

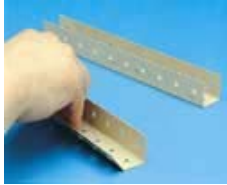
GENETRON ENGINEERING CORPORATION PTE LTD

1 Rochor Centre # 02-604 Singapore 180001. Tel: 62952938 Email: sales@genetron.com.sg Website: genetron.com.sg

Introduction To Card System

Made from 100% recycled card
Pre-punched

Comes cut to size (various profiles)
Pre-scored



Pre-cut and scored and is easily formed into accurate and strong three dimensional components



Once folded the Card are simple to glue together with ordinary PVA glue which is quick and safe to use.



The Card beams, girders and bases are easily modified to create an infinite range of structural components.



Adding dowel axles and card wheels creates a simple rolling chassis from a Card base.

Individual Kits

(MINIMUM 10 PACKS, MIXED)

A range of individual models, each containing all the components and instructions to build one model. (Optional: 2xAA Batteries, PVA glue, Scissors and a rule)

Vehicle



15545 Roadster

Classic sports car design powered by a low voltage simple electric motor with additional power provided by integral reduction gears. The car is 'remote controlled' and can be made to go forwards, stop and reverse.



15540 Fan

Build a propeller car from pre-punched Tech-Card, add a personalized body shell, connect a battery and then see it go.



15561 Land Yacht

Harness the power of air with this easy to build TechCard model which can be made into a land yacht or balloon powered car.

Pneumatic Model



15550 Tipper Truck

Build this fascinating tipper truck and see the power of pneumatics in action. Comes with all of the components.



15585 Pneumatic Earth Mover

This realistic model looks and behaves like a real earth mover and uses syringes to facilitate the pneumatic articulation. The pack includes TechCard, full building and assembly instructions, decals, syringes and tubing.



15583 Pneumatic Robot Arm

Build this pneumatic powered robot grabber arm. By pressing or pulling the control syringes the arm can be made to lift and grab. This kit uses 4 syringes to facilitate movement. The pack includes TechCard, full building and assembly instructions, syringes and tubing

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Classroom Kits: Build-It Kit, Power-It Kit and Control-It Kit.

Kits includes all the components needed and teacher & pupil photocopiable worksheets.

15526 Build-It Kit

This kit explores simple structures and mechanisms such as wheels axles, hinges, cams and linkages.

20 Exciting Models - two each of ten different designs.

The Build-it Kit models:

Land Yacht, Flying powered fairground ride, Working windmill, Working draw-bridge, Hungry frog, Working scales, Up and over fair ground ride, Pull-cord powered merry go round, Working crane and Flying bumble bee.



15528 Power-It Kit

This kit explores more sophisticated Mechanisms such as gears and pulleys and introduces power including electric motors and power from hydraulics and pneumatics systems.

20 Simulating Models - two each of ten different designs.

The Power-It Kit models:

Two speed mixer, Elastic band powered wind-up toy, Pneumatic tipper truck, Two to one hoist, Pneumatic caterpillar, Electric racing car, Electric propeller powered car, Vehicle with rack and pinion steering, Pneumatic fork lift truck and A variable speed gearbox.



15529 Control-It Kit

This kit featuring an element of control (electrical and pneumatic) in the form of simple switch mechanisms including switches operated by movement, pressure and magnetism.

10 Models - one each of ten different designs

The Control-It Kit Models:

Pneumatic grabber arm, Gondola cable arm, Electric loco, Pneumatic loading shovel, Table top flyer, Builder's hoist, Overhead crane, Pressure sensitive alarm, Magnetic burglar alarm and Bumper car



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TechBots Kits: TechBot1, TechBot2, TechBot3, TechBot4

Four ingenious robots which performs a different robotic function. Each robot demonstrates important principles in an exciting and memorable way that guarantees to engage and inspire pupils. The TechBots provide a great starting point for pupils to design and build their own robots.

MINIMUM ORDER 5 PACKS, MIXED



15599 TechBot1

Jaws gnash as he marches forward eating everything in his path. Put a small object in his way and it's gone in a flash...don't stand too close! Techbot 1 has large drive wheels powered by an electric motor and a cam mechanism to power jaws.



15601 TechBot2

Techbot 2 is on his way - stand clear as he shunts forwards lifting his huge feet as he does so, climbing over uneven surfaces and obstacles that get in his way. He has two mechanical feet connected to an electric motor by two rotating cams.



15603 TechBot3

Clever and cunning is TechBot 3 as he swings away from captivity. Place his in a maze and he will run around the walls looking for an escape hole. No maze can hold him for long! Powered by an electric motor, TechBot 3 uses an off centre carousel top to rotate against when it hits anything moveable



15605 TechBot4

Tell him what to do and he will obey. Techbot 4 is completely obedient and can be programmed to go straight, turn left and to turn right. He has two front drive wheels powered by electric motor and rear tiller wheel.

New TechCard Plus MINIMUM ORDER 5 PACKS, MIXED

TechCard Plus combines all the design and structural features of TechCard with the added bonus of being able to build models quickly without the need for gluing. New, repositionable plastic rivets can make building extremely fast and act as pivots. TechCard plus also introduces many new components including tyres, steering, axle plugs, safety propellers and contact springs all to help extend the building possibilities. All our kits are Curriculum focused and contain teachers' notes.

- Starter Kits:** Curriculum focused - **Makes 3 models** - Contains teachers' notes
Reusable components - No gluing - Made from 100% recycled card
Pre-punched - Pre-scored



15748 Robots



15747 Simple Vehicles



15749 Pneumatics

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15723 Simple Structures



15722 Simple Electricity



15721 Simple Mechanisms



15720 Power Vehicle

Curriculum Packs **MINIMUM ORDER 5 PACKS, MIXED**

Resource packs for Design and Make Assignments containing key structural and mechanical elements. Components can be assembled in endless variations and easily combined with other materials to encourage and individual approach to problem solving and design.

- Every Pack Curriculum focused - **Every Pack makes 30 models**
- Every Pack contains teachers' notes - Every pack has reusable components

Year 1



15724 Moving Pictures
Simple Slider & Lever Mechanisms



15725 Playgrounds
Playgrounds & Framework Structures



15726 Homes
Homes, Buildings & Stable Structures

Year 2



15727 Vehicles
Vehicles with Multiple Wheel & Axle Options



15728 Winding Up
Winding Mechanisms & Cranks

Year 3



15729 Moving Monsters
Simple Pneumatic Systems & Control

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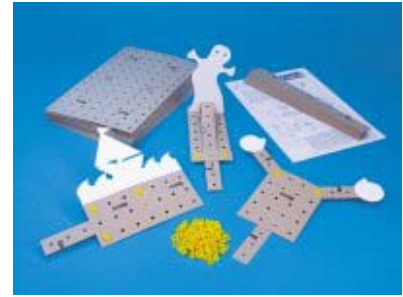
Year 4



15731 Alarms
Simple Electronic Control & Circuits



15732 Lighting It Up
Simple Circuits & Lighting Devices



15730 Story Books
Linkage & Lever Mechanisms

Year 5



15733 Moving Toys
Cam Mechanisms & Control

Year 6



15734 Shelters
Advanced Framework Structures



15735 Fairgrounds
Electrical Control, Motors & Pulleys



15736 Controllable Vehicles
Electrical Control with Powered Vehicles

Top-Up Packs

MINIMUM ORDER 5 PACKS, MIXED

Loose components are available in separate resource packs. These are especially useful for teachers taking a 'design and make' approach to technology or where specific topics are being taught. For example, a teacher wanting pupils to investigate pulleys can purchase a pack of Card System and a pack of pulleys so pupils can devise models to demonstrate their use. A sheet of notes is included with each pack.



5mm dia. centre hole, Multi-coloured with pre-drilled centres. Ideal for all kinds of project work.

- 95650 Red 30mm dia. 100/pk
- 95651 Red 40mm dia. 100/pk
- 95653 Yellow 50mm dia. 100/pk
- 95657 Blue 60mm dia. 100/pk



95659 Cam 40mm dia. 100/pk



**14013 5mm Split Axle
200mm long 100/pk**



This product was designed for cutting plastic and paper axles up to a maximum of 5mm dia.

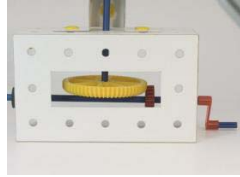
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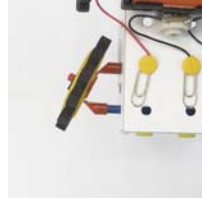
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15737 Chassis 40/pk



15738 Project Base 40/pk



15739 Steering Mechanism 100/pk

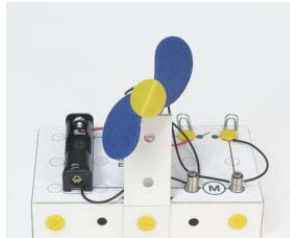


15740 Rivet 200/pk



80 per pack

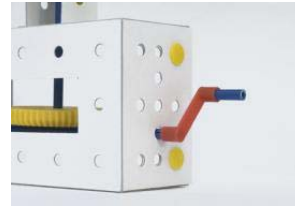
15741 Off Road Tyres
15742 Smooth Tyres



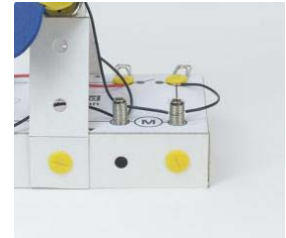
15743 Propeller 50/pk



15744 Axle Plug 200/pk



15745 Crank 100/pk



15746 Springs 100/pk

Quick Builds Packs

MINIMUM ORDER 5 PACKS, MIXED

Quick Builds have been designed to offer teachers and pupils a means of carrying out "design and build: projects with ease." All projects are made to encourage students hands-on approach and includes all of the components, decorative elements and instructions to make 10 functional models. Students should be encouraged to decorate and personalize their models when completed a part of the design process.



95638 Creeping Caterpillar 10/pk

Uses pipe cleaner axles and cotton bobbin wheels to produce a simple pull along toy.



95649 Monster Mash 10/PK

Make scary monsters move using syringe powered pneumatics and levers. A project that offers the chance to investigate pivot points and stable structures. Focus - Pneumatics with levers.



95639 Leaping Frogs 10/PK

Use alongside familiar rhymes such as "5 Speckled Frogs" or to make number games. Elasticated treasury tags give them "leapfrog power" propulsion! Teachers Tip- Elasticated treasury tags of different lengths will give a different leap... a perfect way to encourage discovery through experimentation.



95641 Incy Wincy Spider 10/PK

This simple to build model demonstrates how a winch works, at the same time as encouraging language development. In the process children will discover the effects of kinetic and potential energy, as well as the skills needed to make stable structures.

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95642 Pull Along Toy
10/pk

Using the small test boxes is a quick and easy way to make fixed wheel pull along toys. The design element is developed as the base is turned into a colourful character. Focus - fixed and free turning wheels - links to KSI QCA suggested project.



95643 Wind-Up Carousel
10/pk

Pull the string and watch the fun begin. Two purpose made tubes of the precise diameter (one slightly smaller than the other) create a smooth bearing at the centre of this terrific model. The graphics provided can be coloured in or 3D characters produced to complete the design. Focus - stored energy



95644 Pull Along Toy 2
10/pk

A number of different pull along toys can be made and compared, tested down a ramp or use for telling stories.



95651 Fun With Roundabouts
10/pk

The small 10-toothed motor spindle gear turns the large 160-toothed roundabout gear. The fairground horse or other characters can be made from the 'model magic' which air-dries to a finish that can be painted and decorated to complete this colourful roundabout. Focus - Gear ratios. (Links to the KS2 QCA unit on Fairgrounds).



95652 Buzz Bags
10/pk

Hug the bag (full of your favorite stories) and it will buzz - asking you to unpack it and share it with a friend. Props, finger puppets and other story telling aids can be made and stored in the bag. Can also be used to develop story writing.



95647 Talking Monsters
10/pk

Children can print or design different 'skin' effects as they investigate the characteristics of their dynamic dinosaur! Focus - Pneumatics to open and close the dinosaur's mouth (links to 'moving monsters' a suggested QCA KS2 project).

Carry-All Project Packs

Carry-All Project Packs contain sufficient materials to build 30 models.

They include support materials for the students and teachers and are designed to offer good differentiation and numerous possible outcomes.



95537 Wild Things Class Project Pack

The complete solution for investigating Pneumatic Systems in the primary classroom. Sufficient equipment for 30 children to carry out a range of focused practical tasks followed by a pupil design and make assignment with 4 differentiated options to choose from. Included are: Large and Small test boxes, syringes, tubing and full instructional guide for the teacher. The guide includes a wealth of material including: activities to try, things to talk about, project ideas, cards and tips and techniques for successfully building the pneumatic models Does not include decorative resources.



07378 Wild Things Support Materials

The superb and detailed support material in the Carry-All packs can be purchased separately and keyed to support the D & T scheme or fit in with your own scheme of work.~ Each pack of notes contains:
8 beautifully illustrated 'Let's Find Out About' cards detailing focused tasks, 8 design and make cards with a gallery of ideas to offer pupils alternative outcomes
A supporting Teachers' Guide is provided to give curriculum guidance. A fax back sheet makes re-ordering materials simple. All of these packs are keyed to the Design Technology Scheme of work.



95538 Animated Characters Class Project Pack

Everything needed to study linkages, mechanisms and movement and enough components to build 30 working mechanical models.



07379 Animated Characters Support Materials

The superb and detailed support material in the Carry-All packs can be purchased separately and keyed to support the D & T scheme or fit in with your own scheme of work.~
Each pack of notes contains:
8 beautifully illustrated 'Let's Find Out About' cards detailing focused tasks
8 design and make cards with a gallery of ideas to offer pupils alternative outcomes
A supporting Teachers' Guide is provided to give curriculum guidance
A fax back sheet makes re-ordering materials simple
All of these packs are keyed to the Design Technology Scheme of work.



07380 Thinking With Toys Support Materials

95539 Thinking With Toys Class Project Pack

Everything needed to make 30 mechanical toys all based around a fantastic pre-punched card box. This project is a real winner with literally hundreds of pupil designed outcomes and fun/fantasy models that work every time...and a project that gives every pupil the opportunity to make something unique and special. Includes cams, crank axles, small and large test boxes, teachers guide, with background build instructions, technical vocabulary and pupil D&T assignments. Does not include decorative resources.

The superb and detailed support material in the Carry-All packs can be purchased separately and keyed to support the D & T scheme or fit in with your own scheme of work.~

Each pack of notes contains:

8 beautifully illustrated 'Let's Find Out About' cards detailing focused tasks

8 design and make cards with a gallery of ideas to offer pupils alternative outcomes

A supporting Teachers' Guide is provided to give curriculum guidance

A fax back sheet makes re-ordering materials simple

All of these packs are keyed to the Design Technology Scheme of work.



07381 Fairground Support Materials

95540 Fairground Fun Class Project Pack

Making motorized models can be one of the most difficult aspects of primary D&T. However, in this pack we have put together a range of matched and compatible components including motors, motor holders, gears and battery holders to make 30 successful motorised fairground rides. A focused practical task helps develop the required knowledge and understanding of using gears and pulleys. The teachers' guide explains the terminology and gives appropriate hints and tips for using the components. Ferris wheels, roundabouts that go fast or roundabouts that go slow for toddlers, fairground signs and whizzing waltzer are just some of the models your children can enjoy. Does no include decorative resources.

The superb and detailed support material in the Carry-All packs can be purchased separately and keyed to support the D & T scheme or fit in with your own scheme of work.~

Each pack of notes contains:

8 beautifully illustrated 'Let's Find Out About' cards detailing focused tasks

8 design and make cards with a gallery of ideas to offer pupils alternative outcomes

A supporting Teachers' Guide is provided to give curriculum guidance

A fax back sheet makes re-ordering materials simple

All of these packs are keyed to the Design Technology Scheme of work.

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Carry-All Range

Carry-All Range includes decorative resources and support materials for Carry-All Packs Series

95541 Carry-All Decorative Resources Pack

Carry-All packs do not include any decorative resources, so I have sourced everything you need and have included it here in one bumper crate.

- 3 x honeycombed paper assortment
- 1 x sequins for star assortment 250g
- 1 x Pk100 corks
- 1 x bumper pack foam hands and feet
- 200 x assorted foam shapes
- 1 x giant bag collage feathers
- 100 x animal shaped pom poms
- 100 x standard pom poms
- 100 x giant pipe cleaners - colour mixed
- 100 x giant pipe cleaners fluorescent
- 100 x wiggly eyes round
- 100 x wiggly eyes oval
- 1 pack remnant yarn
- 6 x rolls of safari animal paint - Giraffe, Tiger, Zebra, Cheetah, Alligator and Snake
- 6 x rolls of safari animal print bordette - Giraffe, Tiger, Zebra, Cheetah, Alligator and Snake
- A selection of holographic paper



Test Boxes: MINIMUM ORDER 5 PACKS, MIXED

Having watched students enthusiastically making models, only to be disappointed when they didn't work Test Boxes helps them to overcome this problem.

Test Boxes are pre-cut and pre-punched rigid card boxes, which have all the hole centres in alignment and the correct sized holes arranged in the correct spacing for the gears and pulleys. Students can build literally thousands of different mechanical models with an excellent change of success.



15702 Small Test Box 10/pk

This small strong cardboard test box has been specially designed to enable a range of investigations to be carried out. The pre-punched holes are compatible with the GIGO range of gears. Together with the paper sticks or dowel, children can investigate gearing up and gearing down and the purpose of an idler gear, as well as producing motorised models. The small test box is also an ideal chassis for a buggy. The spacing is also compatible with the large test box, making these two systems inter-changeable. Size: 12.5 x 10 x 2.7cm. Pk 10



15700 Large Test Box and Axle Guide

The large test box and axle guide has a range of pre-punched alignment holes, helping children to make successful cam, gear and motorised models. The 5mm dowel and paper sticks turn freely in the holes. The axle guide gives additional strength and helps to keep the vertical axes running smoothly. Size: 20 x 13.1 x 10.2cm



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15704 Flat-Pack Model Box 10/pk

These strong cardboard model boxes have a smooth white surface enabling children to add their own decoration and graphics. They can be used for a variety of activities including making cam toys, roundabouts and motorised models.

Size: 21.5 x 13 x 12.2cm. Pack 10

TechCard Resources: MINIMUM ORDER 5 PACKS, MIXED



15518 Motors Pack

10 x economy motors,
10 x sticky fixers,
10 x battery holders,
10 x battery snaps.



15512 Wheels and Axles Pack

20 x 300mm wood axles,
100 x 30mm card wheels and 100 x
50mm card wheels, 40 plastic wheels



15514 Gears Pack

80 assorted plastic gears: 20 each of
10, 20 and 40 tooth gears and
20 x 300mm wood axles



15516 Pulleys Pack

48 pulleys - 12 each of 20, 30, 40 and
50mm diameter, 20 x 300mm wood
axles.



15520 Pneumatics Pack

20 x 5ml syringes,
20 x 20ml syringes and
10m plastic tubing.



07306 Teachers Guide Book

This 29 pages guide comes with
numerous illustrations to show just
how easy it is to create working

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15591 Techcard Beams 40/pk

Can be used together with the flat-pack boxes to create up-rights for a winding mechanism or with the pre-punched boxes to make a 'cotton bobbin' cam model. Pre-scored and drilled. Size: 3 x 10 Beams. Pk 40



15593 Techcard Girders 40/pk

These 'L' shaped strips can be folded to create a 'lip' round the edge of a sheet of TechCard to make a 'Maze game' or cut into brackets for joining or hinging materials. Pre-scored and drilled. Size: 2 x 10 Girders. Pk 40



15595 Techcard Strips 40/pk

These single pre-punched strips can be used to make levers and linkages. Quick and easy to use, especially for younger children who are still developing accuracy with their hole punching skills. Pk 40



15589 Techcard Bases 40/pk

These small trays are very adaptable. They can be used for a 'mini maze' project or to make a compartment to hold small components. Size: 5 x 7 Bases. Pk 40



15587 Techcard Sheets A4 40/pk

Pack of pre-punched A4 TechCard sheets. Can be used together with the TechCard lever strips for investigating 'moving pictures' or as a strong base for 'marble mazes' and storyboards. Pk 40



15510 Techcard Mixed Pack

Pack contents: 160 pre-cut and pre-scored TechCard sheets (40 beams, 40 bases, 80 girders).



15597 A4 Colour Card Sheet Pack 40/PK

5 x 8 colours

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Pneumatics

MINIMUM ORDER 10 PACKS, MIXED



These connectors, together with the PVC tubing, allow one syringe to be used to operate two other syringes. Useful for making 'robotic' arms or a working jaw.

87189	2-way	Straight Connector	25/pk
34051	3-way	T-Connector	25/pk
34053	4-way	Cross Connector	25/pk



Useful for making balloon powered vehicles.

64091	Round Balloons	100/pk
64094	Long Balloons	100/pk



Plastic Syringe Tubing

This clear PVC tubing has a 3mm internal diameter, making it a tight fit on the syringes. Can be used together with the syringes to make either pneumatic or hydraulic systems. 25m roll

64098	5M roll
41013	25M Roll



Plastic Syringes

Come in four sizes, 2ml, 5ml, 10ml and 20ml. Used together with 6mm diameter tubing (3mm internal diameter) to create simple pneumatic systems. The rubber seal gives an effective push-pull action. Can also be used for work on hydraulics.

64401	20ml	10/pk
64399	10ml	10/pk
64397	5ml	10/pk
64473	2ml	10/pk



As the name implies these scissors are ideal for cutting materials like thick card and plastic tubing.

05561 Utility Snips