



CATALOG

2021

FULL PRODUCT LINEUP FROM
THE WORLD LEADER IN MODEL ROCKETRY



WELCOME

TO THE EXCITING WORLD OF

MODEL ROCKETRY

Now this is rocket science!

There is no thrill quite like launching a model rocket you have built, watching it streak skyward, reach apogee (peak altitude), then gently return to earth on its recovery system. In a very real sense, model rocketeers experience the same excitement felt by America's space scientists and astronauts as they push humankind's horizons relentlessly forward to the stars. The best way to get started is

with an Estes® launch set or starter set (see pages 10-15). Each starter set has nearly everything you need to build and fly your first rocket. As you increase your rocketry skills, you can progress to new and exciting projects including multi-stage rockets, payload experiments and scale models. Whether you are a hobby beginner or expert, Estes Industries will help you advance higher, further and faster in your adventures.

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Estes encourages membership in the
NATIONAL ASSOCIATION OF ROCKETRY
<https://www.nar.org>





*Hello!
from Penrose, CO*



Our Vision:

To be the best model rocket company on the planet...

Our Mission:

To work relentlessly to create exceptional customer experiences. Everything we do is designed to ignite passion for creativity, exploration, and innovation.

Our Values:

Our safety record:

Over 60 years and over 500 million launches.

Our uniqueness:

In a growing digital world, little compares to the experience of building and launching a model rocket.

Our desire to teach:

We recognize the value of model rocketry as an educational tool.

Our employees:

Many of our current employees have been on this journey with us for decades!

Model Rocket Basics

Welcome to Estes Industries and the Exciting World of Model Rocketry!

Since its creation by Vern and Gleda Estes 63 years ago, our company has made possible over 500 million rocket launches — with an amazing safety record.

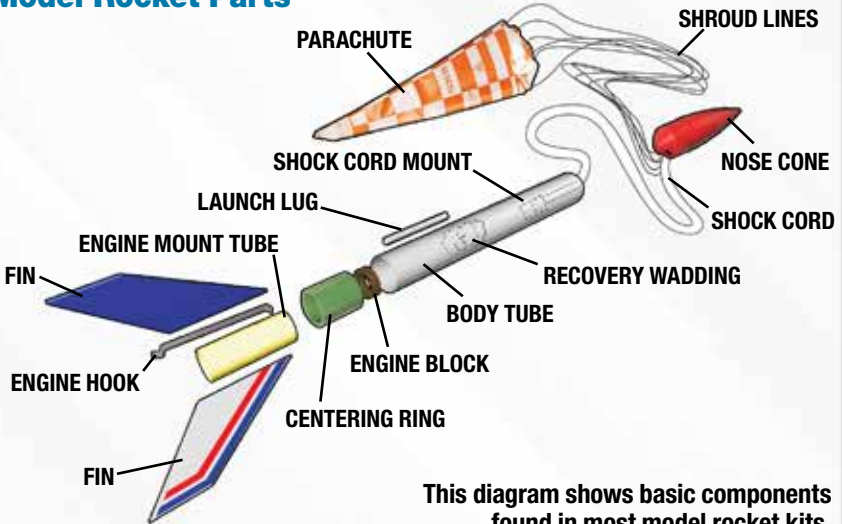


Vern and Gleda Estes
Founders of Estes Rockets

What is a Flying Model Rocket?

Estes® flying model rockets are activity kits designed of lightweight materials such as paper tubing, balsa wood and plastic. Fins attached to the body tube help provide guidance and stability. An engine mount assembly holds the engine in place during rocket flight in most models.

Model Rocket Parts



How Does a Model Rocket Work?

The Estes model rocket is propelled into the air by an electrically ignited model rocket engine. After its acceleration, the rocket continues upward emitting tracking smoke as it coasts. At the rocket's peak altitude (also called apogee), a recovery device, such as a parachute or streamer, is deployed to return the rocket gently to earth. The rocket can then be prepared for another flight.

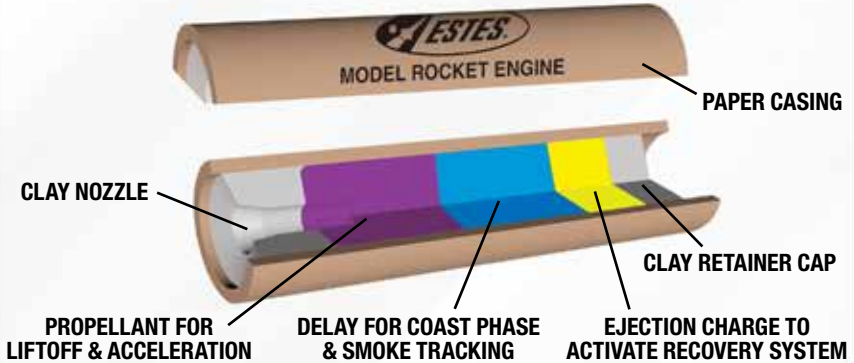
Model rocketry is recommended for ages 10 to adult. Adult supervision is suggested for those under 12 years of age.

What is a Model Rocket Engine?

Estes® model rocket engines are used to thrust a model rocket into the air. They are factory-assembled and comply with the safety requirements of the National Association of Rocketry. They are single use and range in power from A to F sizes. The engine is started using an electrical launch system that is powered by alkaline batteries.



Components of a Model Rocket Engine

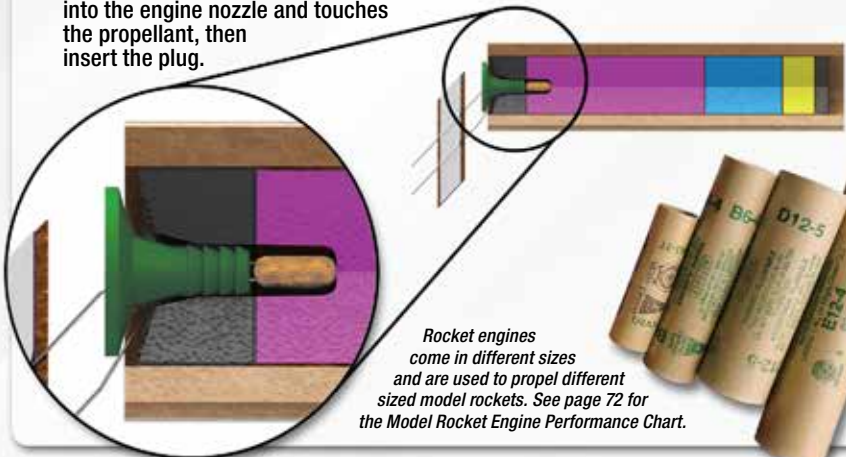


How to Prepare Your Rocket Engine for Launch:

- 1 Use the plug to secure the starter into the exhaust port of your rocket engine.



- 2 Make sure the starter is inserted into the engine nozzle and touches the propellant, then insert the plug.

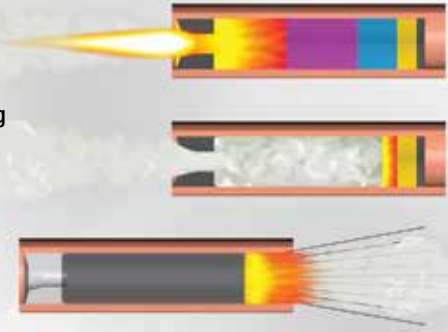


Rocket engines come in different sizes and are used to propel different sized model rockets. See page 72 for the Model Rocket Engine Performance Chart.



How Does a Model Rocket Engine Work?

- 1 When the engine is started, it produces thrust and boosts the rocket into the sky.
- 2 After the propellant is used up, the delay is activated, producing tracking smoke and allowing the rocket to coast.
- 3 After the delay is used, the ejection charge is activated, which deploys the recovery system, such as a parachute or streamer.



Model Rocket Engine Phases and Flight Sequence

- 3 **ENGINE PHASE: COAST**
Model rocket streaks skyward to peak altitude during coast phase.

- 4 **ENGINE PHASE: EJECTION**
Model rocket reaches peak altitude and ejection charge deploys recovery parachute.

- 2 **ENGINE PHASE: THRUST**
High thrust and acceleration for powered flight.

- 5 **LANDING**
Touchdown and safe recovery... ready to blast off again!

- 1 **ENGINE PHASE: LIFTOFF!**
Safe electric ignition from launch pad.

Thanks to the recovery system, you can enjoy the thrill of launching Estes rockets over and over! Every launch, however, requires a new engine as engines can only be used once.

Where to Launch Model Rockets

The chart below tells you what size field to use for each size engine. For launch information, look at the “NAR Model Rocket Safety Code”. You should always check with your local city government for any special regulations that may apply to your area. Generally speaking, you can fly most Estes® model rockets in a clear area the size of a football field or soccer field. Launch in little or no wind, and make sure there is no dry grass close to the launch pad or in the flying field. Each engine size is designated by a letter and is up to twice as powerful as the letter before it. See the engine section (pages 70-73) of this catalog for more information.

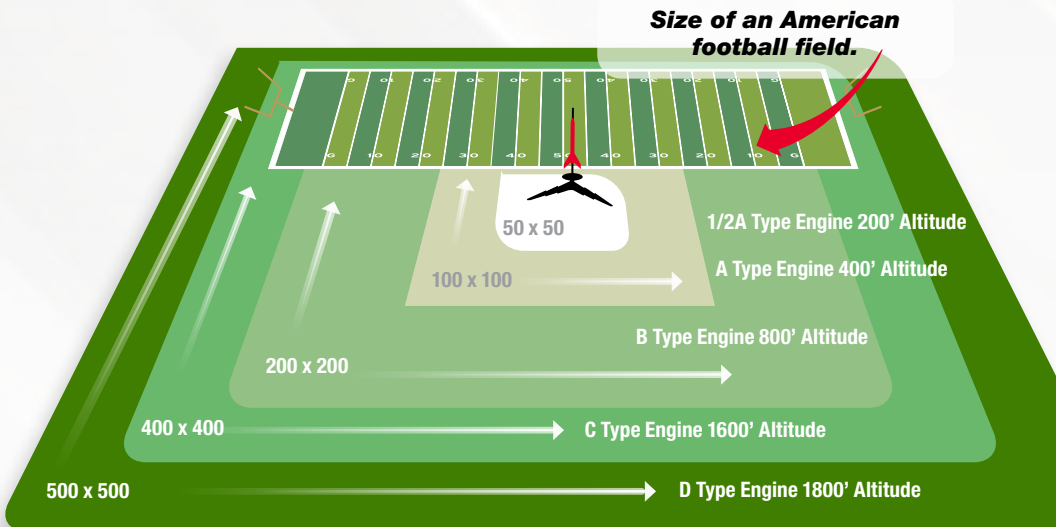


LAUNCH SITE DIMENSIONS

Installed Total Impulse (N-sec)	Equivalent Motor Type	Minimum Site Dimensions (ft.)
0.00 - 1.25	1/4A, 1/2 A	50 x 50
1.26 - 2.50	A	100 x 100
251 - 5.00	B	200 x 200
5.01 - 10.00	C	400 x 400
10.01 - 20.00	D	500 x 500
20.01 - 40.00	E	1000 x 1000
40.01 - 80.00	F	1000 x 1000

Recommended Launch Area

Minimum launch site dimension for circular area is diameter in feet, and for rectangular area is shortest side in feet. Choose a large field away from power lines, buildings, tall trees and low flying aircraft. The larger the launch area, the better your chance of recovering your rocket. Football fields, parks and playgrounds are great. This diagram shows the smallest recommended launch areas.



- Make sure the launch area is free of obstructions, dry weeds, brown grass or highly flammable materials.
- Launch only during calm weather with little or no wind and good visibility.

Where to Find Details About a Rocket Kit in the Catalog

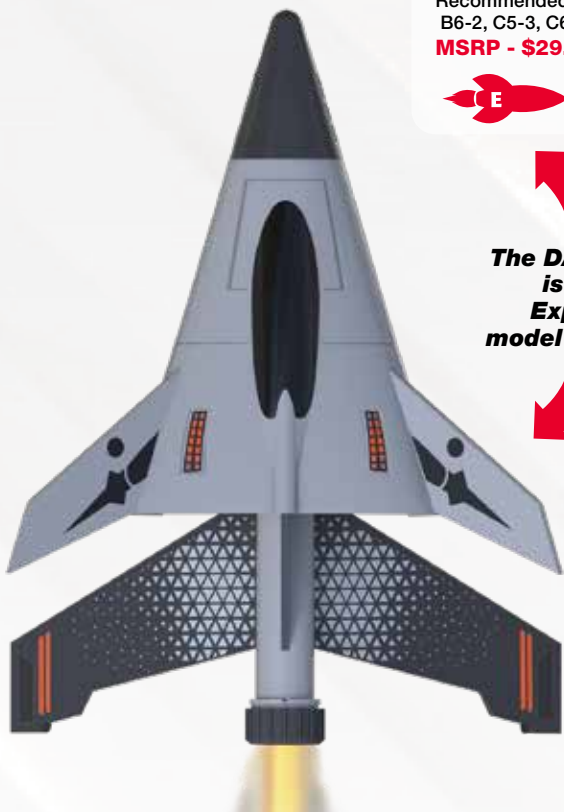
You will find a list of information next to each rocket throughout the catalog.

Example of a Rocket Kit Description

7307 DARC-1™
 Length: 9.3 in. (23.6 cm)
 Diameter: 4.2 in (106.7 mm)
 Recovery:
 12 in. (30.5 cm) Parachute
 Projected Altitude:
 400 ft. (122 m)
 Recommended Engines:
 B6-2, C5-3, C6-3
MSRP - \$29.99








The DARC-1™ is an Expert model rocket.



BUILDING CLASSIFICATIONS

All model rocket kits in this catalog require assembly unless otherwise indicated. Building classifications are designated by a letter given to each kit.

	Beginner
	Intermediate
	Advanced
	Expert
	Master

Estes Starter Sets

Start Your Estes Experience Here!

Starter Sets come equipped with everything you need to launch a model rocket. Multiple model rocket engines, one launch pad, one launch controller, required flight supplies and one flying model rocket. For additional launches, you will need to purchase additional Estes® Engines and flight supplies. Launch controllers require batteries (sold separately).



5325 AstroCam® Starter Set

Length: 20 in. (50.8 cm)
 Diameter: 0.98 in. (25 mm)
 Recovery: 15 in. (38.1 cm) Parachute
 Projected Altitude: 900 ft. (274 m)
 Recommended Engines:
 A8-3, B4-4, B6-4, C6-5
MSRP - \$79.99



**Rocket
Only
pg. 21**



**Insert HD Camera
into Nose Cone!**



**COMES WITH
EVERYTHING
YOU SEE
HERE!**

1 Each B6-4, C6-5



Porta-Pad II®
Launch Pad

Instructions

Launch Rod
Safety Cap

Parachute

Electron Beam®
Launch Controller

Launch
Rod

Recovery
Wadding

Plugs

Starters



5322 Colonizer™ Starter Set

Length: 12.7 in. (32.3 cm)

Diameter: 1.64 (42 mm)

Recovery: 18 in. (45.7 cm) Parachute

Projected Altitude: 250 ft. (76 m)

Recommended Engines: C5-3, C6-3

MSRP - \$49.99



5302 Rocket Science™ Starter Set

Length: 12.6 in. (32 cm)

Diameter: 0.98 in. (25 mm)

Recovery: 12 in. (30.5 cm) Parachute

Projected Altitude: 1100 ft. (335 m)

Recommended Engines:

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

MSRP - \$39.99



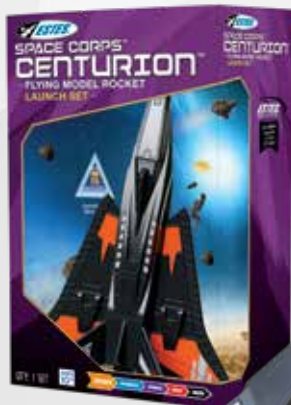
Launch Sets!

An Example of an Estes® Launch Set

Here's what's in the box:

One or two Estes® model rockets (either in kit form or almost ready to fly), one each Estes® Electron Beam® Launch Controller and Estes® Porta-Pad® II Launch Pad, recovery system, and instructions for assembly and use.

Here's what's not in the box: Recommended model rocket engines, starters and recovery wadding, tools, construction and finishing supplies for the rockets and 4 new AA 1.5V alkaline batteries for the launch controller - sold separately.



5324 Space Corps Centurion™ Launch Set

Length: 11.1 in. (28.2 cm)

Wingspan: 7.5 in. (19.1 cm)

Recovery: 9 in. (22.9 cm) Parachute

Projected Altitude: 700 ft. (213 m)

Recommended Engines: A8-3, B4-4, B6-6, C6-5

MSRP - \$49.99



Launch Rod

Blast Plate

Launch Pad

Instruction Manual

Launch Rod Safety Cap

Recovery System

Launch Controller

Almost Ready to Fly!

Get excited with an Estes® Launch Set

The easiest entry point into the fun and exciting world of Estes model rocketry is to purchase an Estes Launch Set. Each launch set contains a rocket (or two) and a complete, high-tech Estes launch system. In addition to the fun of building, launching and recovering your own model rocket, Estes flying model rockets have significant STEM educational value. STEM stands for science, technology, engineering and math, and model rocketry utilizes all four disciplines. So rocketeers often become scientists and engineers.

1491 Taser™ Launch Set

Length: 17 in. (43.2 cm)
 Diameter: 0.98 in. (25 mm)
 Recovery: 12 in. (30.5 cm) Parachute
 Projected Altitude: 1100 ft. (335 m)
 Recommended Engines: A8-3, B4-4,
 B6-4, B6-6, C6-5, C6-7

MSRP - \$28.99



**The
 Taser™ &
 Alpha III®
 Launch Sets
 are Estes
 Best Sellers!**

1427 Alpha III® Launch Set

Length: 12.3 in. (31.2 cm)
 Diameter: 0.98 in. (25 mm)
 Recovery: 12 in. (30.5 cm) Parachute
 Projected Altitude: 1150 ft. (351 m)
 Recommended Engines:
 1/2A6-2, A8-3, A8-5, B4-4, B6-4,
 B6-6, C6-5, C6-7

MSRP - \$35.99



1403 Riptide™ Launch Set

Length: 18 in. (45.7 cm)
Diameter: 1.35 in. (34 mm)
Recovery: 12 in. (30.5 cm) Parachute
Projected Altitude: 675 ft. (206 m)
Recommended Engines:
B4-4, B6-4, C6-5

MSRP - \$37.99



**No
Assembly
Required!**



1478 Flash®! Launch Set

Length: 16.2 in. (41.1 cm)
Diameter: 1.1 in. (28 mm)
Recovery:
12 in. (30.5 cm) Parachute
Projected Altitude:
925 ft. (282 m)
Recommended Engines: A8-3,
B4-4, B6-4, C6-5, C6-7

MSRP - \$28.99



1441 Journey™ Launch Set

Length: 19.3 in. (49 cm)
Diameter: 0.98 in. (25 mm)
Recovery: 12 in. (30.5 cm) Parachute
Projected Altitude: 1100 ft. (335 m)
Recommended Engines: A8-3, B4-4,
B6-4, C6-5, C6-7

MSRP - \$32.99



**1469 Tandem-X™ Launch Set
(Amazon™ and Crossfire™ ISX)**

MSRP - \$35.99

Amazon™

Length: 29.4 in. (74.7 cm)
 Diameter: 1.33 in. (34 mm)
 Recovery: 18 in. (45.7 cm) Parachute
 Projected Altitude: 600 ft. (183 m)
 Recommended Engines:
 B4-2, B4-4, B6-2, B6-4, C5-3, C6-3, C6-5



**1499 Rascal™ & HiJinks™
Launch Set**

MSRP - \$35.99

Rascal™

Length: 14.5 in. (36.8 cm)
 Diameter: 0.98 in. (25 mm)
 Recovery: 12 in. (30.5 cm) Parachute
 Projected Altitude: 1100 ft. (335 m)
 Recommended Engines:
 A8-3, B4-4, B6-4, C6-5, C6-7
 w/Engine Adapter
 (sold separately) - A10-3T



**No
Assembly
Required!**



2 ROCKETS IN 1 PACKAGE!

HiJinks™

Length: 14.5 in. (36.8 cm)
 Diameter: 0.98 in. (25 mm)
 Recovery: 12 in. (30.5 cm) Parachute
 Projected Altitude: 1100 ft. (335 m)
 Recommended Engines: A8-3,
 B4-4, B6-4, C6-5, C6-7
 w/Engine Adapter
 (sold separately) - A10-3T



Crossfire™ ISX

Length: 15.6 in. (39.6 cm)
 Diameter: 0.98 in. (25 mm)
 Recovery: 12 in. (30.5 cm) Parachute
 Projected Altitude: 1150 ft. (351 m)
 Recommended Engines: A8-3, B4-4,
 B6-4, C6-5, C6-7



Rocket Kits!

The Easiest Rockets to Build and Fly

NEW!

0886 Gnome™

Length: 10.3 in. (26.2 cm)
Diameter: 0.54 in. (14 mm)
Recovery:
12 in. (30.5 cm) Streamer
Projected Altitude:
800 ft. (244 m)
Recommended Engines:
1/4A3-3T, 1/2A3-2T,
1/2A3-4T, A3-4T, A10-3T

MSRP - \$9.99



**Also a
Bulk Pack!
pg. 93**

**Snap
Together -
No Glue
Required!**



7299 Illusion™

Length: 19.3 in. (49 cm)
Diameter: 0.98 in. (25 mm)
Recovery:
12 in. (30.5 cm) Parachute
Projected Altitude:
1125 ft. (343 m)
Recommended Engines:
A8-3, B4-4, B6-4, C6-5, C6-7

MSRP - \$19.99



1256 Alpha III®

The high-flying Alpha III is another model rocketry classic! The iconic orange and black space model is easy to build and fun to fly!

Length: 12.3 in. (31.2 cm)
Diameter: 0.98 in. (25 mm)
Recovery:
12 in. (30.5 cm) Parachute
Projected Altitude: 1150 ft. (351 m)
Recommended Engines: 1/2A6-2,
A8-3, A8-5, B4-4, B6-4, B6-6,
C6-5, C6-7

MSRP - \$21.99



2452 Athena™

Length: 17 in. (43.2 cm)
 Diameter: 0.98 in. (25 mm)
 Recovery: 12 in. (30.5 cm) Parachute
 Projected Altitude: 1125 ft. (343 m)
 Recommended Engines: A8-3, B4-4,
 B6-4, C6-5

MSRP - \$13.99

**No
 Assembly
 Required!**

**2603 Sundancer™**

Length: 16.5 in. (41.9 cm)
 Diameter: 0.98 in. (25 mm)
 Recovery:
 12 in. (30.5 cm) Parachute
 Projected Altitude: 1100 ft. (335 m)
 Recommended Engines: A8-3,
 B4-4, B6-4, B6-6, C6-5, C6-7

MSRP - \$13.99

**Also a
 Bulk Pack!
 pg. 93**

**2008 Generic E2X®**

Length: 13.5 in. (34.3 cm)
 Diameter: 0.98 in. (25 mm)
 Recovery: 12 in. (30.5 cm)
 Parachute
 Projected Altitude: 1325 ft. (404 m)
 Recommended Engines: 1/2A6-2,
 A8-3, A8-5, B4-4, B6-4, B6-6,
 C6-5, C6-7
 w/Engine Adapter (sold
 separately) - A10-3T

MSRP - \$12.99

NEW!

7303 Star Hopper™

Based on rumored 1950s secret project to counter the "flying saucer threat." The Estes Star Hopper is a no-glue, no-paint, Beginner-Level kit that you can build and launch up to 400 feet all in the same day. Features detail-molded plastic parts, atomic-age styling, and a 18-inch streamer for recovery.

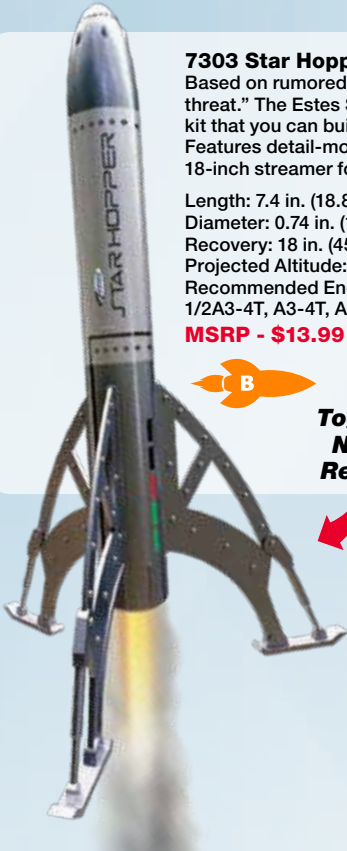
Length: 7.4 in. (18.8 cm)
Diameter: 0.74 in. (19 mm)
Recovery: 18 in. (45.7 cm) Streamer
Projected Altitude: 400 ft. (122 m)
Recommended Engines:
1/2A3-4T, A3-4T, A10-3T

MSRP - \$13.99



**Snap
Together -
No Glue
Required!**

**Also a
Bulk Pack!
pg. 91**



0806 Firestreak SST™

Length: 10.2 in. (25.9 cm)
Diameter: 0.86 in. (22 mm)
Recovery: 12 in. (30.5 cm) Streamer
Projected Altitude: 350 ft. (107 m)
Recommended Engines:
1/2A3-4T, A3-4T, A10-3T

MSRP - \$10.99



**Snap
Together,
No Glue
Required!**

**Also a
Bulk Pack!
pg. 92**



2495 Chiller™

Length: 19.4 in. (49.3 cm)
Diameter: 1.33 in. (34 mm)
Recovery:
15 in. (38.1 cm) Parachute
Projected Altitude:
600 ft. (183 m)
Recommended Engines:
B4-2, B6-2, B6-4, C5-3,
C6-3, C6-5

MSRP - \$18.99



2435 3 Bandits™

This trio of rockets comes in festive colors and with varied fin units.

Length: 10.8-11.1 in. (27.4-28.2 cm)

Diameter: 0.74 in. (19 mm)

Recovery: 6 in. (15.2 cm) Parachute

Projected Altitude: 550 ft. (168 m)

Recommended Engines: 1/2A3-4T, A3-4T, A10-3T

MSRP - \$23.99



3 Rocket Set!



2483 Phantom Blue™

Length: 19.4 in. (49.3 cm)

Diameter: 0.98 in. (25 mm)

Recovery:

12 in. (30.5 cm) Parachute

Projected Altitude: 1150 ft. (351 m)

Recommended Engines:

A8-3, B4-4, B6-4, C6-5, C6-7

MSRP - \$18.99



7292 Terra GLM™

Length: 17.8 in. (45.2 cm)

Diameter: 1.1 in. (28 mm)

Recovery: 12 in. (30.5 cm) Parachute

Projected Altitude: 875 ft. (267 m)

Recommended Engines:

B4-4, B6-4, C6-5

MSRP - \$19.99



0803 Bandito™

Length: 11.2 in. (28.4 cm)
Diameter: 0.74 in. (19 mm)
Recovery: 12 in. (30.5 cm) Parachute
Projected Altitude: 600 ft. (183 m)
Recommended Engines: 1/4A3-3T,
1/2A3-2T, A3-4T, A10-3T

MSRP - \$10.99



2492 Spirit™

Length: 21 in. (53.3 cm)
Diameter: 1.33 in. (34 mm)
Recovery:
15 in. (38.1 cm) Parachute
Projected Altitude:
600 ft. (183 m)
Recommended Engines:
B4-2, B4-4, B6-2, B6-4,
C5-3, C6-3, C6-5

MSRP - \$17.99



2169 Dragonite™

Length: 16 in. (40.6 cm)
Diameter: 1.1 in. (28 mm)
Recovery:
12 in. (30.5 cm) Parachute
Projected Altitude:
1125 ft. (343 m)
Recommended Engines: A8-3,
B4-4, B6-4, C6-5, C6-7

MSRP - \$16.99



FLYIN' HIGH AGAIN!
ASTROCAM
IS BACK!
COME ALONG FOR THE RIDE!

NEW!



7308 AstroCam®
Length: 20 in. (50.8 cm)
Diameter: 0.98 in. (25 mm)
Recovery: 15 in. (38.1 cm) Parachute
Projected Altitude: 900 ft. (274 m)
Recommended Engines:
A8-3, B4-4, B6-4, C6-5
MSRP - \$49.99

Challenge Yourself a Little Bit More!

These Rockets Take More Time to Build.

7306 Xtreme™

Length: 16.8 in. (42.7 cm)

Diameter: 0.74 in. (19 mm)

Recovery:

24 in. (61 cm) Mylar Streamer

Projected Altitude:

1600 ft. (488 m)

Recommended Engines:

1/2A6-2, A8-3, A8-5, B4-4,

B6-6, C6-5, C6-7

MSRP - \$14.99

NEW!



1261 Baby Bertha™

Length: 12.8 in. (32.5 cm)

Diameter: 1.64 in. (42 mm)

Recovery:

12 in. (30.5 cm) Parachute

Projected Altitude: 575 ft. (175 m)

Recommended Engines: A8-3,

B4-4, B6-4, C6-5

MSRP - \$14.99



2442 Mini Fat Boy™

Length: 8.5 in. (21.6 cm)

Diameter: 1.64 in. (42 mm)

Recovery: 12 in. (30.5 cm) Parachute

Projected Altitude: 250 ft. (76 m)

Recommended Engines: A10-3T

MSRP - \$13.99



7244 Indicator™

Length: 21.2 in. (53.8 cm)
 Diameter: 0.98 in. (25 mm)
 Recovery: 9 in. (22.9 cm) Parachute
 Projected Altitude: 200 ft. (61 m)
 Recommended Engines:

A3-4T, A10-3T

MSRP - \$16.99



Also a Bulk Pack!
 pg. 95

1225 Alpha®

Length: 12.3 in. (31.2 cm)
 Diameter: 0.98 in. (25 mm)
 Recovery: 12 in. (30.5 cm) Parachute
 Projected Altitude: 1000 ft. (305 m)
 Recommended Engines: 1/2A6-2,
 A8-3, A8-5, B4-4, B6-4, B6-6, C6-5, C6-7
 w/Engine Adapter (sold separately) - A10-3T

MSRP - \$18.99



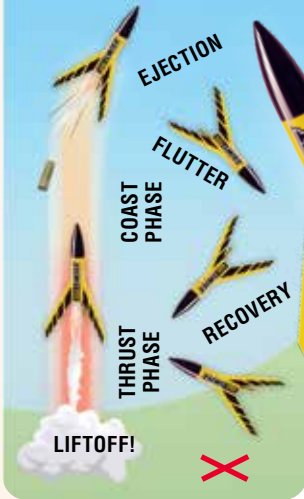
2178 Hi-Flier®

Length: 12 in. (30.5 cm)
 Diameter: 0.74 in. (19 mm)
 Recovery: 12 in. (30.5 cm) Streamer
 Projected Altitude: 1500 ft. (457 m)
 Recommended Engines: 1/2A6-2,
 A8-3, A8-5, B4-4, B6-4, B6-6, C6-5, C6-7
 w/Engine Adapter (sold separately) - A10-3T

MSRP - \$11.99



Swift Flight Sequence



0810 220 Swift™

Length: 4.5 in. (11.4 cm)
Diameter: 0.54 in. (14 mm)
Recovery: Featherweight
Projected Altitude: 850 ft. (259 m)
Recommended Engines: 1/4A3-3T,
1/2A3-2T, 1/2A3-4T, A3-4T, A10-3T

MSRP - \$9.99

The 220 Swift™ is lightweight and gently flutters to the ground without a parachute. During the ejection phase, the engine pops out. Insert another and you're ready to launch again!

7220 Crossfire™ ISX

Length: 15.6 in. (39.6 cm)
Diameter: 0.98 in. (25 mm)
Recovery:
12 in. (30.5 cm) Parachute
Projected Altitude:
1150 ft. (351 m)
Recommended Engines: A8-3,
B4-4, B6-4, C6-5, C6-7

MSRP - \$13.99

1345 Mosquito™

Length: 3.8 in. (9.7 cm)
Diameter: 0.54 in. (14 mm)
Recovery: Featherweight
Projected Altitude: 800 ft. (244 m)
Recommended Engines: 1/4A3-3T,
1/2A3-2T, 1/2A3-4T, A3-4T, A10-3T

MSRP - \$6.99

0651 Der Red Max™

Length: 16.3 in. (41.4 cm)
Diameter: 1.64 in. (42 mm)
Recovery:
18 in. (45.7 cm) Parachute
Projected Altitude: 600 ft. (183 m)
Recommended Engines:
B4-2, B4-4, B6-2, B6-4, C6-5

MSRP - \$19.99

NEW!

2021 Cadet™

Length: 17.5 in. (44.5 cm)

Diameter: 0.98 in. (25 mm)

Recovery:

12 in. (30.5 cm) Parachute

Projected Altitude:

1100 ft. (335 m)

Recommended Engines:

A8-3, B4-4, B6-4, C6-7

MSRP - \$14.99



Also a Bulk Pack!
pg. 94

1292 Wizard™

Length: 12 in. (30.5 cm)

Diameter: 0.74 in. (19 mm)

Recovery:

18 in. (45.7 cm) Streamer

Projected Altitude: 1600 ft. (488 m)

Recommended Engines: 1/2A6-2,

A8-3, A8-5, B4-4, B6-4, B6-6,

C6-5, C6-7

w/Engine Adapter (sold

separately) - A10-3T

MSRP - \$13.99



1381 Yankee™

Length: 11 in. (27.9 cm)

Diameter: 0.74 in. (19 mm)

Recovery:

18 in. (45.7 cm) Streamer

Projected Altitude:

1700 ft. (518 m)

Recommended Engines:

1/2A6-2, A8-3, A8-5, B4-4,

B6-4, B6-6, C6-5, C6-7

w/Engine Adapter (sold

separately) - A10-3T

MSRP - \$13.99





0652 Citation Patriot™

Length: 25.6 in. (65 cm)
Diameter: 1.64 in. (42 mm)
Recovery: 18 in. (45.7 cm) Parachute
Projected Altitude: 600 ft. (183 m)
Recommended Engines: B4-2, B6-2,
B6-4, C6-5

MSRP - \$26.99



1948 Big Bertha®

Length: 24 in. (61 cm)
Diameter: 1.64 in. (42 mm)
Recovery:
18 in. (45.7 cm) Parachute
Projected Altitude:
500 ft. (152 m)
Recommended Engines:
B4-2, B4-4, B6-2, B6-4, C6-5

MSRP - \$26.99



7259 Nike-X

Length: 23.4 in. (59.4 cm)
Diameter: 1.33 in. (34 mm)
Recovery:
15 in. (38.1 cm) Parachute
Projected Altitude:
600 ft. (183 m)
Recommended Engines:
A8-3, B4-4, B6-4, C6-5

MSRP - \$21.99



1949 Viking™

Length: 12.1 in. (30.7 cm)
Diameter: 0.74 in. (19 mm)
Recovery: 18 in. (45.7 cm) Streamer
Projected Altitude: 1600 ft. (488 m)
Recommended Engines: 1/2A6-2, A8-3,
A8-5, B4-4, B6-4, B6-6, C6-5, C6-7
w/Engine Adapter (sold separately) - A10-3T

MSRP - \$13.99



The Viking has 48 various fin configurations to choose from:

It's up to you to decide how to build the Estes® Viking! How many fins? Where to place them? It's your choice to create the rocket YOU want!

Also a Bulk Pack! pg. 93

7237 Goblin™

Length: 14.4 in. (36.6 cm)
 Diameter: 1.33 in. (34 mm)
 Recovery:
 2 x 36 in. (91.3 cm) Streamers
 Projected Altitude: 1400 ft. (427 m)
 Recommended Engines: C11-3, C11-5,
 D12-5, D12-7

MSRP - \$19.99



0865 Mini Mean Machine™

Length: 39 in. (99.1 cm)
 Diameter: 0.74 in. (19 mm)
 Recovery:
 9 in. (22.9 cm) Parachute
 Projected Altitude: 225 ft. (69 m)
 Recommended Engines:
 A3-4T, A10-3T

MSRP - \$14.99



1295 Mean Machine™

Length: 79 in. (200.7 cm)
 Diameter: 1.64 in. (42 mm)
 Recovery: 24 in. (61 cm) Parachute
 Projected Altitude: 700 ft. (213 m)
 Recommended Engines:
 D12-3, D12-5, E12-4, E12-6
 Requires 3/16 in. (5 mm) Maxi™
 Launch Rod PN 2244; sold
 separately.

MSRP - \$32.99



Twist the 2 halves of the 1295 Mean Machine body tube in opposite directions and then pull apart.

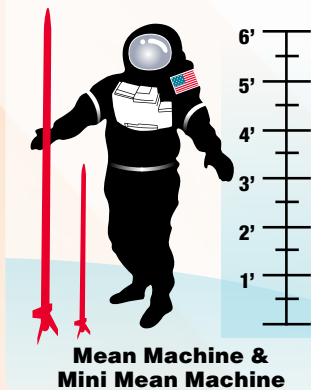


The Mean Machine stands at over 6 feet tall and disassembles in the middle.

It's so Tall - We Had to Split it in Half for Easy Transport and Storage!



Mean Machine Sizes



7287 Sidekick™

The only cluster rocket in the Estes® fleet.
Experience side-by-side engine thrust
and a dual deployment streamer recovery!

Requires Estes® PS II™ Launch Controller

Length: 21.1 in. (53.6 cm)

Diameter: 1.8 in. (46 mm) X 2

Recovery: 2 x 36 in. (91.4 cm)

Mylar streamers

Projected Altitude: 700 ft. (213 m)

Recommended Engines:

Two B4-2, or two B6-4

MSRP - \$19.99



**The Sidekick™
Comes Equipped
with Dual Engine
Mounts!**



7000 Bull Pup 12D 1:9 Scale

Length: 15.6 in. (39.6 cm)

Diameter: 1.33 in. (34 mm)

Recovery:

12 in. (30.5 cm) Parachute

Projected Altitude: 675 ft. (206 m)

Recommended Engines:

A8-3, B4-4, B6-4, C6-5

MSRP - \$20.99



7257 Airborne Surveillance Missile™

Length: 11.3 in. (28.7 cm)

Diameter: 0.98 in. (25 mm)

Recovery: 9 in. (22.9 cm) Parachute

Projected Altitude: 375 ft. (114 m)

Recommended Engines:

A3-4T, A10-3T

MSRP - \$16.99

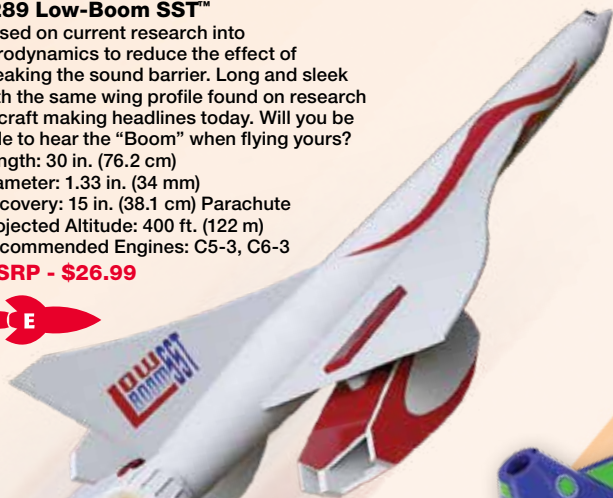


7289 Low-Boom SST™

Based on current research into aerodynamics to reduce the effect of breaking the sound barrier. Long and sleek with the same wing profile found on research aircraft making headlines today. Will you be able to hear the “Boom” when flying yours?

Length: 30 in. (76.2 cm)
 Diameter: 1.33 in. (34 mm)
 Recovery: 15 in. (38.1 cm) Parachute
 Projected Altitude: 400 ft. (122 m)
 Recommended Engines: C5-3, C6-3

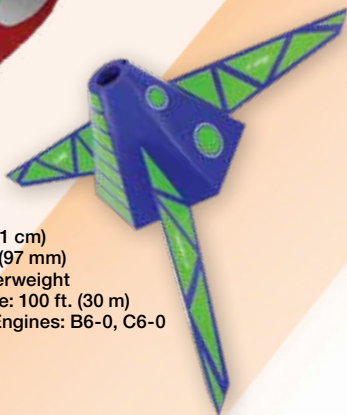
MSRP - \$26.99



7263 Hex-3™

Length: 3.2 in. (8.1 cm)
 Diameter: 3.8 in. (97 mm)
 Recovery: Featherweight
 Projected Altitude: 100 ft. (30 m)
 Recommended Engines: B6-0, C6-0

MSRP - \$8.99



7239 Sky Warrior™

Length: 19 in. (48.3 cm)
 Diameter: 1.33 in. (34 mm)
 Recovery: 12 in. (30.5 cm) Parachute
 Projected Altitude: 850 ft. (259 m)
 Recommended Engines:
 B4-4, B6-4, C6-5

MSRP - \$20.99



7266 Red Nova™

The Red Nova™ flying model rocket is impressive up close and in the sky! Features include a unique nose cone and great waterslide decals.

Length: 21.6 in. (54.9 cm)
 Diameter: 1.64 in. (42 mm)
 Recovery:
 15 in. (38.1 cm) Parachute
 Projected Altitude: 800 ft. (244 m)
 Recommended Engines:
 C11-3, D12-5, D12-7
 w/Engine Adapter (sold separately)
 - C5-3, C6-3
 Requires 3/16 in. (5 mm) Maxi™
 Launch Rod PN 2244; sold
 separately.

MSRP - \$21.99



MODEL ROCKET PAYLOADS!!

Watching a model rocket that you've crafted zip off the pad and into the sky is super fun, but it is also always an educational experience! Because all Estes® model rockets are uniquely suited for teaching science, technology, engineering, and math, they are frequently used in students' science fair projects. But which are the best model rockets for science experiments? Payloaders, of course!

What is a payload? A payload is the cargo that a model rocket carries into the atmosphere. Payloads can be grasshoppers, raw eggs, or scientific measurement devices, such as altimeters that measure the altitude rockets achieve in flight.

The best thing about Estes payloader rockets is that they are designed with clear payload sections so that you can see the cargo you're launching. The possibilities are endless!

A Payload Section is a Feature that Allows the Rocketeer to Launch Cargo!

Measure Your Rocket's Altitude with the Estes Altimeter, pg. 85

7261 Air Walker™
Length: 21.7 in. (55.1 cm)
Diameter: 1.1 in. (28 mm)
Recovery:
12 in. (30.5 cm) Parachute
Projected Altitude:
950 ft. (290 m)
Recommended Engines:
B4-4, B6-4, C6-5
MSRP - \$18.99





Place an Egg in the Rocket Payload Section!

With a Rocket Payload Section, You Can Launch Eggs, Insects and Altimeters Into the Sky!

Also a Bulk Pack! pg. 95



7301 Green Eggs™
 Length: 23.6 in. (59.9 cm)
 Diameter: 1.8 in. (46 mm)
 Recovery:
 18 in. (45.7 cm) Parachute
 Projected Altitude w/egg:
 825 ft. (251 m)
 Projected Altitude wo/egg:
 1050 ft. (320 m)
 Recommended Engines:
 w/egg: C11-3, D12-3
 w/out egg: C11-5, D12-5
MSRP - \$21.99



7300 Ghost Chaser™

All the molded plastic parts in this rocket are a translucent color. Insert the rocket engine and you can see it inside! Truly something unique for your rocket collection!

Length: 23 in. (58.4 cm)

Diameter: 0.98 in. (25 mm)

Recovery: 12 in. (30.5 cm) Parachute

Projected Altitude: 1100 ft. (335 m)

Recommended Engines:

A8-3, B4-4, B6-4, C6-5, C6-7

MSRP - \$19.99



**Multi-Staged
Rockets Fly
Higher!**

7248 Supernova™

Length: 27.5 in. (69.9 cm)

Diameter: 0.98 in. (25 mm)

Recovery: 9 in. (22.9 cm)

Parachute; Tumble

Projected Altitude:

1550 ft. (472 m)

Recommended Engines:

Rocket Only: A8-5, B4-4,

B6-4, C6-5, C6-7

Two Stages:

Rocket: A8-5, B6-6, C6-7

Booster: B6-0, C6-0

MSRP - \$22.99



**Become an
Eggsper
Rocketeer!**

7265 Space Crater™

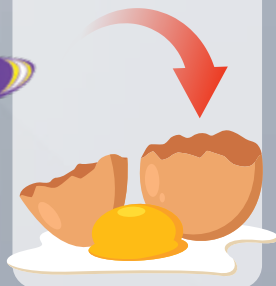
Length: 18.5 in. (47 cm)
 Diameter: 0.98 in. (25 mm)
 Recovery:
 15 in. (38.1 cm) Parachute
 Projected Altitude: 650 ft. (198 m)
 Recommended Engines:
 With egg: C5-3, C6-3
 Without egg: B4-4, B6-4, C6-5
MSRP - \$22.99



**Hurl an Egg at
the High Heavens**



After assembling your Space Crater rocket nose cone, insert an egg into the payload section and prepare for liftoff. But be sure to prepare the parachute recovery system correctly, or you may end up with an egg-citing mess to clean up!



Welcome to the Exciting World of **Multi-Stage Rockets**

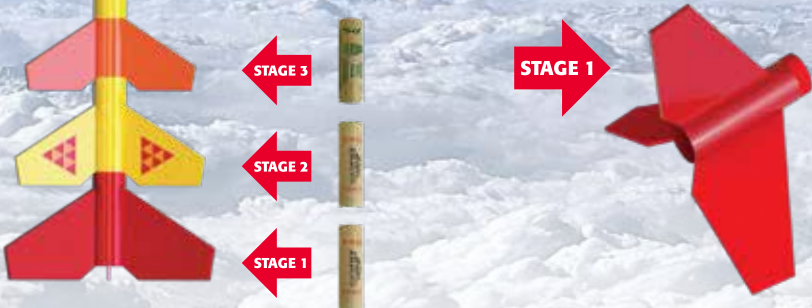
Many full-size rockets that leave Earth's atmosphere are multi-staged rockets. The amount of fuel required to lift millions of pounds of mass requires huge rockets that have multiple stages (segments) stacked on top of the main booster stage. Each upper-stage requires its own rocket engine and fuel and each subsequent stage is used to increase velocity to escape Earth's gravitational pull and reach Low Earth Orbit (LEO is 99 to 1200 miles). Estes® multi-stage rockets will not get to LEO, but they are designed to increase a model rocket's maximum altitude.

A two stage model rocket uses a first-stage booster engine (It has no ejection charge and is designated as a "dash zero" i.e; B6-0) to get the rocket moving vertically. When the booster engine uses up its propellant, it then ignites the upper stage engine. The booster separates from the upper-stage and it tumbles to the ground. After the upper-stage is ignited (also called a sustainer-stage), it then accelerates to its maximum height (or apogee) and an ejection charge at apogee deploys the recovery system.

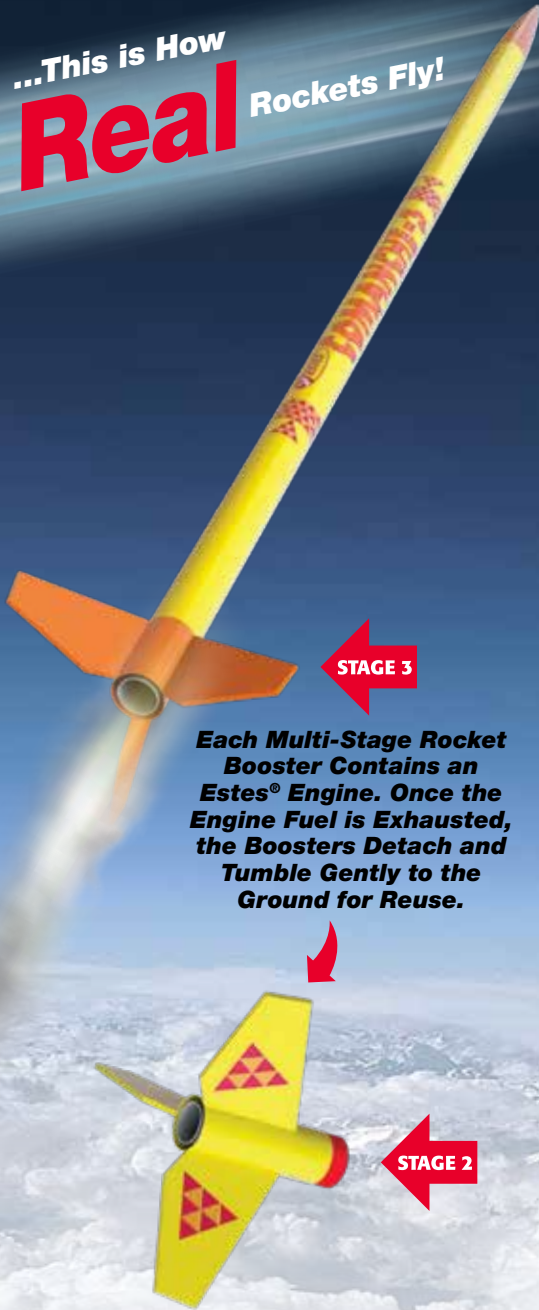
A three-stage model rocket (like the Comanche-3™) uses a first stage booster engine to get the rocket moving vertically. When the booster engine uses up its propellant, it then ignites the second-stage engine. The first stage separates from the second stage and it tumbles to the ground. After the second stage is ignited, it carries the rocket higher until it uses up its propellant, and then it ignites the third stage. The second stage separates from the third stage, and it tumbles to the ground. The third stage then accelerates to its maximum height (or apogee), and an ejection charge at apogee deploys the recovery system.

While a full-size rocket can take several minutes to burn through the various stages to obtain LEO, in an Estes® rocket, the boost and upper stage burnouts can be measured in a matter of seconds. Multi-stage rockets are challenging and exciting to launch. Recovering a small three stage rocket on a streamer from over 2500 feet altitude can be a task!

7245 Comanche-3™

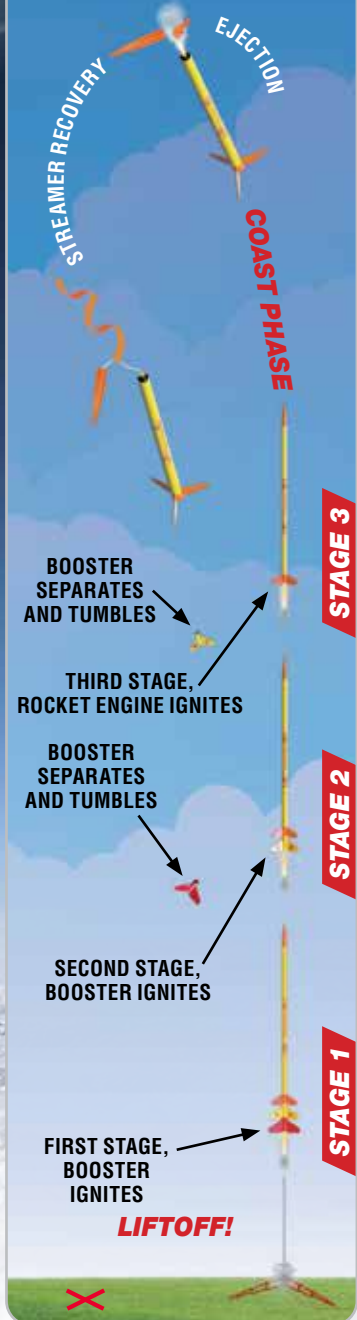


...This is How
Real Rockets Fly!



Each Multi-Stage Rocket Booster Contains an Estes® Engine. Once the Engine Fuel is Exhausted, the Boosters Detach and Tumble Gently to the Ground for Reuse.

MULTI-STAGE ROCKET FLIGHT SEQUENCE



2092 Mongoose™

Length: 27 in. (68.6 cm)
Diameter: 0.98 in. (25 mm)
Recovery: 12 in. (30.5 cm)
Parachute; Tumble
Projected Altitude:
1600 ft. (488 m)
Recommended Engines:
Rocket Only:
A8-3, B4-4, B6-4, C6-5
Two Stages:
Rocket: A8-5, B6-6, C6-7
Booster: B6-0, C6-0

MSRP - \$16.99



2437 Savage™

Length: 31.8 in. (80.8 cm)
Diameter: 1.33 in. (34 mm)
Recovery: 15 in. (38.1 cm) Parachute; Tumble
Projected Altitude: 1600 ft. (488 m)
Recommended Engines:
Rocket Only: B4-2, B6-2, B6-4, C6-5
Two Stages:
Rocket: A8-5, B6-4, B6-6, C6-5, C6-7
Booster: D12-0

MSRP - \$25.99



7275 Sterling Silver™

Length: 22 in. (55.9 cm)

Diameter: 0.74 in. (19 mm)

Recovery:

30 in. (76.2 cm) Streamer; Tumble

Projected Altitude: 2600 ft. (792 m)

Recommended Engines:

Rocket Only: A8-5, B6-6, C6-7

Two Stages:

Rocket: A8-5, B6-6, C6-7

Booster: A8-0, B6-0, C6-0

MSRP - \$14.99**1946 Boosted Bertha™**

Length: 28.2 in. (71.6 cm)

Diameter: 1.64 in. (42 mm)

Recovery: 18 in. (45.7 cm)

Parachute; Tumble

Projected Altitude:

1000 ft. (305 m)

Recommended Engines:

Rocket Only:

B4-2, B4-4, B6-2,

B6-4, B6-6, C6-5, C6-7

Two Stages:

Rocket: A8-3, A8-5, B4-4,

B6-2, B6-4, B6-6, C6-5, C6-7

Booster: A8-0, B6-0, C6-0

MSRP - \$29.99



7250 Twin Factor™

Length: 6 in. (15.2 cm)
Diameter: 4.3 in. (109 mm)
Recovery: Tumble
Projected Altitude: 150 ft. (46 m)
Recommended Engines:
Rocket Only: A3-4T, A10-3T, A10-PT
Two Stages:
Rocket: 1/4A3-3T, 1/2A3-2T, 1/2A3-4T,
A3-4T, A10-3T, A10-PT
Booster: A10-0T

MSRP - \$13.99



7245 Comanche-3™

Length: 41 in. (104.1 cm)
Diameter: 0.98 in. (25 mm)
Recovery: 36 in. (91.4 cm) Dual
Streamer; Tumble
Projected Altitude:
2250 ft. (686 m)
Recommended Engines:
Rocket Only:
A8-3, B4-4, B6-4, C6-5
Two Stages:
Rocket: B4-4, B6-4, B6-6, C6-7
Booster: B6-0, C6-0
Three Stages:
Rocket: B6-6, C6-7
Booster: B6-0, C6-0
Booster: C11-0, D12-0

MSRP - \$23.99



Comanche-3 Size



Comanche-3™

7276 Checkmate™

Length: 17 in. (43.2 cm)

Diameter: 0.74 in. (19 mm)

Recovery:

18 in. (45.7 cm) Streamer; Tumble

Projected Altitude: 900 ft. (274 m)

Recommended Engines:

Rocket Only: A3-4T, A10-3T

Two Stages:

Rocket: 1/2A3-4T, A3-4T, A10-3T

Booster: A10-0T

MSRP - \$12.99

6
Ways to
Launch!

**1329 Multi-Roc™**

Length: 25 in. (63.5 cm)

Diameter: 0.98 in. (25 mm)

Recovery: 12 in. (30.5 cm)

Parachute; Glide; Tumble

Projected Altitude: 1200 ft. (366 m)

Recommended Engines:

Rocket Only:

B6-4, B6-6, C6-5, C6-7

Two Stages:

Rocket: B6-4, B6-6, C6-5, C6-7

Booster: B6-0, C6-0

MSRP - \$22.99

Fun Recovery Systems!

Watching your model rocket liftoff is only part of the fun — seeing the whoosh – pop of the parachute when the rocket reaches apogee is equally thrilling! Estes® model rocketry recovery systems vary depending upon each rocket's specifications and engineering design. Most model rockets rely on traditional parachute or streamer recovery. Factors, such as rocket size, engine power and launch site dimension, are used to determine the size or number of parachutes to be used or if a streamer should be used to keep a high-performance rocket from drifting too far from the launch site and becoming lost. A few model rockets are so light that they either simply tumble or flutter gently back to earth; in essence, their lightweight construction is the recovery system.

There are also combinations of recovery systems and other unique methods of recovery. These include spin and glide recovery. Spin recovery is created by the rocket's spinning (usually with helicopter blades), creating drag. And glide recovery utilizes lift created by varying wing shapes and designs, requiring careful trimming for optimum performance.

7288 Solo™

Length: 25.3 in. (64.3 cm)
Diameter: 1.33 in. (34 mm)
Recovery: 15 in. (38.1 cm)
Parachute; Glide
Projected Altitude: 500 ft. (152 m)
Recommended Engines:
B6-2, C5-3, C6-3

MSRP - \$19.99



7279 Double Ringer™

Length: 25.3 in. (64.3 cm)

Diameter: 1.33 in. (34 mm)

Recovery: 15 in. (38.1 cm) Parachute; Glide

Projected Altitude: 500 ft. (152 m)

Recommended Engines: B6-2, C5-3, C6-3

MSRP - \$19.99

**The
Double Ringer™
has Unique
Cylindrical
Gliders that
Detach and
Circle
Back to Earth.**



7282 Tazz™

Length: 16.6 in. (42.2 cm)
Diameter: 0.98 in. (25 mm)
Recovery: 18 in. (45.7 cm) Streamer; Spin
Projected Altitude: 700 ft. (213 m)
Recommended Engines: A8-3, B6-2,
B6-4, C5-3, C6-3

MSRP - \$22.99



7241 Quinstar™

The Quinstar™ is a lightweight rocket which allows for a spin recovery that requires no parachute.

Length: 3 in. (7.6 cm)
Diameter: 8 in. (203 mm)
Recovery: Spin
Projected Altitude:
150 ft. (46 m)
Recommended Engines:
B6-0, C6-0

MSRP - \$21.99



***During the Tazz™
Recovery, the
Rocket Spins Back
to Earth While
the Engine Mount
Separates and
Gently Descends
with Attached
Streamer!***



7280 Gryphon™

Our easiest to build boost glider kit ever! Designed for the true beginner, the Gryphon has all precision laser cut parts that assemble on a flat surface. No airfoil or dihedral is needed to make this clever glider fly!

Length: 18 in. (45.7 cm)

Diameter: 0.54 in. (14 mm)

Recovery:

12 in. (30.5 cm) Streamer; Glide

Projected Altitude: 700 ft. (213 m)

Recommended Engines:

1/2A3-2T, A3-4T, A10-3T

MSRP - \$18.99



Designer Signature Series



G. Harry Stine (NAR #02) is known as the “Father of Model Rocketry” and founder of the National Association of Rocketry. One of the original pioneers that founded the hobby right alongside Vern Estes, Stine was also a talented writer.

Harry Stine was a visionary who believed that mankind would soon travel to and live in space. He wrote several fiction books in the early 1950's including best sellers *Starship Through Space* and *Contraband Rocket*. Many of the characters in his books were based on real people he met working at White Sands. His stories also needed spaceships that didn't exist yet so he created them. Athena, Fafnir, Vittoria, Absyritis were all designed with incredible detail by a fictional company Hueco Spacecraft Inc.

7310 Antar™

Length: 23.2 in. (58.9 cm)
Diameter: 1.64 in. (42 mm)
Recovery:
15 in. (38.1 cm) Parachute
Projected Altitude:
450 ft. (137 m)
Recommended Engines:
B6-2, B6-4, C6-5
MSRP - \$29.99



HUECO
Spacecraft Inc.



The Designer Signature Series is a series of kits designed by some of the most famous pioneers of model rocketry. Some will be re-introductions of lesser-known classics and others will be never-before-seen designs that never made it out of the R&D room. Every serious model rocket collector will want the complete series for their own museum!



Vern Estes

In 1960 Vern Estes, founder of Estes Industries, designed the Astron Scout, which was the first Estes® model rocket packaged for sale as a complete kit.

7295 Orange Bullet™

Length: 5.9 in. (15 cm)

Diameter: 0.74 in. (19 mm)

Recovery: Featherweight

Projected Altitude: 500 ft. (152 m)

Recommended Engines: 1/2A6-2, A8-3

MSRP - \$11.99



The Orange Bullet™ was the prototype for the famous Astron Scout™. This rocket used metal weights glued to the end of the fin tips to shift the center of gravity back after the engine popped out at apogee resulting in the rocket tumbling gently instead of streamlining in nose first. It worked, but after many experimental flights, Vern realized he could achieve the same thing without ejecting the engine. He could use the weight of the rocket engine itself to shift the center of gravity backwards. During a span of more than 20 years, Estes® sold tens of thousands of Astron Scout kits, inspiring countless young people to pursue technical careers.



Estes Chief Technology Officer Ellis Langford (top), Estes General Manager Bill Stine (left), and Estes Industries Founder Vern Estes are pictured with Vern Estes' very first rocket design, the Orange Bullet.

IMAGINE NEW WORLDS

7309 Super Mars Snooper™

Length: 29.3 in. (74.4 cm)
Diameter: 1.33 in. (.34 mm)
Recovery: 18 in. (45.7 cm) Parachute
Projected Altitude: 800 ft. (244 m)
Recommended Engines:
C11-3, D12-5

MSRP - \$34.99



NEW!

Available Summer 2021

Super Mars Snooper™ is a nuclear- powered reconnaissance craft designed to explore Mars' outermost moon, Deimos. Designed to fly in two directions – nose first as a space rocket and tail first as a ramjet airplane. This “upscaled” version of the original “K-20” released in 1965 stands 29.3 inches tall and flies on C11 and D12 engines. Thoughtfully redesigned to include all plastic cones and transitions, this unique spacecraft is still a challenging build. It is a faithful replica of the model that was featured on Estes first full color catalog in 1966. Every collector should have this “Super Snooper”!

7285 Leo Space Train™

Length: 17 in. (43.2 cm)
Diameter: 1.64 in. (42 mm)
Recovery: 18 in. (45.7 cm) Parachute
Projected Altitude: 300 ft. (91 m)
Recommended Engines:
C5-3, C6-3

MSRP - \$24.99



Get ready to ride on the space train! The LEO Space Train™ is a stunning model rocket designed after government/corporate-style space planes that deploy satellites into Low Earth Orbit (LEO) – hence, the decal of the constellation “Leo” the Lion.

Not unlike the Space Shuttle, real space planes land on runways and are prepared once again for further flights. Our model can be launched over and over again using Estes® engines and each time, gently return back to earth via parachute recovery!

7284 Starship Octavius™

Length: 20 in. (50.8 cm)
Diameter: 0.98 in. (25 mm)
Recovery: 12 in. (30.5 cm) Parachute
Projected Altitude: 1100 ft. (335 m)
Recommended Engines:
A8-3, B4-4, B6-4, C6-5, C6-7

MSRP - \$16.99



STARSHIP OCTAVIUS™
Snap together construction, ready to fly in minutes!

1250 Interceptor™

Length: 26 in. (66 cm)
Diameter: 1.33 in. (34 mm)
Recovery: 18 in. (45.7 cm) Parachute
Projected Altitude: 525 ft. (160 m)
Recommended Engines:
B4-2, B6-2, B6-4, C6-5

MSRP - \$29.99



Standing over 2 feet tall, this model rocket features laser cut precision balsa parts, a detailed blow molded nose cone and three 5-color decal sheets that will finish this model with eye-popping décor!

7260 Protostar™

Length: 24 in. (61 cm)

Diameter: 1.64 in. (42 mm)

Recovery: 18 in. (45.7 cm) Parachute

Projected Altitude: 1350 ft. (411 m)

Recommended Engines: C11-3, D12-5, E12-6

Requires 3/16 in. (5 mm) Maxi™ Launch Rod

2244; sold separately

MSRP - \$30.99



7253 Explorer Aquarius™

A scale-like model of the future, the interstellar voyager Explorer Aquarius! Stretch your skills with this unique and challenging kit. A great looker on the pad and in the air!

Length: 21.8 in. (55.4 cm)

Diameter: 2.75 in. (70 mm)

Recovery: 18 in. (45.7 cm) Parachute

Projected Altitude: 750 ft. (229 m)

Recommended Engines:

D12-3, D12-5, E12-4, E12-6

Requires 3/16 in. (5 mm) Maxi™

Launch Rod 2244; sold separately.

MSRP - \$38.99



From the first moments that man embarked from Earth to colonize the solar system, the Astron Explorer™ was critical in furthering mankind's space explorations. Equipped with long, hefty fuel tanks, the rocket's design aims to carry passengers and payloads safely across vast reaches of the galaxy.

When mankind built its first outpost on Saturn's icy moon Europa, the Astron Explorer™ took us there. When astronauts first journeyed beyond the outskirts of Pluto — to the 10th planet of our solar system, 2003 UB313 — the Astron Explorer™ took us there.

Astron Explorer Size



**One of
Our Longest
Rockets!**

7264 Astron Explorer™

Length: 42.2 in. (107.2 cm)

Diameter: 1.33 in. (34 mm)

Recovery:

18 in. (45.7 cm) Parachute

Projected Altitude:

1200 ft. (366 m)

Recommended Engines:

C11-3, D12-3, E12-4

Requires 3/16 in. (5 mm)

Maxi™ Launch Rod 2244; sold separately

MSRP - \$27.99



7249 Expedition™

Length: 25.6 in. (65 cm)

Diameter: 2.22 in. (56 mm)

Recovery: 18 in. (45.7 cm) Parachute

Projected Altitude: 1100 ft. (305 m)

Recommended Engines: C11-3, D12-5, E12-4, E12-6

Requires 3/16 in. (5 mm) Maxi™ Launch Rod 2244; sold separately

MSRP - \$27.99



D E S T I N A T I O N M A R S™



MISSION: COLONIZE MARS

The first crewed landing on Mars is still years away but Estes can't wait that long [you don't have to wait that long]! Destination Mars imagines a future timeline for Mars exploration, colonization, and more. Join the adventure now and travel with us to Mars, its moons, and all points along the way!

Space exploration experts predict a Mars landing by 2035 and that's where Destination Mars begins! Imagine the historic journey of the Mars One Expedition and the first men and women who'll make that trip. [One of them might even be you!] It's a grueling nine-month space voyage just to reach Mars orbit. Steering the lander through the thin Martian atmosphere isn't easy, but after a few tense moments the commander sets down on the dusty red plains – success! Over the next few years other Mars Expeditions follow with new technologies, more advanced rockets, and larger crews. It's the golden era of Mars exploration!

Eventually, humans arrive on Mars to stay. The temporary Expedition habitats are replaced with permanent bases and humanity has a new home away from home! As colony ships trickle in from Earth the Mars bases grows into a city, and the cities multiply across the surface. Terraforming efforts to remake Mars into a livable, Earth-like planet are started, and Mars becomes the launching point for exploring the asteroids, the outer planets, and beyond! To be sure, there are setbacks and sacrifices along the way, but progress, like adventure, constantly drives forward!

And that's what Destination Mars is: an adventure and a peek into the imagined future of space flight! But it doesn't have to stay imaginary! Humankind will travel by rocket to Mars someday. Someone has to plan those missions, design the hardware, build the rockets, and land them under the red Martian sky. Why can't that someone be you? [Shouldn't that someone be you?]



D E S T I N A T I O N M A R S™

Destination Mars™ imagines a future timeline for Mars exploration, colonization and more. Join the adventure now and travel with us to Mars, its moons and all points along the way!



THE LEAPER™

It doesn't just fly... it leaps! The Leaper helps Mars explorers get to where they need to go fast!

Officially it's the LAMPMU – Low Altitude Mars Personal Maneuvering Unit – but no one ever calls it that. To most people, on Earth and on Mars, it's simply "The Leaper™." Developed for the first Mars Expedition of 2035, the jetpack was envisioned as a way to rapidly travel between surface habitats. What the engineers didn't count on was just how fun it would be! Why walk when you can leap!

7297 Destination Mars™

The Leaper™

Height: 7.7 in. (19.6 cm)
Width with Legs: 23.4 in. (59.4 cm)
Recovery: Featherweight
Projected Altitude: 75 ft. (23 m)
Recommended Engines: A10-0T

MSRP - \$24.99



*Launches Up to 100 ft. on the
Porta-Pad II™ Launch Pad!*



MARS LONGSHIP™

The workhorse of the colonization fleet and a marvel of dynamic engineering, the Destination Mars™ Mars Longship™ planetary transport is the lifeline connecting old Earth to new Mars! Add it to your Mars fleet today!

First deployed in 2052 to support the expanding Mars outpost, the Mars Longship™ carries crucial supplies and eager colonists from Earth to Mars orbit, completing a circuit between planets every 18 months. But to the colonists the massive vessel is more than a cargo ship – with each return, it's a vital link to the old planet and a reminder of home. Build and launch your own Mars Longship™ and follow the full story of the human exploration and settlement of the red planet in Estes® Destination Mars!

7296 Destination Mars™ Mars Longship™

Length: 27.2 in. (69.1 cm)
Diameter: 1.33 in. (34 mm)
Recovery: 18 in. (45.7 cm) Parachute
Projected Altitude: 500 ft. (152 m)
Recommended Engines: D12-3, E12-4

MSRP - \$34.99



MAV LANDER™

The Destination Mars™ MAV™ (Mars Ascent Vehicle) has one job: bring the Mars Expedition crew back from the surface of the red planet and get them home safely! The MAV is the first release in Estes' latest series, Destination Mars™. It's 2035 and after a second global space race humanity has taken another "giant leap" and Mars is the prize. While it may require the efforts of an entire nation to reach Mars, the return is much simpler: a single rocket – the MAV – must lift off successfully from the dusty red plains and carry the crew back home. The highly-detailed MAV is a snap to assemble, featuring a colorful body wrap, highly detailed nosecone, realistic landing struts, and a large 18" parachute. Do you have what it takes to build and launch the Estes MAV?

7283 Destination Mars™ MAV Lander™

Length: 12.7 in. (32.3 cm)
Diameter: 1.64 in. (42 mm)
Recovery: 18 in. (45.7 cm) Parachute
Projected Altitude: 250 ft. (76 m)
Recommended Engines: C5-3, C6-3

MSRP - \$19.99



ADDRESS TO:

SPACE CORPS ACADEMY

INCOMING CLASS - SEPTEMBER 15, 2061

Welcome new cadets, to Space Corps and Space Corps Academy! I am Admiral Beard, superintendent of this fine academy and your commanding officer for the next four years. You have been selected to join an elite group of young men and women representing every settled human planet, moon, and orbital habitat. You are the bravest and brightest from one end of the Solar System to the other, and you will do great things. Starting today!

Before you begin your academy careers, let me remind you of the heroes and events that preceded you. It was barely a century ago that humanity first flew into space and only eight short years after that we were leaving footprints on Luna. What followed was the era of space stations, space shuttles, and space tourists. What an exciting time that must have been! Eventually, humanity decided to return to the moon to stay – first a moon base, then a colony, and now magnificent Armstrong City. We sent your parents' generation to Mars – five expeditions starting in '35 and now a permanent colony is underway! Today we're exploring the Asteroid Belt and the outer planets in ways that wouldn't have been possible even ten years ago. Humanity is pushing ever outward into the solar system and to the stars... and that's where you come in!

As you surely know, Space Corps was established in 2033 by the space-faring nations of Earth to support the exploration of our solar region and provide defense against any dangers, should they arise. Upon graduating from this academy, you will be fully prepared to take your place alongside those already serving Space Corps. The opportunities are boundless! You may be assigned to a Corvette crew patrolling the moons of Mars, or aboard a survey vessel mapping the asteroids for vital resources, or even supporting a Centurion interceptor exploring the rings of Saturn up close. And someday – perhaps sooner than you think – you could be leading a mission beyond our own planets and moons to the nearest stars... and beyond. We're just getting started!

So, cadets, once again welcome to Space Corps! Work hard, learn all you can, and stay hungry for adventure. There's a universe out there waiting for you!

ADMIRAL
H. BEARD
SUPERINTENDENT, SPACE CORPS ACADEMY





SPACE CORPS™

Space Corps™ is Here!
This Thrilling New Estes® Series
Takes You to the Front Line of
Space Exploration and a Future of
Non-Stop Excitement!

CORVETTE CLASS™

The Estes Corvette Class military rocket is an agile “ship of the line” of the Space Corp fleet. This versatile rocket serves as the primary vessel for all functions of the Corps – from patrol missions, to transport duty, to intercept activities, the Corvette Class crews are ready to take on any task, no matter the danger!

Standing more than two feet tall from the tip of its extended nose cone to the end of its threaded engine retainer, the Corvette Class is an impressive flying model rocket! Laser-cut, multi-piece balsa fins tipped with simulated particle-beam cannons and a large sheet of red, white and blue insignia water-slide decals complete the stylish look. Join Space Corp and launch your own Corvette Class flying model rocket today!

7281 Space Corps™ Corvette Class™

Length: 25 in. (63.5 cm)
Diameter: 1.33 in. (34 mm)
Recovery: 12 in. (30.5 cm) Parachute
Projected Altitude: 650 ft. (198 m)
Recommended Engines: B4-4, B6-4, C5-3, C6-3, C6-5

MSRP - \$24.99



LUNAR SCOUT™

The Lunar Scout series of remote space probes was critical to the success of the new lunar landing program of the late 2020s. These automated probes mapped out the moon's surface in detail to identify prospective landing sites for the “Second Giant Leap” as that series of lunar missions became known. Inexpensive to manufacture and reliable to operate, Space Corps later adapted the Lunar Scout to explore Mars and its twin moons Phobos and Deimos.

The Estes Lunar Scout is a lightweight model of this future historic space probe. The highly detailed, intermediate-level kit features laser-cut cardstock fins and other structural parts, with colorful water-slide decals for added realism. With flights up to 200 feet on an Estes mini A10-OT engine and featherweight recovery, this rocket makes for a great small field launcher. No need to wait for NASA to create their Lunar Scout – build and fly yours today!

7290 Space Corps™ Lunar Scout™

Length: 4 in. (10.2 cm)
Diameter: 0.74 in. (19 mm)
Recovery: Featherweight
Projected Altitude: 200 ft. (61 m)
Recommended Engines:
1/2A3-2T, A3-4T, A10-OT, A10-3T

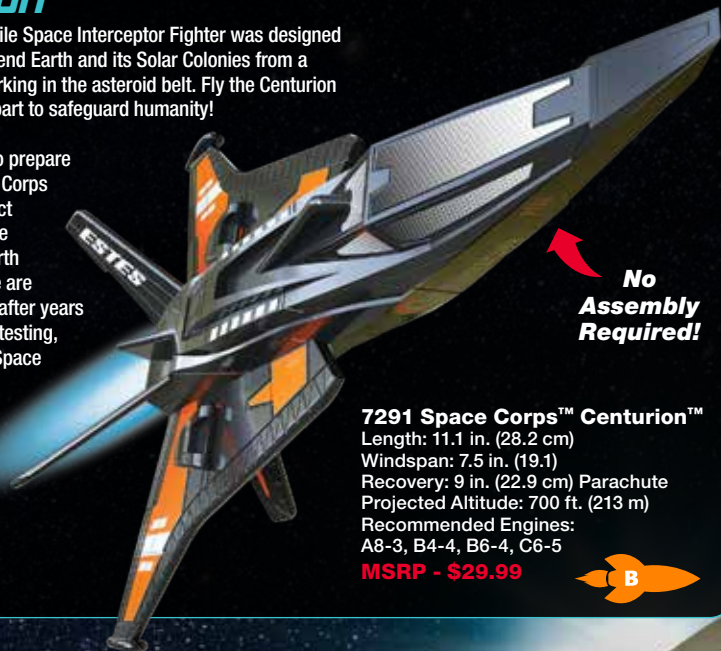
MSRP - \$9.99



CENTURION™

This Space Corps Agile Space Interceptor Fighter was designed for one purpose: defend Earth and its Solar Colonies from a mysterious visitor lurking in the asteroid belt. Fly the Centurion fighter and do your part to safeguard humanity!

With no choice but to prepare for the worst, Space Corps commissioned Project Centurion to meet the defense needs of Earth and the colonies. We are happy to report that after years of development and testing, the Centurion Agile Space Interceptor is now operational.



**No
Assembly
Required!**

7291 Space Corps™ Centurion™

Length: 11.1 in. (28.2 cm)

Wingspan: 7.5 in. (19.1)

Recovery: 9 in. (22.9 cm) Parachute

Projected Altitude: 700 ft. (213 m)

Recommended Engines:

A8-3, B4-4, B6-4, C6-5

MSRP - \$29.99



DARC-1™ Available Summer 2021

The Deep Atmosphere Research Craft is a one of a kind scientific vessel developed by Space Corps Science Division to explore the gas giants of the outer solar system. Designated DARC-1, this multi-section crewed vessel is designed to enter and maneuver within the thick atmospheres of Jupiter-type worlds for study and exploration.

The lifting body characteristics of the DARC-1 are ideal for atmospheric flight in dense gases and for maintaining station under turbulent conditions. At the conclusion of its research mission, the DARC-1 initiates return by igniting and subsequently discarding its aft booster section to break atmosphere and set a trajectory for home.

The DARC-1 first became operational in 2052 and successfully surveyed the atmospheres of Jupiter, Saturn and several of their large moons before it was claimed in a tragic accident over Titan.

7307 Space Corps™ DARC-1™

Length: 9.3 in. (23.6 cm)

Diameter: 4.2 in (107 mm)

Recovery: 12 in. (30.5 cm) Parachute

Projected Altitude: 400 ft. (122 m)

Recommended Engines: B6-2, C5-3, C6-3

MSRP - \$29.99



 is a
Scale Modeler's *Dream!*

**For More Than 62 Years, Estes®
Has Produced the Finest Scale
Replicas of Rockets and Missiles.**



Scale Model Rockets
Make History and Your
Hobbies Come...

... to *Life!*

SCALE MODELS



Scale Model Rockets

This category features detailed, miniature replicas of full-scale military, commercial, or space agency rockets, which come in a variety of scale sizes and model rocket engine requirements. Rockets in this class usually require advanced-level building skills using many handcrafted or molded detail parts. These rockets often require rocketeers attempting to build these models to have mastered a variety of skills in assembly, painting and launching techniques.



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 2206 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!

NEW!



2206 NASA SLS

1:200 Scale

Length: 19.4 in. (49.3 cm)

Diameter: 1.64 in. (42 mm)

Recovery: 15 in. (38.1 cm)

Parachute

Projected Altitude: 350 ft. (107 m)

Recommended Engines: C5-3, C6-3

MSRP - \$69.99



The 2160 Saturn V Comes Almost Ready-to-Fly Out of the Box.



DISPLAY STAND INCLUDED!



Model Features a Clear Plastic Fin Unit to Stabilize Flights!

The Estes limited production and 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.

2160 Anniversary Saturn V

1:200 Scale

Length: 21.8 in (55.4 cm)

Diameter: 1.98 in. (50 mm)

Recovery: 18 in. (45.7 cm) Parachute

Projected Altitude: 200 ft. (61 m)

Recommended Engines: C5-3, C6-3

MSRP - \$69.99





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.



7251 Saturn 1B
1:100 Scale
Length: 26.8 in. (68.1 cm)
Diameter: 2.62 in. (67 mm)
Recovery:
1x 15 in. (38.1 cm), 1x 18 in. (45.7 cm)
Projected Altitude: 1000 ft. (305 m)
Recommended Engines:
C11-3, D12-3, E12-4, E12-6
MSRP - \$69.99



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.

1973 Saturn Skylab
1:100 Scale
Length: 41.25 in. (104.8 cm)
Diameter: 3.94 in. (100 mm)
Recovery:
1x 18 in. (45.7 cm), 2 x 24 in. (61 cm)
Projected Altitude: 400 ft. (122 m)
Recommended Engines:
E16-4, F15-4
MSRP - \$99.99



2056 U.S. Army Patriot M-104**1:10 Scale**

Length: 21.3 in. (54.1 cm)

Diameter: 1.64 in. (42 mm)

Recovery: 12 in. (30.5 cm) Parachute

Projected Altitude: 600 ft. (183 m)

Recommended Engines:

B4-4, B6-4, B6-6, C6-5

MSRP - \$18.99

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

2446 Mini Honest John**1:24 Scale**

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!

Length: 11.75 in. (29.8 cm)

Diameter: 0.98 in. (25 mm)

Recovery:

12 in. (30.5 cm) Parachute

Projected Altitude: 325 ft. (99 m)

Recommended Engines:

1/2A3-2T, A3-4T, A10-3T

MSRP - \$12.99

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

7240 Honest John

1:14 Scale

Length: 23 in. (58.4 cm)
Diameter: 1.64 in. (42 mm)
Recovery: 15 in. (38.1 cm)
Parachute
Projected Altitude:
1400 ft. (427 m)
Recommended Engines:
C11-3, D12-5, E12-6
Requires 3/16 in. (5 mm)
Maxi™ Launch Rod
(2244), sold separately.

MSRP - \$28.99



Made to be a fin-stabilized, unguided artillery rocket, the Honest John was mounted on the backs of military trucks. It had a range of 15.4 miles with a 20 kiloton nuclear warhead or a 1500 pound conventional warhead.

7243 Black Brant II

1:13 Scale

The Estes® Black Brant II is a 1:13 scale replica of one of the earliest of the Black Brant sounding rockets. Loaded with scale details, this rocket really moves using the recommended Estes® D12 engines (not included).

Length: 24.9 in. (63.2 cm)
Diameter: 1.33 in. (34 mm)
Recovery: 18 in. (45.7 cm) Parachute
Projected Altitude: 1300 ft. (396 m)
Recommended Engines: C11-3, D12-5, D12-7
Requires 3/16 in. (5 mm) Maxi™ Launch Rod (2244) sold separately.

MSRP - \$23.99



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.

7255 Little Joe I**1:34 Scale**

Length: 17.6 in. (44.8 cm)

Diameter: 2.34 in. (59 mm)

Recovery: 15 in. (38.1 cm)

Parachute

Projected Altitude:

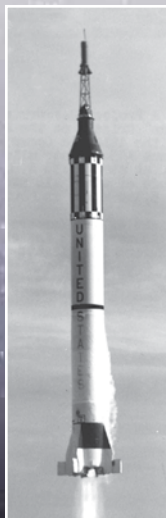
400 ft. (122 m)

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

1921 Mercury Redstone 4/ Liberty Bell 7**1:34 Scale**

Length: 28.6 in. (72.6 cm)

Diameter: 2.05 in. (52 mm)

Recovery:

15 in. (38.1 cm) Parachute

Projected Altitude:

200 ft. (61 m)

Recommended Engines:

C5-3, C6-3

MSRP - \$26.99

FLY BIG!

Challenging Builds and Flights

7271 SA-2061 Sasha™

Length: 31.5 in. (80 cm)
Diameter: 1.64 in. (42 mm)
Recovery: 18 in. (45.7 cm) 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 3/16 in. (5 mm) Maxi™
Launch Rod 2244; sold separately

MSRP - \$29.99



2162 Big Daddy™

Length:
19 in. (48.3 cm)
Diameter: 3 in. (76 mm)
Recovery: 24 in. (61 cm) Parachute
Projected Altitude: 900 ft. (274 m)
Recommended Engines:
C11-3, D12-3, D12-5, E12-4, E12-6
Requires 3/16 in. (5 mm) Maxi™
Launch Rod 2244; sold separately.

MSRP - \$34.99



3226 Hi-Flier® XL

Length: 31 in. (78.7 cm)
Diameter: 1.64 in. (42 mm)
Recovery:
18 in. (45.7 cm) Parachute
Projected Altitude:
1325 ft. (404 m)
Recommended Engines:
C11-3, D12-5, D12-7, E12-6, E12-8
w/Engine Adapter
(sold separately) - C5-3, C6-3
Requires 3/16 in. (5 mm) Maxi™
Launch Rod 2244; sold separately

MSRP - \$21.99



9719 Super Big Bertha™

Length: 36.8 in. (93.5 cm)
Diameter: 2.6 in. (66 mm)
Recovery: 24 in. (61 cm) Parachute
Projected Altitude: 1200 ft. (366 m)
Recommended Engines:
E16-4, F15-6
w/Engine Adapter (sold separately)
- D12-3

MSRP - \$39.99



**9707 Majestic™
Pro Series II™ E2X®**

Length: 35.3 in. (89.7 cm)
Diameter: 2 in. (51 mm)
Recovery:
18 in. (45.7 cm) Nylon Parachute
Projected Altitude: 2200 ft. (671 m)
Recommended Engines:
E16-6, F15-6, F15-8
w/Engine Adapter (sold
separately) - D12-3, E12-4

MSRP - \$48.99



**9716 Star Orbiter™
Pro Series II™**

Length: 45.2 in. (114.8 cm)
Diameter: 1.64 in. (42 mm)
Recovery:
18 in. (45.7 cm) Parachute
Projected Altitude:
1800 ft. (549 m)
Recommended Engines:
E16-6, F15-8
w/Engine Adapter (sold
separately) - D12-3, E12-4

MSRP - \$24.99



9720 Doorknob Pro Series II™

1:5.3 Scale
Length: 26.9 in. (68.3 cm)
Diameter: 3 in. (76 mm)
Recovery: 18 in. (45.7 cm) Nylon Parachute
Projected Altitude: 1100 ft. (335 m)
Recommended Engines:
E16-4, F15-4, F15-6

MSRP - \$39.99



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

Bigger & Better!

The Der Big Red Max is here!



9721 Der Big Red Max™

Length: 29.9 in. (75.9 cm)

Diameter: 3 in. (76 mm)

Recovery:

18 in. (45.7 cm) Parachute

Projected Altitude:

1100 ft. (335 m)

Recommended Engines:

E16-4, F15-4

MSRP - \$49.99

PRO
SERIES II

Over
29 in.
Tall!



9753 PS II™ 24 mm to 29 mm Engine Adapter Set

MSRP - \$5.99



3172 PS II™ Shock Cord Accessory Pack

3 heavy-duty elastic shock cords;
1/2 in. (13 mm) x 96 in. (243.8 cm)

MSRP - \$10.99



9752 Pro Series II™ E2X® Booster

For use with the 9707 Majestic™
Recommended Engine: F15-0

MSRP - \$9.99



3556 PS II™ Recovery Wadding

Approximately 216
sheets for larger rockets.
Can be used in any
Estes® rocket.

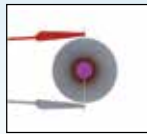
MSRP - \$9.99

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 below).

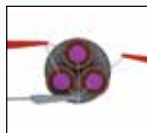
2240 PS II™ Launch Controller

- 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)

MSRP - \$39.99

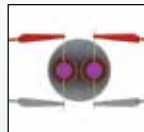


Single
← Engine
Arrangement

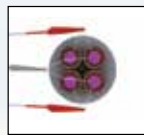


Three Engine
← Cluster
Arrangement

Engine Configuration for a Cluster Launch



Two Engine
← Cluster
Arrangement



Four Engine
← Cluster
Arrangement

3552 PS 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

MSRP - \$39.99

**Paint Your
Launch Base
the Color
of Your
Choice!**

MODEL ROCKET ENGINE PERFORMANCE CHART

Prod. No.	Engine Type	Total Impulse		Time Delay		Est. Max. Lift Wt.	Max Thrust		Thrust Duration		Initial Weight		Propellant Weight	Diameter	Quantity per Pack	Retail Price per Pack
		N-sec	Sec	Sec	Sec		oz	g	oz	g	oz	g				
SINGLE STAGE ENGINES																
1502	1/4A3-3T	0.625	3	1.0	28	4.90	1.1	0.25	0.21	5.9	0.05	1.3	13	4	\$10.29	
1503	1/2A3-2T	1.25	2	2.0	57	8.30	1.9	0.30	0.23	6.4	0.07	1.9	13	4	\$10.29	
1507	A3-4T	2.50	4	2.0	57	6.80	1.5	0.60	0.28	8.0	0.12	3.3	13	4	\$10.29	
1511	A10-3T	2.50	3	3.0	85	13.00	2.9	0.80	0.29	8.1	0.12	3.5	13	4	\$10.29	
1593	1/2A6-2	1.25	2	2.0	57	8.90	2.0	0.30	0.48	13.6	0.10	2.7	18	3	\$10.29	
1598	A8-3	2.50	3	3.0	85	10.70	2.4	0.50	0.55	15.5	0.14	4.1	18	3	\$10.29	
1601	B4-2	5.00	2	4.0	113	13.20	3.0	1.10	0.66	18.6	0.27	7.6	18	3	\$10.79	
1602	B4-4	5.00	4	3.5	99	13.20	3.0	1.10	0.68	19.2	0.27	7.6	18	3	\$10.79	
1605	B6-2	5.00	2	4.5	127	12.10	2.7	0.80	0.61	17.3	0.23	6.5	18	3	\$10.79	
1606	B6-4	5.00	4	4.0	113	12.10	2.7	0.80	0.63	17.8	0.23	6.5	18	3	\$10.79	
1617	C5-3	10.00	3	8.0	227	20.40	4.6	1.85	0.83	23.6	0.39	11	18	3	\$11.79	
1613	C6-3	10.00	3	4.0	113	15.30	3.4	1.60	0.83	23.4	0.43	12.2	18	3	\$11.79	
1614	C6-5	10.00	5	4.0	113	15.30	3.4	1.60	0.85	24.0	0.43	12.2	18	3	\$11.79	
1522	C11-3	10.00	3	6.0	170	22.10	4.9	0.80	1.13	32.1	0.44	12.4	24	2	\$7.99	
1523	C11-5	10.00	5	5.0	142	22.10	4.9	0.80	1.18	33.4	0.44	12.4	24	2	\$7.99	
1566	D12-3	20.00	3	14.0	396	32.90	7.4	1.60	1.57	44.5	0.85	24.2	24	2	\$11.99	
1567	D12-5	20.00	5	10.0	283	32.90	7.4	1.60	1.61	45.7	0.85	24.2	24	2	\$11.99	
1692	E12-4	30.00	4	17.0	482	30.60	6.9	2.70	2.16	61.2	1.3	36.9	24	3	\$23.99	
1693	E12-6	29.50	6	14.0	397	29.60	6.7	2.70	2.23	63.2	1.3	36.9	24	3	\$23.99	
1651	F15-4	49.61	4	21.0	595	25.26	5.7	3.45	3.59	101.5	2.12	60	29	2	\$26.99	
1652	F15-6	49.61	6	17.0	482	25.26	5.7	3.45	3.66	103.7	2.12	60	29	2	\$26.99	
1696	E16-4	33.68	4	20.0	566	26.44	5.9	2.09	2.86	81.0	1.41	40	29	2	\$22.99	
1697	E16-6	33.68	6	16.0	453	26.44	5.9	2.09	2.92	82.7	1.41	40	29	2	\$22.99	



MODEL ROCKET ENGINE PERFORMANCE CHART (cont'd)

Prod. No.	Engine Type	Total Impulse		Time Delay	Est. Max. Lift Wt.	Max Thrust	Thrust Duration	Initial Weight		Propellant Weight	Diameter	Quantity per Pack	Retail Price per Pack		
		N-sec	g					oz	g						
UPPER STAGE ENGINES															
1504	1/2A3-4T	1.25	4	1.0	28	8.30	1.9	0.30	0.23	6.6	0.07	1.9	13	4	\$10.29
1599	A8-5	2.50	5	2.0	57	13.30	3.0	0.50	0.55	15.7	0.14	4.1	18	3	\$10.29
1607	B6-6	5.00	6	2.5	71	12.10	2.7	0.80	0.64	18.2	0.23	6.5	18	3	\$10.79
1615	C6-7	10.00	7	2.5	71	15.30	3.4	1.60	0.85	24.3	0.43	12.2	18	3	\$11.79
1524	C11-7	10.00	7	4.0	113	22.10	4.9	0.80	1.19	33.8	0.44	12.4	24	2	\$7.99
1568	D12-7	20.00	7	8.0	226	32.90	7.4	1.60	1.62	46.0	0.85	24.2	24	2	\$11.99
1694	E12-8	29.80	8	12.0	340	31.80	7.1	2.70	2.24	63.5	1.3	36.9	24	3	\$23.99
1653	F15-8	49.61	8	15.0	425	25.26	5.7	3.45	3.69	104.4	2.12	60	29	2	\$26.99
1698	E16-8	33.68	8	14.0	396	26.44	5.9	2.09	2.99	84.7	1.41	40	29	2	\$22.99
BOOSTER STAGE ENGINES															
1510	A10-0T	2.50	NONE	4.0	113	13.00	2.9	0.80	0.24	6.8	0.12	3.5	13	4	\$10.29
1600	A8-0	2.50	NONE	3.0	85	13.30	3.0	0.30	0.47	13.5	0.14	4.1	18	3	\$10.29
1608	B6-0	5.00	NONE	4.0	113	12.10	2.7	0.80	0.55	15.7	0.23	6.5	18	3	\$10.79
1616	C6-0	10.00	NONE	4.0	113	15.30	3.4	1.60	0.76	21.4	0.43	12.2	18	3	\$11.79
1521	C11-0	10.00	NONE	6.0	170	22.10	4.9	0.80	1.03	29.2	0.44	12.4	24	2	\$7.99
1565	D12-0	20.00	NONE	14.0	396	32.90	7.4	1.60	1.43	40.4	0.84	23.8	24	2	\$11.99
1691	E12-0	28.80	NONE	16.0	454	31.30	7.0	2.60	2.05	58.1	1.3	36.9	24	3	\$23.99
1650	F15-0	49.61	NONE	19.0	539	25.26	5.7	3.45	3.32	94.0	2.12	60	29	2	\$26.99
1695	E16-0	33.68	NONE	18.0	509	26.44	5.9	2.09	2.58	73.2	1.41	40	29	2	\$22.99
PLUGGED ENGINES—FOR USE WITH ROCKET-POWERED RACERS & R/C ROCKET GLIDERS															
1505	A10-PT	2.50	NONE	3.0	85	13.00	2.9	0.80	0.26	6.83	0.13	3.5	13	4	\$10.29

*Delays have a tolerance of +/- 10% or one second, whichever is greater. The data listed above is from randomly chosen production samples. There are four mini-engines per package. All other engines are two or three per package. NOTE: The "T" designates a mini-engine. All Estes engines come complete with starters and starter plugs. The Estes starter plug makes engine ignition extremely reliable.

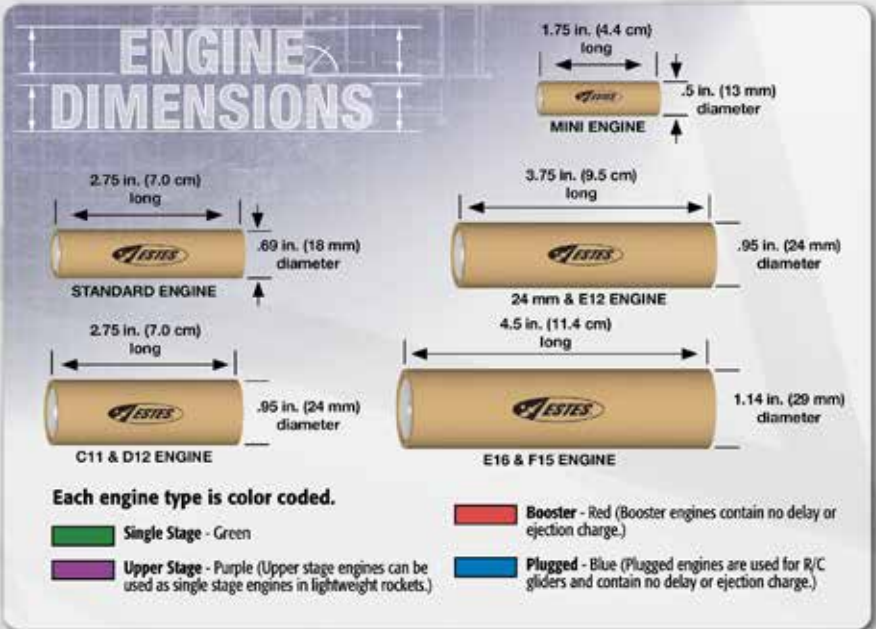


WARNING:
 This product can expose you to silica, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.
 This warning is on all Estes engine packaging.

Estes Model Rocket Engines

The famous model rocket engines that made model rocketry the safe activity it is today! Estes® model rocket engines have been proven consistent and reliable in more than 500 million launches.

- The concept of a factory assembled model rocket engine is the foundation of this scientific and educational activity!
- 3% of all Estes® engines are static-tested at the factory for reliability and adherence to performance specifications.
- All engines comply with the code requirements of the National Fire Protection Association and are certified by the National Association of Rocketry.



LETTER = TOTAL IMPULSE

This letter is the total power (in Newton-seconds) produced by the engine. Each succeeding letter has up to twice the total power as the previous letter. (Example: 'B' engines have up to twice the power of 'A' engines, which results in approximately twice the altitude the rocket will reach.)

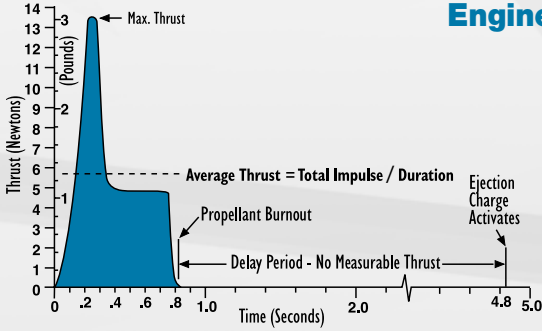
FIRST NUMBER = AVERAGE THRUST

This number shows the engine's average thrust push or how fast the engine powers the rocket to go. The higher the number, the faster the speed. It is measured in Newtons (4.45 Newtons = 1lb.).

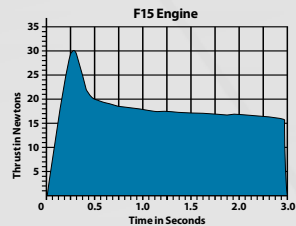
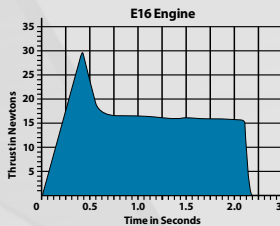
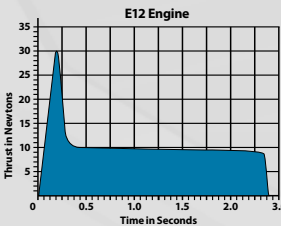
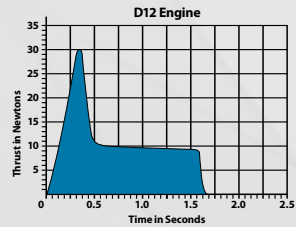
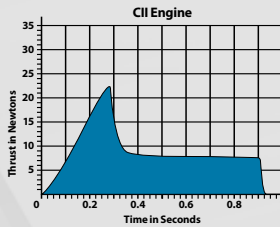
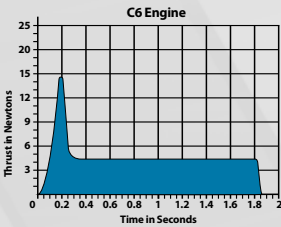
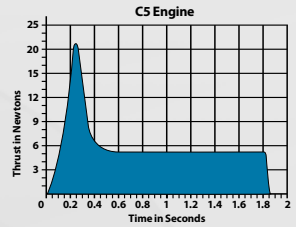
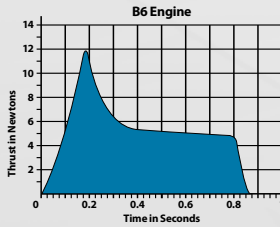
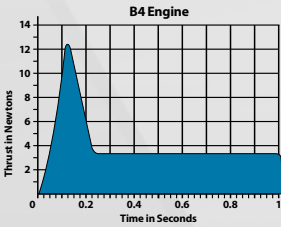
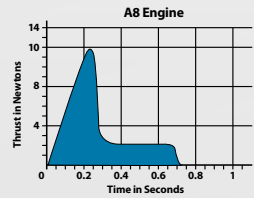
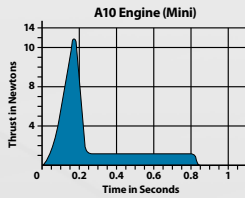
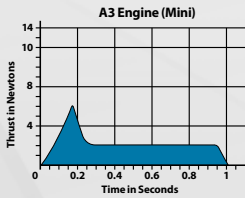
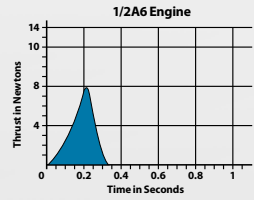
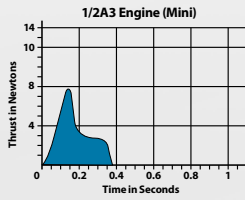
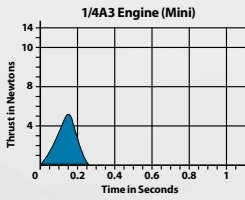
SECOND NUMBER = TIME DELAY

This number gives you the time delay in seconds between the end of the thrust phase and the ignition of the ejection charge. Engine types ending in '0' have no time delay or ejection and are used for booster stages and special purposes only. Engines ending in 'P' have no time delay or ejection charge and the forward end is plugged.

Engine Time/Thrust Curves



- Time/thrust curves are representative of random production samples.
- Graphs are not drawn to the same scale.

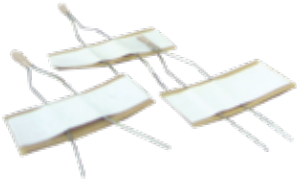


The Estes® model rocket starter is the basic ignition device used to start the combustion process in the rocket engine. Starters are placed inside of all Estes® model rocket engines.

2302 Model Rocket Starters

Easy-to-use Estes® starters in a convenient six pack. It's always good to have spares.

MSRP - \$5.49

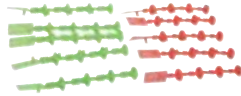


Estes® starter plugs are used to safely secure your model rocket starters to your Estes® engines during ignition. Different colored starter plugs are designed to accommodate different sized engines. They are a convenient way to ensure the success of your rocket launches; they are reusable.

2250 Plugs for Mini Engines

1/4A3, 1/2A3, A3, and A10 (20 pack)

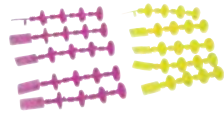
MSRP - \$5.99



2251 Plugs for Standard Engines

1/2A6, A8, B4, B6, and C6 (20 pack)

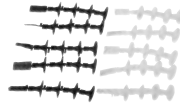
MSRP - \$5.99



2252 Plugs for Large Engines

C11, D12, E9, E12, E16 and F15 (20 pack)

MSRP - \$5.99



Shock cords hold the parts of a model rocket together once they separate during the ejection phase. The shock cord is made of an elastic material to help absorb the shock placed upon the rocket when the parachute ejects, then opens — creating drag during the recovery phase. Shock cord mounts fasten the shock cord to the inside of the rocket's body tube.

2278 Shock Cords & Mounts Pack

Includes three 1/8 in. x 36 in. (3 mm x 91.4 mm) and one 1/4 in. x 36 in. (6 mm x 91.4 mm) rubber shock cords (enough for four shock cords). Includes shock cord mounts and instructions.

MSRP - \$5.99



Model rocket recovery wadding is placed inside the rocket to protect the parachute from intense heat during the rocket's ejection stage. All Estes® recovery wadding is flame resistant, ensuring the safety of your rocket flights. Crumple sheets lightly, insert wadding into rocket making sure it touches the body tube walls and then insert the recovery system!

2274 Recovery Wadding

Flame-resistant wadding protects recovery system. Required in most Estes rockets. Contains approximately 72 squares — enough for about 18-25 flights!

MSRP - \$5.49

Recovery Parachutes

(plastic)

2268 9 in. (22.9 cm)
MSRP - \$3.49

2262 6 in. (15.2 cm)
MSRP - \$2.99

2264
12 in. (30.5 cm)
MSRP - \$3.99

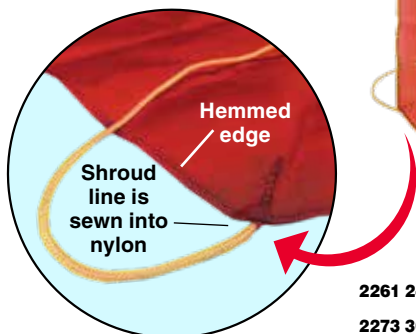
2265
15 in. (38.1 cm)
MSRP - \$4.49

2267 18 in. (45.7 cm)
MSRP - \$4.99

2271
24 in. (61 cm)
MSRP - \$5.49

All Parachutes are Fully-Assembled

Sturdy sewn fabric chutes for your biggest, heaviest rockets.



2261 24 in. (61 cm) Nylon Parachute MSRP - \$12.99

2273 30 in. (76.2 cm) Nylon Parachute MSRP - \$16.99

Launch equipment is what you'll need to safely and successfully launch your rocket time after time. The essentials are: launch base, launch rod, blast plate and launch controller. Different sized launch bases and launch rods are used to accommodate different sized rockets.

The 2230 E Launch Controller has the longer 30 foot cable you need when launching E and F engines.

2222 Porta-Pad® II and Electron Beam® Launch Controller

Quick assembly - no glue or tools required! Launch rod angle is adjustable. Comes complete with blast deflector, standoff, two-piece 1/8 in. (3 mm) launch rod and safety cap. Can accommodate a 3/16 in. (5 mm) Maxi™ launch rod - not included. Launch controller comes assembled with safety key and 15 ft. (4.6 m) of cable. Requires 4 new 1.5V AA alkaline batteries - not included.

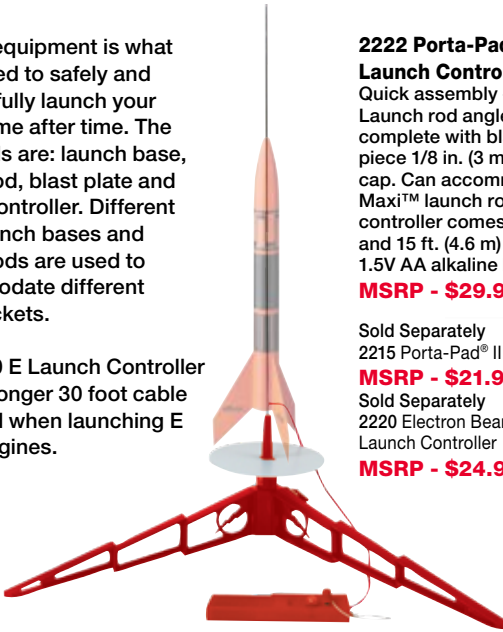
MSRP - \$29.99

Sold Separately
2215 Porta-Pad® II Launch Pad

MSRP - \$21.99

Sold Separately
2220 Electron Beam® Launch Controller

MSRP - \$24.99



2230 E Launch Controller

Comes assembled with safety key and 30 ft. (9.7 m) of cable. Requires 4 new 1.5V AA alkaline batteries - not included.

MSRP - \$32.99

2243 1/8 in. (3 mm) Two-Piece Launch Rod

Replacement rod ideal for most rockets.

MSRP - \$6.99

2244 3/16 in. (5 mm) Two-Piece Maxi™ Launch Rod

Launch rod with extra strength and length for larger rockets.

MSRP - \$11.99

38206 1/4 in. (6 mm) Two-Piece Launch Rod

Screws together. For use with the 2238 Porta-Pad® E Launch Pad and PS II™ Launch Pad.

MSRP - \$16.99



2238 Porta-Pad® E Launch Pad

Quick assembly - no glue or tools required. Launch rod angle is adjustable. Includes a three-piece 1/4 in. (6 mm) launch rod, but can accommodate a 3/16 in. (5 mm) Maxi™ launch rod - not included.

MSRP - \$30.99

2241 Blast Deflector Plate

Replaces that worn-out deflector. For use with 2215 Porta-Pad® II

MSRP - \$5.99



Now you can make exact, easy measurements when attending to your fleet of Estes® model rockets. Tube marking guides and fin alignment tools help make your hobby rocket endeavors fast, efficient and fun! These are must-have items for the advanced model rocket enthusiast.

3 Different Building Tools!



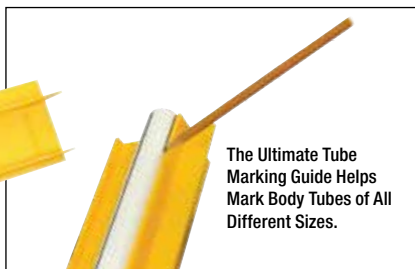
2227 Tube Marking Guide

The tube marking guide is an easy way to mark your fin and launch lug placement. The marking guide is a must for any rocket builder!

MSRP - \$12.99



The Tube Marking Guide Allows for Accurate and Consistent Fin Placement When Building Your Rocket.



The Ultimate Tube Marking Guide Helps Mark Body Tubes of All Different Sizes.

2228 Ultimate™ Tube Marking Guide

Accurately mark your body tubes for a variety of rocket-assembly purposes.

MSRP - \$11.99



2315 Tube Cutting Guides

Assorted sizes: BT-5, BT-20, BT-50, BT-55, and BT-60 (hobby knife not included).

MSRP - \$11.99

Never Misalign Your Rocket Fins Again!



2231 Fin Alignment Guide

Fast and accurate fin alignment for three- or four-finned rockets.

MSRP - \$21.99

Model rockets are constructed using various essential parts. Nose cones streamline a rocket's ascent. Nose cone weights help stabilize a rocket's trajectory. Payload sections allow the rocketeer to view their cargo.

With Estes model rocket parts, you can build, launch, repair and create using any of the items listed here!



3180 Clay Nose Cone Weights
MSRP - \$5.99



3175 BT-5 through BT-55 Centering Ring Assortment
MSRP - \$5.99

NOSE CONE ASSORTMENTS

Each package of nose cones may contain a variety of shapes. Some are one piece, others two piece. All have eyelets for shock cord and shroud line attachments. (3173 shown)



- 3160 NC-5 Assortment (5 pack) **MSRP - \$5.49**
- 3161 NC-20 Assortment (4 pack)..... **MSRP - \$5.49**
- 3162 NC-50 Assortment (5 pack) **MSRP - \$8.99**
- 3163 NC-55 Assortment (4 pack) **MSRP - \$7.99**
- 3164 NC-56 Assortment (4 pack) **MSRP - \$7.99**
- 3165 NC-60A Assortment (3 pack)..... **MSRP - \$8.99**
- 3168 NC-80B Assortment (1 Pack) **MSRP - \$4.49**
- 3173 Sci-Fi Assortment (5 pack) **MSRP - \$16.99**



3171 Clear Payload Section Assortment
MSRP - \$17.99

BODY TUBE PACKS

High quality spiral wound paper tubes. Use tube couplers to connect tubes of the same diameter. Outer diameters listed. (not all body tube sizes shown)



- 3084 BT-5 • 0.54 in./14 mm diameter • 18 in./45.7 cm long (4 pack)
MSRP - \$7.49
- 3085 BT-20 • 0.74 in./19 mm diameter • 18 in./45.7 cm long (4 pack)
MSRP - \$8.49
- 3086 BT-50 • 0.98 in./25 mm diameter • 18 in./45.7 cm long (3 pack)
MSRP - \$8.49
- 3087 BT-55 • 1.33 in./34 mm diameter • 18 in./45.7 cm long (3 pack)
MSRP - \$8.99
- 3089 BT-60 • 1.64 in./42 mm diameter • 18 in./45.7 cm long (3 pack)
MSRP - \$9.49
- 3090 BT-80 • 2.60 in./66 mm diameter • 14.2 in./36 cm long (2 pack)
MSRP - \$8.99



3176 Tube Couplers
for BT-5, BT-20, BT-50 (2 each)
MSRP - \$3.99



3177 Tube Couplers for BT-
55, BT-60 (2 each)
MSRP - \$5.49



3178 Tube Couplers for BT-80 (2 each)
MSRP - \$4.99



3196 Tube Coupler Assortment Pack
Includes two couplers for BT-55, BT-56 and BT-60; One for BT-80.
MSRP - \$6.99

3179 2x Sets Laser Cut Centering Rings and 2 Sets Shroud Templates
MSRP - \$8.49



3181 Engine Mount Parts Assortment
Engine mounts for mini-engines, standard engines, and D engines. (3 each)
MSRP - \$8.49



3158 Standard Engine Mount Kit
Fits BT-50, BT-55 and BT-60 tubes. Can also be used to make a conversion mount for lightweight D powered rockets.
MSRP - \$7.49



3159 D and E12 Engine Mount Kit
Heavy duty engine mounts for D and E12 engines. Fits BT-55, BT-60 and BT-80 tubes.
MSRP - \$10.99

3143 Engine Hook Accessory Pack
Hooks fit mini engines (two), regular and D engines (three) and E12 engines (two).

MSRP - \$5.49



9750 Pro Series II™ Engine Retainer Set 29 mm (2 sets)

MSRP - \$8.99



9751 Engine Retainer Set 24 mm (2 sets)

MSRP - \$7.99



3187 Engine Retainer Set 18 mm (3 sets)

MSRP - \$6.99



2316 Mini to Standard Engine Adapters

Two simple steps transform a mini-engine into a standard size. Insert a mini-engine into the adapter, and insert the adapter into a rocket. 3 adapters per pack. Reusable. (Engines not included).

MSRP - \$5.99



2317 Standard to D Engine Adapters

Two simple steps transform a standard engine into a D size. Insert a standard engine into the adapter, and insert the adapter into a rocket. 3 adapters per pack. Reusable. (Engines not included).

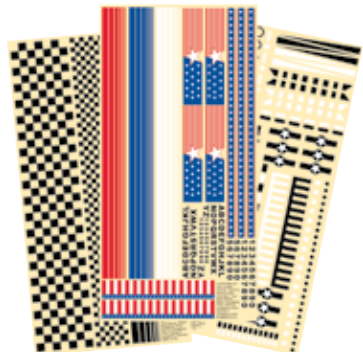
MSRP - \$5.99



2320 Launch Lug Pack

Contains 4 each: 1/8 in. x 2 3/8 in. (3 mm x 60 mm), 1/8 in. x 1 1/4 in. (3 mm x 32 mm), 3/16 in. x 2 in. (5 x 51 mm) and 1/4 in. x 1 in. (6 mm x 25 mm) launch lugs.

MSRP - \$5.99



3170 Waterslide Decal Set

MSRP - \$12.99

**The Model Rocket Cradle
Holds Rockets in a Horizontal Fashion.**



**Proudly
Display Your
Rockets!**

The world of hobby rocketry, models become more than mere ships — they become works of art that must be treated as such! Proudly display the rocket that you meticulously constructed, adorned and flew using your bare hands and brawny brain!

The rocket display cradle holds your rocket in a horizontal fashion while the display stands hold your rockets upright for the whole world to see!

**2293 Model
Rocket Cradle**

Multiple ways to use:
Assembly, display or
transportation to the field.

MSRP - \$8.49

**2290 Model Rocket
Display Stand**

For 13 mm engines. (3 pack)

MSRP - \$7.49

**2292 Model Rocket
Display Stand**

For 24 mm engines. (3 pack)

MSRP - \$7.49

**2291 Model Rocket
Display Stand**

For 18 mm engines. (3 pack)

MSRP - \$7.49

Estes® Rocket Display
Stands come in various
sizes and hold different
sized rockets upright.

Challenge Your *Imagination!*



Contains 100+ Parts. Design and Build the Rockets of Your Dreams!

Experiment with your own designs. Includes enough parts to build at least 8 complete rockets. Just add imagination.

1980 Designer's Special™
MSRP - \$86.99

Designs shown are for inspiration only and may include other imaginative parts not included in your Designer's Special.



HEIGHT

HYPOTENUSE

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 - \$21.99



How High Did It Fly?

Altitrak™: 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 process uses good old reliable trigonometry, and it requires creating an invisible right triangle. A right triangle is any triangle that has a 90-degree angle (also called a right angle). The three points of this invisible triangle are the launch pad, the person who tracks the rocket's altitude with the Altitrak, and the point in the sky where the rocket reaches peak altitude (apogee).

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).

RIGHT
90°
ANGLE

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!

Altimeter: Another method for measuring the altitude without the need for a helper is by using an electronic altimeter. These onboard electronic devices can attach to the nose cone or be inserted into a payload bay. Altimeters incorporate a highly sensitive barometric sensor and an electronic triggering logic that provides maximum altitude at apogee. The Estes® 2246 Electronic Altimeter provides a direct LCD readout and can record heights in one-foot increments up to 10,000 feet (+/- 3 feet) and can store up to 10 launches in the unit's memory. The Estes® Altimeter weighs about 1/2 oz. and is slightly over 5/8 in. in diameter.



2246 Altimeter
Record up to 10 flights. LCD display, battery included.
MSRP - \$39.99



Altimeter

The Altimeter hooks onto the nose cone of your rocket and is inserted into the body tube right above the parachute. As your rocket climbs in altitude, the Altimeter digitally calculates the maximum height attained.

The Hand-Held Altitrak™ Quickly Tells How High Your Rocket Flies!

The Altitrak™ Measures This Angle.





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.

educo

“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 6 years and it’s the best activity every year!”

- KB

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

- Remote and in classroom options
- Claims - Evidence -Reasoning Assessments
- NGSS standards
- All 4 STEM elements
- 21st Century skills
- Support resources



Download Lesson Plans at: EstesRockets.com/edu/b2s/lesson-plans/

education

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

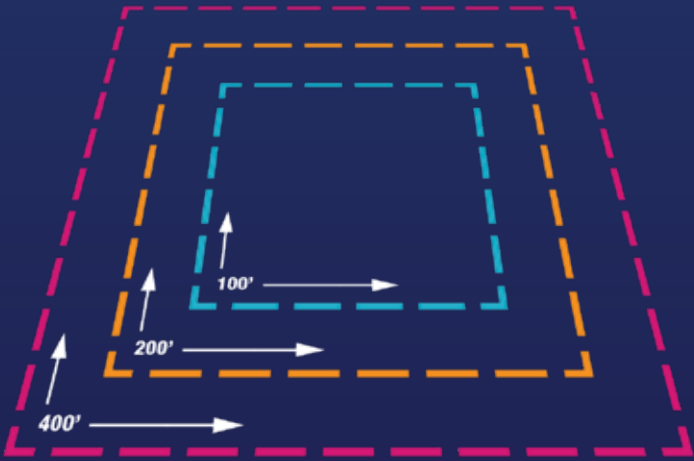
Younger students (Grades 5-8) need beginner rockets that are simple to assemble. They're not quite ready for the challenge of gluing on individual fins yet, so choose one of our beginner bulk packs. Grades 9-12 are ready for the intermediate rockets!

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. Use the chart below to help you determine what engine will work best!



100' x 100' Area

- Recommended Engines
A8-3, A8-5



200' x 200' Area

- Recommended Engines
B4-4, B6-4, B6-6



400' x 400' Area

- Recommended Engines
C6-5, C6-7

education



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.

NEW PRODUCTS



1721 Star Hopper™ Bulk Pack

- No glue or building supplies required!
- Ready to fly in minutes, perfect for teachers on a tight schedule!
- Great for younger students

Length: 7.4 in. (18.8 cm)
Diameter: 0.74 in. (19 mm)
Recovery: 18 in. (40.7 cm) Streamer
Projected Altitude: 400 ft. (122 m)
Recommended Engines:
1/2A3-4T, A3-4T, A10-3T

Pack of 12
MSRP - \$129.99

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 - \$9.99



**How High
Did My
Rocket Go?**



EDUCATOR BULK PACKS



**Quick Snap –
No Gluing!**

1721 Star Hopper™ Bulk Pack

Length: 7.4 in. (18.8 cm)
Diameter: 0.74 in. (19 mm)
Projected Altitude: 400 ft. (122 m)
Recommended Engines:
1/2A3-4T, A3-4T, A10-3T

**Pack of 12
MSRP - \$129.99**



**PLASTIC SNAP
IN FINS!**



**ONE-PIECE
MOLDED FIN UNIT**

1749 Gnome™ Bulk Pack

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

**Pack of 12
MSRP - \$69.99**



**Quick Snap –
No Gluing!**

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, A10-3T

**Pack of 12
MSRP - \$104.99**



**PLASTIC SNAP
IN FINS!**

**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 - \$114.99



**ONE-PIECE
MOLDED FIN
UNIT**



**1751 Alpha III®
Bulk Pack**

Length: 12.3 in. (31.2 cm)
Diameter: 0.98 in. (25 mm)
Recommended Engines:
1/2A6-2, A8-43, A8-5, B4-4, B6-6,
C6-5, C6-7

Pack of 12
MSRP - \$129.99



**ONE-PIECE
MOLDED FIN
UNIT**

EDUCATOR BULK PACKS



1753 AVG Bulk Pack

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

Pack of 12
MSRP - \$89.99

Assorted Rockets
Including:
4 Alpha[®], 4 Viking[™],
4 Generic E2X[®]



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
w/Engine adapter
(Sold Separately) A10-3T

Pack of 12
MSRP - \$79.99



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
w/Engine adapter
(Sold Separately) A10-3T

Pack of 12
MSRP - \$84.99



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

Pack of 12
MSRP - \$129.99



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 safely 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 - \$199.99



INDIVIDUAL FINS
 THAT GLUE ONTO
 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: 9 in. (22.9 cm) Parachute
 Projected Altitude: 400 ft. (122 m)
 Recommended Engines: A8-3,
 B4-4, B6-4, C6-5
 Non-flying model.

MSRP - \$59.99



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 multiple launches. Choose from a variety of engine sizes. We advise using the smallest recommended engines for the first launches.

- 1781** A8-3 Engines (24); 30 starters; 24 plugs; 72 sheets wadding **MSRP - \$71.99**
- 1783** B6-4 Engines (24); 30 starters; 24 plugs; 72 sheets wadding **MSRP - \$72.99**
- 1784** B6-0 & B6-6 Engines (12 each); 30 starters;
24 plugs; 72 sheets wadding..... **MSRP - \$80.59**
- 1788** 1/2A3-4T Engines (24); 30 starters; 24 plus wadding **MSRP - \$57.79**
- 1789** C6-5 Engines (24); 30 starters; 24 plugs; 72 sheets wadding **MSRP - \$84.99**
- 1726** C11-3 Engines (12); 20 starters; 16 plugs; 144 sheets wadding **MSRP - \$47.99**
- 1672** Blast-Off® Flight Pack A8-3, B6-4, C6-3, C6-5 engines (6 each); 30 starters;
28 plugs; 72 sheets wadding **MSRP - \$69.99**



Pictured above: 1672 Blast-Off® Flight Pack



ACCESSORIES

2310 Lifetime Launch System

Kids are TOUGH. That's why we recommend our lifetime launch system for educators and youth leaders. It is so tough we guarantee it will last a lifetime. Designed for kid use, it will help you create a memorable launch day experience for your students.

- Stands 18 inches off-the-ground - Allows students to easily see the micro clips.
- 2 Tiltable launch rods - Aim rocket upwind to help it recover in-bounds.
- Pro Series II Launch Controller - Uses bigger batteries for more launches.

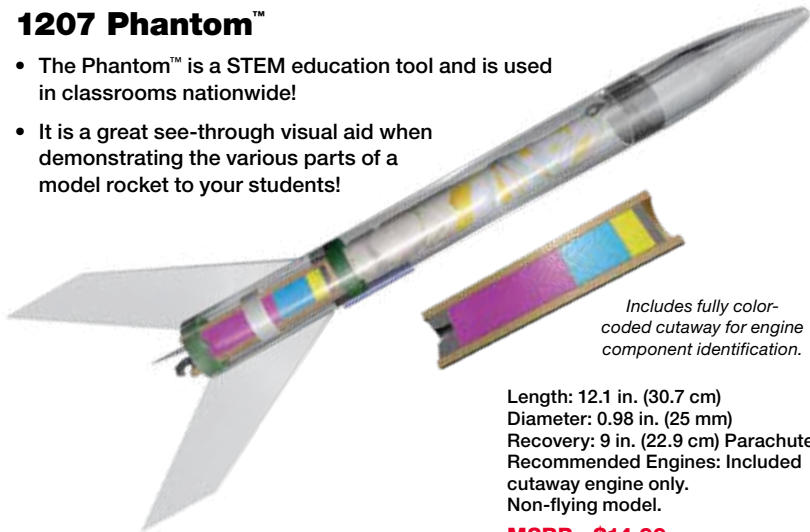
MSRP - \$79.99



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

1207 Phantom™

- 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!



Includes fully color-coded cutaway for engine component identification.

Length: 12.1 in. (30.7 cm)
Diameter: 0.98 in. (25 mm)
Recovery: 9 in. (22.9 cm) Parachute
Recommended Engines: Included cutaway engine only.
Non-flying model.

MSRP - \$14.99

“EQUIPPED WITH HIS FIVE SENSES,
MAN EXPLORES THE UNIVERSE AROUND HIM
AND CALLS THE ADVENTURE **SCIENCE.**”

- EDWIN POWELL HUBBLE



Promote Engineering Thinking & Design

Chosen for the 2019 Purdue University Engineering Gift Guide. Build the rocket and launch it with one of three included engines. 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.

5302 Rocket Science Starter Set

Length: 12.6 in. (32 cm)
Recovery: 12 in. (30.5 cm) Parachute
Projected Altitude: 1100 ft. (335 m)
Recommended Engines: 1/2A6-2, A8-3,
B4-4, B6-4, B6-6, C6-5, C6-7

MSRP - \$39.99

Starter Set Includes:

- 1 Rocket
- 1 Porta-Pad® II Launch Pad
- 1 Electron Beam® Launch Controller
- 1 12 in. (30.5 cm) Parachute
- 1 each A8-3, B6-4, C6-5 Model Rocket Engine
- 4 Starters
- 8 Plugs
- 12 Sheets of Recovery Wadding
- 1 Altitude Tracker



ALTITUDE TRACKER



A, B & C ENGINES



4 STARTERS



8 PLUGS



RECOVERY WADDING



PARACHUTE



Launch Rod

LAUNCH PAD AND CONTROLLER

National Association of Rocketry MODEL ROCKET SAFETY CODE

(Basic Version, Eff. August 2012)



1. Materials. I will use only lightweight, non-metal parts for the nose, body, and fins of my rocket.

2. Motors. I will use only certified, commercially-made model rocket motors, and will not tamper with these motors or use them for any purposes except those recommended by the manufacturer.

3. Ignition System. I will launch my rockets with an electrical launch system and electrical motor igniters. My launch system will have a safety interlock in series with the launch switch, and will use a launch switch that returns to the “off” position when released.

4. Misfires. If my rocket does not launch when I press the button of my electrical launch system, I will remove the launcher’s safety interlock or disconnect its battery, and will wait 60 seconds after the last launch attempt before allowing anyone to approach the rocket.

5. Launch Safety. I will use a countdown before launch, and will ensure that everyone is paying attention and is a safe distance of at least 15 feet away when I launch rockets with D motors or smaller, and 30 feet when I launch larger rockets. If I am uncertain about the safety or stability of an untested rocket, I will check the stability before flight and will fly it only after warning spectators and clearing them away to a safe distance. When conducting a simultaneous launch of more than ten rockets I will observe a safe distance of 1.5 times the maximum expected altitude of any launched rocket.

6. Launcher. I will launch my rocket from a launch rod, tower, or rail that is pointed to within 30 degrees of the vertical to ensure that the rocket flies nearly straight up, and I will use a blast deflector to prevent the motor’s exhaust from hitting the ground. To prevent accidental eye injury, I will place launchers so that the end of the launch

rod is above eye level or will cap the end of the rod when it is not in use.

7. Size. My model rocket will not weigh more than 1500 grams (53 ounces) at liftoff and will not contain more than 125 grams (4.4 ounces) of propellant or 320 N-sec (71.9 pound-seconds) of total impulse.

8. Flight Safety. I will not launch my rocket at targets, into clouds, or near airplanes, and will not put any flammable or explosive payload in my rocket.

9. Launch Site. I will launch my rocket outdoors, in an open area at least as large as shown in the accompanying table, and in safe weather conditions with wind speeds no greater than 20 miles per hour. I will ensure that there is no dry grass close to the launch pad, and that the launch site does not present risk of grass fires.

LAUNCH SITE DIMENSIONS

Installed Total Impulse (N-sec)	Equivalent Motor Type	Minimum Site Dimensions (ft.)
0.00-1.25	1/4A, 1/2A	50
1.26-2.50	A	100
2.51-5.00	B	200
5.01-10.00	C	400
10.01-20.00	D	500
20.01-40.00	E	1000
40.01-80.00	F	1000
80.01-160.00	G	1000
160.01-320.00	Two Gs	1500

10. Recovery System. I will use a recovery system such as a streamer or parachute in my rocket so that it returns safely and undamaged and can be flown again, and I will use only flame-resistant or fireproof recovery system wadding in my rocket.

11. Recovery Safety. I will not attempt to recover my rocket from power lines, tall trees, or other dangerous places.
www.nar.org



rocketcontest.org

Estes is a proud Sponsor of The American Rocketry Challenge

The American Rocketry Challenge (TARC) is the world's largest rocket contest with nearly 5,000 students nationwide competing each year. The contest gives middle and high school students the opportunity to design, build and launch model rockets and hands-on experience solving engineering problems.

Get Involved!

Here you'll find respected groups and institutions who support the development of young people. Like Estes®, many of these organizations provide their own unique learning opportunities for students, youth leaders and teaching professionals. Together, we strive to create an environment rich with resources to keep your students interested, inquisitive and inspired. Please take a moment to visit their sites today.



aiaa.org



BOYS & GIRLS CLUBS
OF AMERICA

bgca.org



AEROSPACE INDUSTRIES
ASSOCIATION

aia-aerospace.org



nar.org



challenger.org



ymca.net



4-h.org



spacecamp.com



gocivilairpatrol.com



Girl Scouts
Where Girls Grow Strong

girlscouts.org



scouting.org



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Prices and availability are subject to change without notice. Color of product may vary.

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WARNING: Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to www.P65Warnings.ca.gov/wood

All Estes rockets that contain wood parts/components carry this warning.



Our Return Policy

YOU'RE COVERED WITH THE ESTES FULL ONE-YEAR WARRANTY

Your Estes® model rocket product is warranted against defects in materials or workmanship for one year from the date of the original purchase. If this Estes® product, because of a manufacturing mistake, malfunctions or proves to be defective within the one-year warranty period, it will be repaired or replaced, at Estes' option and at no charge to you.

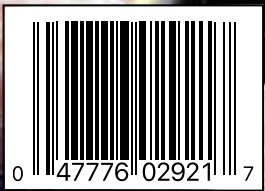
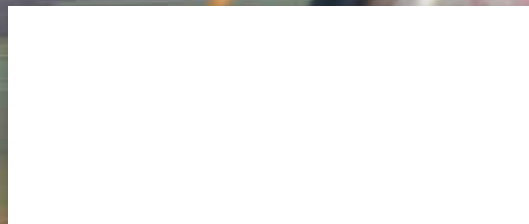
This warranty does not cover incidental or consequential damage to persons or property caused by the use, abuse, misuse, failure to comply with operating instructions or improper storage of the

warranted products. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

For repair or replacement under this warranty, please contact us at EstesRockets.com or by mail at Estes Industries, LLC, Customer Service Department, 1295 H Street, Penrose, Colorado 81240-9698.



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