

# STEM Fundamentals

**Course Overview** 

## **STEM Reimagined**

We believe that inside every child lives a Legend<sup>™</sup>. We use the magic of drones to engage elementary and middle school students in highly entertaining, yet academically challenging drone-themed STEM missions that require them to work in teams, fail forward, and explore solutions to real-world problems.

Drone Legends empowers teachers around the world to deliver the best STEM with drones programming to the children in their classrooms and after school enrichment programs.

## **Curricular Topics**

- Drone piloting
- Real-world drone applications
- Science and math applications
- Engineering design process
- Aerial video and editing
- Introduction to visual-based coding
- Coding concepts: loops, functions, variables

## **Educator Support**

- Live or virtual professional development support
- Customer support
- An active online community for fresh teaching ideas

## **Perfect For**

IDEAL FOR 10-13 YEAR OLDS

- In school: in class, after school, specials
- Out of school: enrichment programs, school breaks, camps
- Anytime: learning-based fun!

## Teacher Testimonial

"The Operations Manual is an asset that you cannot be without! The super clear contents (that covers every possible aspect needed), clear images and detailed, yet concise, text makes it easy for both teachers and students to follow and successfully use."

- Charlotte, After School Program Instructor

12-15 STUDENTS PER CLASS

Gimbal



# **Materials Included**



Recommended starter bundle, customizable to meet your unique requirements.

# **Drones and 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)

# Fundamental Curriculum

- 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 DL Educator Portal (slides, videos, worksheets, and more)
- 12 month unlimited Professional Development (4x Zoomsessions w/live instructor available ea. month)

# **Class Materials**

- 1x 158pcs construction builder set
- 8x Launch/land pads
- 24x 1.25in Spiky Hedge Balls (for flip missions!)
- 6x 3D printed flip cups + STL print file to print your own!
- 10x 120 Inches/300cm, measuring tapes
- 24x mini koala animal clips
- 24x Mechanical pencils
- 8x Sticky Notes
- 12x Clipboards
- 12x Safety goggles
- 6x 6 quart storage bins



# **Contact Hours**

20 hours – The program includes 10 lessons, each one intended to run about 2 hours. Teachers can choose to use 1 lesson per day, combine two lessons, or split them between days depending on their scheduling constraints.

# **Technical Requirements**

One smartphone or tablet per drone to use as a flight controller (requires iOS 9.0 or later or Android 4.0.0 or later. Not compatible with FireOS/Amazon tablets). Students can conduct coding missions on the same smartphone or tablet via the DroneBlocks app or the DroneBlocks Google Chrome extension on Chromebooks or PC. Not Included.

# **Pricing Options**

For pricing options and additional information, please contact Influential Drones, authorized reseller info@influentialdrones.com +1 (856) 281-7545 Visit: dronelegends.influentialdrones.com





Give your students an educational experience they'll cherish for a lifetime. Start a Drone Legends program in your school and see firsthand the power of the Magic of Drones! For more information, visit:

# https://dronelegends.com

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# Alignment and Standards

### **Lesson 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, 8.1, 4.2, 5.2, 6.2, RI 4.4, W.4.4, 5.4, 6.4
CSTA	4.CS.D.1 / 5.CS.D.1
ISTE	Working cooperatively

### **Lesson 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

# Lesson 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

## Lesson 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

## Lesson 5: Medicine Delivery

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



# Inside Every Child Lives a Legend!

#### Lesson 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

## **Lesson 7: Fighting Fires**

Subject	Standard Alignment
NGSS	-
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

## Lesson 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

### Lesson 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, 7c

### Lesson 10: Video Production

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, 7c