Mercury Redstone 4 Liberty Bell 7

1:34 Scale

Product Number: 1921
Length: 28.6 in. (72.6 cm)
Diameter: 2.05 in. (52 mm)
Recovery: Parachute
Projected Altitude: 200 ft. (61 m)
Recommended Engines:
C5-3, C6-3

MSRP $29.99

The Mercury-Redstone 4 was the second United States human spaceflight. Piloted by astronaut Virgil "Gus" Grissom, it launched on July 21, 1961.

Bull Pup 12D

1:9 Scale

Product Number: 7000
Length: 15.6 in. (39.6 cm)
Diameter: 1.33 in. (34 mm)
Recovery: Parachute
Projected Altitude: 675 ft. (206 m)
Recommended Engines:
A8-3, B4-4, B6-4, C6-5

MSRP $32.99

Black Brant II

1:13 Scale

Product Number: 7243
Length: 24.9 in. (63.2 cm)
Diameter: 1.33 in. (34 mm)
Recovery: Parachute
Projected Altitude: 1300 ft. (396 m)
Recommended Engines:
C11-3, D12-5, D12-7
Requires (Sold Separately):
3/16 in. Maxi™ Launch Rod
See Page: 83

MSRP $25.99

The Canadian Black Brant line of sounding rockets is one of the most successful launch vehicles ever flown. Since the late 1950s, several hundred Black Brant rockets have completed research missions for Canada and NASA.

Little Joe I

1:34 Scale

Product Number: 7255
Length: 17.6 in. (44.8 cm)
Diameter: 2.34 in. (59 mm)
Recovery: Parachute
Projected Altitude: 400 ft. (122 m)
Recommended Engines:
B4-4, B6-4, C5-3, C6-3, C6-5

MSRP $32.99

The Little Joe I booster was the first rocket designed solely for manned spacecraft qualifications and to measure critical parameters in flight.

The Estes Saturn 1B is a stunning 1:100 recreation of this rocket of the Apollo era. Designed to test Apollo hardware, it later served as crew launch vehicle for Skylab and the Apollo Soyuz Test Project. Build and launch this Master-Level kit for spectacular lift-offs and dazzling dual parachute recoveries.

Saturn 1B

1:100 Scale

Product Number: 7251
Length: 26.8 in. (68.1 cm)
Diameter: 2.62 in. (67 mm)
Recovery: Parachute x2
15 in., 18 in.
Projected Altitude: 1000 ft. (305 m)
Recommended Engines:
C11-3, D12-3, E12-4, E12-6

MSRP $76.99

In 1973, the last Saturn V was launched with a special payload – Skylab, America's first space station. Now you can build and fly your own 1/100 scale replica of that historic mission. Exciting launches up to 350 feet on an Estes F15-4 engine, and spectacular three-parachute recoveries.

Saturn Skylab

1:100 Scale

Product Number: 1973
Length: 41.25 in. (104.8 cm)
Diameter: 3.94 in. (100 mm)
Recovery: Parachute x3
(18 in. x 1, 24 in. x 2)
Projected Altitude: 400 ft. (122 m)
Recommended Engines:
E16-4, F15-4

MSRP $109.99

U.S. Army Patriot M-104

1:10 Scale

Product Number: 2056
Length: 21.3 in. (54.1 cm)
Diameter: 1.64 in. (42 mm)
Recovery: Parachute
Projected Altitude: 600 ft. (183 m)
Recommended Engines:
B4-4, B6-4, B6-6, C6-5

MSRP $20.99

The MIM-104 Pariot is a surface-to-air missile system used by the United States Army and several Allied Nations.

Check out this mini-engine powered version of the U.S. Army Honest John. The Estes Mini Honest John is a sport scale model, featuring a molded plastic nose cone and balsa fins, that's quick to build and fun to fly!

Mini Honest John

1:24 Scale

Product Number: 2446
Length: 11.75 in. (29.8 cm)
Diameter: 0.98 in. (25 mm)
Recovery: Parachute
Projected Altitude: 325 ft. (99 m)
Recommended Engines:
1/2 A3-2T, A3-4T, A10-3T

MSRP $13.99

An iconic weapon of the Cold War, the MGR-1 Honest John battlefield rocket could carry nuclear or conventional warheads.

The Estes 1:200 scale replica of this rocket portrays the Project Artemis Block 1 configuration, the first in the proposed series of heavy lift launch vehicles. Pre-assembled, pre-finished and ready to launch, this highly detailed model realistically reproduces the features and markings of America's next generation rocket for deep space missions.

The NASA SLS Comes Almost Ready-to-Fly Out of the Box!

Model features clear plastic fins to stabilize flights and can be used for display!

NASA SLS

1:200 Scale

Product Number: 2206
Length: 19.4 in. (49.3 cm)
Diameter: 1.64 in. (42 mm)
Recovery: Parachute
Projected Altitude: 350 ft. (107 m)
Recommended Engines:
C5-3, C6-3

MSRP $76.99

The Estes commemorative 1:200 scale Apollo II Saturn V model is almost 2 feet tall and comes fully assembled with many scale details and markings carefully reproduced for exceptional realism. This historical model of the Saturn V is suitable for display or launch.

The Saturn V Comes Almost Ready-to-Fly Out of the Box!

Model features a clear plastic fin unit to stabilize flights and a custom display stand!

50th Anniversary Saturn V

1:200 Scale

Product Number: 2160
Length: 21.8 in. (55.4 cm)
Diameter: 1.98 in. (50 mm)
Recovery: Parachute
Projected Altitude: 200 ft. (61 m)
Recommended Engines:
C5-3, C6-3

MSRP $76.99

GO BIGGER

With Challenging Builds and Towering Flights!

Big Daddy™

Product Number: 2162
Length: 19 in. (48.3 cm)
Diameter: 3 in. (76 mm)
Recovery: Parachute
Projected Altitude: 900 ft. (274 m)
Recommended Engines:
C11-3, D12-3, D12-5, E12-4, E12-6
Requires (Sold Separately):
3/16 in. Maxi™ Launch Rod
See Page: 83
MSRP $37.99

Hi-Flier® XL

Product Number: 3226
Length: 31 in. (78.7 cm)
Diameter: 1.64 in. (42 mm)
Recovery: Parachute
Projected Altitude: 1325 ft. (404 m)
Recommended Engines:
C11-3, D12-5, D12-7, E12-6, E12-8
Sold Separately:
C5-3, C6-3 w/ Engine Adapter
Requires (Sold Separately):
3/16 in. Maxi™ Launch Rod
See Page: 83
MSRP $23.99

SA-2061 Sasha™

Product Number: 7271
Length: 31.5 in. (80 cm)
Diameter: 1.64 in. (42 mm)
Recovery: Parachute
Projected Altitude: 2300 ft. (701 m)
Recommended Engines:
Rocket Only: C11-3, C11-5, D12-5, E12-6
Two Stages:
Rocket: D12-5, D12-7, E12-8
Booster: D12-0, E12-0
Requires (Sold Separately):
3/16 in. Maxi™ Launch Rod
See Page: 83
MSRP $32.99

POWERED BY OUR LARGEST ENGINES!

PRO SERIES II

Bigger and better than ever, Estes Pro Series II products give you all the power you need to reach towering heights! The best part is that you don't have to be a master builder to enjoy launching with kits that use our largest engines!

PRO SERIES II

*Doorknob

1:5.3 Scale

Product Number: 9720
Length: 26.9 in. (68.3 cm)
Diameter: 3 in. (76 mm)
Recovery: Nylon Parachute
Projected Altitude: 1100 ft. (335 m)
Recommended Engines:
E16-4, F15-4, F15-6
Sold Separately:
D12-3, E12-4 w/ Engine Adapter

MSRP $43.99

A

The Doorknob was a sounding rocket manufactured from Lacrosse Rocket Motors for the project Hardtack Nuclear Test Series.

PRO SERIES II

*Super Big Bertha™

Product Number: 9719
Length: 36.8 in. (93.5 cm)
Diameter: 2.6 in. (66 mm)
Recovery: Parachute
Projected Altitude: 1200 ft. (366 m)
Recommended Engines:
E16-4, F15-6
Sold Separately:
D12-3, E12-4 w/ Engine Adapter

MSRP $43.99

A

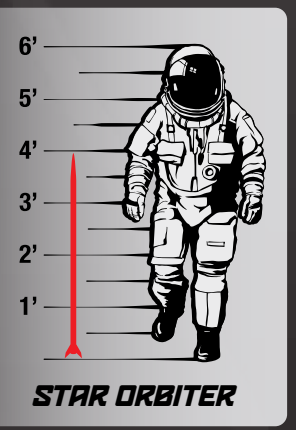
PRO SERIES II

*Star Orbiter™

Product Number: 9716
Length: 45.2 in. (114.8 cm)
Diameter: 1.64 in. (42 mm)
Recovery: Parachute
Projected Altitude: 1800 ft. (549 m)
Recommended Engines:
E16-6, F15-8
Sold Separately:
D12-3, E12-4 w/ Engine Adapter

MSRP $26.99

I



STAR ORBITER

PRO SERIES II

*Majestic™

Product Number: 9707
Length: 35.3 in. (89.7 cm)
Diameter: 2 in. (51 mm)
Recovery: Nylon Parachute
Projected Altitude: 2000 ft. (610 m)
Recommended Engines:
E16-6, F15-6, F15-8
Sold Separately:
D12-3, E12-4 w/ Engine Adapter

MSRP $53.99

B

* Requires PS II Launch Base (3552) with 1/4" launch rod or Porta-Pad E Launch Pad (2238) and E Launch Controller (2230) or Pro Series II Launch Controller (2240) with 30" of wire – Sold Separately

BIG ROCKETS WITH BIG ACCESSORIES!

PRO SERIES II

PRO SERIES II

*Der Big Red Max™

Product Number: 9721
Length: 29.9 in. (75.9 cm)
Diameter: 3 in. (76 mm)
Recovery: Skull & Bones Parachute
Projected Altitude: 1100 ft. (335 m)
Recommended Engines:
E16-4, F15-4

MSRP $54.99

* Requires PS II Launch Base (3552) with 1/4" launch rod or Porta-Pad E Launch Pad (2238) and E Launch Controller (2230) or Pro Series II Launch Controller (2240) with 30" of wire – Sold Separately

PRO SERIES II

Engine Adapter Set
(29mm - 24mm)
Product Number: 9753

MSRP $6.99

PRO SERIES II

Shock Cord Accessory Pack
3 heavy-duty elastic shock cords;
1/2 in. (13 mm) x 96 in. (243.8 cm)
Product Number: 3172

MSRP $11.99

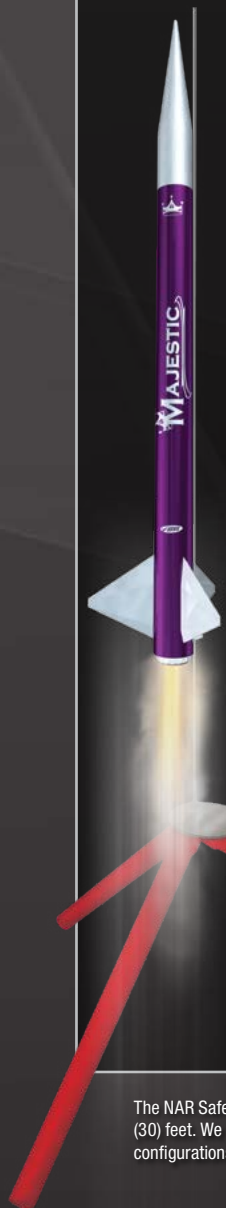
PRO SERIES II

E2X® Booster
For use with the Majestic (9707)
Recommended Engine: F15-0
Product Number: 9752

MSRP $10.99

PS II Recovery Wadding
Approximately 216 sheets for larger rockets.
Can also be used in any Estes rocket.
Product Number: 3556

MSRP $10.99



PRO SERIES II

Launch Controller
- 30 feet launch cable
- Required set back distance for rocket engines with more than 30 grams propellant
- Audible Continuity
- Easily hear if the starter is connected correctly
- Two hands required for launch
- Even with the Safety Key left in, the rocket will not launch without both buttons pressed
- Requires 6 1.5V "C" size alkaline batteries (sold separately)
- Includes 4 wire leads with micro clips for multi-engine clusters
- Includes JST style plug for alternate battery use (8-10 cell 1000mAh NimH or 3 cell LiPo (11.1V) battery

Product Number: 2240

MSRP $43.99

PRO SERIES II

Launch Base
- Stands 18 inches off the ground!
- Sturdy enough to launch our biggest Pro Series rockets
- Two-piece 1/4 in. (6 mm), 5' (152.4 cm) Launch Rod

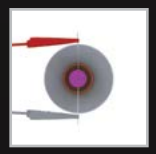
Product Number: 3552

MSRP $49.99

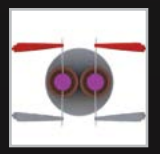
Base comes in white, but may be painted your color of choice!

Engine Configurations for a Cluster Launch

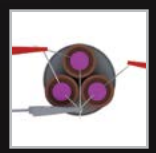
Config. 1 - Single Engine



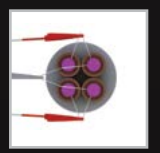
Config. 2 - Two Engine



Config. 3 - Three Engine



Config. 4 - Four Engine



The NAR Safety Code requires all rockets that launch with motors larger than a "D" to be launched from thirty (30) feet. We suggest using the 2240 Pro Series II launch controller. It is also capable of launching cluster engine configurations (see Config. 1-4 above).

ESTES education

A place where you can take learning to new heights.

Inspire your students to imagine the limitless possibilities in aerospace with our line of model rocketry education products.

Real world, hands on learning happens with Estes Education.

Choose Estes Lesson Plans to Engage Your Students in STEM

Develop 21st century skills with your students through lesson plans that promote collaborative thinking and leadership.

Gain confidence in effectively teaching STEM to promote real world learning in the classroom.

Create lifelong memories in your classroom with hands on learning that inspire and ignite creativity. Aerospace careers start with Estes.

Our Free Lesson Plans Include

- *Range of topics include STEM, ELA, & History*
- *National Education Standards*
- *Student Portfolios*
- *Assessments*
- *Support Resources*

Find all of our resources at edu.estesrockets.com

" Model Rocketry is an **excellent STEM activity** that gets students out of the classroom and into the sky! Students use all the elements of STEM to **collect, analyze and communicate data.** I've been teaching rocketry for over six years and **it's the best activity every year**! "

Get Started

These are the items you need to teach Rocketry in your classroom:

Rocket Bulk Packs

Engine Bulk Packs

Lifetime Launch System

How to choose the right experience for your students:

Age

Younger students (Grades 5-8) need beginner rockets that are simple to assemble. They're not quite ready for the challenge of gluing on individual fins yet, so choose one of our beginner bulk packs. Grades 9-12 are ready for the intermediate rockets!

Time

Consider the amount of time needed to build a rocket, for glue to dry and how long it will take to prep the rockets before launch. Our snap together rockets are ready to fly in minutes! Our intermediate rockets require a longer glue drying time.

Flying Field Size

Recovery method (parachute or streamer), engine size and wind all play a role in what rocket is best suited for the size field you may have.

A Few Tips

1. **Prepare.** Build a rocket and launch it ahead of time! It's helpful to have that experience before you launch with your students.
2. **Organize.** Get your supplies together and encourage students to keep track of all their rocket parts. Sometimes, there can be many pieces and organization is key!
3. **Be Flexible.** Sometimes lessons don't go according to plan. Have backup activities ready in case things change.
4. **Connect.** STEM and rocketry go hand in hand. Use every opportunity to connect rockets to the science or math concepts you are teaching.
5. **Encourage.** The more excited you are, the more your students will be. Launching rockets is fun and creates memories your students will carry with them forever.

Educator Bulk Packs

Easiest To Build

1 hr OR LESS

1764 Generic E2X® Bulk Pack

Length: 13.5 in. (34.3 cm)
Diameter: 0.98 in. (25 mm)
Recommended Engines:
1/2A6-2, A8-3, A8-5, B4-4,
B6-6, C6-5, C6-7

Pack of 12
MSRP - $129.99

ONE PIECE
MOLDED FIN UNIT

1751 Alpha III® Bulk Pack

Length: 12.1 in. (30.7 cm)
Diameter: 0.98 in. (25 mm)
Recommended Engines:
1/2A6-2, A8-3, A8-5, B4-4,
B6-4, B6-6, C6-5, C6-7

Pack of 12
MSRP - $144.99

ONE PIECE
MOLDED FIN UNIT

1721 Star Hopper™ Bulk Pack

Length: 7.4 in. (18.8 cm)
Diameter: 0.74 in. (19 mm)
Recommended Engines:
1/2A3-4T, A3-4T, A10-3T

Pack of 12
MSRP - $144.99

PLASTIC SNAP IN FINS:
NO GLUING!

1749 Gnome™ Bulk Pack

Length: 10.3 in. (26.2 cm)
Diameter: 0.54 in. (14 mm)
Recommended Engines:
1/2A3-2T, 1/2A3-4T,
A3-4T, A10-3T

Pack of 12
MSRP - $79.99

ONE PIECE
MOLDED FIN UNIT

1794 Firestreak SST™ Bulk Pack

Length: 10.2 in. (25.9 cm)
Diameter: 0.86 in. (22 mm)
Recommended Engines:
1/2A3-2T, 1/2A3-4T,
A3-4T, A10-3T

Pack of 12
MSRP - $119.99

PLASTIC SNAP IN FINS:
NO GLUING!

Educator Bulk Packs

More Challenging To Build

2 hrs OR LESS

1753 AVG Bulk Pack

Includes 4 of each - Alpha, Viking, and Generic E2X rockets.

Recommended Engines:
1/2A6-2, A8-3, A8-5, B4-4, B6-4, B6-6, C6-5, C6-7

Pack of 12
MSRP - $99.99

1754 Wizard™ Bulk Pack

Length: 12 in. (30.5 cm)
Diameter: 0.74 in. (19 mm)
Recommended Engines:
1/2A6-2, A8-3, A8-5, B4-4, B6-4, B6-6, C6-5, C6-7
Sold Separately:
A10-3T w/ Engine Adapter

Pack of 12
MSRP - $89.99

INDIVIDUAL FINS THAT GLUE ONTO THE BODY TUBE

1755 Viking™ Bulk Pack

Length: 12.1 in. (30.7 cm)
Diameter: 0.74 in. (19 mm)
Recommended Engines:
1/2A6-2, A8-3, A8-5, B4-4, B6-4, B6-6, C6-5, C6-7
Sold Separately:
A10-3T w/ Engine Adapter

Pack of 12
MSRP - $94.99

INDIVIDUAL FINS THAT GLUE ONTO THE BODY TUBE

1756 Alpha® Bulk Pack

Length: 12.3 in. (31.2 cm)
Diameter: 0.98 in. (25 mm)
Recommended Engines:
1/2A6-2, A8-3, A8-5, B4-4, B6-4, B6-6, C6-5, C6-7
Sold Separately:
A10-3T w/ Engine Adapter

Pack of 12
MSRP - $144.99

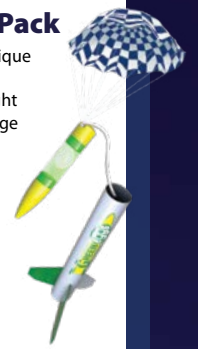
INDIVIDUAL FINS THAT GLUE ONTO THE BODY TUBE

1718 Green Eggs™ Bulk Pack

An egg lofting rocket designed for the unique needs of teachers. Uses our "mighty" C11 rocket engines to safety lift the extra weight of an egg and keep it well within an average school yard for safe recovery.

Length: 23.6 in. (59.9 cm)
Diameter: 1.8 in. (46 mm)
Recommended Engines:
w/egg: C11-3, D12-3
w/out egg: C11-5, D12-5

Pack of 12
MSRP - $219.99



INDIVIDUAL FINS THAT MOUNT THROUGH THE BODY TUBE

1706 Orbis 3D™ Bulk Pack

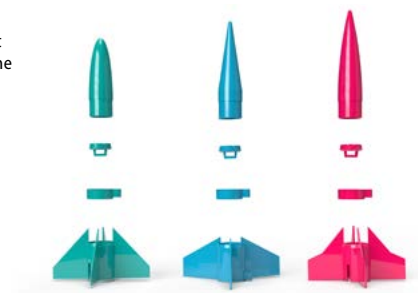
This kit comes with body tubes, parachutes and parts you need to build an engine mount. Download .stl files from the Estes website to print your 3D plastic parts to complete your rocket. Nine different design options.

3D printer and filament NOT included

Length: 10 - 12 in. (25.4 - 30.5 cm)
Recovery: Parachute
Recommended Engines: A8-3, B4-4, B6-4, C6-5

MSRP - $69.99

Students 3D print these parts!



Engine Bulk Packs

Every launch requires engines, recovery wadding, starters, and plugs. These convenient engine bulk packs include enough of each for 24 launches. Choose from a variety of engine sizes. We advise using the smallest recommended engines for the first launches. Learn more about how to find the perfect engine on pg. 92.

1781	A8-3 Engines (24); 30 starters; 24 plugs; 72 sheets wadding	MSRP - $73.99
1783	B6-4 Engines (24); 30 starters; 24 plugs; 72 sheets wadding	MSRP - $89.99
1784	B6-0 & B6-6 Engines (12 each); 30 starters; 24 plugs; 72 sheets wadding	MSRP - $89.99
1788	1/2A3-4T Engines (24); 30 starters; 24 plus wadding	MSRP - $69.99
1789	C6-5 Engines (24); 30 starters; 24 plugs; 72 sheets wadding	MSRP - $99.99
1726	C11-3 Engines (12); 20 starters; 16 plugs; 144 sheets wadding	MSRP - $56.99
1672	Blast-Off® Flight Pack A8-3, B6-4, C6-3, C6-5 engines (6 each); 30 starters; 28 plugs; 72 sheets wadding	MSRP - $79.99

Accessories

2310 Lifetime Launch System

Designed for teachers and students to withstand the rigors of multiple launches.

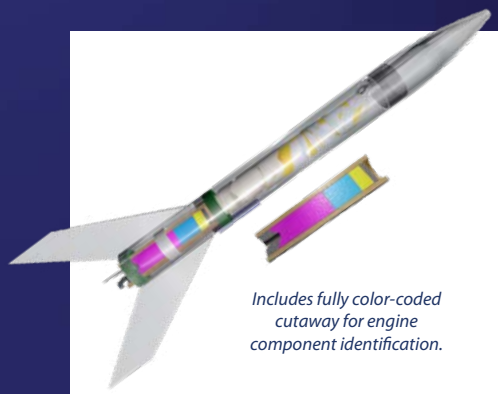
Stands 18 inches off the ground for easy launch preparation.

- Tiltable launch rod.
- Two-hand safety feature in the launch controller.
- Includes a Pro Series II controller, 30 feet of cable and two different size launch rods

MSRP: $79.99

The Lifetime Launch System comes with a lifetime warranty available to read at: www.estesrockets.com/lifetime-launch-system-warranty

1207 Phantom™



Includes fully color-coded cutaway for engine component identification.

The Phantom is a STEM education tool and is used in classrooms nationwide!

It is a great see-through visual aid when demonstrating the various parts of a model rocket to your students!

Length: 12.1 in. (30.7 cm)
Diameter: 0.98 in. (25 mm)
Recovery: Parachute (for demo)
Projected Altitude: Non-Flying Model
Recommended Engines:
Included cutaway engine only.

MSRP - $21.99

2246 Altimeter

The Estes Altimeter records heights in one-foot increments up to 10,000 feet (+/- 3 feet). It weighs about 1/2 oz. with a 0.625 diameter. It easily hooks onto the nose cone of your rocket and inserts into the body tube right above the parachute.

- LCD Display
- Store up to 10 flights
- Battery included.

MSRP - $43.99

How High Did It Fly?

Part of the fun in launching a model rocket is knowing how high it goes. The Estes AltiTrak is a favorite, easy-to-use rocketry tool that provides fairly accurate measurements of flight altitudes.

The AltiTrak works like a protractor, providing the angle between the base line and the triangle's hypotenuse (a big math word for the straight line between the person using the AltiTrak and the rocket when it's at peak altitude).

If you measure the base line as given in the instructions (500 feet), the AltiTrak also provides your rocket's altitude. The AltiTrak is great for students' science experiments and for teachers' math lessons!

2232 AltiTrak™

Measure altitude with this easy-to-use device. Follow the rocket in the sights to apogee, and release the trigger to lock the reading.

MSRP - $23.99

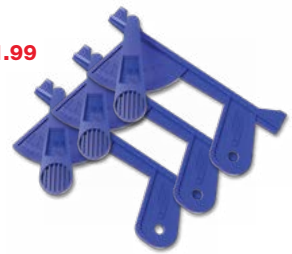
2226 Mini AltiTrak™

The mini AltiTrak provides a technology solution for students to track, graph and analyze data.

Their small size makes them easy to transport and share amongst students.

This low-cost solution provides three in pack so you can easily budget for this.

Pack of 3
MSRP - $11.99



Promote Engineering Thinking & Design

Chosen for the 2019 Purdue University Engineering Gift Guide. Build the rocket and launch it with one of three included options. Observe as a reaction occurs to make the rocket soar! Launch again with a different size engine, and measure the difference in altitude with the included altitude tracker.

5326 Rocket Science Starter Set

Length: 12.6 in. (32 cm)
Diameter: 0.98 in. (25 mm)
Recovery: Parachute
Projected Altitude: 1100 ft. (335 m)
Recommended Engines:
1/2 A6-2, A8-3, B4-4, B6-4,
B6-6, C6-5, C6-7

MSRP - $54.99

Set Includes:

- **1** Rocket
- **1** Porta-Pad II Launch Pad
- **1** Electron Beam Launch Controller
- **1** Parachute
- **1ea.** B6-4, C6-5 Engine
- **4** Starters
- **4** Plugs
- **12** Sheets of Recovery Wadding
- **1** Mini AltiTrak Altitude Tracker