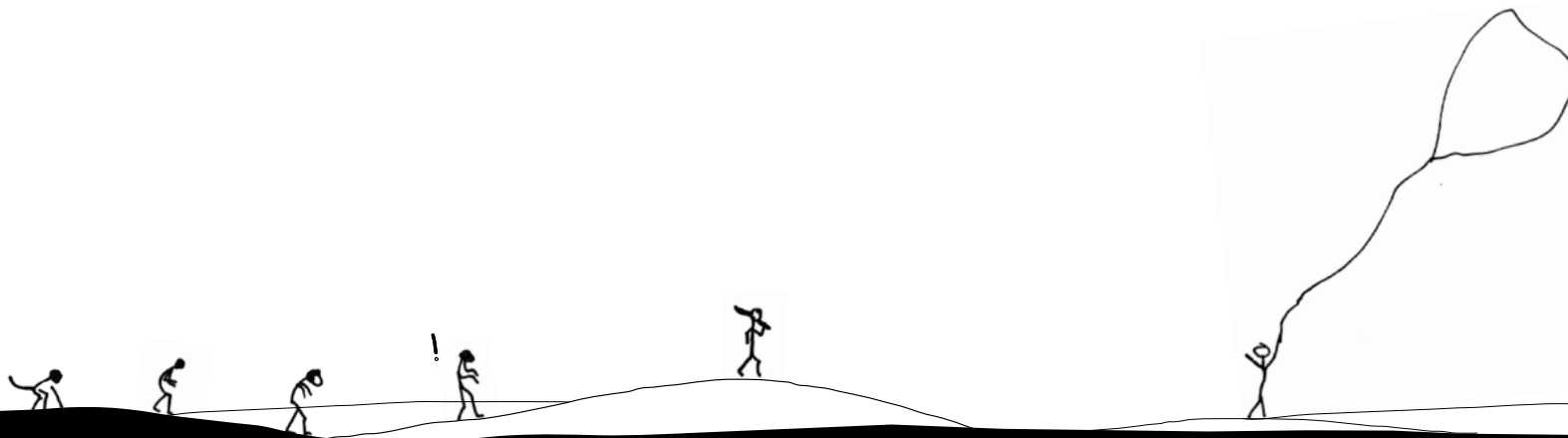




AEROCENE EXPLORER

An open-source, do-it-together flight kit for solar-powered atmospheric exploration

WELCOME TO THE AEROCENE EPOCH



“The Aerocene is poised to de- and re-engineer the hydrocarbon and intellectual property infrastructures that envelop our world.”

– Nicholas Shapiro

Aerocene is an open-source, multi-disciplinary project furthering the artistic and scientific exploration of environmental issues.

Aerocene is developing new solutions and technologies for sustainable Aerocene travel and living, with support from multiple collaborators and partners around the world. Aerocene is a movement, an invitation to shape a period of time, a new epoch. Aerocene is a response to – and a way to transcend – our current Anthropocene epoch.



THE EXPLORER IS LIFTING OFF...



The Explorer, developed by artist Tomás Saraceno, is a tethered-flight starter kit, which enables anyone to personally launch their own Aerocene solar sculpture and start exploring the skies.

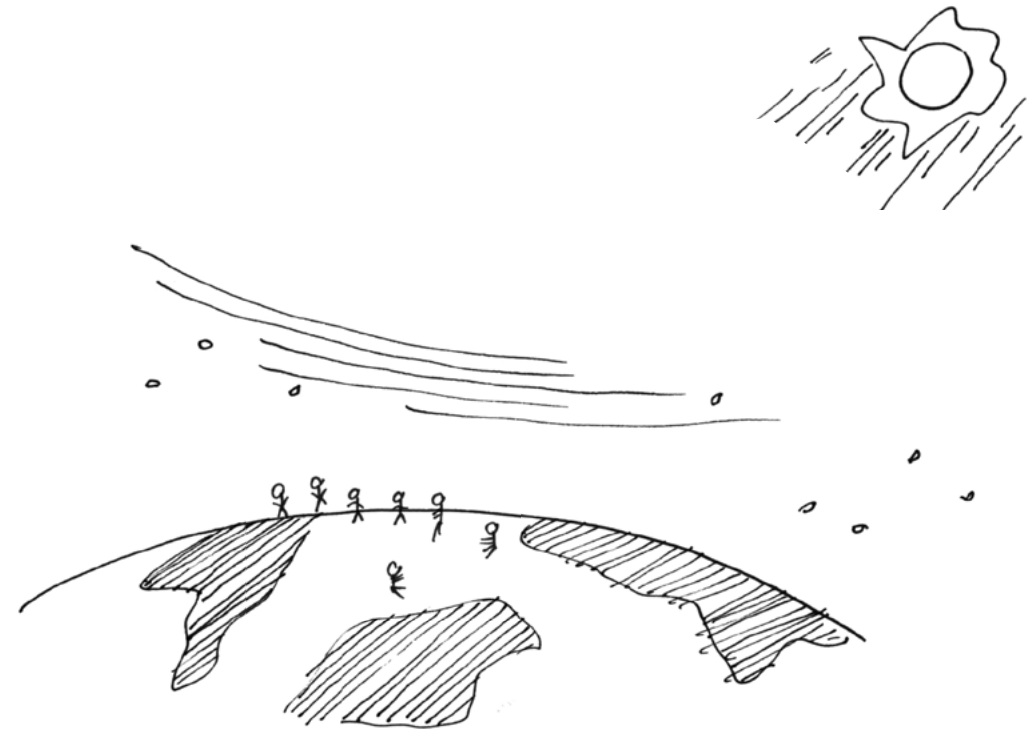
A tactile and engaging way to experience the Aerocene, the Explorer allows participants to take aerial photographs and videos and to collect atmospheric data using non-intrusive, emissions-free scientific exploration tools that measure air quality, temperature, humidity, and pressure. Additionally participants can 'hack' the devices pack, create their own light-weight sensors, and lift them up.



The Explorer is revolutionising a common understanding of what it takes to become aerosolar and offering a new knowledge of what sustainable energy can achieve. Using inexpensive Do-It-Together (DIT) techniques, Aerocene seeks to change how people see the world in environmental, social, and political terms.

The Aerocene Explorer is designed to engage participants in thinking-through-making activity, stimulate imagination and creativity, and impart information about solar balloon flight, thermodynamic physics, meteorological science, and art practices in a multidisciplinary way.

San Luis, Argentina
September 2016



Aerocene is a different conception of moving through space and time...



Aerocene allows you to become attuned to the natural rhythms of the Earth – and move with them, not against them.



Flying with Aerocene is an artistic experience that requires you to surrender control and change your expectations.



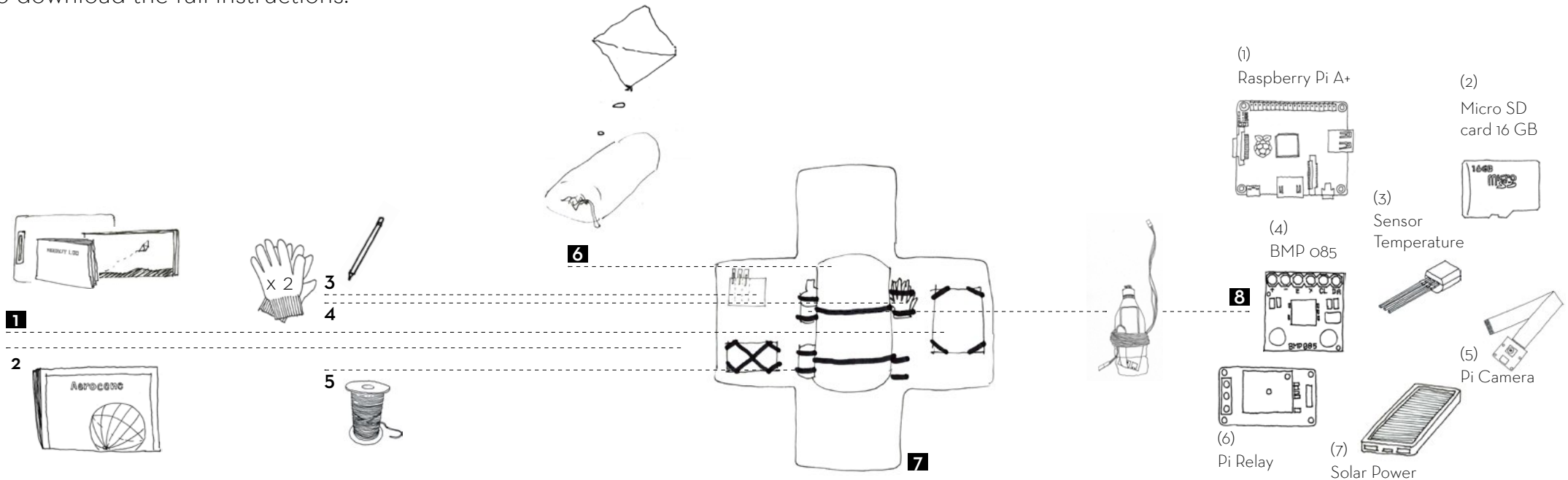
Sometimes Aerocene air travel means waiting for the weather conditions to be right. It's about slowing down and tapping into the endless resources and energy of our environment – then anything is possible!



Don't worry if you can not fly the first day. When the Sun shines on your Explorer, enjoy the moment!

EACH EXPLORER KIT INCLUDES...

You can build your own Aerocene Explorer kit by yourself. Click [here](#) to download the full instructions.



1 EXPLORER ACTIVITY BOOKLET

Download instructions [here](#)

3 PENS

4 2 PAIRS OF GLOVES

6 EXPLORER SCULPTURE

Download instructions [here](#)

7 EXPLORER BACKPACK

Download instructions [here](#)

8 SENSING DEVICES PACK

Download instructions [here](#)

2 AEROCENE NEWSPAPER

Download [here](#)

5 TETHER/ ROPE

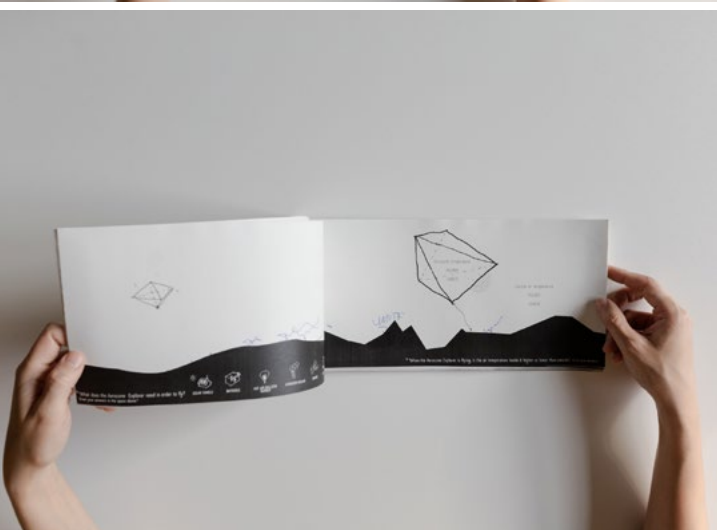
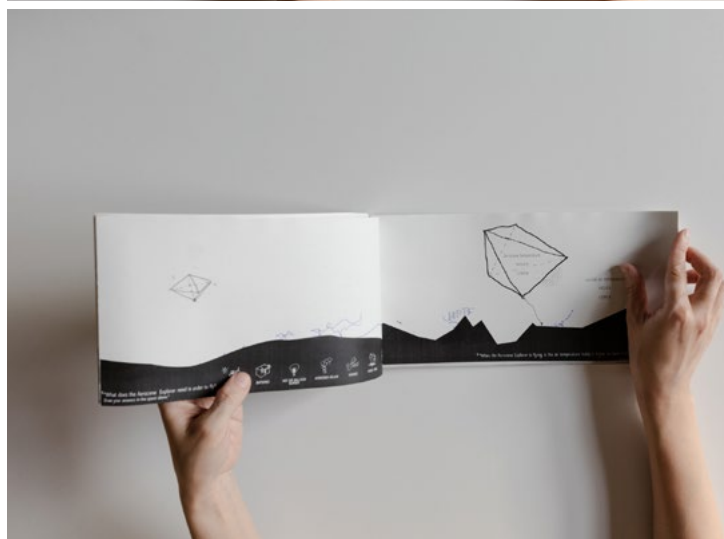


THE EXPLORER ACTIVITY BOOKLET

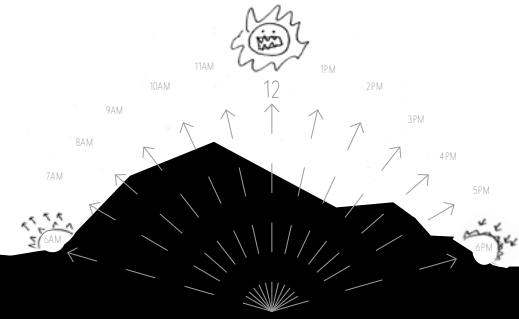
This beautifully designed booklet gives a basic introduction to the science behind solar balloon flight, while inspiring creativity with fun drawing activities and exercises.

Download booklet/manual [here](#)





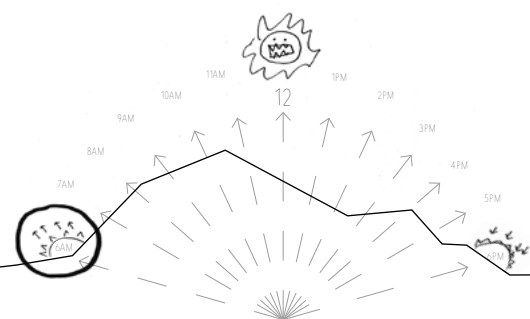
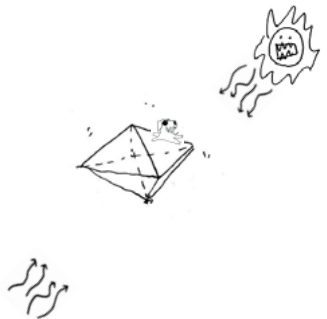
A PEEK INSIDE... THE EXPLORER ACTIVITY BOOKLET



6 Circle which time of day is best for launching your Explorer.

-  SOLAR PANELS
-  BATTERIES
-  HOT AIR BALLOON BURNER
-  HYDROGEN HELIUM
-  ENGINES
-  FOSSIL FUELS
-  SUN
-  RADIATION FROM THE EARTH

1 What does the Aerocene Explorer need in order to fly?
Draw your answers in the space above.



6 Circle which time of day is best for launching your Explorer.

- ~~~~ SOLAR PANELS
- ~~~~ BATTERIES
- ~~~~ HOT AIR BALLOON BURNER
- ~~~~ HYDROGEN HELIUM
- ~~~~ ENGINES
- ~~~~ FOSSIL FUELS
- 
- 

The only things here that the Aerocene Explorer needs to fly are heat energy from the Sun and infrared radiation from the Earth.

Solar balloons are able to lift into the air and travel via a process that is environmentally friendly and releases zero toxic emissions.

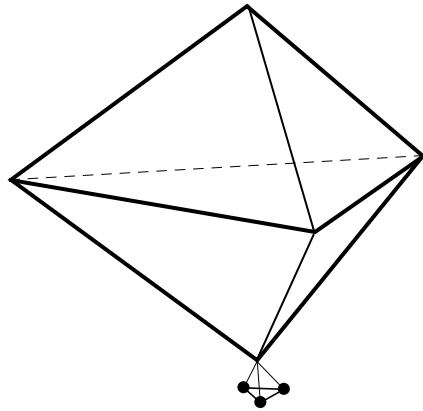
1 What does the Aerocene Explorer need in order to fly?

The best time to launch is early in the morning!
The early morning is the best time to achieve maximum lift with the Explorer sculpture for two main reasons. First, at sunrise the air will have a cooler temperature than on a sunny afternoon. The greater the difference between the colder outside air and the heated air inside the Explorer, the higher the lift will be. Second, in the early morning, the wind speeds are usually not as high as in the afternoons.

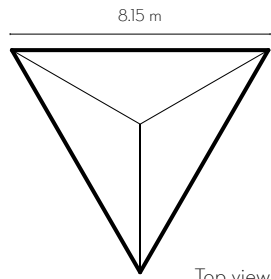
It is important to have as little wind as possible – this creates a higher lift, as the sculpture will not be blown significantly downwards or horizontally.

THE EXPLORER SCULPTURE

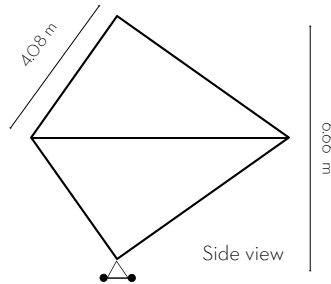
Download instructions [here](#)



Perspective view



Top view



Side view

MATERIALS:

Black nylon (ripstop 7D): 23 g/m²

Material amount (120%): 120 m²

VOLUME: 64 m³

ENVELOPE WEIGHT: 2.76 Kg

LIFT CALCULATION

Launch Altitude: 32 m

Outer temperature: 26.0 °C

Delta t (Different temperature): 20.0 °C

Lift: 72.47 g/m³

Balloon Lift: 4.64 Kg

AVAILABLE PAYLOAD: 1.88 Kg



The Explorer sculpture is lightweight, but powerful enough to lift up to 1.88 kg of payload!

THE EXPLORER BACKPACK

A lightweight, waterproof backpack keeps all of the Explorer kit's contents secure and ready for travel!

Download instructions [here](#)



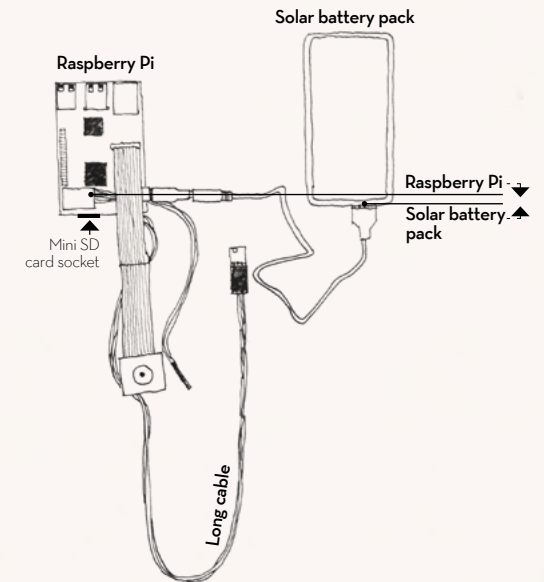
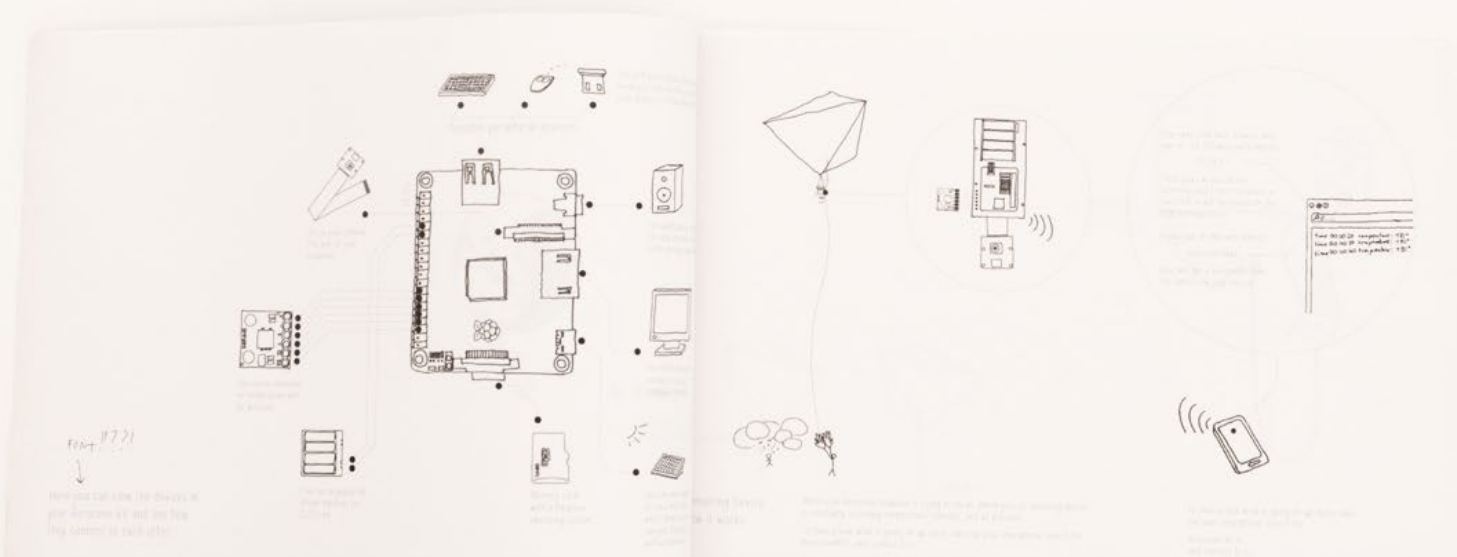
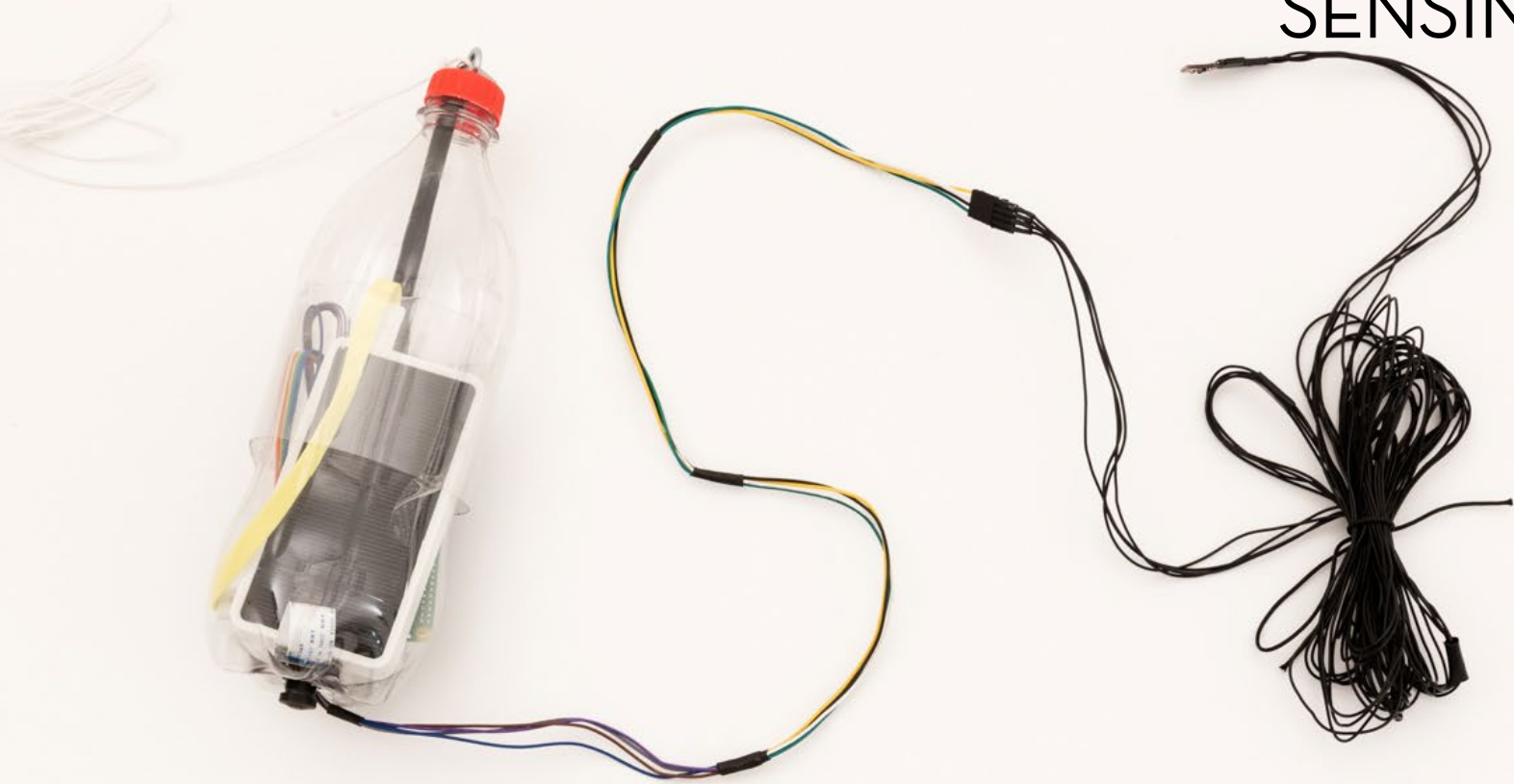
The prototype of Aerocene Explorer kit backpack

THE EXPLORER'S SENSING DEVICES PACK

Each kit comes with a small camera and sensing devices to record air quality, temperature, humidity, altitude, and pressure.

Data collected using the Aerocene Explorer can be uploaded and shared with Aerocene's open-source online community, via an interactive website that will encourage participants all over the world to share their experiments, photos and videos, comments, and innovations.

Download instructions [here](#)





The camera and sensors to measure atmospheric data are placed in the recycled-plastic bottle provided, and then attached to the Explorer sculpture, ready for lift off!



DATA RECORDING AND IMAGES

When the Explorer is airborne, atmospheric data is recorded by the sensing devices and transmitted to your smartphone in real time.

Download instructions [here](#)

Using your smartphone, turn on your Wi-Fi and connect to Wi-Fi name : "Aerocene Explorer"
Password : lighterthanair



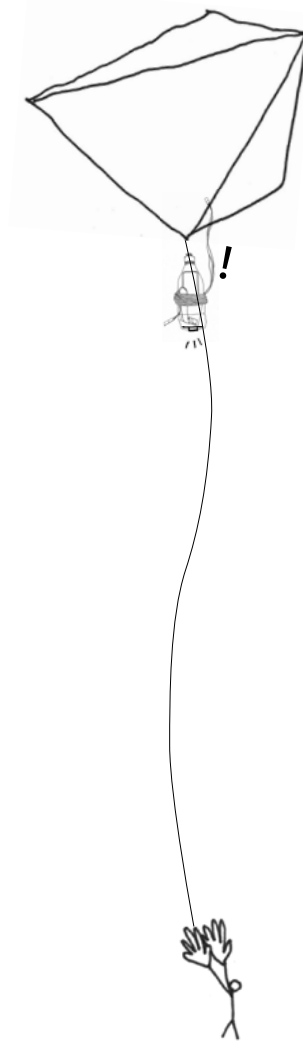
Click the "atmosphere observation" box to check the atmospheric data as it records in real time



If you want to take a photo:
Record images > Download videos and images > choose frame > download > save image



Open your web browser and type: 172.24.1.1 in the address bar
Admin setting password : saraceno5051





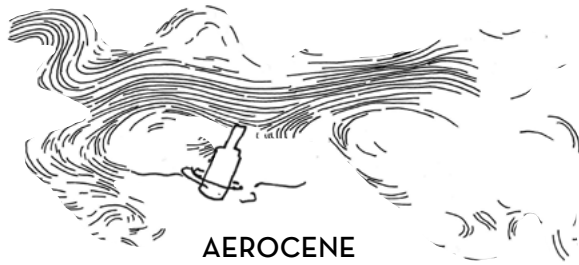
Aerial photos
captured by the
Aerocene Explorer

Cappadox Festival
Cappadocia, Turkey
May 2016

HACK IT YOURSELF!

You can easily hack the Explorer, add your own sensing devices, and further customize your exploring.

Post your ideas click [here](#)



AEROCENE
MESSAGING
WITH THE
WIND



AEROCENE
RADIO SPACESHIP



AEROCENE
MAPPING

AEROCENE
AIRBORNE



AEROCENE
GROW UP IN THE AIR



AEROCENE
SPECTROMETRY



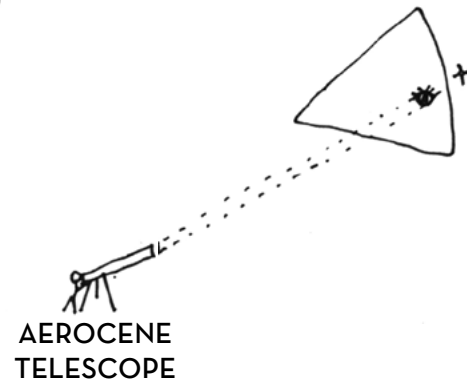
AEROCENE
MILKY WAY TRIP

AEROCENE
BAROMETER

AEROCENE
STATE OF MATTER



AEROCENE
WEATHER STATION



AEROCENE
TELESCOPE

AEROCENE
ANEMOMETER



AEROCENE
WAVE SPACE



OPEN SOURCE ONLINE COMMUNITY

Once your launch has been successfully completed, you will have a collection of data and images to share with other Aerocene Explorers all around the world.

[Log in](#), create a profile, and [join](#) the Aerocene open source online community!



Much like the universe, the Aerocene project
is constantly expanding.

Join Aerocene online for the
latest news and updates:

www.aerocene.com

www.facebook.com/aerocene

twitter.com/aerocene