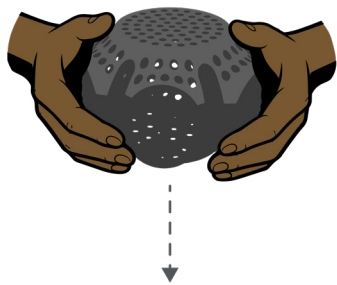




DataSnap Impact STEM Lab

STUDENT EXPERIENCE



- Students build and drop test Impact Ships, using drop data to evaluate and improve their designs
- Durable Impact Ships and Exosuits support repeated testing with classroom consumables

LESSON TOPICS

STANDARD

- Distance and Time
- Speed and Velocity
- Acceleration and Gravity
- Forces and Newton's Laws
- Engineering Challenge: Protect the Astronaut

ADVANCED

- Distance, Time, and Velocity
- Gravitational Acceleration
- Acceleration and Impacts
- Engineering Challenge: Protect the Astronaut
- Forces, Newton's Laws, and Inertia
- Impact Forces
- Parachute Dynamics
- Engineering Challenge: Egg Impact Safety

WHAT IS INCLUDED

- 30 Impact Ships
- 30 Exosuits

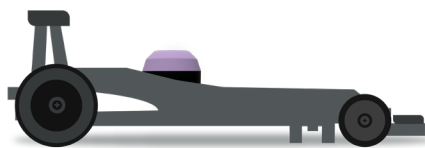
ADDITIONAL ADD-ONS

- 10 additional Impact Ships and Exosuits (63410101) are available for \$399

\$1,999
63410100

DataSnap Air Racer STEM Lab

STUDENT EXPERIENCE



- Students design and test air-powered race cars using real speed and distance data
- The air-powered launch system enables fast, repeated trials for iterative engineering

LESSON TOPICS

STANDARD

- Building and Racing Basics
- Newton's Laws of Motion
- Pneumatic Power and Transfer of Energy
- Weight Distribution
- Wheel and Axle Placement
- Collision Dynamics
- Engineering Challenge

ADVANCED

- Building and Racing Basics
- Newton's Laws of Motion
- Pneumatic Power, Work, and Energy Transfer
- Weight Distribution
- Wheel and Axle Placement
- Aerodynamics
- Collision Dynamics
- Final Engineering Design Challenges

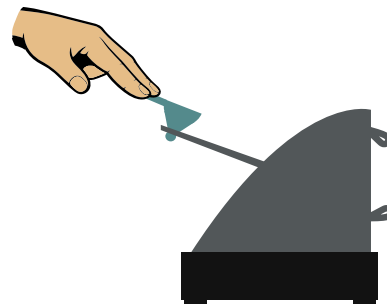
WHAT IS INCLUDED

- 8 Air Racer Frames
- 8 Air Racer Customization Kits, each including:
 - 2 Allen wrenches
 - 2 nut wrenches
 - 2 front wheel types (narrow and wide)
 - 2 rear wheel types (narrow and wide)
 - Ballast weights
 - 2 rear wings (flat and curved)
 - 2 front wings (flat and curved)
 - 2 collision bumpers
- Dual Launch Pneumatic Race System

\$3,499
63010100

DataSnap Projectile STEM Lab

STUDENT EXPERIENCE



- Students explore projectile dynamics, foundational AI concepts, and data-supported predictive modeling
- Customizable catapults let teams collect projectile data, develop predictive data models, and test their accuracy

LESSON TOPICS

STANDARD

- Making Your Catapult Data-Smart
- Pull-Back Angle: Force and Work
- Elastic Bands: Energy
- Arm Length: Velocity
- Launch Angle: Newton's Laws
- Team Challenge

ADVANCED

- Making Your Catapult Data-Smart
- Pull-Back Angle: Force and Work
- Elastic Bands: Energy
- Arm Length: Velocity
- Launch Angle: Newton's Laws
- Team Challenge

WHAT IS INCLUDED

- 8 Catapults, each including:
 - 2 Adjustable Launch Arms
 - Tools for modification
 - 3 Quick-Change Pins
- 4 Heavy-duty plastic storage containers.

\$2,999
63210100

SHARED COMPONENTS

All Labs Include

- 2 DataSnap Motion Sensors
- Dual Sensor Charging Case with USB-C charging cord and power supply
- Standards-aligned, downloadable curricula (standard and advanced), which include:
 - Student-ready slide presentations
 - Student Engineering Workbook
 - Teacher's Curriculum Guide
- Free DataSnap web app for data analysis (available on chromebooks, computers, phones, and tablets)

NOTE: Additional sensors (69010100) available for \$1,099 to gather more data

DataSnap STEM Lab Features:

- Students build, test, and iterate on an engineered design
- Hands-on learning paired with real data from the DataSnap Sensor
- Small teams collaborate using lesson slide presentations and Student Engineering Workbooks
- Rapid testing cycles that maintain engagement
- Curricula aligned to NGSS, ISTE, and ITEEA standards
- Critical thinking supported by real-world data

