# She Maps Product & Pricing Guide

Learning solutions to teach with drones

2024/25



Inspiring the next generation to solve some of the world's toughest challenges with STEM.



# Why teach with drones?

Our signature indoor microdrone program <u>Classroom Drone Essentials</u> has been taught face-to-face to over 9,300 students around the world, and over 2000 teachers have been engaging in our resources.

As the only Australian provider of curriculum-aligned and industry co-designed teaching materials and professional development content to help teachers learn how to use educational drones in classrooms, we often get asked why teaching with drones matters. Here are some of the reasons:

Drones teach essential 21st century skills such as critical thinking, problem solving, coding, digital competence, and creativity across a wide range of subjects within STEAM and HASS.

Drones have incredibly wide-ranging uses. Their increased use in agriculture, forestry and fisheries, mining, construction, transportation, government services, and defence, is forecasted to lead to a \$14.5 billion increase in GDP over the next 20 years.

2

3

For many, especially girls, educational drones can be the key to see STEM through a different lens, which makes them perfect tools to encourage gender equality in STEM subjects.

Drones allow for the simulation of real-world applications, immersing students in hands-on-activities and scenario-based problem solving. Drones are naturally fun and fascinating, being able to go where humans can't, and as such building natural curiosity in kids which they can apply to real-world problems.

4

5

Teaching with drones creates a comparative advantage of one school over another by demonstrating an innovative approach to deliver the Australian curriculum and equipping students with a competitive edge as they prepare for modern-day jobs.

As you can see, drones are the hook, but the outcomes of our programs and teaching materials run far deeper. We believe that by building teacher capabilities and confidence in teaching STEM and HASS with drones, more students across Australia and globally will be engaged, encouraged and inspired to look at these subjects with different eyes.

This document is designed to help interested educators gain a thorough understanding of what we offer, and a basis to propose drone equipment and teaching resources in your next budget. We hope the information provided can assist you in making an informed decision about which program best suits your students and school.

# Why choose She Maps

She Maps is Australia's leading drone and geospatial education provider. We are a certified social enterprise, focused on increasing diversity in STEM. Our program outcomes are aligned with the 'Women in STEM Decadal Plan', the Australian Government's 'Advancing Women in STEM' agenda and multiple state government STEM education and STEM industry development strategies.

#### Our purpose



To grow the diversity in how Science, Technology, Engineering, and Maths (STEM) is perceived and who does it.

#### **Our mission**



To inspire a generation to solve some of the world's toughest challenges with STEM.

#### **Our vision**



To grow teacher capability and confidence in teaching STEM.

Throughout her studies and career, our co-founder and Director of Education, Dr Karen Joyce has always been in the minority of a traditionally male dominated discipline. Only 27% of the people employed in the geospatial and surveying sector are women.

After speaking about her career in schools, Karen noticed a troubling trend. Her talk on drones at primary schools was met with enthusiasm in equal parts by both girls and boys. However, when she spoke at secondary schools, the boys were there but the girls just didn't show up. After researching this issue, Karen identified a gender discrepancy that occurs in STEM subjects because girls at a young age are losing confidence in their ability to 'do' STEM.

She Maps is seeking to change this by

- 1 Exposing students to positive female role models within the STEM field
- 2 Raising awareness of the unconscious gender bias that females are exposed to at school
- Using drones as a hook to engage female students in STEM topics and build their curiosity and confidence, especially in years 5-9.

Since 2017, our impact has reached schools far and wide, and our signature program Classroom Drone Essentials has been taught to girls and boys alike. Our messaging rings loud and proud: everyone can fly a drone and everyone can do STEM - you just have to see it to belive it.



2,000+



9,300+



59%



12

Teachers engaged

Students taught

Of students engaged are female

Countries where our program is taught

### **Supported by Government and industry**

At She Maps we aim to promote diversity and inclusivity in the field of drone technology and geospatial science. The geospatial industry is an integral part of our modern society and offers solutions to a wide variety of environmental and societal changes on planet Earth. We seek to challenge and break down stereotypes and societal barriers that hinder women's participation in STEM and aim to inspire and encourage women and girls to pursue their passions, overcome obstacles, and achieve their full potential in these fields.















### **Trusted by schools around Australia**

Over the last 7 years we had the pleasure to work with over 2,000 schools in Australia and each week, we hear from new schools that want to join our community of teachers curious to teach outside the box.



















































# **Contents**



















### 

Build teacher capabilities and engage students at every stage of their development.

Our series of programs and materials have been developed to help schools integrate drones, real-world STEM connections and inclusive role modelling at every stage of their students' development, from Kindergarten to Year 12.

We believe this integration is key to making students more confident, curious and literate in STEM and 21st century skills and ultimately preparing them better for the jobs of the future, no matter their gender.

Grades K - 4



**Pippa** & Dronie

Grades K - 10



Classroom **Mapping Essentials** 

Grades 5 - 9



Classroom **Drone Essentials** 

Grades 7-12



**DroneBlocks** 

**Grades 10-12** 



**Drone** Mapping

### **She Maps Professional Development Resources**

Learn to teach our concepts with confidence, no matter your skill level.







### **She Maps Teaching Resources**

Practice, explore and apply the foundational skills with our industry co-designed teaching resources.



**Drones to the** Rescue Bushfires Rescue Flooding



**Drones to the** 



**Drones in Forestry** 



Healthcare in the Himalayas



Code. Fly.



**Drones in Agriculture** 



Map My School

# Pippa & Dronie

Pippa & Dronie is an illustrated children's book, accompanied by teaching resources and an entry-level coding game. The story about Pippa & Dronie takes students on an adventure to explore the different ways modern STEM skills are used to gather data, and solve real world challenges.

Dronie gets teased by other robots for being different. To show her how special drones are, Pippa takes her on an adventure around Australia to meet some of the most fascinating women who have one thing in common: they all fly drones in their daily jobs.

#### Learning promise

- Create positive perceptions of STEM and Geography.
- Meet real scientists and drone professionals and explore what they do.
- Explore the interactive coding game to go beyond the book.
- Be exposed to great STEM role models and the real world applications of drones.

#### **Learning outcomes**

- All lessons are mapped to the Australian Curriculum and each lesson has its own learning intentions.
- The lessons cover Science, English, Maths, Geography, Design and Digital Technologies.
- Health and PE and incorporates cross-curriculum priorities including Aboriginal and Torres Strait Islander histories and cultures.
- Learn how technology can be used to support problem-solving.

### Pippa & Dronie individual items



Book + Teacher Resources \$25.95



Big Book \$55



Image Mat Single \$330 / Double \$462



Dronie Plushie\$39.95



Dronie Coding Game (Free)



Printables (Free)

**SHOP NOW** 

### Pippa & Dronie packages

	ITEM	SMALL	MEDIUM	LARGE
ВООК		x5	x10	x30
BIG BOOK		x1	x1	x2
IMAGE MAT SINGLE		<b>~</b>	<b>&gt;</b>	<b>~</b>
DRONIE	(0)	~	~	<b>~</b>
TEACHER	Page and how	<b>~</b>	~	<b>~</b>
DRONIE CODING GAME (APP)		~	~	~
DRONIE CODING GAME	The state of the s	<b>~</b>	~	<b>~</b>
CODING GAME PRINTABLES		<b>~</b>	~	~
AUTHOR READING (VIDEO)	CIENCE COMBINED NGINERAING ATHS	<b>~</b>	<b>~</b>	<b>~</b>
PRIC	CE (INCL GST)	\$534.25	\$634.00	\$1,137.50

**SHOP NOW** 

### What is an image mat?

Image mats are great for creating realworld scenarios and coded mission plans!

Our standard image mat is a 2mx2m fabric banner that is washable so students can touch it. walk on it and interact with it as part of their code development.



We have a range of locations to choose from around Australia and also offer custom prints.

### **Dronie the App**

Dronie is a fun and educational game for primary school kids. Give Dronie her flight plan as she travels around Australia, helping out real-world scientists, from the Great Barrier Reef to the Pilbara.



The app complements the book and allows your students to further explore the world according to Dronie, as well as learn block coding which gets increasingly more challenging the further they go!





### Buy 1 and give 1

Buy a copy of Pippa and Dronie, and you automatically donate a copy to one of our charity partners, Ardoch and Deadly Science.

They work with under-represented communities, and provide students with opportunities to experience STEM.







# Classroom Mapping Essentials

In today's educational landscape, the use of spatial tools and technologies is not just beneficial, it's essential. There's a growing emphasis on students using tools like Geographic Information Systems (GIS) to gather, analyse, and interpret data. This course is tailored to ensure that teachers have the knowledge and skills to teach students how to use a range of geospatial tools so that they can meet the requirements of the Australian Curriculum.

#### What's covered

- Mapping and the Curriculum
- History of Maps
- Mapping Essentials BOLTSS
- Types of Maps
- Map Projections
- Mapping Coordinates
- Geospatial Explained
- GPS Unpacked
- Mental Maps
- Hand Drawn Maps
- ✓ Digital Mapping in GeoNadir
- Mapping in Felt
- Fieldwork



#### **Learning outcomes**

- Identify geospatial requirements in the curriculum
- Identify and use basic geospatial tools in the classroom
- Plan instruction using basic geospatial tools
- Locate and use the appropriate tools to help deliver the curriculum

- Occidence to demonstrate to students how to use geospatial tools.
- Onfidence to engage your students using geospatial tools
- Confidence in using geospatial tools to enhance the delivery of specific curriculum content

# **Classroom Drone Essentials**





Classroom Drone Essentials is an immersive program combining both teacher professional development content and student learning. Students explore applications of drone technology, understand safety and drone regulations, learn how to fly and code educational microdrones and are exposed to great role models as we challenge their unconscious bias.

#### What's covered

#### **Drone career pathways**

In this module, we cover how and where drones are used in industry and look at the importance of working towards gender parity and diversity within STEM.

**MODULE 3** 

#### **Manual flight**

In this module, we practice manual flight. The students learn how a drone moves and demonstrate competence as a drone pilot.

#### **Junior Drone Pilot License**

Students have the opportunity to gain their Junior Drone Pilot Licence by demonstrating they can apply the new skills and knowledge correctly.

MODULE

#### **Drone safety**

In this module, we discuss the different roles and responsibilities of drone pilots, undertake pre-flight safety checks and use manual controls to fly microdrones.

MODULE 4

#### **Coded flight mission**

In this module, the students are given a data collection scenario. Using block coding and image mats, the students plan and carry out their mission.

#### Tips and tricks

She Maps will share tips and tricks around equipment setup, synchronising the drones, classroom management, and general troubleshooting.

#### **Learning outcomes**

- Explore applications of drone technology.
- Understand and act according to relevant drone regulations.
- Evaluate and implement safety processes.
- Manually control a drone in a safe manner.
- Conceptualise a hypothetical mission based on a real life situation and propose ideas for its solution.

- Use block code to automate drone flight in accordance with the mission.
- Collaborate to iterate and improve their solution.
- Use digital storytelling and persuasive text to demonstrate understanding.
- Explore diversity in STEM and create confident STEM learners.
- Connect students with real world problems and applications.

### 3 ways to engage in Classroom Drone Essentials

We understand that teachers have different levels of skills and confidence, and different levels of access to resources and equipment. That's why we are offering our foundational program in three different ways. Note, Classroom Drone Essentials is not for sale as an individual resource and can only be obtained:

- ✓ On-Demand (in the form of our Membership) for those that have access to drones and have some experiencing flying or teaching with drones;
- ✓ Through virtual sessions live online with a She Maps Instructor (Online Together) for those with access to drones but in need of a little extra support to get started;
- ✓ With an incursion, where a She Maps Instructor will visit the school and teach the Classroom Drone Essentials program to students, so that teachers can see first-hand how it works. This is particularly popular with schools that don't have drone equipment yet.







### Choose the right support for your school

	Membership	Online Together	Incursions
Recommended drone experience	Advanced	Beginner to intermediate	Beginner
12-month online portal access	$\odot$	$\odot$	$\odot$
Requires your own drone equipment	$\odot$	$\odot$	$\otimes$
On-demand access ①	$\odot$	$\odot$	$\odot$
Extra learning materials ①	$\odot$	$\odot$	$\odot$
Bookable live online sessions (i)	$\otimes$	$\odot$	$\otimes$
Help with drone setup 🛈	$\otimes$	$\odot$	$\odot$
Classroom management advice	$\otimes$	$\odot$	$\odot$
Personalised curriculum advice & classroom troubleshooting	$\otimes$	$\odot$	$\odot$
Face-to-face classroom visit	$\otimes$	$\otimes$	$\odot$
Teacher Professional Learning Certificate	$\odot$	$\odot$	$\odot$
Can be upgraded to include additional teachers	$\odot$	$\odot$	$\odot$
Available worldwide	$\odot$	$\odot$	Australia Only

# **She Maps Membership**

# Our online portal of on-demand professional learning and teaching resources

The She Maps Membership is for teachers who are integrating drones at their school and seek professional development and ready-to-teach, curriculum aligned units of work to help enable this. Get access to over 40 hours of online teacher professional learning and world-class drone and geospatial teaching resources, developed in collaboration with industry experts to enable real world, practical problem-solving lessons that aim to inspire, engage and challenge students.

### What's included in the membership portal?

#### Professional Development Content (24/7 access, self-paced)



#### **Classroom Mapping Essentials**

Grades K-10

ideal for: Geography Teachers

Become confident in how to integrate a variety of mapping foundations and geospatial applications into your lesson plans. (No drones required)



#### **Classroom Drone Essentials**

Grades 5-9

ideal for: Any primary school teacher, Digital Technology, Design & Technology, and Geography Teachers

Become confident in using educational indoor drones to teach students manual flight, coding and use drones to apply various STEM concepts. (Drones required)



#### **Drone Mapping**

Grades 10-12

ideal for: Geography Teachers

Become confident in using sub 2KG drones in outdoor environments and learn how to collect and manage advanced drone data.

#### **Teaching Resources (digital, on-demand)**



#### **Drones to the Rescue - Bushfires**

Grades: 5-6 & 7-8

Subjects: HASS, Geography, Science, Digital Technologies, Design and Technologies

How can drones and Geographic Information Systems be used to support research and recovery after a bushfire event?



#### **Drones to the Rescue - Flooding**

Grades: 7-8

Subjects: Geography, Digital Technologies, Design and Technologies

What are the causes and impacts of natural disasters and how can drones be used to minimise the risk of natural hazards?



#### **Drones in Forestry**

Grades: 5-6 & 9-10

Subjects: HASS, Geography, Digital Technologies, Design and Technologies

How can drones and Geographic Information Systems assist foresters to manage the forest environments that provide sustainable and renewable resources for society?



#### Healthcare in the Himalayas

Grades: 5-6 & 7-10

Subjects: HASS, Geography, Digital Technologies, Design and Technologies, Mathematics

How can drones help provide access to healthcare in some of the most remote regions of Nepal? Using microdrones, students will simulate the transport of critical medical supplies to remote villages in Nepal.



#### Code. Fly. Deliver.

Grades: 5-6 & 7-10

Subjects: HASS, Economics & Business, Geography, Digital Technologies, Design and

Technologies, Mathematics

Drones are increasingly used for product deliveries. Let your students create their own drone delivery solution that solves a community need.



#### **Drones in Agriculture**

Grades: 5-6, 7-8 & 9-10

Subjects: Science, Digital Technologies, Design and Technologies, Mathematics

Students will learn about the use of drones in agriculture, and design, plant and monitor a mobile vegetable garden using various learning processes.



#### Map My School

Grades: K-8

Subjects: HASS, Geography, Digital Technologies, Design and Technologies,

Mathematics, Science

Map My School teaches students how to create maps and calculate the size of surface areas. This resource does not require the use of drones.



#### **Pippa & Dronie Teaching Resources**

Grades K - 2 & 3-4

Subjects: English, HASS, Science, Technologies, Mathematics, HPE, Visual Arts

This resource pack provides lesson plans to accompany the Pippa & Dronie book (not included on the membership portal).

#### **Bonus Materials**



#### **Tournament of Drones**

Primary & Secondary Students

Run a Tournament of Drones competition and test your students' teamwork, problem-solving skills, creativity, technical flight skills, and analytical thinking. This resource pack contains everything to run this competition successfully.



#### **Drone Club Kit**

Primary & Secondary Students

This kit contains everything you need to run a successful drone club. It includes essential information, checklists, posters and 30 ready-to-teach activities your students will love!

#### **Industry Connections**



#### **Career Posters**

Primary & Secondary Students

Our series of career posters features a diverse range of women in jobs within science and technology industries. The are designed to inspire female students and break through gender and job stereotypes.



#### **EduDrone STEMinar Series**

Our quarterly STEMinar series connects teachers with professionals and experts within the drone industry, featuring a different guest speaker each time.



#### **Geospatial Careers Guide**

Our geospatial careers guide sheds a light on the professions that make up the geospatial industry and the opportunities that lie within this field. Learn more about the pathways to become a machine learning engineer, surveyor, remote sensing scientist, data analyst, or climate scientist.



#### **ArcGIS StoryMaps**

StoryMaps is a web application and can be used as a teaching tool, for student inquiry, research and is a great alternative to conventional research papers or PowerPoint presentations.

Access 100+ StoryMaps for the geography classroom with Esri StoryMaps as part of your She Maps Membership.

#### Access everything on a single or department license



SIGN UP NOW

# **Online Together**



# Virtual sessions taking you through Classroom Drone Essentials

Our Online Together program combines our She Maps Membership with live online sessions with a She Maps Certified Instructor, who steps you through the Classroom Drone Essentials Professional Development. Online Together is ideal for teachers who require a little more support than the ondemand materials of the She Maps Membership provide, or those teachers that learn better in face-to-face environments.

Online Together sessions can be booked individually or in a group, at a time convenient to everyone's busy schedules.

#### What's covered

#### Set up

- Getting to know our resources and the Classroom Drone Essentials program
- How to set up your drones and tablets (school or own device) for classroom use
- ✓ How to set up a space for safe flying

#### **Taking flight**

- How to keep your students and the drones safe when flying
- ✓ Taking that first flight with your students
- ✓ How to code with the Tellos

#### Curriculum

- Aligning our teacher resources to your learning outcomes
- Extension units of work and activities
- Support to develop scope and sequence for subject proposal
- Tips and tricks

#### **Technical troubleshooting**

✓ Classroom management tips and hacks

#### **Pricing**

- \$725 inc GST per year\*
- \$95 inc GST per additional teacher\*
  - \* Includes 12-month access to the She Maps Membership valued at \$275 per teacher

SHOP NOW

# **Incursions**

# In-school drone workshops for students and teachers



Incursions are for schools looking for an immersive drone experience where students will become geospatial scientists for a day and teachers will observe a She Maps drone instructor model the best practice for teaching with drones.

A certified She Maps instructor will visit your school and bring all the equipment needed to immerse students and teachers in this hands-on drone flying experience.

#### **Face-2-Face Incursions include:**

- Learn to fly and code microdrones
- Max. 30 students/teachers per session
- 12-month She Maps Membership for one teacher for each 2.5 hour session booked
- Drones and safety equipment provided
- A certified She Maps instructor visits your school

#### **Pricing:**

- 1 x 2.5 hour session: \$2,255 inc. GST Half day program / up to 30 students
- 2 x 2.5 hour session: \$3,680 inc. GST 1 day program / up to 60 students
- 4 x 2.5 hour session: \$5,170 inc. GST2 day program / up to 120 students
- The pricing does not include travel expenses. Contact us for a customised quote.

**ENQUIRE NOW** 

# **Individual Teaching** Resources

All our units of work are designed and created in collaboration with industry experts. They are linked to the Australian curriculum across multiple learning areas both inside and outside the STEM-identified subjects.

Each resource includes everything you need including learning intentions, curriculum links, lesson outlines, assessment rubrics, teacher presentations and worksheets.

#### **Drones to the Rescue Bushfires**



#### SUITABLE YEARS 5-6 & 7-8

How can drones and Geographic Information Systems be used to support research and recovery after a bushfire event?

\$139 inc. GST

#### **Drones to the** Rescue Flooding



This unit investigates the causes and impacts of one of the most common and costly hazards in



#### **SUITABLE YEARS 7-8**

Australia: floods.

\$139 inc. GST

#### **Drones in Forestry**



#### SUITABLE YEARS 5-6, 9-10

Sustainable forests are managed using a variety of digital systems including drone and satellite technologies.

**FREE** 

#### Healthcare in the Himalavas



#### **SUITABLE YEARS 5-9**

Using the real application of drones with our partner Nepal Flying Labs, students simulate the transportation of critical medical supplies to the remote villages in Nepal.

\$139 inc. GST

#### Code. Fly. Deliver.



#### **SUITABLE** YEARS 5-9

Students create their own drone delivery solution that solves a community need.

\$139 inc. GST

#### **Drones in Agriculture**



#### **SUITABLE YEARS 5-10**

Students design and grow their own mobile edible garden or horticulture plot and use drones to monitor them.

\$139 inc. GST

#### **Map My School**



#### SUITABLE YEARS F-8

Teach students how to create maps and calculate the size of surface areas. \*No drones required

**FREE** 

**Drone Club Kit** 



#### **PRIMARY & SECONDARY**

30 ready-to-teach activities, checklists and posters to run a successful drone club.

\$139 inc. GST

SHOP PRIMARY TEACHING RESOURCES

SHOP SECONDARY TEACHING RESOURCES

# **Curriculum Alignment**

All units of work designed and created by She Maps are aligned to the Australian curriculum across multiple learning areas. By using these programs you help to equip your students with the necessary STEM skills and knowledge that will enable them to engage with the careers of the future.

Learning Area	Subject Focus	Recommended Program
HASS	Geography	<ul> <li>Classroom Drone Essentials (5-10)</li> <li>Drones in Forestry (5-6)</li> <li>Drones to the Rescue - Bushfires (5-8)</li> <li>Healthcare in the Himalayas (5-6)</li> <li>Map My School (F-8)</li> <li>Pippa and Dronie (F-4)</li> </ul>
	Biomes and Food security	Drones in Forestry (9-10)
	Environmental change and Management	Drones in Forestry (9-10)
	Water in the World	Drones to the Rescue - Flooding (7-8)
	Landforms and landscapes	Drones to the Rescue - Flooding (7-8)
	Place and liveability	<ul><li>Healthcare in the Himalayas (7-10)</li><li>Map My School (7-8)</li></ul>
	Landforms and landscapes	<ul><li>Healthcare in the Himalayas (7-10)</li><li>Map My School (7-8)</li></ul>
	History	Drones in Forestry (5-6)
	Economics and Business	Code. Fly. Deliver. (5-10)
Mathematics	Measurement and Geometry	<ul> <li>Classroom Drone Essentials (5-16)</li> <li>Code Fly Deliver (5-18)</li> <li>Drones in Forestry (5-6)</li> <li>Healthcare in the Himalayas (5-10)</li> <li>Map My School (F-6)</li> <li>Pippa and Dronie (F-4)</li> </ul>
	Number and Algebra	<ul><li>Code. Fly. Deliver. (5-8)</li><li>Drones in Agriculture (5-8)</li></ul>
	Statistics and Probability	<ul> <li>Drones in Agriculture (5-8)</li> <li>Drones in Forestry (5-6)</li> <li>Healthcare in the Himalayas (5-6)</li> </ul>

		Map My School (F-6)     Control (F-6)     C
		Pippa and Dronie (F-4)
	Data representation and interpretation	Healthcare in the Himalayas (7-10)
Science	Science Understanding Science as a Human Endeavour Science Inquiry Skills	Pippa and Dronie (F-4)
	Physical sciences	Code. Fly. Deliver. (7-8)
	Biological Science	<ul><li>Drones in Agriculture (5-8)</li><li>Drones to the Rescue - Bushfires (5-6)</li></ul>
	Science as a Human Endeavour	Drones in Agriculture (5-8)
Technology	Digital Technologies	<ul> <li>Classroom Drone Essentials (5-10)</li> <li>Code. Fly. Deliver (5-10)</li> <li>Drones in Agriculture (5-10)</li> <li>Drones in Forestry (5-10)</li> <li>Drones to the Rescue - Bushfires (5-8)</li> <li>Drones to the Rescue - Flooding (7-8)</li> <li>Healthcare in the Himalayas (5-10)</li> <li>Map My School (F-2)</li> <li>Pippa and Dronie (F-4)</li> </ul>
	Design and Technologies	<ul> <li>Code. Fly. Deliver. (5-10)</li> <li>Drones in Agriculture (5-10)</li> <li>Drones in Forestry (5-6)</li> <li>Drones to the Rescue - Bushfires (5-8)</li> <li>Drones to the Rescue - Flooding (7-8)</li> <li>Healthcare in the Himalayas (5-10)</li> <li>Map My School (F-8)</li> <li>Pippa and Dronie (F-4)</li> </ul>
English	Literacy	<ul><li>Code. Fly. Deliver. (5-6)</li><li>Pippa and Dronie (F-4)</li></ul>
	Language	<ul><li>Code. Fly. Deliver. (5-6)</li><li>Pippa and Dronie (F-4)</li></ul>
The Arts	Media Arts	<ul><li>Drones in Agriculture (5-6)</li><li>Pippa and Dronie (3-4)</li></ul>
	Visual Arts	Pippa and Dronie (F-4)
Health and Physical Education	Personal, Social and Community Health	Pippa and Dronie (F-4)

### **DroneBlocks**



#### Teach advanced programming languages with drones

Once your students master block coding, they may be up for more of a challenge. Learning a coding language such as Python or JavaScript is a valuable skill for students. But for those of us who are not digital natives or coders, teaching students this skill can be a bit daunting!

We have partnered with US-based DroneBlocks to bring their drone coding platform exclusively to you. DroneBlocks creates opportunities for students of all ages to learn Blockly, Python, and JavaScript by programming autonomous drone missions in the classroom.

A 12-month membership provides up to 10 teachers of a school with full access to the DroneBlocks curriculum - a platform of professional development and resources - as well as the DroneBlocks software, enabling them to engage an unlimited amount of students per school.

Students will also be able to access DroneBlocks Coding Simulator, giving you the ability to explore DroneBlocks coding without a drone or in a virtual learning environment.

Note: DroneBlocks supports DJI Tello and Tello EDU drones, Crazyflie drones, Unitree Go1 Robots, and databot sensors.

#### **Students will:**

- Program supported drones using more advanced programming techniques such as JavaScript, Python, and OpenCV.
- Understand and implement more complex coding functions such as loops, variables, and logic.
- Work through real-world applications with drones such as creating a drone lightshow performance and panorama challenge.
- Use the DroneBlocks Simulator to fly through obstacle courses and create shapes and patterns with the simulator trail.
- OpenCV, and use OpenCV for ArUco marker recognition.

- Ocde the supported drones to be flown with keyboard shortcuts in OpenCV, or design your own custom control panel in NODE-RED.
- Use the Tello EDU swarm function through Python coding and NODE-RED.
- Access the Tello video stream through Python coding, or using the DroneBlocks Desktop App.
- Work through over 100 individual lessons with easy to follow video instructions.
- Troubleshoot common coding software challenges.

Price: \$739 inc GST per school per year

**SHOP NOW** 

# **Drone Mapping**

#### Get started using larger drones for advanced mapping activities

Are you wanting to use sub 2kg drones with your students outdoors? We have the right resources to help you get started!



Explore our Drone Mapping resource inside the She Maps Membership.\* Designed for Years 11 and 12, this professional development content will provide you with guidelines on how to make your field activity a success.

Note that this is not a course to teach you how to fly a drone or to get a drone operator license.

\* Not available for individual sale.

#### **Learning outcomes**

- Understand the workflow and timing required for planning drone data capture missions;
- Make an informed decision as to which drone will suit your mapping needs;
- ◆ Effectively use a mobile app for creating and executing a flight plan designed for capturing mapping data;
- Understand and apply appropriate data management techniques; and
- Conduct a basic visual analysis of an orthomosaic generated from your drone data using either GeoNadir or ArcGIS Online.



### **Drone Mapping with GeoNadir**

Our sister company GeoNadir provides a user-friendly platform to manage, process, share, and analyse drone data.

Their Introductory Guide to Drone Mapping is ideal for teachers getting started in this field.

DOWNLOAD DRONE MAPPING GUIDE

Explore GeoNadir for free and discover their crowd-sourced library of drone data from around the world.

**CLICK HERE TO GET STARTED** 

# **Equipment requirements**

#### Recommended equipment to run a successful microdrone program at school

#### **Educational Microdrones**

A microdrone is a drone weighing less than 250 grams and designed for indoor use. Australian teachers using educational microdrones indoors with their students or other teachers don't need a license as long as they don't use the drones in a hazardous manner.

There are several microdrones on the Australian market. She Maps recommends the Robolink CoDrone EDU for several reasons.

#### **Our pick: CoDrone EDU**

- It's designed for educational environments: it is safe, durable and repairable
- It utlises radio frequency to allow for faster pairing than Bluetooth devices
- It comes with a separate controller
- Each sensor of the drone as well as the controller can be programmed
- Programmable with either Blockly or Python
- It comes with spare batteries and a charger for each drone to let your students fly longer





#### **Image mats**

Image mats are  $2 \times 2$  meters large fabric cloths that are printed with an aerial image of a particular location. Laid out on the floor, image mats are great for drone coding activities where they can be used to create real-world scenarios, coded mission plans, and stepping out code. We provide a selection of image mats printed with iconic Australian locations to choose from or can create custom mats with a location of your choice.

#### **Lipo Bags**

LiPo bags provide safety to teachers, students and their environment during charging, transportation, and storage of microdrone batteries. Lithium-ion batteries harbor a risk of ignition or explosion, so don't underestimate the importance of this little bag. LiPo bags are made of super-strong flame retardant silicone fibreglass woven fabric and will tolerate very high temperatures for a reasonable period of time.



### **Equipment requirements cont'd**

#### Other recommended equipment

- Markers/cones for flight zones and activities
- · Large suitcase or storage trolley to transport drones between classes
- Safety glasses for each student
- · Stickers for labelling each drone and dedicated tablet
- Posters Printing of Careers Posters & Safety Posters available on our membership portal

#### **Location considerations**

- Choose a large indoor space free from wind, draft or other air movement
- The size of the room required depends on the number of drones flown at any given time. As a rule of thumb, a standard size classroom is suitable for up to 5 drones, a double-size classroom for up to 7 drones and a school hall or indoor basketball court is ideal for 7 drones or more
- The height of the room is less relevant as the drones should only be flown at or below adult shoulder height

#### **Administrative considerations**

- Do you require a school Drone Policy? Download policy template
- Do you require a risk assessment? Download risk assessment
- Where will the equipment be stored?

#### **Teacher training considerations**

- Which members of your team could benefit from learning how to teach with microdrones indoors?
  - She Maps Membership contains selfpaced PD content
  - Online Together provides live online learning
  - Incursions demonstrate our program live in action and provide you the resources to replicate our workshop

#### Sub 2KG drone considerations

Picking the right sub 2kg drone for your school program depends on a number of factors. Getting the wrong drone is expensive and can derail your objectives. A chat with our team can get you sorted!



SCHEDULE A CALL

## **Classroom Drone Kits**

The most important drone equipment and accessories bundled up in one convenient kit

We know teachers are often time-poor and choosing the right tech equipment can be overwhelming and time-consuming. That's why we bundled up our recommended microdrones with image mats and LiPo bags to create a drone kit that includes everything you need to run a safe and successful drone lesson in the classroom.

#### **CoDrone EDU Classroom Kits**

#### **SMALL MEDIUM** LARGE codroneEDU codroneEDU codrone<sup>EDU</sup> 4 x microdrones 8 x microdrones 6 x microdrones incl. batteries, charge hubs incl. batteries, charge hubs incl. batteries, charge hubs & spare propellers) & spare propellers) & spare propellers) 2 x Image mats 1 x Image mat 2 x Image mats (2m x 2m) $(2m \times 2m)$ $(2m \times 2m)$ 2 x Lipo battery bags 2 x Lipo battery bags 2 x Lipo battery bags Ideal for a class of Ideal for a class of Ideal for a class of 8 - 12 students 12-18 students 16-24 students \$1,990 inc. GST \$3,950 inc. GST \$3,150 inc. GST **SHOP NOW**



Each drone purchase includes 12 months of technical support by She Maps plus standard manufacturer's warranties.

### **Individual Microdrones & Accessories**

	PRODUCT	PRICE
COLOR SECONDARIO	Robolink CoDrone EDU  1 x CoDrone EDU, 1 x smart controller, 2 x rechargeable batteries, 1 x dual port charging hub & cable, spare propellers, landing pads, quick start guide	\$409.00 inc. GST
	CoDrone EDU Power Pack  2x batteries for CoDrone EDU, 1 x dual charger, 1 x micro USB to USB-A cable	\$64.00 inc. GST
	CoDrone EDU Extra Battery  Single CoDrone EDU battery without charger	\$28.00 inc. GST
	CoDrone EDU Replacement Frame  CoDrone EDU replacement frame with integrated white LED dome	\$39.00 inc. GST
	CoDrone EDU Set of 4 Propellers  Replacement propellers for CoDrone EDU	\$24.00 inc. GST
	CoDrone EDU Set of 4 Motors  CoDrone EDU replacement motors	\$59.00 inc. GST

### **Individual Microdrones & Accessories**

	PRODUCT	PRICE
LIPO GUARD	<b>LiPo Battery Bag</b> Convenient way of safeguarding your batteries during charging, transportation, and storage.	\$22.00 inc. GST
C Seals	Standard Image Mat (single sided)  2x2 m cloth mat, washable. Standard locations to choose from:  Adelaide, Bondi Beach, Brisbane, Cairns, Canberra, Darwin, Gold Coast, Hobart, Longreach, Melbourne, Newcastle, Orpheus Island, Perth, St Kilda, Sunshine Coast, Sydney, Townsville	\$330.00 inc. GST
	Double Sided Image Mat  2x2 m cloth mat, washable.  Printed with a standard location on the front and grid pattern on the back.	\$462.00 inc. GST
	Custom Image Mat  2x2 m cloth mat, washable Printed with an aerial image of a location of your choice	\$420.00 inc. GST

**SHOP NOW** 

# **Orders and Payments**

### Why purchase equipment from She Maps?



Real educators who have tested all equipment in a classroom setting.



12 months' technical support and drone assistance on call



Support a local Australian business and social enterprise



Free delivery within Australia on orders over \$450

### Two easy ways to place your order

- Purchase directly on the website www.shemaps.com
- Ocontact She Maps via phone or email for a quote or invoice

Schools can pay via credit card (processing fees apply) or via electronic funds transfer.

Special Note: Orders cannot be sent until we've received a purchase order or payment in full.

#### Here is the information you require to raise a purchase order:

**Company Name:** Kaea Pty Ltd trading as She Maps

**ABN:** 90 628 152 303

**Address:** PO Box 321, Trinity Beach, Cairns, QLD, 4879

**Phone:** 1300 895 795

**Email:** orders@shemaps.com

# Dive a little deeper

Our team of educators are constantly working on informative and useful content to help teachers introduce drones to their classrooms.



#### **Getting Started With Drones in Your** Classroom

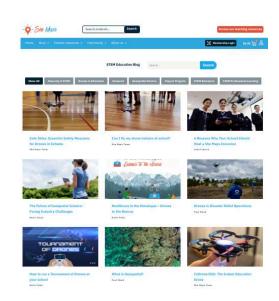
Learn the 6 steps to launching a successful drone and geospatial program in your classroom.

**DOWNLOAD** 

#### **She Maps Blog**

Browse our library of STEM and drone education blogs for tips and information about teaching with drones and GIS tools.

**START READING** 



Subscribe to our monthly newsletter for free resources, teaching ideas and updates from the She Maps team.

**SUBSCRIBE** 

### Find us on socials









Disclaimer: Prices in this catalogue are correct as at August 2024. Prices may change at any time without further notice.

#### **STEM GRANTS AUSTRALIA**

STEM grants open across the school year, so we've collated a list of grants that you might like to keep an eye on. Please note many close early in the year, so this is more of a reference list for you to keep track of.

#### **Brighter Futures**

Brighter Futures community funding grants are designed to support organisations that are working to develop stronger communities in three areas: health and safety, education and environment.

#### **Engaging Science Grants**

This grant aims to support organisations, schools and teachers improve STEM participation through the delivery of science engagement and communication projects, events and activities.

#### **NSW-Supporting Young Scientists Program**

This grant is offered to NSW high school students participating 'in person' or virtually in competitions, events or courses, either domestically or internationally, which offer the potential for signi cant educational advancement in an area related to science, technology, engineering or mathematics (STEM).

#### **School Grant Program in South Australia**

These are grants to help school-initiated National Science Week activities. Applications are accepted that support the running of a National Science Week activity or event in a school and teachers can apply for up to \$500.

## **QLD-Peter Doherty Awards for Excellence**in STEM Education

Schools or teachers who have implemented strategies to lift student performance in STEM subjects can apply for this award. The award should be used to undertake activities associated with the STEM course or purchase equipment to assist in the development of STEM learning.

#### **Inspiring NSW grants**

Each year, funds are given to NSW stakeholders to deliver high-pro le community STEM events.

#### **Aboriginal Benefits Foundation Grants**

The Foundation provides grants to support projects which advance the aims of the Foundation, with the current focus on supporting educational projects. Applications are accepted from any Aboriginal communities/individuals.

#### **Rural and Remote Education Access Program**

The RREAP program aims to assist schools in improving the educational outcomes and opportunities of students who are disadvantaged because of their geographical isolation, so that their learning outcomes match those of other students.

#### **Indigenous Education**

This funding aims to assist schools supporting indigenous students and close the attainment gap between non-indigenous and indigenous students.

#### **BankWest Easy Grants**

Every month Bank West takes the  $\,$ rst 40 applications that  $\,$ t their entry criteria and puts them up for a public vote. The 6 projects with the highest votes receive \$1000 and the rest receive \$200 each.

#### **Crowdfunding through Schools Plus**

The "Fundraise Yourself' platform allows schools to publish information and bene ts about a project and crowdfund through the community network. Eligibility is dependent on the Index of Community Socio-Educational Advantage (ICSEA) or whether a school is de ned as a special school.

#### **National Science Week Grants**

The Australian Science Teachers Association (ASTA) conducts an annual grant round to assist schools to hold a special event in National Science Week. Applications are usually open in Term One and the results of the selection process announced in Term Two. Schools can apply for up to \$500 of assistance. The grant pool of more than \$100 000 is provided by the Australian Government

