

NEW THE ORIGINAL KELVIN® HYPERLOOP TRAINER



Scan Code For A Video



Bring the Imagineering of Elon Musk into your Classroom

KELVIN® Hyperloop – Elon Musk Concept

KELVIN® has created an original learning system that allows students to design, model and test vehicles in a reduced pressure Hyperloop tube. The track and tube measures eight feet long. A vacuum is used to reduce the pressure within the tube while the vehicles travel on the track. A compressor provides the air power to move the vehicles down the track.

Students will integrate math, science and technology concepts by designing pods, experimenting with different air pressures within the tube and air pressure powering the vehicle.

KELVIN® Hyperloop Starter Set

The Starter Set comes with a Hyperloop Vehicle Launching System, a Single Lane Next Generation Maglev Track (8 ft. long), a clear Hyperloop Tube (5 in. dia. x 8 ft. long), Hyperloop Vehicle Bulk Pack of [10] Kits and instructions.

Not included but required are a vacuum and compressor. Additional optional items (not included) are the KELVIN® Motion Timer, Sensor Stand and Sensor Holders – see below #842423 for complete system. **Please note, oversized shipping charges of \$100 apply.**

842421 Starter Set with Maglev Track, Hyperloop Tube and Vehicle Bulk Pack **\$1,495**

KELVIN® Hyperloop Trainer

The Hyperloop trainer includes: a Hyperloop Vehicle Launching System, a Next Generation Single Lane Maglev Track (8 ft. long), a clear Hyperloop Tube (5 in. dia. x 8 ft. long), KELVIN® Motion Timer with Sensor Cables, Sensor Stands, Compressor, Vacuum, Hyperloop Vehicle Bulk Pack of [10] Kits and instructions. **Please note, oversized shipping charges of \$150 apply.**

842423 Starter Set PLUS Compressor, Vacuum, Motion Timer & Sensor Setup **\$1,895**



As Low As

\$9.95

Per Student

KELVIN® Hyperloop Experimental Vehicle Kit Bulk Pack

Enough materials to build and design your own hyperloop vehicle.

842422 Bulk Pack of 10 **As Low As \$9.95 Per Kit \$99.50**



ELON MUSK, the founder of SpaceX, Tesla Motors and SolarCity is the world renowned entrepreneur who focuses much of his creative efforts on the environment through

sustainable energy production and consumption. His newest vision involves the production of high-speed transportation systems using reduced-pressure tubes in which passenger pods ride on a cushion of air powered by induction magnets and air pressure.

Are you ready for a fresh approach to maglev activities?

Tracks work with KELVIN's Variable Power Supplies



One Lane Track

Dual Track



KELVIN® The NEXT Generation Maglev Tracks™, Single and Double Lanes

Build the next generation in maglev modeling. The new keel design base eliminates the need for side rails on the track. This track design change allows students to easily see the levitating effects of the magnets and increases interest in the activity. The design change also allows for wider body design and eliminates the problem of magnets applied beyond the edge of the vehicle base wedging the vehicle in the guide way.

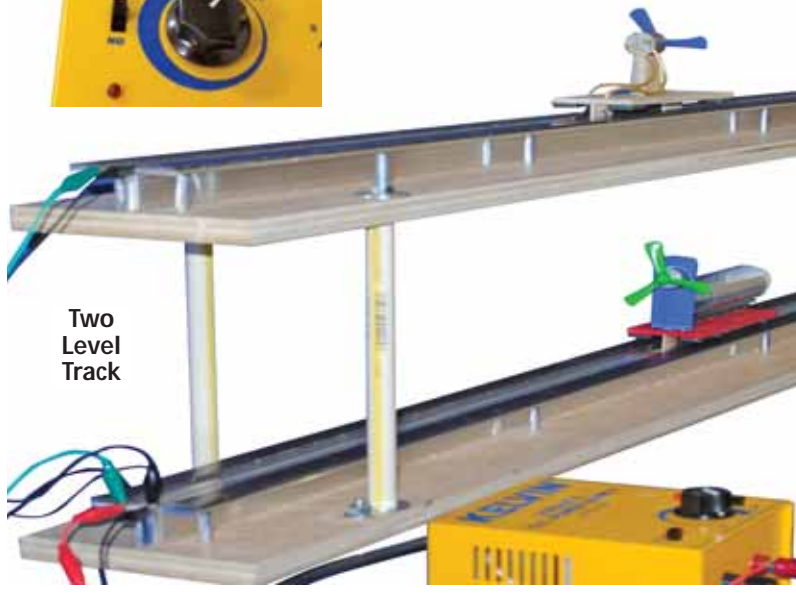
Power can be easily picked up from the track. The included voltage meter displays the voltage being applied to the track rails. The bumper at the end of the track prevents vehicles from flying off the guide way and getting damaged.

- 842359 Single Lane Maglev Track w/ Volt Meter, Assembled, 8ft. L – \$20 Oversized Shipping Charges Apply **\$175**
- 842360 Dual Lane Maglev Track (side by side lanes), Assembled, 8ft. L – \$20 Oversized Shipping Charges Apply **\$285**
- 841051 Kel-KPS™ #100 Variable Speed Power Supply **\$125**

KELVIN® The NEXT Generation Maglev Track™ – Two Levels!

The same keel design guidance and other innovation used in our single and two lane tracks are incorporated into the two level track system (does not include voltage meter). This system is a real attention grabber. The track includes leveling feet and bumpers at the end of the guide way. Watching head to head vehicle performance from a side view helps students observe design differences and flaws helpful in optimizing their design solutions.

- 842364 Two Level Maglev Track (layered lanes), Assembled, 8ft. L – \$40 Oversized Shipping Charges Apply **\$325**
- 841051 Kel-KPS™ #100 Variable Speed Power Supply **\$125**



Two Level Track

KELVIN® The NEXT Generation Maglev Racer™ Vehicle Keel Kits

As Low As **\$3.30** Per Student

Add on a cardstock or foam vehicle design to the platform base.

Basic Vehicle Keel Kit
Kit comes with: [6] magnets, chassis and keel material.

- 842361 Kit **\$4.95 or \$4.50 ea./10+**
- 842366 Bulk Pack of 30 Kits **\$99**

Advanced Vehicle Keel with Power From Track Kit
Kit comes with: [6] magnets, chassis and keel material in addition to a foam block, motor, propeller and wire.

- 842365 Kit **\$7.45 or \$6.85 ea./10+**
- 842367 Bulk Pack of 20 Kits **\$115**

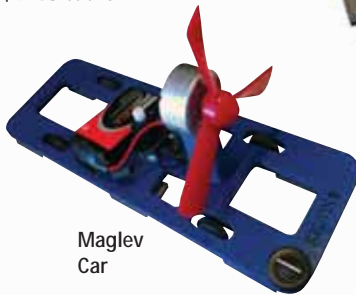
Build a revolutionary maglev car that travels from road to maglev! On the road it travels on micro wheels. When the maglev goes over the magnetic field it hovers and the wheels are lifted.

Any Existing Maglev Car Can Travel From Road to Maglev Track™

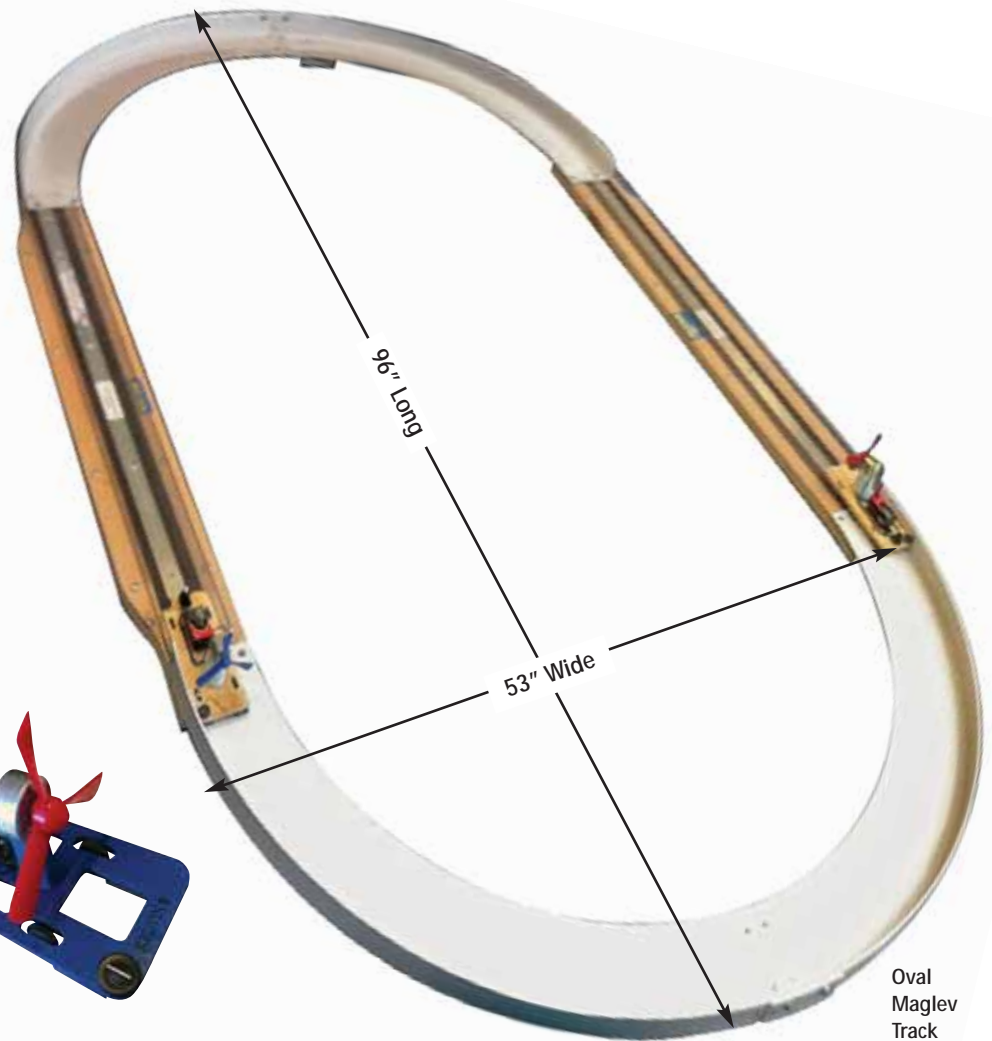
KELVIN®
From Road to Maglev™
Oval Track

Car moves in a circular motion around the track. The complete track (#842279) features an 8 ft. long oval track made of two straight magnet sections for maglev and four curves (for the two curved ends). **If you already have a straight maglev track, you can add two 1/2 plastic oval tracks (#851921) to it to create your own oval maglev track. 9V battery optional.**

- Complete Oval Track - Requires Some Assembly
842279\$345
- 1/2 Plastic Oval Maglev Track (2 Needed for Oval)
851921\$99.95
- Maglev Car Kit
842280\$9.95 or \$9.45 ea./10+
- Maglev Car Bulk Pack
for 10 Students
842281\$89.95
- 9V Battery
220019\$2.35 or \$1.85 ea./10+



Maglev Car



Oval Maglev Track



KELVIN® From Road to Maglev™ Straight Track

When the maglev reaches the end of the track it hits a switch that changes polarity and send the vehicle back in the other direction. The 8 ft. long straight track features a magnet section for maglev and a road section. 9V battery optional.

- 842282 Complete Straight Track - Assembled\$145
- 842286 Assembled/Tested Maglev Car with Reverse Switch\$75
- 842283 Maglev Car Kit with Reverse Switch\$11.95 or \$10.95 ea./10+
- 842284 Maglev Car w/ Reverse Switch Bulk Pack for 10 Students\$99.95
- 220019 9V Battery\$2.35 or \$1.85 ea./10+



Can Be Extended to 16 Feet Long!

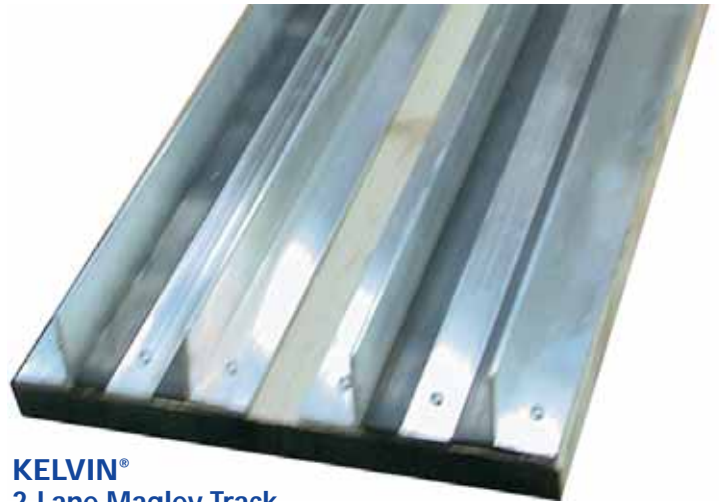
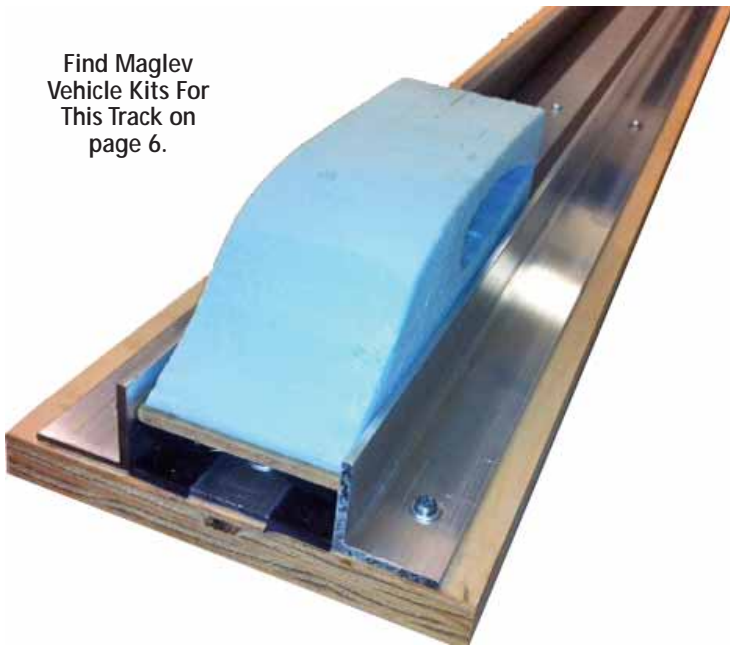
Maglev Tracks with Aluminum Sides & Electric Propulsion

KELVIN® Maglev Racer™ Track with Aluminum Side Rails & Electric Propulsion!

Design and build a maglev vehicle and evaluate it using the 8 ft. long, pre-assembled maglev track (or add another track to extend it to 16 ft.). Includes platform vehicle, wood base, self-adhesive magnetic strips, flat aluminum center rail and L-shaped aluminum guide rails. Electric power can be carried to the vehicles through the metal rails. Requires a power supply (#841051). Grades 5-12. ★ \$20 Oversized Shipping Charges Apply

840445 Assembled Track, 8 ft. Long ★\$135 841051 Kel-KPS™ Var. Speed Power Supply\$125

Find Maglev Vehicle Kits For This Track on page 6.



KELVIN® 2-Lane Maglev Track

Only KELVIN® can bring you this low price and innovation! The side-by-side track features compact size but maximum evaluation area. Students are able to evaluate maglev car designs two at a time; speeding up the entire process. Assembled track measures 8 feet long. The electric power can be carried to the vehicles through the metal rails. Use KELVIN® Kel-K.P.S. #100 Power Supply (#841051). ★ \$20 Oversized Shipping Charges Apply

841209\$185

Maglev Track Connector

Connect two 8 ft. long tracks for a total of 16 ft.

840451\$26.95

Kel-KPS™ #100 Variable Speed Power Supply

Energize maglev tracks #840433, #840445 and #841209.

841051\$125



Maglev Testing Station

Single lane maglev track measures 2 feet long.

842091 Assembled\$49.95 or \$44.95 ea./3+

Portable Maglev Track

Single lane maglev track measures 4 feet long.

842092 Assembled\$89.95 or \$84.95 ea./3+

841051 Kel-KPS™ Var. Speed Power Supply\$125

This kit ONLY works with our Electric Propulsion MAGLEV RACER® tracks



KELVIN® Advanced Maglev Kit

Plans not included. Students design and plan their own maglev vehicle. Includes magnets, toy motor, [2] propellers, balsa, foam blank, 4 x 2 in. tin plate, plastic base, wind power package, plastic straws, craft sticks, dowels, wire and a student workbook. Works with electric propulsion.

840666\$9.95 or \$9.65 ea./10+ or \$9.25 ea./25+

Ideal for
Young
Students

Find Maglev
Vehicle Kits For
This Track on
page TM6.



Beginning Maglev Track with See-Through Sides

KELVIN® Maglev Track with See-Through Side Rails

This 8 ft. long maglev track with see-through rails is ideal for young students to view magnetic levitation of the car in the track. They can also measure the height of the maglev's elevation as they put more weight (passengers) on it. The maglev car can be designed to be powered by a sail and a box fan, propeller and a rubber band or using an on-board battery.

NOTE: The railing can't be electrified since it is plastic. Works with maglev car kits #840665, #841295, #841294 & #840730 only (see page 6). **Oversized Shipping Charges of \$20.00 Apply.**

#841296

Track with clear sides.
Assembled, 8 ft. Long.

\$115 + Shipping

Advanced Maglev Track with See-Through Sides & Electric Propulsion



KELVIN® Maglev Track with See-Through Side Rails & Electric Propulsion!

KELVIN's Maglev Track with see-through side rails allows students to see the levitation of the vehicle while it is on the track and to run vehicles with electric motors. Although it is made of plastic, this track can be electrified with KELVIN's power supply (#841051). It also offers them the ability to measure the height of the vehicle, above the track, as cargo is added.

Students will plan, build, test and modify a maglev vehicle with an electric motor. One challenge is to design a vehicle that will go the fastest when propelled by an electric-powered propeller while using different brush configurations: 2 or 4, side or upper. Another challenge for students is how to supply the needed electric power to the vehicles during the run on the road without batteries? **★ \$20 Oversized Shipping Charges Apply**

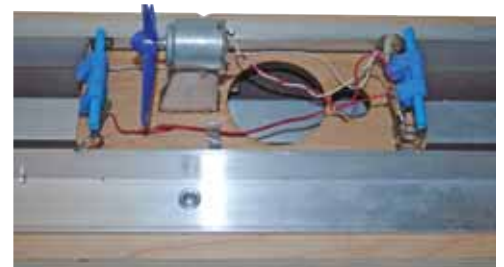
- 842137 Maglev Track w/See-Through Rails, 8ft. L (shown with maglev cars) ★\$145
- 842157 Maglev Track w/See-Through Rails, 4 ft. L ★\$99.95
- 842158 Maglev Track w/See-Through Rails, 2 ft. L ★\$59.95
- 841051 Kel-KPS™ #100 Variable Speed Power Supply\$125



KELVIN® Maglev Vehicle with Side Brushes Kit (shown above)

Pick up electrical energy from the sides of your electrified maglev tracks. This kit provides the materials needed to create a maglev vehicle that uses side brass brushes to energize the motor onboard your maglev vehicle.

842144\$12.95 or \$10.95 ea./10+ or \$9.95 ea./25+

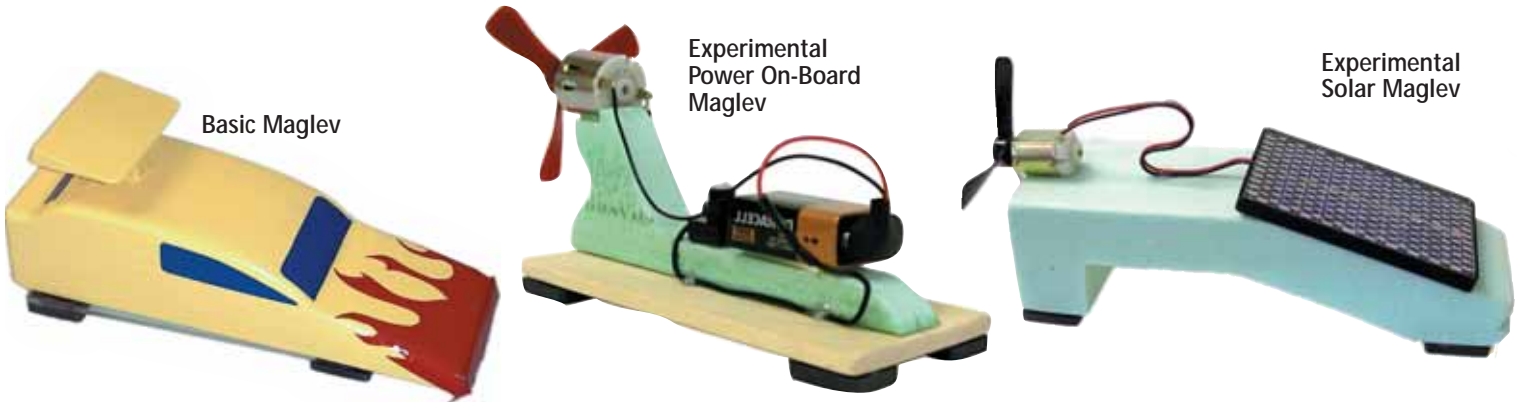


KELVIN® Maglev Vehicle with Spring Brushes Bulk Pack

Includes chassis, magnets, motors, propellers, wire, Kre8® parts and an assortment of spring type and sizes to build twenty maglev vehicles.

842341 Bulk Pack for 10\$79.95

These kits work with **ALL** of our **MAGLEV RACER®** tracks



KELVIN® Basic Maglev Kit

No plans are included with this kit. Students must design and plan their own maglev vehicle. Includes foam, magnets, wind power package, straws, craft sticks, dowels, wire and a student workbook.

840665\$5.95 or \$5.45 ea./10+ or \$4.95 ea./25+

KELVIN® Experimental Power On-Board Maglev Kit

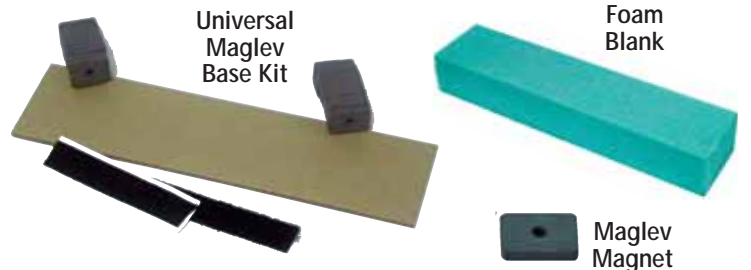
Kit is used to power your maglev car with a battery on-board. Works with both tracks. Incl. foam body, motor, propeller, magnets, battery holder, wires, guide and switch. Requires 9V battery.

841294\$6.45 or \$5.95 ea./10+ or \$5.45 ea./25+

KELVIN® Experimental Solar Maglev Kit

No plans are included with this kit. Students determine which design makes the most efficient solar maglev. This kit includes: [2] types of propellers, solar cell (1000mA), [2] toy motors, a foam blank and magnets.

841295\$9.95 or \$8.95 ea./10+ or \$7.95 ea./25+



KELVIN® Universal Maglev Base Kit

You can attach student designs to this standard maglev base with velcro strips.

- 840730 Kit\$5.95 or \$5.45 ea./10+ or \$4.95 ea./25+
- 841412 Bulk Pack for 100 StudentsAs Low As \$1.45 Per Kit \$145
- 841114 Foam Blank, 2-1/2" W x 2" H x 8" L., 10/pkg.\$6.95
- 640090 Maglev Magnets, 1"x3/4"x3/16", 250/pkg.\$36.95 or \$32.50 ea./3+

KELVIN® Turbo Maglev Vehicle

Comes with Electric Ducted Fan, wood for the base, [6] magnets, wood strip and instructions.

841733\$25.95
or \$22.95 ea./3+

Electric Ducted Fan
6 to 7.2 VDC, 2.6 to 3.4A,
54 to 72g thrust.

851370\$19.95



This kit works **ONLY WITH** our **ELECTRIC PROPULSION** Maglev Racer™ tracks.

KELVIN® Advanced Maglev Kit

Plans not included with kit. Students design and plan their own maglev vehicle. Includes magnets, toy motor, [2] propellers, balsa, foam blank, 4"x2" piece of tin plate, plastic base, wind power package, plastic straws, craft sticks, dowels, wire and a student workbook.

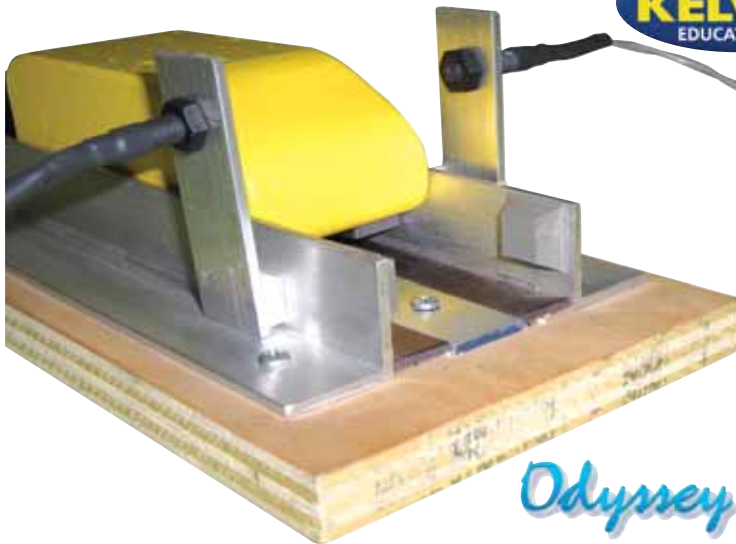
840666\$9.95 or \$9.65 ea./10+ or \$9.25 ea./25+



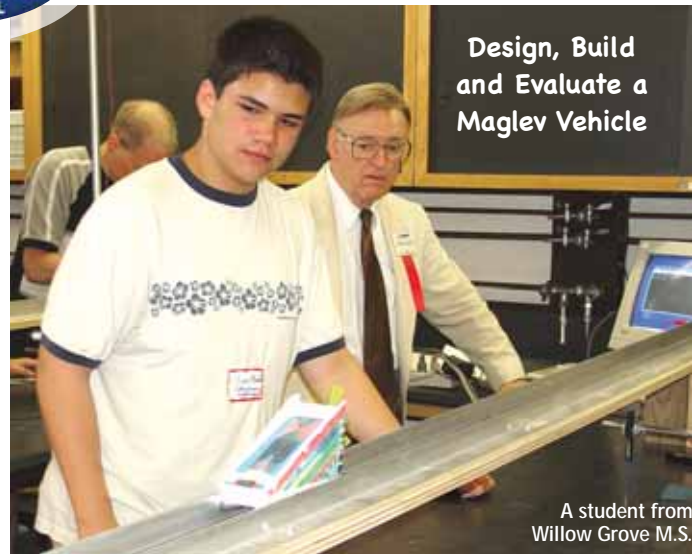
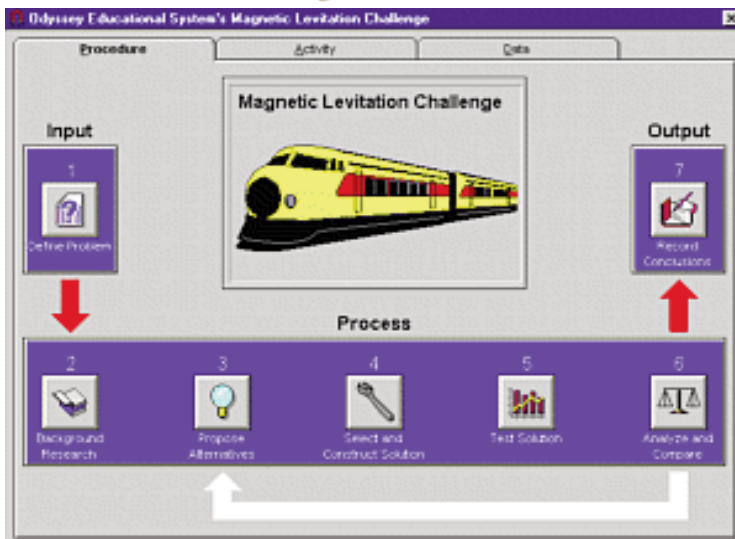
KELVIN® Shanghai Maglev Video

Join your host, **Avi Hadar**, as he rides the incredible Shanghai Maglev Train and tours the station. Stand beside him as the train accelerates to an amazing 265 miles per hour!

121699 DVD\$19.95



Odyssey



Design, Build and Evaluate a Maglev Vehicle

A student from Willow Grove M.S.

KELVIN® Maglev Vehicle Lab

This Lab Includes:

- [2] Maglev Racer™ Tracks, Assembled
- [10] Basic Maglev Kits
- [10] Advanced Maglev Kits
- Variable Power Supply
- Stop Watch
- Universal Maglev Sled Kit
- Balsa Strips
- Balloons
- Rubber Bands
- Velcro Tape
- Motors
- Propellers
- Magnets
- Soldering Irons
- Solder
- Glue Gun/Glue Slugs
- Scissors
- Rulers
- Snap Blade Craft Knives and Blades
- Self-Healing Cutting Mats
- Lesson Guide
- Workstation Sign
- [3] Competition Medals
- [30] Tech Excellence Certificates

The need to travel has provided our world with many types of transportation. Futuristic maglev vehicles that can travel at speeds of up to 300 mph on magnetic waves, without friction, have become a reality. Students will design, build and evaluate their KELVIN® Maglev Racer™ to learn about future transportation.

840768 Maglev Vehicle Lab - Grades 6-12\$995

KELVIN® Odyssey™ Maglev

This activity challenges students to design and construct a magnetic levitation vehicle that will travel successfully along a magnetic levitation track. This challenge enables students to design several different types of vehicles using a variety of materials.

The goal is to build a vehicle that will travel as fast as possible along a test track. The software will monitor and display the acceleration of the vehicle between each sensor. This will produce an acceleration curve for the entire test run. Final Speed will be displayed in feet per second and miles per hour. This challenge offers students an opportunity to understand the mystery of magnetic levitation.

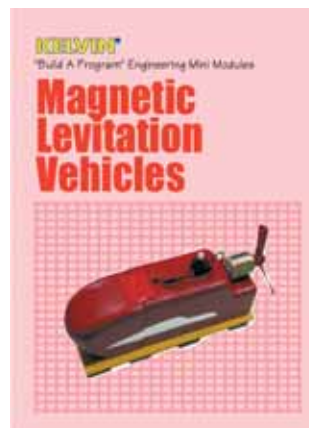
This Challenge Includes:

- Data Acquisition Interface NOW with USB Port
- USB Computer Cable
- Magnetic Levitation Challenge Software (Windows 98 sp2-XP)
- Maglev Test Track, 8 ft. long
- Cable Assembly with [6] Sensors to fit 8 ft. Track
- Teacher Manual
- Student Worksheets
- Workstation Sign

841608 Maglev Challenge\$845

841627 Maglev Challenge w/ PC, LCD Display, Software (Windows XP-7)\$1,995

Design and construct maglev vehicles that travel as fast as possible along a magnetic levitation track.



KELVIN® Magnetic Levitation I

Design, model and test a Maglev vehicle. Module includes: Maglev See-Thru 8' Track, Foam Cutter, Kel-Timer Jr., Maglev Magnets, Foam and DesignGrid Paper.

841644 Elem-MS\$745

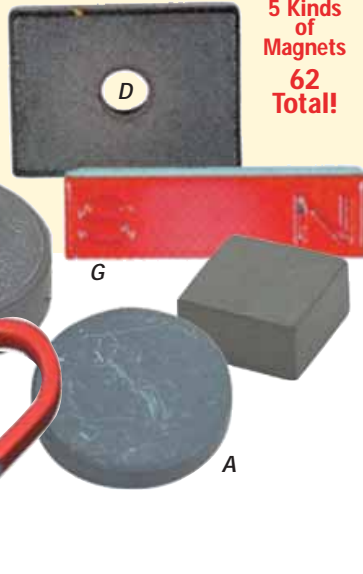
KELVIN® Magnetic Levitation II

Design, model, test a self-propelled Maglev vehicle. Module includes: [2] Maglev Tracks, Kel-Timer, 8' Aluminum Railings, Foam Cutter, Power Supply, DC Motors, 3" Propellers, Balloons, Nose Hook Propellers, Polystyrene, Maglev Magnets and DesignGrid Paper.

841645 MS-HS\$1,145

KELVIN® Magnets Pack

- [10] Maglev Magnets, Fig. D
 - [13] Disc Magnets, Fig. A
 - [13] Ring Magnets, Fig. B
 - [13] Cube Magnets, Fig. C
 - [13] Bar Magnets, Fig. G
- 841584, **\$9.95**
or **\$8.95** ea./6+



5 Kinds
of
Magnets
62
Total!

Disc Magnets [A]

STOCK #	DIA.in.	THICK in.	\$ 1-49	\$ 50-99	\$ 100+
640097	1/2	1/4	.22	.20	.19
640098	3/4	3/16	.17	.15	.14
640099	1	5/32	.30	.27	.25

Ring Magnets [B]

STOCK #	O.D in.	I.D. in.	THICK in.	\$ 1-99	\$ 100+
640096	1/2	3/16	1/8	.15	.13
640095	3/4	1/4	1/4	.22	.19

Ceramic Set of 6 Ring Magnets in Assorted Colors

640115 1-1/8 in. O.D., 3/8 in. I.D., 1/4 in. T **\$4.95** or **\$4.45** ea./10+

Rectangular Magnets [C] [D]

STOCK #	LENGTH in.	THICK in.	QTY.	\$ 1-99	\$ 100+
640100	1/4 x 1/4	3/32	1	39¢	35¢
640091	1/4 x 1/2	3/16	1	16¢	14¢
640090	1 x 3/4	3/16	250	\$36.95	\$32.50 ea./3+

Horseshoe Magnets [E]

STOCK #	W in.	T In.	TYPE	\$ 1-9	\$ 10+
282155	1	5/16	Alnico	4.95	4.45
640108	1-1/4	—	Ceramic	1.25	.95
282156	2	1/4	Alnico	6.95	6.45
640126	3-1/2 x 1-3/4	1/4	—	5.49	4.95
640112	8	1	Giant	6.95	6.45

Adhesive Magnet Strips [F] Use only 640102, 640103 & 640104 for Maglevs

STOCK #	W in.	T In.	LENGTH	N OR S?	QTY.	\$ 1-2	\$ 3+
640102	3/4	1/8	10 ft.	1 ea.	Pair	39.95	38.95
640103	3/4	1/8	10 ft.	1 North	1	19.95	17.95
640104	3/4	1/8	10 ft.	1 South	1	19.95	17.95
282170	1/2	—	10 ft.	No	1	4.95	4.45
640107	1/2	1/16	25 ft.	No	1	13.95	13.25
282172	1	—	10 ft.	No	1	7.95	6.45
282173	1/2	—	30 in.	No	48	39.95	38.95

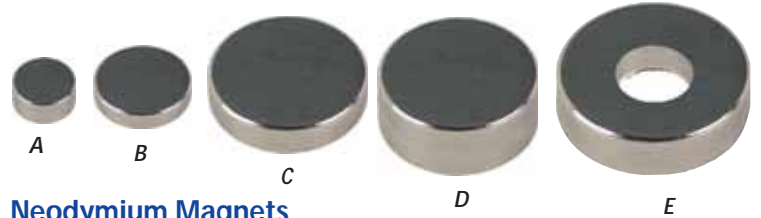
Super-Powerful Magnets!

STOCK #	DIA. (MM)	THICK (MM)	PRICE
640116	1/4	1/8	\$1.25
640118	3/16	3/16	49¢
640119	3/16	3/8	95¢
640120	1/4	1/4	59¢
640121	1/2	1/4	\$1.59
640122	3/4	1/8	\$2.25
640124	1	3/4	\$12.95
640123	1	3/8	\$6.39
640125	1-1/2	1/4	\$11.95



Rare Earth Magnets

These magnet discs are the most powerful made! Demonstrate phenomena that's impossible with ordinary magnets.



Neodymium Magnets

Neodymium magnets also contain Iron and Boron, making them some of the strongest magnets around.

- 640131 [A] 1/4 in. dia. x 1/4 in. thick Disc, 2/pkg. **\$1.25**
- 640127 [B] 3/8 in. dia. x 1/8 in. thick Disc, 4/pkg. **\$3.25**
- 640128 [C] 1/2 in. dia. x 1/8 in. thick Disc, 2/pkg. **\$1.95**
- 640129 [D] 1/2 in. dia. x 1/2 in. thick Disc, 1/pkg. **\$2.95**
- 640130 [E] 3/4 in. outer dia. x 1/4 in. inner dia. x 1/4 in. thick Ring, 1/pkg. **\$4.95**



Magnet Set

This set of [70] magnets includes [7] different types (10 of each type of magnet).

640106 **\$17.95** or **\$16.95** ea./3+



Loadstone

Actual product will vary.

Loadstones are useful for a variety of science experiments.

640113 **\$1.10** or **\$1.05** ea./6+



Magnet Hold-Its

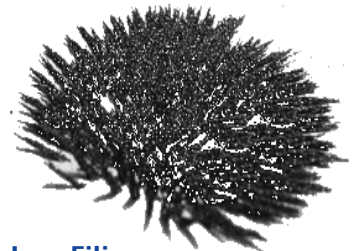
[40] magnets in assorted colors.

Disk Magnets – 1-1/8 in. dia. x 3/8 in. thick

282175 **\$39.95** or **\$37.95** ea./3+

Bar Magnets – 2-1/2 x 1 x 1/2 in.

282362 **\$39.95** or **\$37.95** ea./3+



Iron Filings

Demonstrate magnetic field patterns and separation technology. Ideal for general science experiments.

640111 Small Vial **\$1.95**

282176 Shaker Bottle, 12 oz. **\$6.95**