and connectors in classic scale. Plus lots of wheels and 3 different types of motors — a spring motor, a fly-wheel motor and a battery-powered motor. Wind-powered, hand-powered and rubber-band powered vehicles can also be created with the set — that's 6 unique power sources to intrigue and inspire your budding makers!

KEY CONCEPTS

- Energy transfer
- Velocity and acceleration
- Impact of design and choice of motor on speed and performance

This set includes a 24 page instruction booklet and can build up to 11 models.

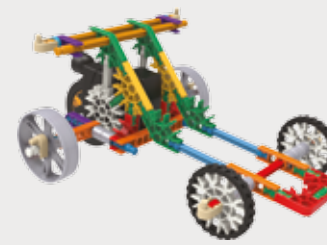
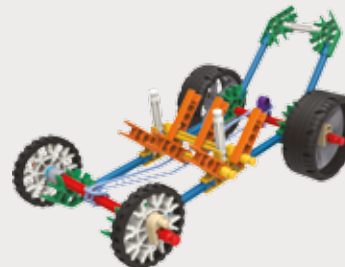


4 WHEEL SPRING RACER

RUBBER BAND RACER

PULLSTRING DRAGSTER

3 WHEEL SPRING RACER



ITEM NO. 78499

MAKER KIT SIMPLE MACHINES



- + **8+ YEARS**
- 📖 **22 MODELS**
- 👤 **6-12 STUDENTS**
- 🧩 **597 PIECES**

This set is ideally designed to allow up to 12 students to work together to build up to 22 different models of real life machines, (three at a time). There are three separate instruction booklets allowing three groups of children to work in teams to design, build and evaluate their models.

KEY CONCEPTS

- How levers function
- Pulley systems and how they function
- How inclined planes make work easier
- How different types of gears are used and the impact on performance

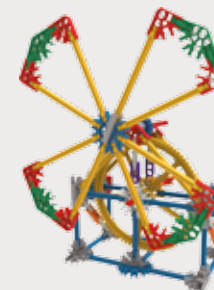
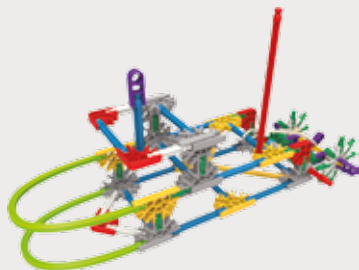
This set includes three separate instruction booklets and can build up to 22 models, three at one time.

WHEELBARROW

PADDLE BOAT

CAR

CRANK FAN



ELEMENTARY MATH & GEOMETRY

ITEM NO. 78720

Students live in a 3D world, so it makes sense for them to connect with math and geometry on a 3D level.

K'NEX® sets allow them to do just that, building their knowledge and understanding of key math and geometry concepts.



- 6+ YEARS**
- 38 MODELS**
- 3-4 STUDENTS**
- 142 PIECES**

An introduction to 2D and 3D shapes, symmetry and fractions for hands-on math.

This 142 piece set builds 38 different 2D and 3D models (multiple models simultaneously.)

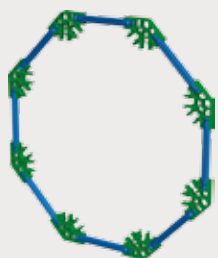
KEY CONCEPTS

- Shapes, faces, angles & similarity, symmetry lines
- Segments and rays edges
- 2D & 3D dimensional geometric shapes
- Sides, congruence
- Fractions, vertices

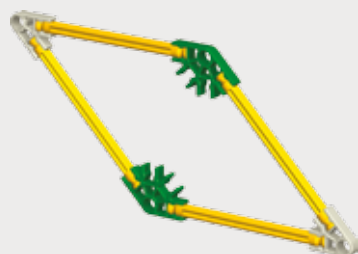
72 page teacher's guide with student flashcard resources.

Includes key terms and definitions and 12 lesson plans.

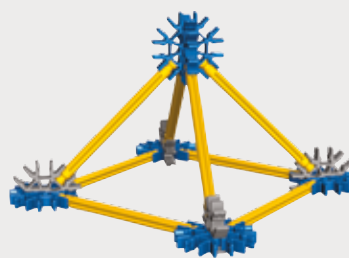
OCTAGON



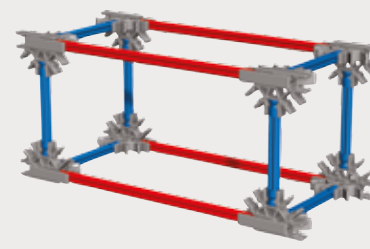
QUADRILATERAL



SQUARE PYRAMID

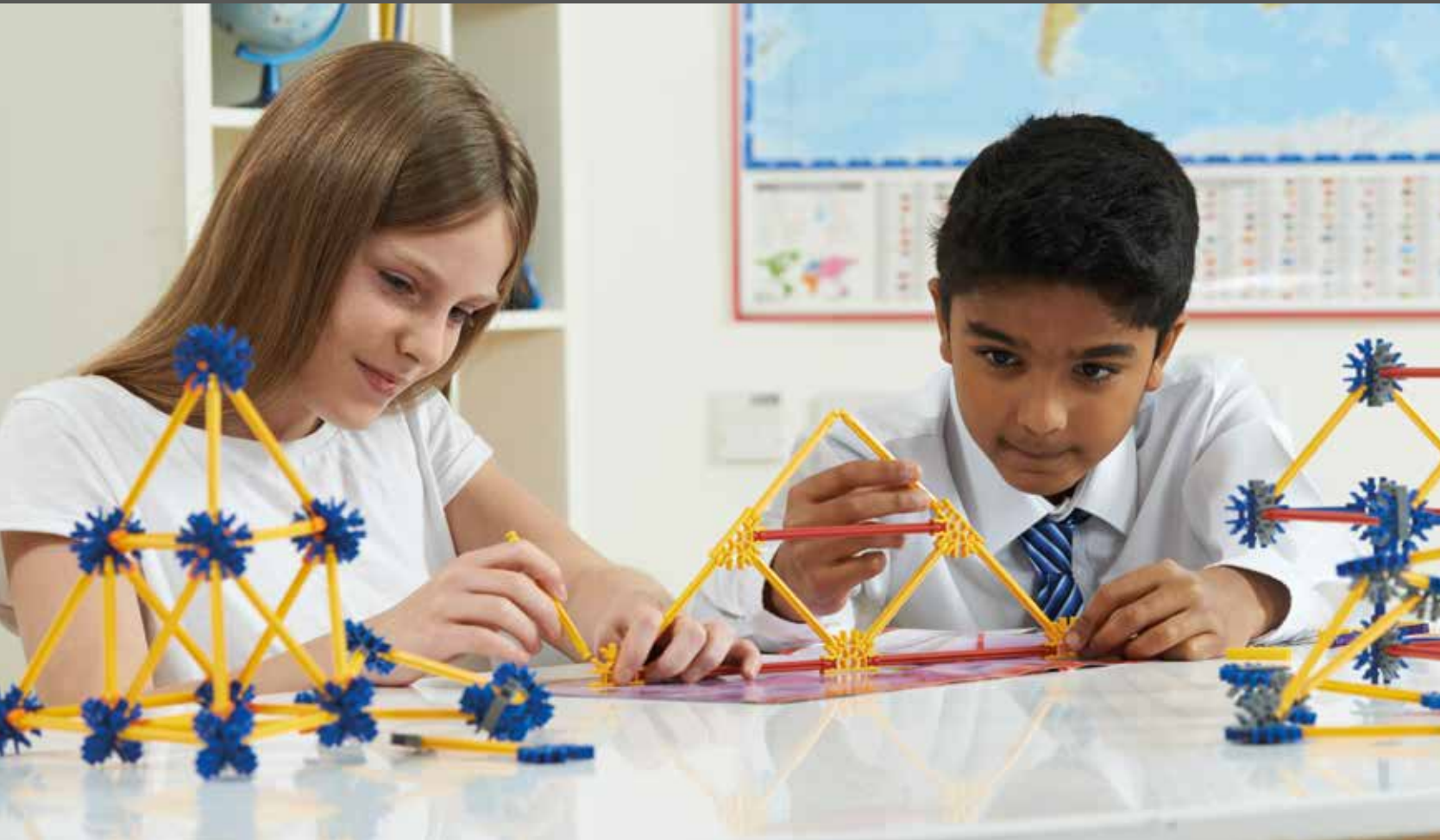


RECTANGULAR PRISM



ITEM NO. 79028A

INTERMEDIATE MATH AND GEOMETRY



- 9+ YEARS**
- 95 MODELS**
- 8-16 STUDENTS**
- 920 PIECES**

Builds 95 K'NEX® Math and Geometry models, up to four simultaneously.

Designed to address critical mathematics concepts in the secondary school classroom, and provide instructional models that will enhance students' understanding of important concepts and algorithms.

KEY CONCEPTS

- 2D and 3D geometry
- Sequencing and patterning
- Transformations
- Rotational symmetry in 3D
- Reflections, congruence and similarity

60 page teacher's guide, including key terms and definitions with 14 lesson plans.

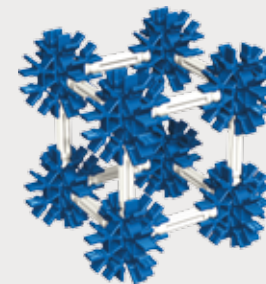
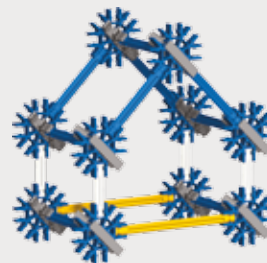
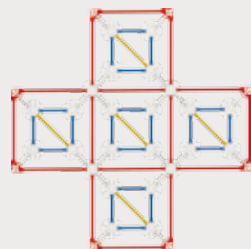
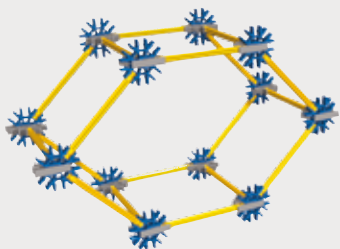


HEXAGONAL PRISM

PATTERN

PENTAGONAL PRISM

BLUE CUBE



When teaching design and technology or key areas of the science curriculum, it is important to allow students to explore how structures and machines around them work.

Many students accelerate their learning through hands on exploration and experimentation. The K'NEX Introduction to Machines range allows students to explore diverse areas of the curriculum from Mechanical Advantage to how products can be designed to make working lives easier.

SIMPLE MACHINES DELUXE ITEM NO. 79565

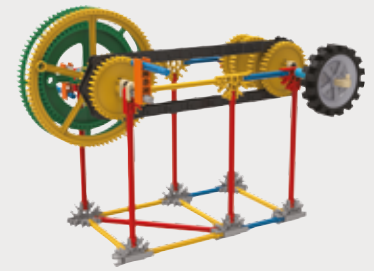
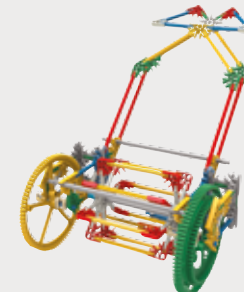
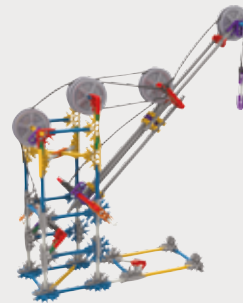


CAROUSEL





CRANE

LAWN MOWER

BICYCLE GEARS





-  **8+ YEARS**
-  **60 MODELS**
-  **10-15 STUDENTS**
-  **3480 PIECES**

This set is designed to introduce students to the scientific concepts associated with simple machines — Levers, Pulleys, Wheels and Axles, Inclined Planes, including Wedge and Screw and Gears. As students build and investigate, they are encouraged to discuss and evaluate the scientific principles in action.

KEY CONCEPTS

- Levers, pulleys, inclined planes, wedge, screw, wheel and axle and gears.
- Energy transfer
- Effort and resistance forces
- Mechanical advantage
- Motion and forces

Includes 5 separate guides; Levers, Gears, Pulleys, Inclined Planes, Wheels and Axles (243 pages, 54 lesson plans).

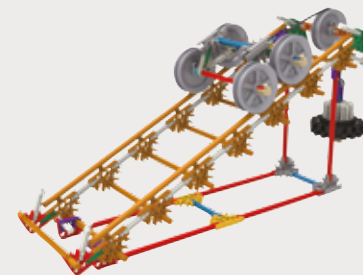
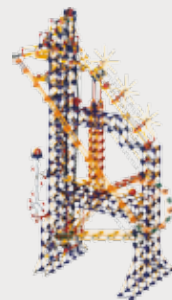
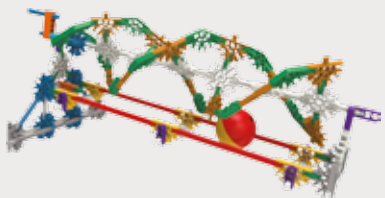


ARCHIMEDES SCREW

BALANCE

BIG BALL FACTORY

INCLINED PLANES



SIMPLE MACHINES CLASS SET

ITEM NO. 79008

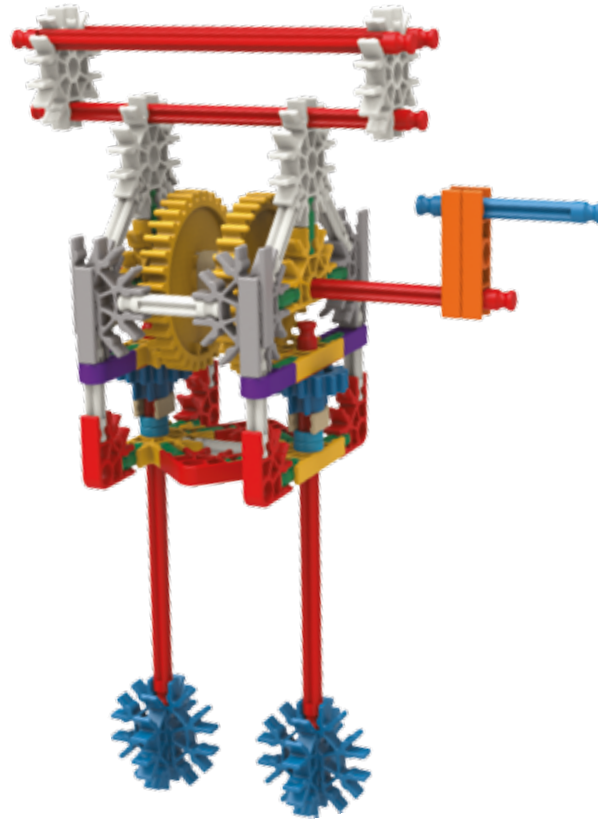
- + 8+ YEARS
- 📖 15 MODELS
- 👤 24-26 STUDENTS
- 🧩 2176 PIECES

Bring the excitement of STEM to your students with this Classroom Simple Machines Set! Introduce students to the scientific concepts associated with simple machines - Levers, Pulleys, Wheels & Axles, Inclined Planes, Gears, Wedges and Screws. Builds 15 fully functioning models up to eight at a time.

KEY CONCEPTS

- Levers, pulleys, wheel and axle, inclined planes, gears, wedge and screw
- Making work easier
- Mechanical advantage
- Energy transfer

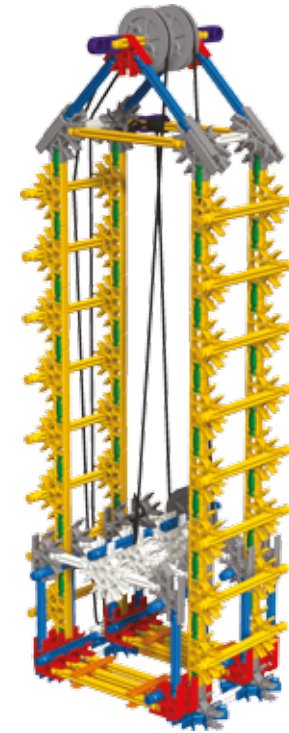
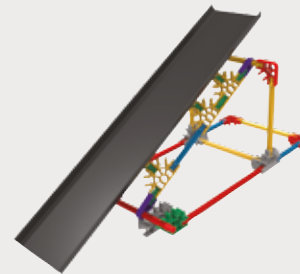
Includes 75 page teacher's guide with 13 lesson plans and key terms and definitions.



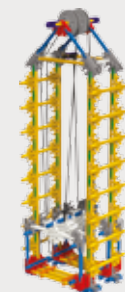
SET BALANCE



SET RAMP







ELEVATOR



ITEM NO. 78600

EXPLORING MACHINES



-  **10+ YEARS**
-  **30 MODELS**
-  **8-12 STUDENTS**
-  **1432 PIECES**

The 30 different models featured in this set enable students to investigate a broad variety of mechanisms in more complex models. Four of each type of model can be built simultaneously.

KEY CONCEPTS

- Levers and pulleys
- Motion and forces
- Energy transfer
- Effort and resistance forces
- Classes of levers
- Mechanical advantage

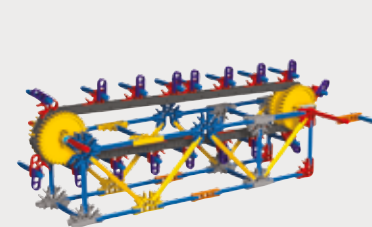
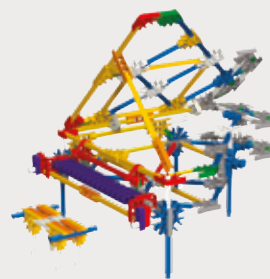
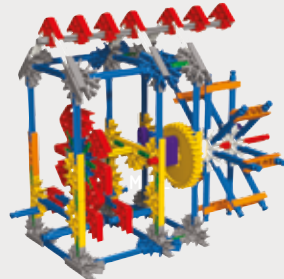
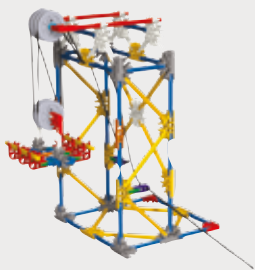
Includes a 73 page teacher's guide with 14 lesson plans and key terms and definitions.

BLOCK & TACKLE

SAW MILL





PIANO

CONVEYOR BELT



SIMPLE AND COMPOUND MACHINES

ITEM NO. 77053

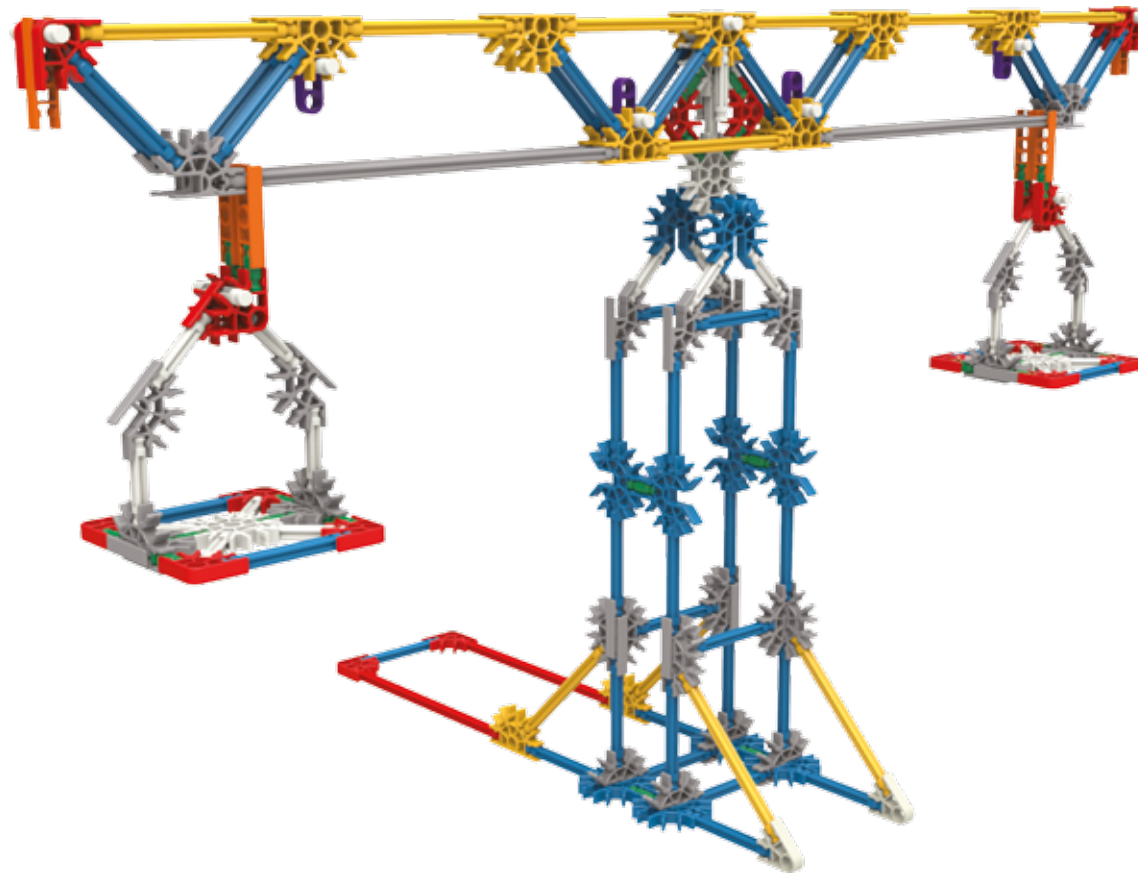
-  **9+ YEARS**
-  **16 MODELS**
-  **2-3 STUDENTS**
-  **352 PIECES**

A smaller group version of the Exploring Machines set, this set is designed to increase students understanding of simple machines, and how they make work easier by investigating, exploring and experimenting with fully functioning simple machine models. Build sixteen models, one at a time.

KEY CONCEPTS

- Effort and resistance
- Mechanical advantage
- Force
- Six types of simple machine

Includes 81 page teacher's guide with 14 lesson plans and key terms and definitions.



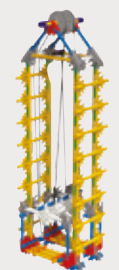
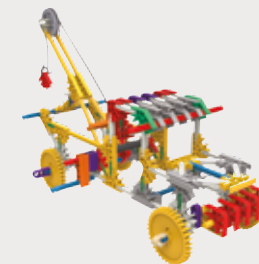
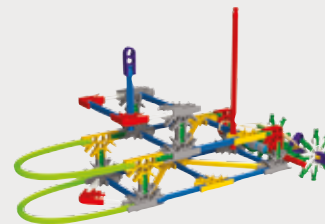
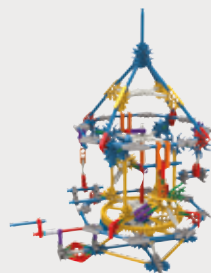
CAROUSEL

CRANK FAN

PADDLE BOAT

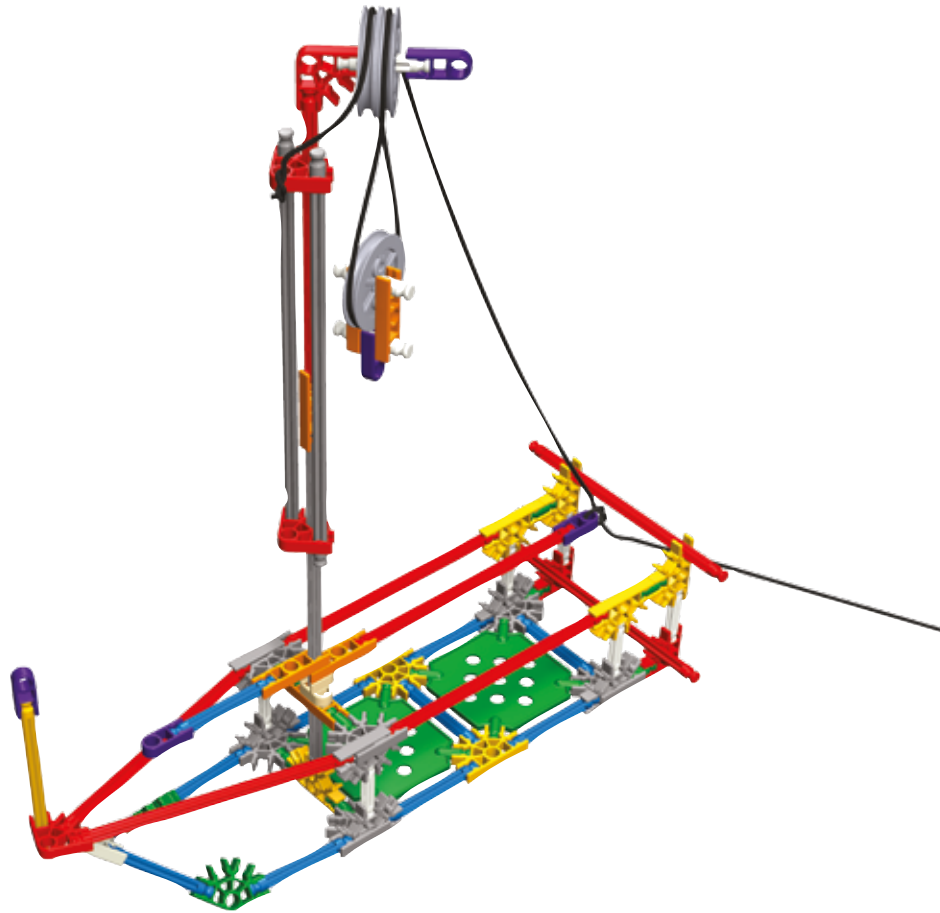
TOW TRUCK

ELEVATOR



ITEM NO. 78610

LEVERS AND PULLEYS



- + **8+ YEARS**
- 📐 **8 MODELS**
- 👤 **2-3 STUDENTS**
- 🧩 **178 PIECES**

Build eight real working models of 1st, 2nd and 3rd class levers and fixed, moveable and combination pulley systems, one at a time. Detailed Teacher's Guide with key concepts, terms, definitions and learning objectives and lesson plans included. Packaged in a strong storage tray with moveable dividers and snap on transparent lid.

KEY CONCEPTS

- Identifying three classes of levers and how they operate
- Key parts of levers: effort arm, resistance arm and fulcrum
- How levers function
- Fixed, moveable and combination pulley systems and how they function

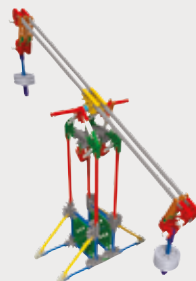
Includes 60 page teacher's guide with 8 lesson plans and key definitions and concepts.



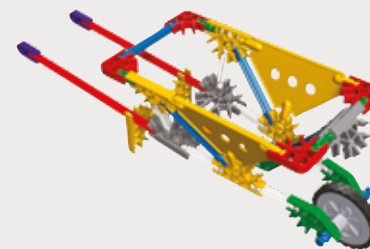
BLOCK AND TACKLE



BALANCE



WHEELBARROW



WHEELS, AXLES AND INCLINED PLANES ITEM NO. 78620

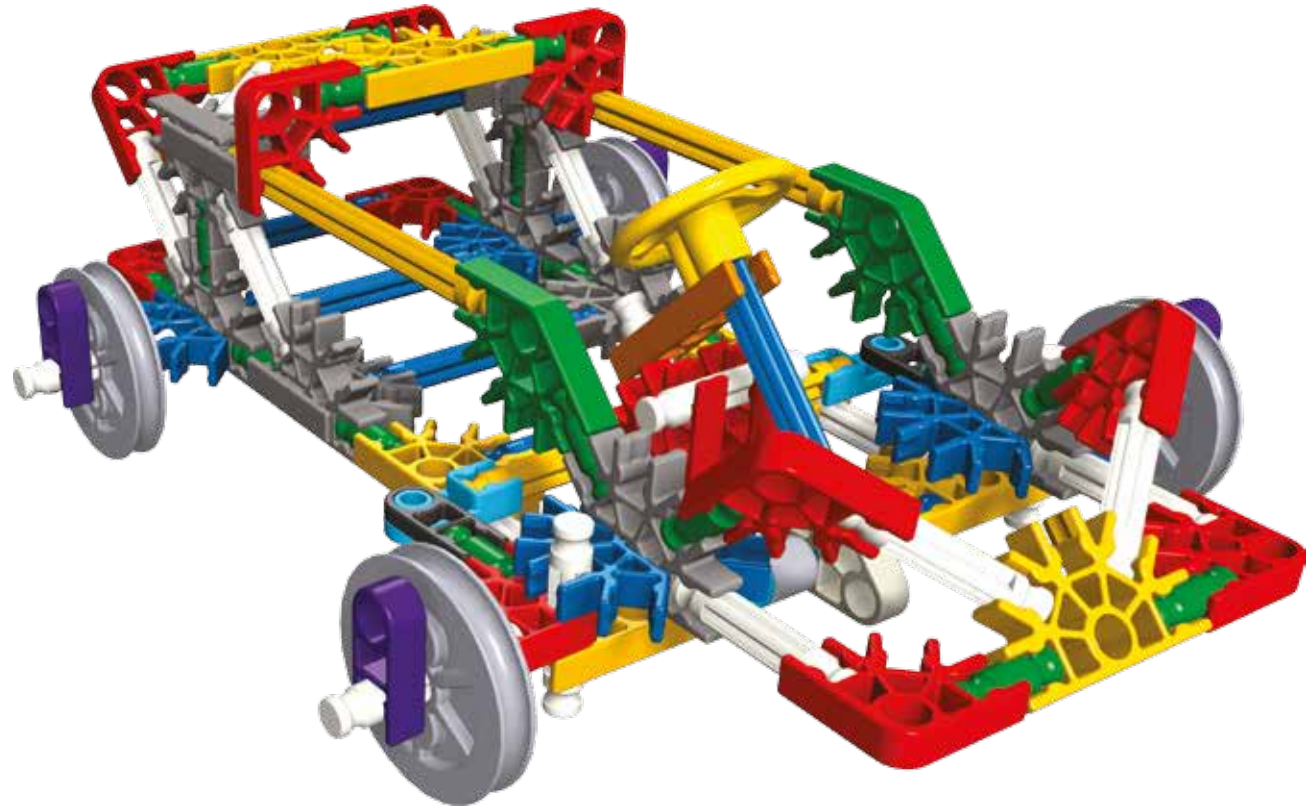
- + 8+ YEARS
- 📖 7 MODELS
- 👤 2-3 STUDENTS
- 🧩 221 PIECES

Seven real world examples of how a wheel turns an axle, how an axle turns a wheel, plus two levels of inclined planes and a screw and wedge. The set supports a team of two to three students. Build seven models, one at a time.

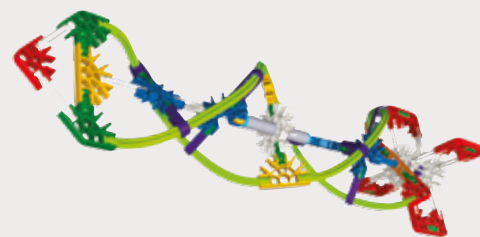
KEY CONCEPTS

- Identifying key parts of wheel and axle system
- Where wheels & axles are used
- Comparing and contrasting how these different machines function
- Identifying how inclined planes, screws and wedges make work easier

Includes 39 page teacher's guide with 6 lesson plans and key definitions and concepts.



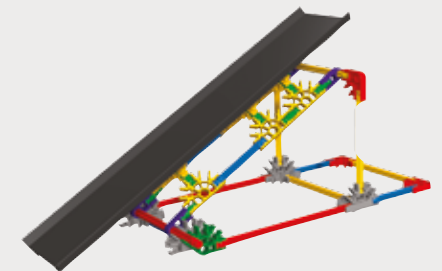
HAND DRILL

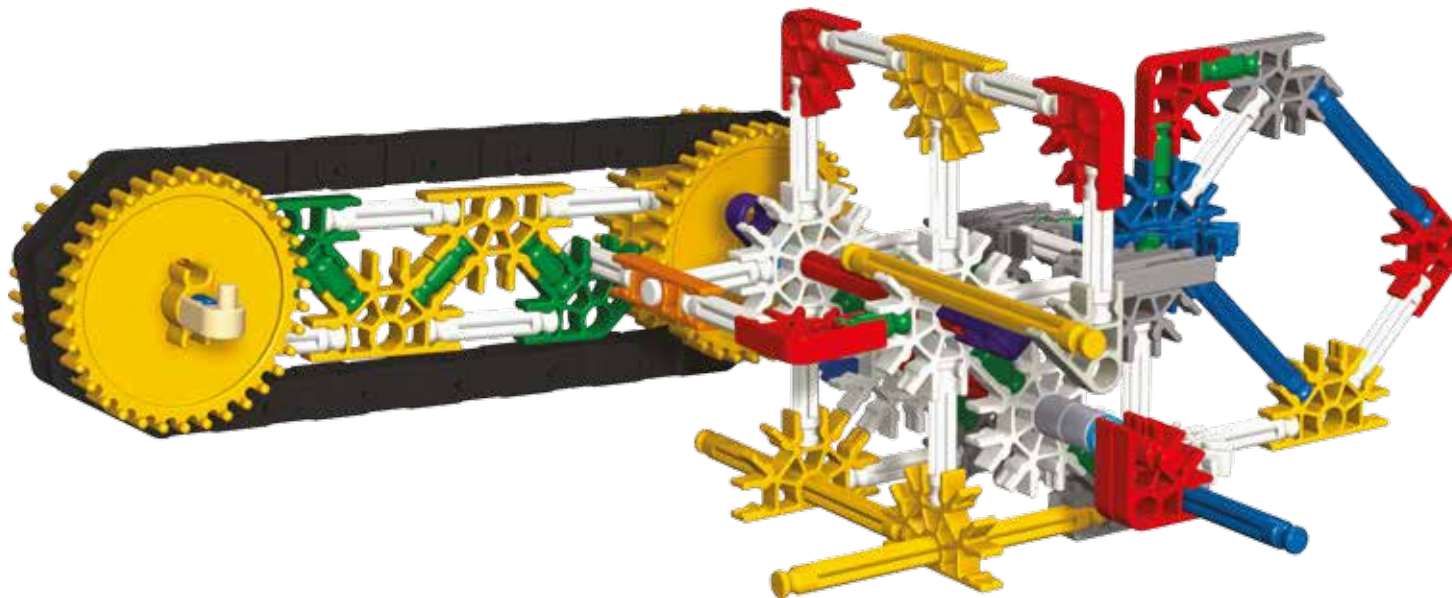





PADDLE BOAT



STEEP RAMP





-  **8+ YEARS**
-  **7 MODELS**
-  **2-3 STUDENTS**
-  **198 PIECES**

- This set builds seven different gear models, including two spur gear, two crown gear and two chain and socket gear examples
- Models include Egg Beater, Blender, Chainsaw, Record player, Crank Fan, Car Window and Exercise Bike
- Set supports a team of two to three students working together, and includes a detailed Teacher's Guide with key concepts, terms and definitions

KEY CONCEPTS

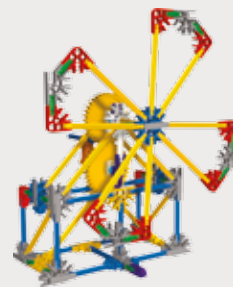
- What a gear ratio is and how it is calculated
- Determining how different gear configurations change the amount of applied force, speed or direction of movement
- Where different types of gears are used
- Identifying three different types of gear configuration

Includes 40 page teacher's guide with 5 lesson plans, key terms, definitions and concepts.

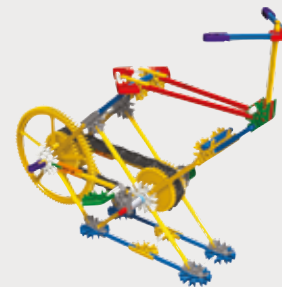
EGG BEATER



CRANK FAN



STATIONARY BIKE







The K'NEX® Bridges range is designed to support the Design and Technology, Science, Geography and History curriculum in schools.

The sets build replicas of real world bridges and feature all seven of the key bridge designs, showcasing real life examples of international bridges, bringing to life the engineering and math concepts architects and engineers have to put in place to build robust, durable structures. Teacher's Guides also explore the cost involved in constructing the bridges, and the part they have played in history.

BRIDGES

ITEM NO. 78640



-  **8+ YEARS**
-  **13 MODELS**
-  **2-3 STUDENTS**
-  **207 PIECES**

- Builds 13 fully functioning replicas of seven key bridge types
- Detailed teachers guide with key concepts, terms and definitions included
- Supports Design and Technology, as well as Science Curriculum

KEY CONCEPTS

- Defining the characteristics and purposes of seven bridge types
- Identifying key features of each type of bridge
- Investigating how different bridge types hold their loads
- Evaluating the strength and stability of each bridge type through experimentation

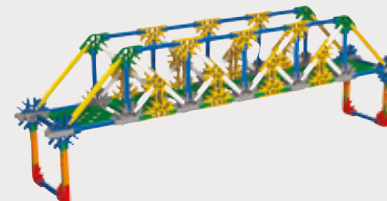
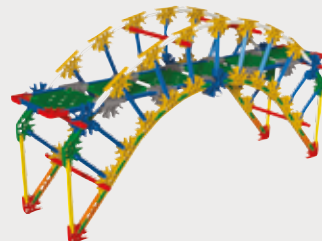
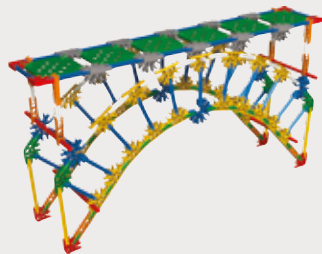
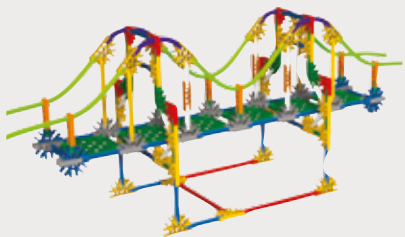
92 page teacher's guide with 8 lesson plans, including key term, definitions and concepts.

SUSPENSION BRIDGE

ARCH BRIDGE

THROUGH ARCH





BALTIMORE TRUSS



ITEM NO. 78680

REAL BRIDGE BUILDING



-  **10+ YEARS**
-  **7 MODELS**
-  **6-8 STUDENTS**
-  **2304 PIECES**

- This large set builds replicas of real-world bridges up to 5.9 meters long — two at a time.
- Designed to assist students in their study of the history, function, structural design, geometry and strength of bridges
- Helps students investigate the physical properties of materials and their application in the placement of design and construction of bridges
- The models demonstrate seven key bridges: bascule, cantilever, cable-stayed, truss, suspension, arch and beam

KEY CONCEPTS

- Defining the characteristics and purposes of seven bridge types
- Investigating how different bridge types hold their loads
- Determining and calculating costs involved in building a bridge
- Exploring the history of each of the real-world bridges

Includes 143 page teacher's guide with 8 lesson plans as well as projects and worksheets.

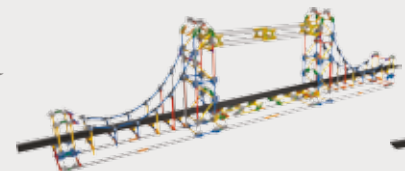
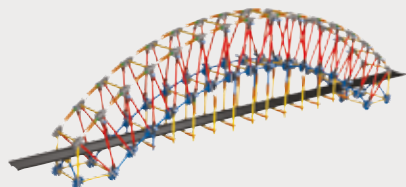
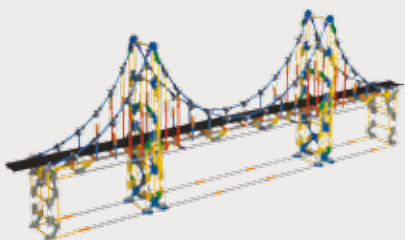


GOLDEN GATE BRIDGE

SYDNEY HARBOUR BRIDGE

TOWER BRIDGE

FORTH BRIDGE



RENEWABLE ENERGY ITEM NO. 78976

The planning of energy resources and how we conserve and make better use of energy supplies is a hot topic in the classroom.

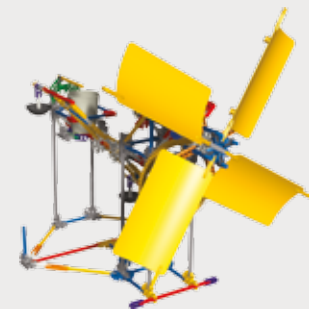
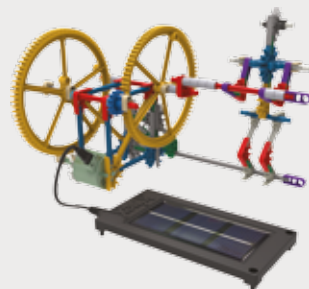
This range of K'NEX Education® products has been designed to allow students to investigate and explore how various forms of energy power everyday machines and structures around them. Key concepts covered in the range include renewable energy, energy storage, energy efficient technologies, force, motion, work and power. The hands on building of models and comparing performance of the designs encourage problem solving and experimentation.



CRANK MAN

WINDMILL

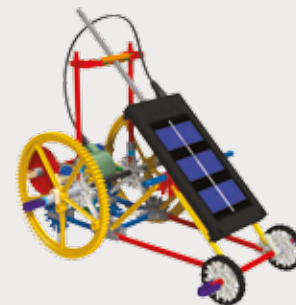
WINDMILL MECHANICAL SYSTEM





WATER POWERED MILL

SOLAR POWERED CAR



- + 10+ YEARS**
- 9 MODELS**
- 6-12 STUDENTS**
- 583 PIECES**

This set allows students to compare and contrast the power and efficiency that can be realized from wind, solar and water powered machines. Students generate electricity to operate models as they experiment with renewable energy systems. Builds three models at a time: One 1.38 V - 500 mA solar panel, three motors and power cords, and one capacitor for energy storage included.

KEY CONCEPTS

- Solar, wind and hydro power
- Energy: radiant, mechanical and electrical
- Kinetic and potential energy
- Green energy/clean energy
- Hydroelectric energy generation

164 page teacher's guide with 9 lesson plans, key terms, definitions and concepts.



EXPLORING WIND AND WATER ENERGY

ITEM NO. 77051

- + 9+ YEARS
- 📖 7 MODELS
- 👤 2-3 STUDENTS
- 🧩 288 PIECES

This small group version of the Renewable Energy set allows students to experiment with wind and water power. Students will investigate the science behind these energy sources and the technologies that help to make them useful. Builds seven wind and water powered models, one at a time.

KEY CONCEPTS

- Wind and hydro power
- Energy storage
- Hydroelectric energy generation
- Energy efficient technologies

105 page teacher's guide includes key terms, definitions and concepts and 6 lesson plans.



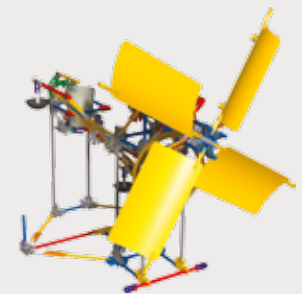
WINDMILL



SAIL CAR







MECHANICAL WINDMILL



ITEM NO. 77075 SOLAR ENERGY



-  **9+ YEARS**
-  **3 MODELS**
-  **2-3 STUDENTS**
-  **128 PIECES**

This small group version of the Renewable Energy set allows students to harness the energy of the sun and convert it into electricity to power K'NEX models. Builds three solar powered models, one at a time and supports two to three students working in small groups.

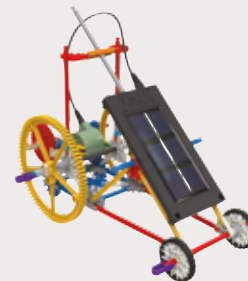
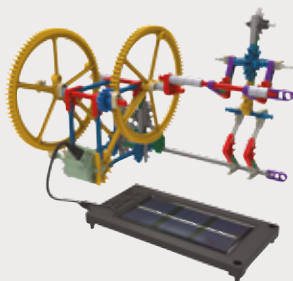
KEY CONCEPTS

- Solar power
- Energy storage
- Energy efficient technologies
- Innovation and invention

69 page teacher's guide includes key terms and definitions plus 3 lesson plans.

SOLAR CRANK MAN

SOLAR CAR



FORCES ENERGY AND MOTION ITEM NO. 78790

- + 10+ YEARS
- 📖 11 MODELS
- 👥 12-16 STUDENTS
- 🧩 442 PIECES

This set has been designed to encourage students to investigate and experiment using a variety of models. Hands on testing with various models and motors allows groups to compare and contrast what impact design has on speed and distance travelled. Includes tires and motors, battery, spring and fly wheel. Build eleven vehicles, up to four at a time.

KEY CONCEPTS

- Energy transfer
- Velocity and acceleration
- Potential and kinetic energy
- Newton's Law and the mathematics of motion
- Student designed experiments to encourage design challenges

86 page teacher's guide, and 7 lesson plans. Includes key terms, definitions and concepts.

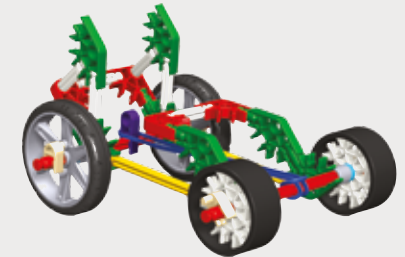
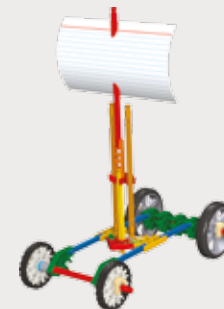


BATTERY RACER

SPRING RACER

WIND RACER





RUBBER BAND RACER



ITEM NO. 79621

ENERGY, MOTION AND AERONAUTICS



-  **10+ YEARS**
-  **9 MODELS**
-  **6-9 STUDENTS**
-  **1437 PIECES**

This set allows students to investigate a variety of concepts related to Newton's Laws and aeronautics. These concepts include aeronautics as it applies to force and motion, as well as the effects of individuals who work in space. Models demonstrate: Newton's Laws, aeronautic and aerospace training devices, optical illusions, mechanical systems, airplane flight surfaces, parachute technology, projectile motion, and much more. Build nine models, up to three at a time.

KEY CONCEPTS

- Newton's Laws, ratios and proportions
- The design process / engineering design
- Measurement
- Testing, evaluating and modifying
- Data collection, graphing and analysis

152 page teacher's guide, including key terms, definitions and 9 lesson plans.

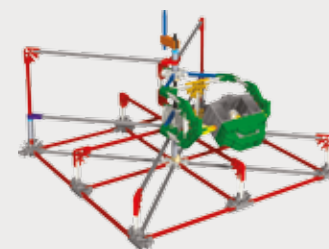
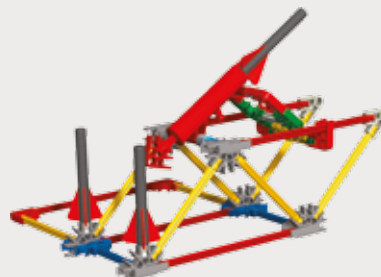
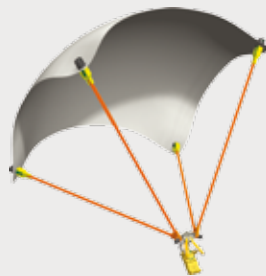
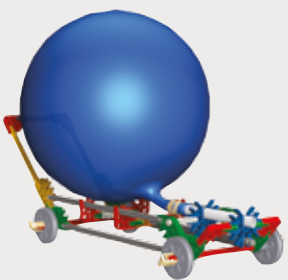


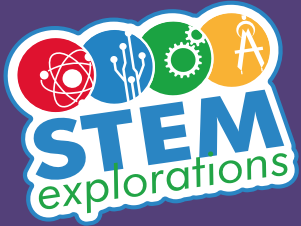
BALLOON RACER

PARACHUTE

DART LAUNCHER

CENTRIFUGE MODEL





Designed to inspire with multiple builds and experiments.

The STEM Explorations range of products is a lower priced introduction to our Machines range.

The sets are a selection of our most popular builds and come with simple students experiments for each model.

At a lower price they allow you to try out key areas of the K'NEX Education line or buy multiple low priced sets to teach larger classes.





Sets suit 2-3 students working together as opposed to larger working groups.



ITEM NO. 79319

LEVERS AND PULLEYS



-  **8+ YEARS**
-  **3 MODELS**
-  **2-3 STUDENTS**
-  **139 PIECES**

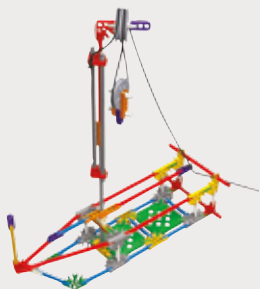
This introductory set allows students to explore the concepts of levers and pulleys and their use in a balance, sailboat and wheelbarrow. Each of the three models has a corresponding experiment worksheet included.

KEY CONCEPTS

- Identifying classes of levers and how they work
- Understanding key parts of levers
- Fixed, moveable and combination pulley systems and how they function

Includes 3 experiment worksheets, one for each model.

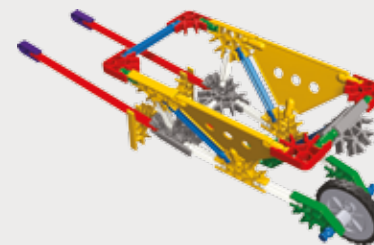
BOAT



BALANCE



WHEELBARROW



GEARS ITEM NO. 79318

- + 8+ YEARS
- 📖 3 MODELS
- 👤 2-3 STUDENTS
- 🧩 143 PIECES

This low priced introductory set allows children to explore the concepts associated with Gears. The set builds three different models Crank Shaft, Egg Beater and Car Window model. Each model has its own experiment worksheet.

KEY CONCEPTS

- Where different types of gears are used
- Types of gears and their configuration
- Gear ratios and how they are calculated

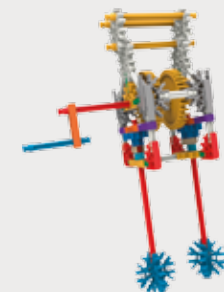
Includes 3 experiment worksheets, one for each model.



CAR WINDOW

CRANK FAN





EGG BEATER



ITEM NO. 79320

VEHICLES



-  **8+ YEARS**
-  **7 MODELS**
-  **2-4 STUDENTS**
-  **131 PIECES**

This exciting set allows students to explore 7 different vehicle builds and how they are powered differently. With spring motor included. 5 of the 7 models have a corresponding experiment for students to work on in the classroom.

KEY CONCEPTS

- Energy transfer
- Velocity and acceleration
- The impact of design on performance

Includes 5 experiment worksheets.

WIND RACER

RUBBER BAND RACER





4 WHEEL SPRING RACER

3 WHEEL SPRING RACER



SWING RIDE

ITEM NO. 77077

-  8+ YEARS
-  3 MODELS
-  2-3 STUDENTS
-  486 PIECES

Students will be engaged and energized as they further their knowledge and understanding of the science, technology, engineering and maths concepts associated with a real-life amusement park ride.

KEY CONCEPTS

- Relationship between mass and speed
- Gearing up & gearing down
- Understanding patterns
- Gather, analyze, and interpret data

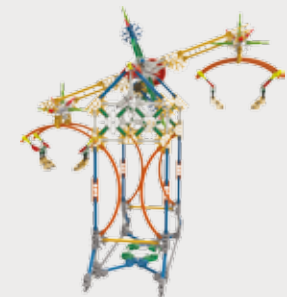
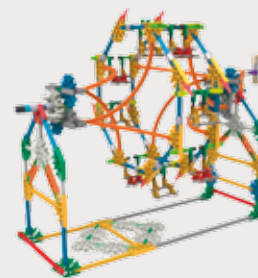
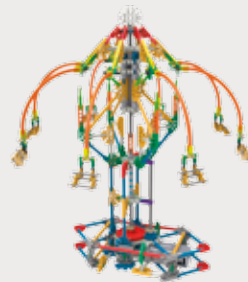
Includes 3 experiment worksheets, one for each model.



SWING RIDE

FERRIS WHEEL

BOOM RIDE

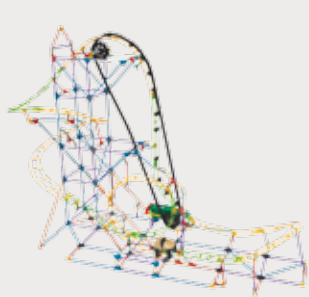


ITEM NO. 77078 **ROLLER COASTER**

ROLLER COASTER

HALPIPE COASTER

INCLINE COASTER



- + 8+ YEARS**
- 3 MODELS**
- 2-3 STUDENTS**
- 546 PIECES**

This set has been designed to engage and inspire students as they further their knowledge and understanding of how science, technology, engineering and math concepts are used in the development of thrill rides.

KEY CONCEPTS

- Relationship between speed, distance and time
- Variables in an experiment
- Gather, analyze, and interpret data

Includes 3 experiment worksheets, one for each model.



The K'NEX Education® Amusement Park range provides an opportunity for students to combine real world applications with key science, technology, engineering and math principles.

Students will be engaged and energized as they explore how these key concepts are applied on Amusement Park Rides.

AMUSEMENT PARK EXPERIENCE

ITEM NO. 78890

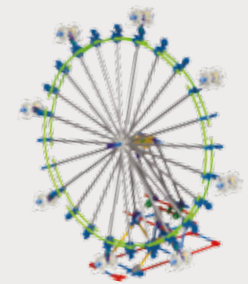
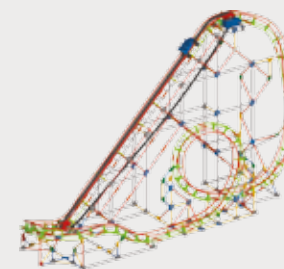
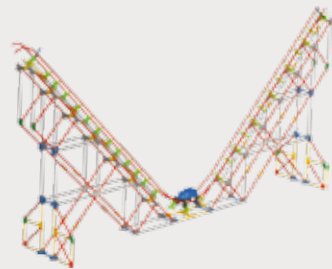


HALF PIPE

ZIPPER

SERPENT

LONDON EYE

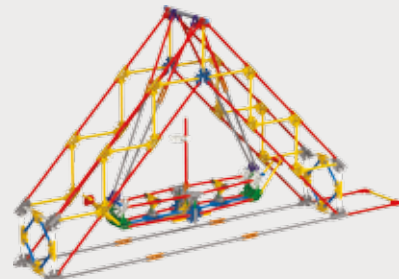




FERRIS WHEEL

PIRATE SHIP

SWING RIDE



+ 10+ YEARS

📊 13 MODELS

👤 6-8 STUDENTS

🧱 2272 PIECES

- Amusement Park Experience opens up science and mathematical investigations into speed, distance and time, rotational motion and more.
- 2272 pieces build classic amusement park rides including a roller coaster, carousel, Ferris Wheel, pirate ship, scrambler, wing and boom rides, plus ramps and half pipes.
- Build clothoid loops, circular loops, ball ramps.
- Explore gearing options for rotating rides
- Builds up to two models at a time

KEY CONCEPTS

- Relationship between speed, distance and time
- Relationship between mass and speed
- Mass motion and energy loss
- Slope as a rate of change
- Displacement

Includes 78 page teacher's guide, including key terms and definitions, 11 lesson plans, worksheets and answers.



ROLLER COASTER PHYSICS

ITEM NO. 78880

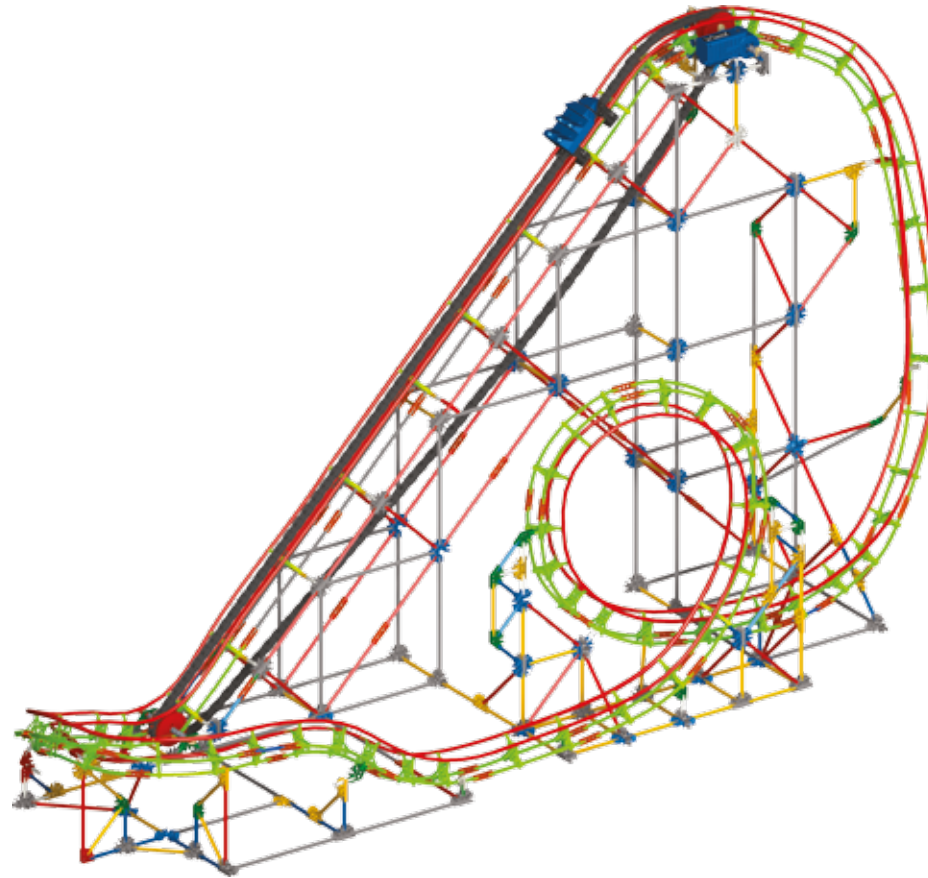
- + 16+ YEARS
- 📐 11 MODELS
- 👤 6-8 STUDENTS
- 🧩 2058 PIECES

This set is designed to help students as they design and conduct scientific investigations, identify variables of the problem and adapt models to improve performance. Learn data collection, charting and reporting of experimental results. Build up to two lab stations at a time.

KEY CONCEPTS

- Measurement in 3D trigonometry
- Time of flight
- Uniform acceleration
- Elastic collision in two dimensions
- Centripetal force and acceleration
- Centripetal force in a vertical direction
- Weightiness and weightlessness
- The physics of the clothoid loop

61 page teacher's guide and includes 9 lab lessons.

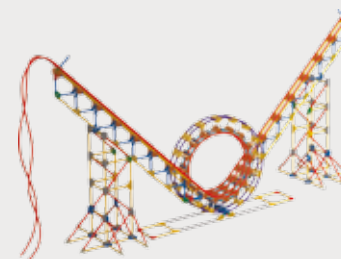
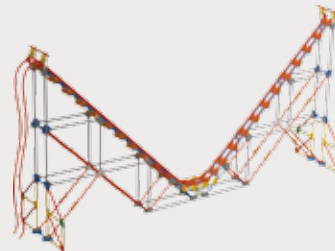
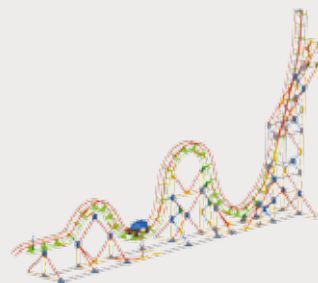


DOUBLE HILL

HALF PIPE FOR BALL

HALF PIPE WITH CIRCULAR LOOP

HALF PIPE FOR CAR







ITEM NO. 78780

DNA REPLICATION AND TRANSCRIPTION



MRNA STRAND

REPLICATION FORK

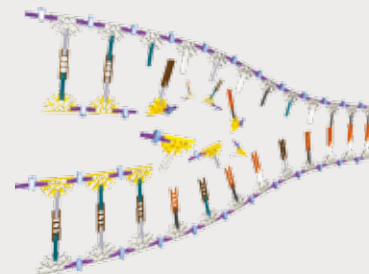
-  **10+ YEARS**
-  **19 MODELS**
-  **2-3 STUDENTS**
-  **525 PIECES**

This set is designed to aid in teaching the structure and function of the nucleic acid molecules that make up DNA and RNA. Build nineteen models, up to two at a time.

KEY CONCEPTS

- Molecular basis of heredity
- Chemistry of DNA
- DNA structure
- The double helix
- Enzymatic control of DNA process
- Semi-conservative replication of DNA
- Translation of DNA code
- Transcription and mRNA reproduction

44 Page teacher's guide with key terms and definitions. Includes 7 lesson plans.



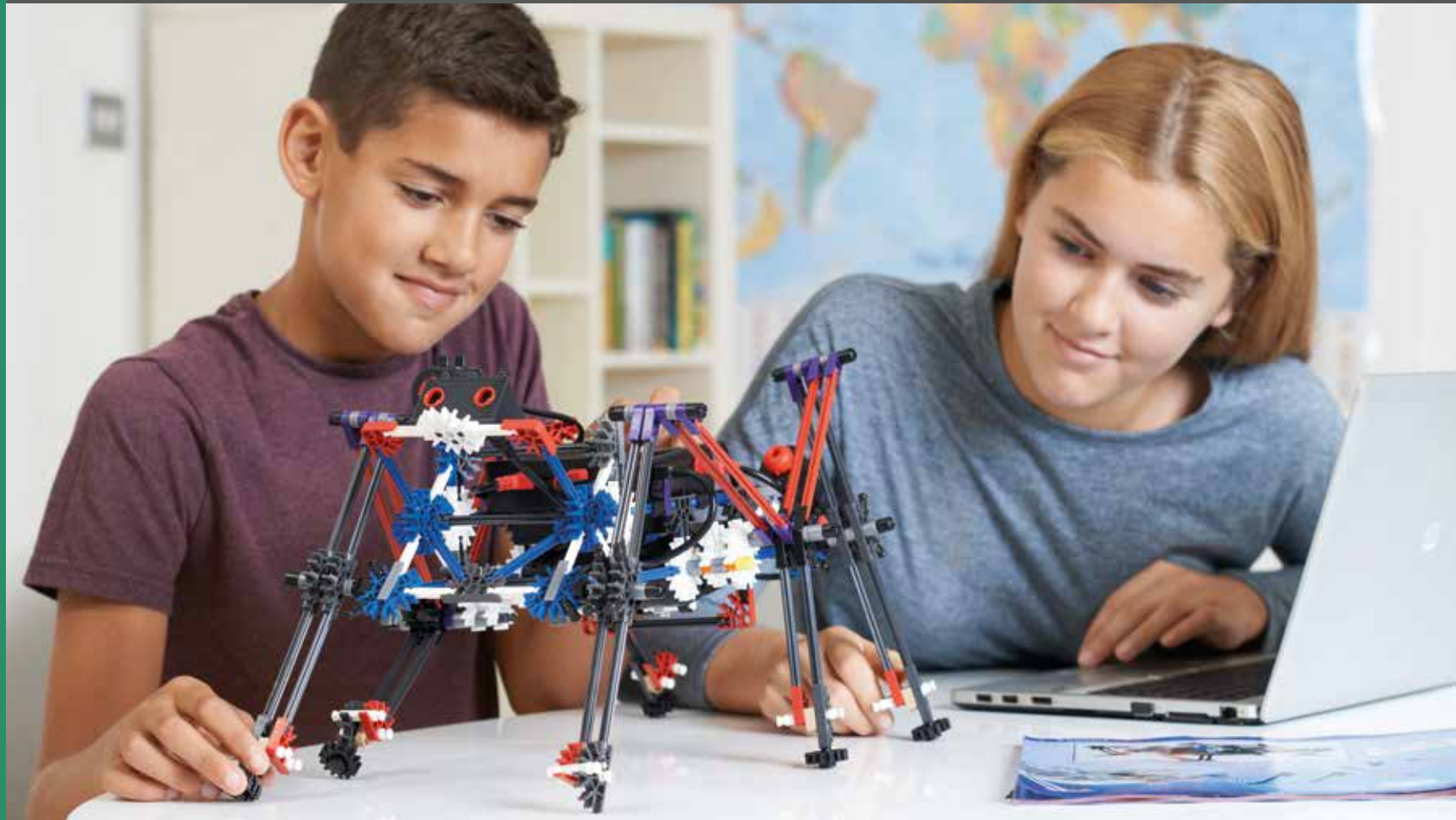
Build, Program & Control with the K'NEX Education Robotics Building System!

This engaging robotics set for middle and high school classrooms aims to teach students how to apply programming skills to operate various K'NEX models.

Students will design and build fully-functioning models, write computer programs, and use the Robotics Programming Software to communicate with and operate the models to solve Challenge Activities outlined in the lesson plans.

ROBOTICS

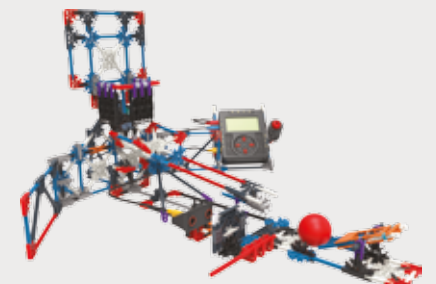
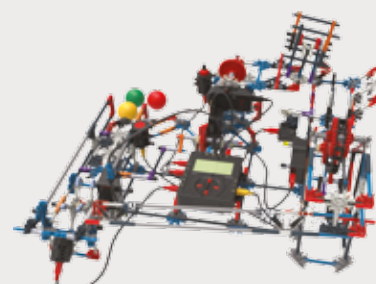
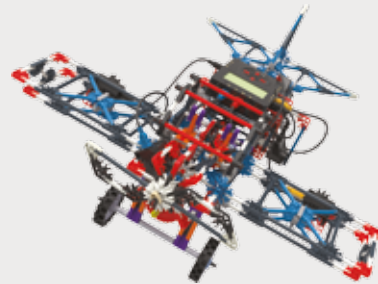
ITEM NO. 79100







AIRPLANE

MODEL BALL FACTORY

BASKET BALL HOOP





-  10+ YEARS
-  9 MODELS
-  2-3 STUDENTS
-  825 PIECES

The set includes over 800 K'NEX parts, Robotics Programming Software, Control Box, 4 motors, 1 push-button sensor, 1 distance sensor, 1 tri-color LED, 1 color/light sensor, and a downloadable teacher's guide with 5 progressive lesson plans.

KEY FEATURES

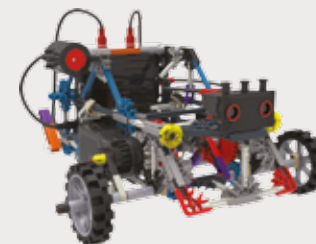
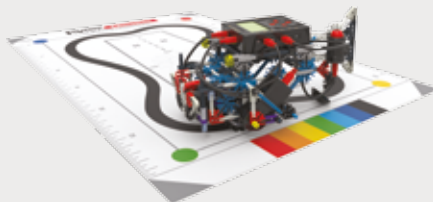
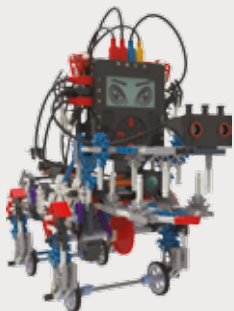
- Build, Program, CONTROL
- Free downloadable software
- Control Box connects to motors & various sensors
- 5 Progressive lesson plans

DOG

LINE TRACKER

SEARCH AND RESCUE

CAR BOT





FOR FULL DETAILS ON OUR PRODUCT LINE AND TO REVIEW ALL OUR RESOURCES AND KEY RETAILERS VISIT OUR WEBSITE WWW.KNEXEDUCATION.COM



PRE-K



ELEMENTARY



MIDDLE/HIGH SCHOOL

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