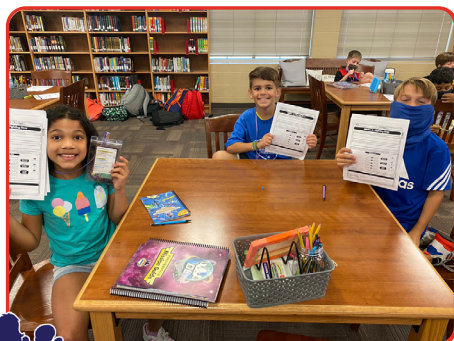# STEM FUNDAMENTALS

INSPIRE THE LEGENDS OF TOMORROW, TODAY

Inside every classroom, there are students with limitless potential—future innovators, problem-solvers, and leaders. With Drone Legends™ STEM Fundamentals, you'll help them uncover their inner legend through engaging, hands-on learning experiences powered by drones. And the best part? We've made it easy for you to deliver high-impact STEM lessons with confidence.

Whether you're just starting with drones or have years of STEM teaching experience, STEM Fundamentals provides all the tools, resources, and support you need to create exciting, meaningful learning experiences. You bring the passion—we've got everything else covered.
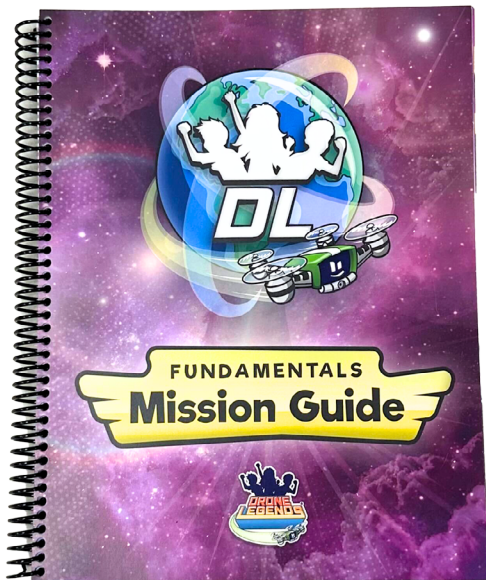
TURNKEY CURRICULUM SYSTEM™
BUILT ON STANDARDS, DESIGNED FOR IMPACT

STEM Fundamentals isn't just aligned to educational standards—it's built from the ground up on them. Every mission, activity, and lesson starts with key national and state standards, ensuring that your students gain real-world STEM skills while meeting important learning benchmarks.

- **National Standards:** NGSS, ISTE, CSTA, Common Core (ELA & Math)
- **State Standards:** Texas TEKS, Pennsylvania STEELS, Virginia SOL
- **Custom Alignments:** Need alignment for your state? Just ask! We'll handle it at no extra charge.

We believe great teaching shouldn't come with extra burdens, so we've done the heavy lifting for you. With our Turnkey Curriculum System, you get a ready-to-go package that includes everything you need—from student guides and lesson plans to hardware and professional development.

WHAT'S IN A STEM FUNDAMENTALS MISSION?

Each mission immerses students in a narrative-driven, problem-solving adventure. Working in real-world drone mission teams—Remote Pilot in Command, Visual Observer, and Safety Manager—students tackle challenges inspired by real-life scenarios.
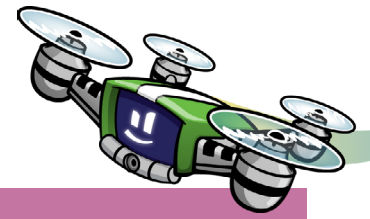
Along the way, they'll gain critical skills in:

- Drone piloting and real-world applications
- Engineering design and coding (loops, functions, variables)
- Math and science problem-solving
- Collaboration and teamwork

By the end of the program, your students won't just be learning STEM—they'll be living it.

WHAT MAKES STEM FUNDAMENTALS DIFFERENT?

Engaging, Narrative-Based Learning

Every mission begins with a story, pulling students into an exciting world where they're the heroes solving real-world problems.

Real-World Career Connections

Students aren't just learning concepts—they're stepping into real-world roles, practicing teamwork and communication in a professional context.

Turnkey Curriculum System

You're busy—we get it. That's why STEM Fundamentals comes with everything you need, including:

- **Student Mission Guides**
- **Lesson Planners**
- **Safety Cards and Launch Pads**
- **Construction Sets and more**

Unlimited Professional Development

Teaching with drones is easier than ever, thanks to 4+ live Zoom sessions per month led by expert instructors. Join as often as you like, and bring as many colleagues as you need.

EXTEND THE ADVENTURE WITH STEM EXPEDITIONS

STEM Fundamentals is just one part of the Drone Legends Universe, a complete pathway for K-12 STEM learning:

GRADES K-3

Little Legends

Creative play and storytelling that introduces young learners to the magic of drones.

GRADES 4-8

STEM Fundamentals & STEM Expeditions

Hands-on missions and advanced expeditions for middle school students.

GRADES 5-8

Egyptian Expedition

A digital, self-paced adventure in which students solve an ancient mystery using drone coding and flight simulation.

GRADES 8-12

FPV Initiator™ & USDRA™

POWERED BY ORQA

The ultimate turnkey drone-piloting curriculum and competitive racing experience. With USDRA™ powered by Orqa™, students race in real life (IRL) and in the exciting world of esports through the Orqa FPV SkyDive™ simulator—the first drone racing league exclusively for students, combining hands-on FPV flying with exciting online competitions.

GRADES 6-8

The Rise of The Legends

An action-packed novel that ties directly into the Drone Legends Universe, inspiring students with STEM, drones, and teamwork. It's the perfect companion to classroom missions or a great standalone read. Learn more at riseofthelegends.com.

ALIGNMENT & STANDARDS

Mission 1: Flight Training

Subject	Standard Alignment
NGSS	4-PS3-1
Common Core Math	CCSS.MATH.CONTENT.4.MD.C.5.B
Common Core Literacy	CCSS.ELA-LITERACY.SL.4.1, 5.1, 6.1, 4.2, 5.2, 6.2, RI 4.4, W.4.4, 5.4, 6.4
CSTA	1B-CS-02, 1B-CS-03, 1B-IC-18
ISTE	1d, 2b, 7c

Mission 2: Fighting Fires

Subject	Standard Alignment
NGSS	3-PS2-2, 5-ESS3-1
Common Core Math	CCSS.MATH.CONTENT.3.MD.B.4, 6.SP.B.5.C
Common Core Literacy	CCSS.ELA-LITERACY.RI.4.4, W.4.4, 5.4, 6.4
CSTA	1B-CS-02, 1B-CS-03, 1B-IC-18
ISTE	2b, 3d, 7c

Mission 3: Erebus Expedition

Subject	Standard Alignment
NGSS	4-ESS2-2
Common Core Math	3.MD.B.4, 3.NBT.A.2, 3.OA.D.8,4.MD.A.1, 4.MD.A.2, .4.NBT.B.4, 4.OA.A.3, 5.MD.A, 5.MD.A.1, CCSS.MATH.PRACTICE.MP4, MP6
Comm on Core Literacy	SL.4.1, 5.1, 6.1, 4.2, 5.2, 6.2, RI.4.4, 5.4, 6.4, 5.3, W.4.4, 5.4, 6.4
CSTA	1B-AP-10, 1B-AP-13, 1B-AP-15
ISTE	1d, 3d, 4d

Mission 4: Shark Watch

Subject	Standard Alignment
NGSS	3-5-ETS1-2
Common Core Math	CCSS.MATH.CONTENT.5.MD.A.1, 4.NBT.B.6
Common Core Literacy	CCSS.ELA-LITERACY.SL.4.1, 5.1, 6.1, 4.2, 5.2, 6.2, RI.4.4/5.4/6.4, 5.3, W.4.4/5.4/6.4
CSTA	1B-AP-08, 1B-AP-10, 1B-AP-11, 1B-AP-12
ISTE	3d, 5c, 7c

Mission 5: Medicine Delivery

Subject	Standard Alignment
NGSS	5-PS2-1, 3-5-ETS1-3
Common Core Math	CCSS.MATH.CONTENT.3.MD.B.4, 4.MD.A.2, 5.MD.A.1
Common Core Literacy	CCSS.ELA-LITERACY.RI.4.4, 4.1, 5.1, 5.3, 6.1, W.4.4, 5.4, 6.4
CSTA	1B-AP-08, 1B-AP-10, 1B-AP-11, 1B-AP-12, 1B-AP-13, 1B-IC-18
ISTE	4a, 4c, 4d

Mission 6: Helper Bees

Subject	Standard Alignment
NGSS	4-LS1-1, 5-ESS3-1
Common Core Math	CCSS.MATH.CONTENT.3.MD.B.4, 5.G.A.1, 5.G.A.2, CCSS.MATH.PRACTICE.MP1
Common Core Literacy	CCSS.ELA-LITERACY.RI.4.4, 5.3, W.4.4, 5.4, 6.4
CSTA	1B-AP-12, 1B-AP-16, 1B-IC-18
ISTE	4a, 5c, 7c

Mission 7: Drone Racing

Subject	Standard Alignment
NGSS	3-PS2-1
Common Core Math	CCSS.MATH.CONTENT.3.MD.B.4, 4.MD.A.2, 5.MD.A.1
Common Core Literacy	CCSS.ELA-LITERACY.RI.4.4, 5.3, W.4.4, 5.4, 6.4
CSTA	1B-AP-10, 1B-AP-11, 1B-AP-16
ISTE	4d, 7c

Mission 8: Mission to Mars

Subject	Standard Alignment
NGSS	5-PS2-1
Common Core Math	CCSS.MATH.CONTENT.3.MD.B.4, 4.MD.A.2, 5.MD.A.1
Common Core Literacy	CCSS.ELA-LITERACY.RI.4.4, 5.3, W.4.4, 5.4, 6.4
CSTA	1B-AP-08, 1B-AP-10, 1B-AP-11, 1B-AP-12
ISTE	4a, 5c, 7c

Mission 9: Koala Care

Subject	Standard Alignment
NGSS	5-ESS3-1, 3-5-ETS1-3
Common Core Math	—
Common Core Literacy	CCSS.ELA-LITERACY.W.4.4, 5.4, 6.4, .4.5, 5.5, 6.5, .4.6, 5.6, 6.6, 4.7, 5.7 ,6.7, RI.4.4, 5.4, 6.4, 5.9
CSTA	1B-AP-13, 1B-AP-16, 1B-IC-18
ISTE	1a, 1b, 7a

Mission 10: Cinematography

Subject	Standard Alignment
NGSS	5-ESS3-1, 3-5-ETS1-3
Common Core Math	—
Common Core Literacy	CCSS.ELA-LITERACY.W.4.4, 5.4, 6.4, .4.5, 5.5, 6.5, .4.7, 5.7 ,6.7, 4.8, 5.8, RI.45.9
CSTA	1B-AP-13, 1B-AP-16, 1B-IC-18
ISTE	1a, 1b, 7a

WHAT'S INCLUDED IN YOUR KIT?

Your STEM Fundamentals Kit includes everything you need to run an amazing program for up to 15 students:

Hardware

- 5X Tello Boost Combo (drone, 3X batteries, 3-port battery charger, USB cord, 1X set of 4 replacement propellers)
- 10X Tello spare batteries
- 10X Tello replacement propellers (pack of 4)
- 5X Tello replacement propeller guards (pack of 4)

NOTE: Four of the five drones included are intended for use in the curriculum, with students organized into four teams of 3-5 students. The entire bill of materials is designed to support this team structure. The fifth drone and hardware are provided as a backup or spare.

For larger classes or additional team configurations, ask your Drone Legends educational consultant about expanded class kit options.

Mission-Ready Curriculum Components

- 1x 158 pcs construction builder set
- 8x launch/landing pads
- 24x 1.25 in spiky hedge balls (for flip missions!)
- 6x 3D printed flip cups + STL print file to print your own!
- 10x 120 inches/300 cm measuring tapes
- 24x mini-koala animal clips
- 24x mechanical pencils
- 8x sticky notes
- 12x clipboards
- 12x safety goggles
- 6x 6-quart storage bins

Curriculum, Professional Development, and Support

- 12x Student Mission Guides
- 6x Operations Manuals
- 2x Educator Lesson Planners
- 12x Student Safety Cards on lanyards
- 36x Drone Legends pilot wing pins
- 100X Drone Legends stickers
- Annual access to Drone Legends Educator Portal (slides, videos, worksheets, and more)
- 12-month unlimited Professional Development (4x Zoom sessions w/live instructor available ea. month)
- Unlimited support available M-F, 9a-5p EST

Contact Hours

20 Hours

The program includes 10 exciting, problem-based missions, each intended to run 90 minutes. You may choose to use one mission per day, combine two missions, or split them between days depending on your scheduling constraints.

Technical Requirements

One smartphone or tablet is required per drone/team to use as a flight controller (requires iOS 9.0 to 17 or Android 4.0.0 or later. Not compatible with iOS 18 or later or FireOS/Amazon tablets). For iOS 18 or above, an Android device is required. Students can conduct coding missions on the same smartphone or tablet via the Blocky coding app.

READY TO INSPIRE THE LEGENDS IN YOUR CLASSROOM?

JOIN THE DRONE LEGENDS COMMUNITY TODAY!

For pricing options or more information, contact us at
info@dronelegends.com or call (866) 376-6338.