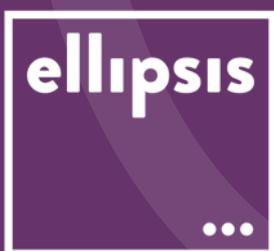


**I am an
ISP Scientist**

INFORMATION FOR COORDINATORS

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elevating perspectives



**International[®]
Schools
Partnership**

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I am an ISP Scientist

Introduction

At the International Schools Partnership (ISP), learning is at the heart of everything we do. As a global group of schools our students benefit from being part of a wider international community, providing a wealth of learning and cultural opportunities. Our **International Learning Opportunities** (ILOS) give students the chance to connect with other ISP students from around the world.

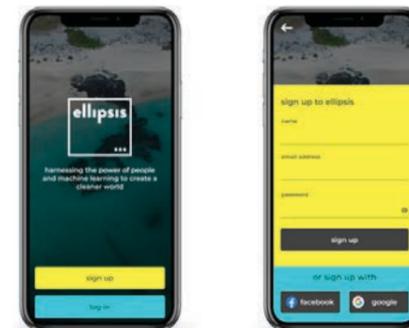
I am an ISP Scientist is a new ILOS project, launching in 2021. ISP students aged 8-14 are invited to participate in a real-world STEM research project through **citizen science**, enabling them to:

- Connect classroom learning to real research
- Develop greater understanding of scientific methodology
- Participate in enquiry-based learning
- Practise transferable skills such as problem-solving, teamwork and communication

The project also includes inspiring opportunities to engage with STEM professionals behind cutting-edge scientific innovation and discovery, encouraging ISP students to consider and explore a wide range of STEM careers.

The project

The theme for this year will be plastic pollution, and we are partnering with the fantastic team at **Ellipsis Earth*** to enable ISP students to use cutting edge technology to help map the journey of missing plastic and identify trends to help influence environmental change.



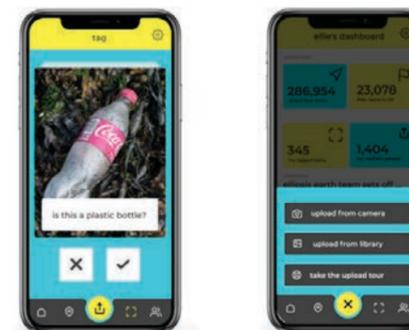
Gather: Students upload video and stills of litter from their local area. This could be around the school grounds, near their home as homework, or you could organise a school trip to an area off-site.

Stitch: Ellipsis AI software then blends multiple photos into a master image for enhanced geospatial mapping.

Identify: Using custom machine learning, Ellipsis software can identify plastic with a 93% accuracy and 95% certainty.

Categorise: Ellipsis software can then classify exactly what the plastic is, ie, plastic bottle, fishing net, bottle cap or toothbrush, to provide better context.

Map: Ellipsis creates a global heatmap of plastic waste that can be filtered and overlaid against existing data sets, and compared geographically and over time.



**Ellipsis Earth was founded in 2019 by scientist, filmmaker and extreme environment drone pilot, Ellie Mackay. Their vision is to create an integrated ecosystem for environmental change, through global research, education, exploration and creative media, all underpinned by Ellipsis' unique algorithm technology for mapping the missing 99%.*

Hypothesis Methodology
 Investigation Research
 Measure Experiment
 Data Citizen Science
 Observation Data
 Innovation Exploration
 Discovery Plastic
 Pollution Environmental
 Change Technology
 Engineering Science
 Hypothesis Methodology
 Investigation Research
 Measure Experiment
 Data Citizen Science
 Observation Data
 Innovation Exploration
 Discovery Plastic

What will students do?



Ask a scientist Q&As: Throughout the project, students will be invited to join a series of live interactive 'Ask a Scientist' sessions online, providing opportunities for them to engage with professionals behind cutting-edge scientific innovation and discovery, and hear about different careers in STEM.

Citizen Science data collection: The heart of the project - using the Ellipsis app ISP students will take and upload photos of litter in their local area, contributing to real-life scientific research. This could be around the school grounds, near their home as homework, or you could organise a school trip to an area off-site. They will identify and categorise photos, and the data collected by students will be analysed by the Ellipsis AI algorithm and put into a global heatmap of plastic waste that can be filtered and overlaid against existing data sets.



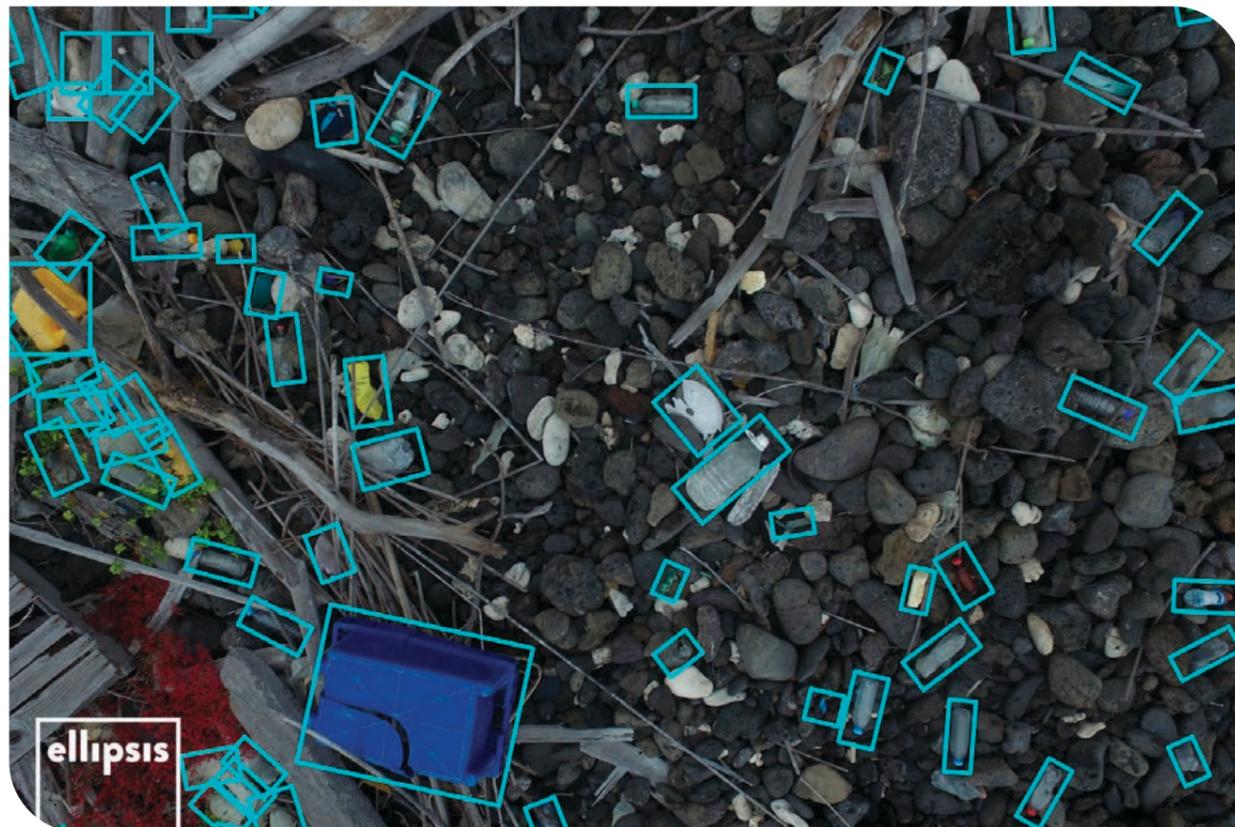
Workshops (Optional): Teachers will be provided with a resource pack with everything they need to run extra workshops to help students get the most out of the project, including supporting students to design a methodology for their data collection, using the data collected by their school to identify trends, patterns and proportions, and developing initiatives to conduct their own research and analysis. There will be a junior pack (8 - 12 years) and a senior pack (12+) with workshops to suit different ages.

Student eligibility

- ISP students aged 8 – 14 years
- Up to 30 students per school, ideal for a STEM or eco club
- All resources for teachers and students will be in English only
- No participation fees

Coordinator responsibilities

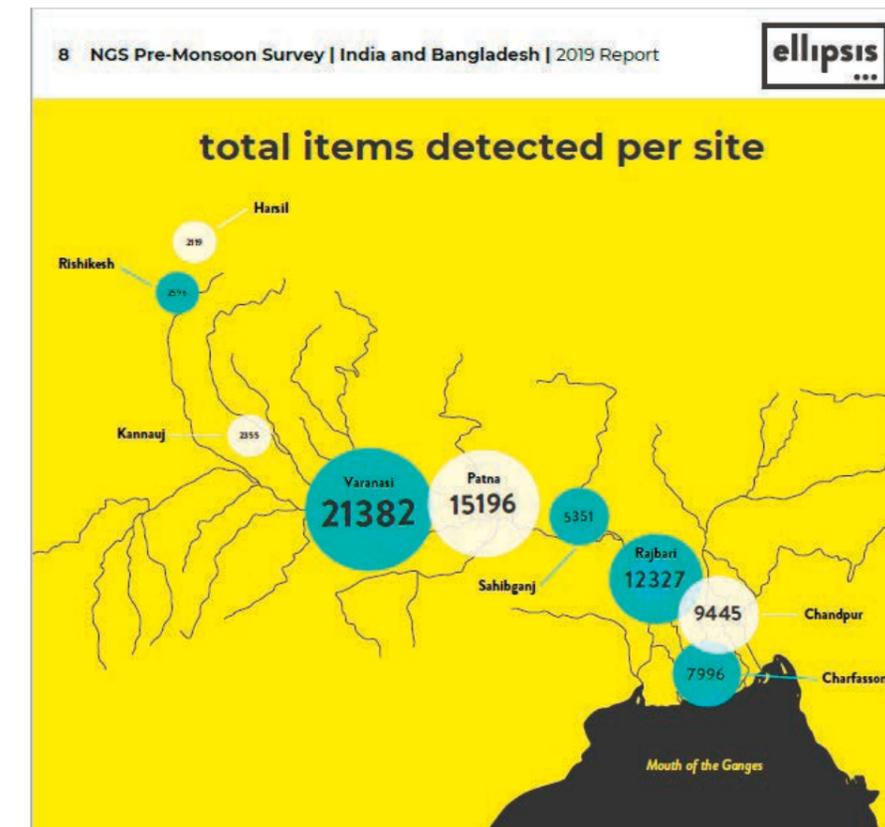
- Recruit or select students to participate in the project
- Gather and submit registration forms for participating students
- Join 2 x instructional webinars, or watch the recordings after if not able to join live
- Be the admin account holder for the school account on the Ellipsisearth app
- Support students to take and upload photos for data collection - this could be around the school grounds, near their home as homework, or you could organise a school trip to an area off-site
- Deliver up to five extra workshops from the education pack (optional)
- Support students to join or watch recordings of 2 x Ask a Scientist sessions



10 million tonnes of plastic waste is entering our oceans every year. **99% is missing...**

- **Where** is the plastic ending up?
- **How far** around the planet **does it travel?**
- **How long** does it stay in the **environment?**
- **How quickly** do cleaned beaches and cities become **re-polluted?**

Today, it's all a mystery.
Without knowledge,
we are stuck.



Timeline

By 25th January: Coordinator sign-up (if participating in round 1)

Let ISP know if you want to participate by the 25th January 2021 by emailing Beejal Parekh, International Opportunities Project Manager at bparekh@ispschools.com. You will then receive a launch pack including an information leaflet for students and parents, social media graphics, and forms for participating students.

By 12th February: Student registration

Recruit students or decide on a group to run the project with (ideal for STEM or eco club). Collect and send in forms for participating students by the 12th February.

12th - 22nd February: Project planning

You will receive an education pack to help you prepare for project (junior pack for 8 - 12 years and a senior pack 12+ with resources to suit different ages):

- Plan how, where and when students will take and upload their photos
- Plan if and when you will deliver the optional extra workshops from the education pack
- Receive log-ins for the app by 22nd February

22nd February - 8th March: Pre-project preparation

- Download the app and check your teacher account works correctly
- Support students to download the app and check their student account works correctly
- **23rd February: Introductory Webinar** (time TBC) Live webinar for coordinators (recording available for one week afterwards for any schools unable to join)
- Deliver introductory workshop from the education pack (optional)

8th - 26th March: DATA COLLECTION: ROUND 1

- Support students to take and upload photos of litter to the app
- Run extra workshops with students from the education pack (optional)
- Join an Ask a Scientist session (times TBC):
 - **9th March: Plastics and Recycling** (Europe, Middle East and Southeast Asia)
 - **16th March: Data and Communication** (USA & Canada, Mexico & Central America and South America)

By 12th April: Registration (Only for groups that did not participate in round 1)

- Recruit students and gather/complete forms for participating students
- Watch webinar recording and plan project delivery (using education pack)

26th April - 14th May: DATA COLLECTION: ROUND 2

- Support students to take and upload photos of litter to the app
- Run extra workshops with students from the education pack (optional)
- Join an Ask a Scientist session (times TBC):
 - **27th April: Plastics and Recycling** (USA & Canada, Mexico & Central America and South America)
 - **4th May: Ask a Scientist: Data and Communication** (Europe, Middle East and Southeast Asia)

24 - 28th May: WRAP-UP / CELEBRATION

- **25th May: Wrap-up webinar** (time TBC) Live webinar for coordinators (or watch later)
- Deliver optional wrap-up session with students from the education pack
- Share the project report and infographics with your students

NB. There are two data collection periods - schools can join in with round 1, round 2 or both rounds.

If you have a question about the I am an ISP Scientist project, please contact Beejal Parekh at bparekh@ispschools.com.

With knowledge we can **turn trash into treasure**, harnessing the power of **machine learning** & **global research** to create **environmental change**.

Together, we will...

- Map the **missing 99%**
- Identify **trends**
- Target **hotspots**
- Influence **lasting change**



Hypothesis Methodology
Investigation Research
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Observation Data
Innovation Exploration
Discovery Plastic
Pollution Environmental
Change Technology
Engineering **Science**
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Investigation Research
Measure Experiment
Data Citizen Science
Observation Data
Innovation Exploration
Discovery Plastic



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