FROM THE EARTH

The department of mechanical and aerospace engineering B3

Kenta Iizuka (President)

Daiki Kita (Vice-President)

What is FROM THE EARTH

We are a space activity club

Number of member: 108 !!

What is FROM THE EARTH

Number of member: 108 !!

Our motivation

「Breakthrough to the atmosphere」

「Dreams and inspiration for all」

Vision

Hybrid Rocket
CanSat

Atmosphere

Education
SNS (X,Instagram)

Dreams and
inspiration for all

Vision

Hybrid Rocket
CanSat

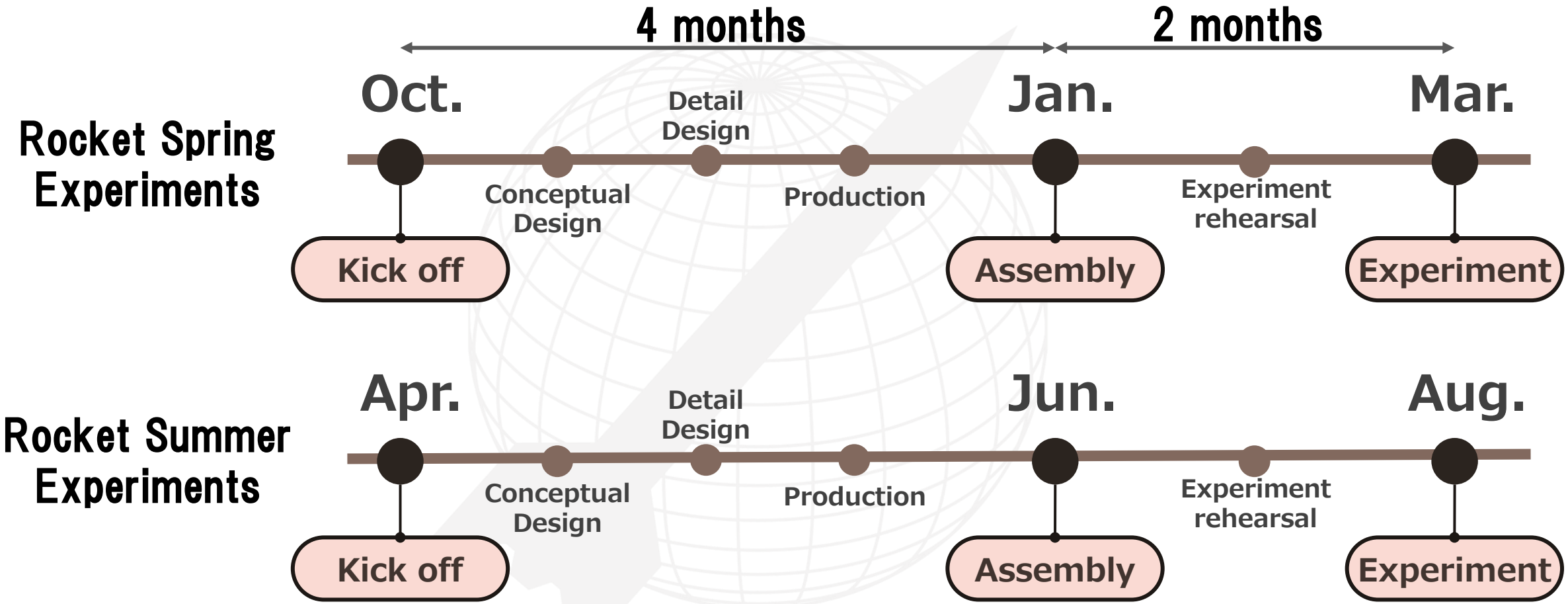
Atmosphere

Growth as an engineer

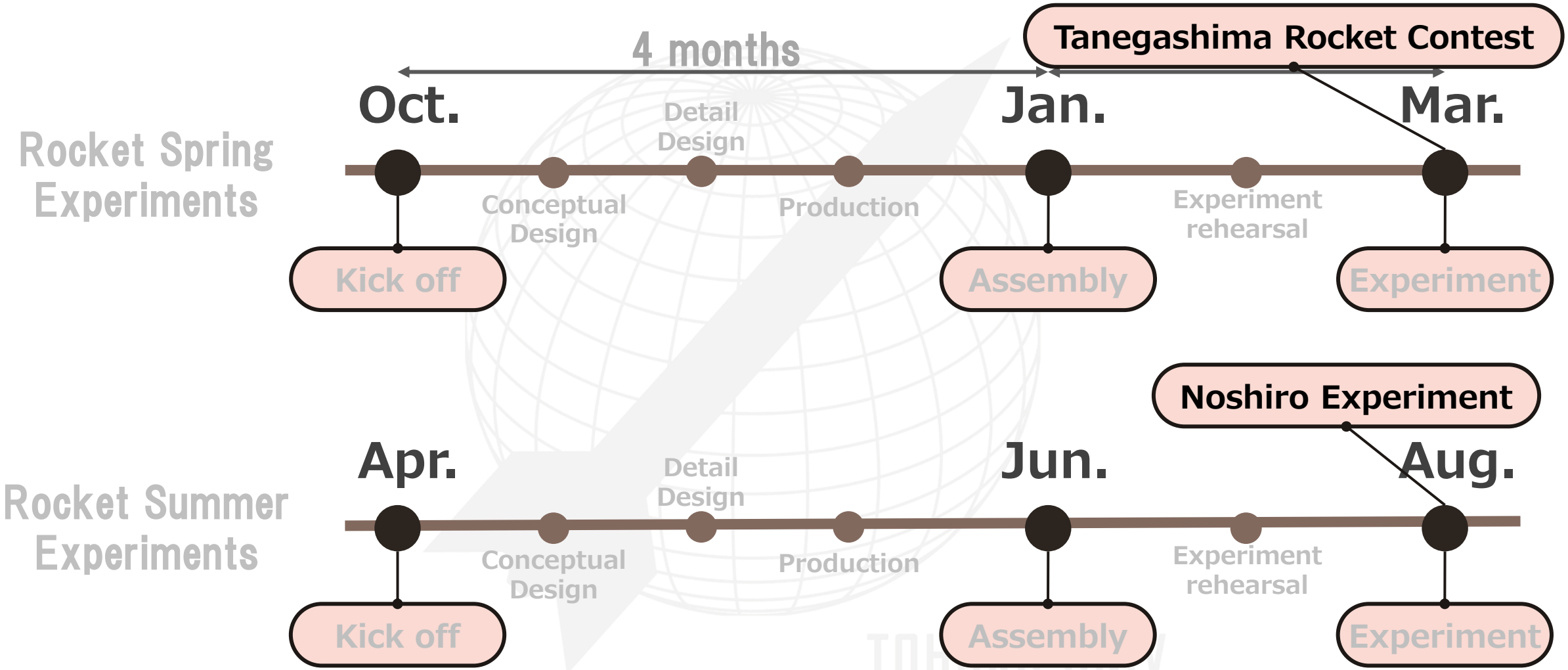
Volunteer
SNS (X,Instagram)

Dreams and
inspiration for all

Yearly Schedule



Yearly Schedule



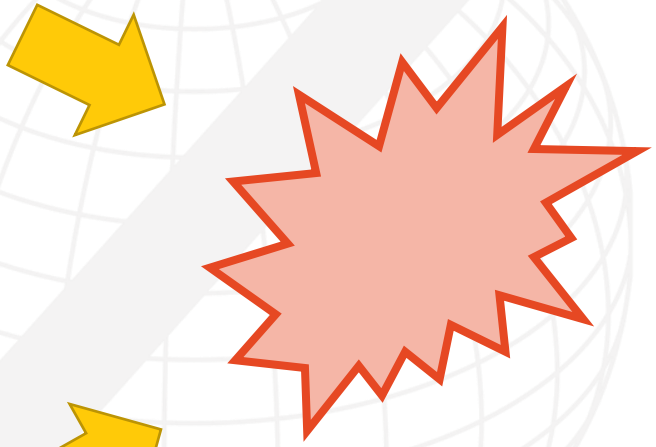
Hybrid Rocket

Solid Fuel

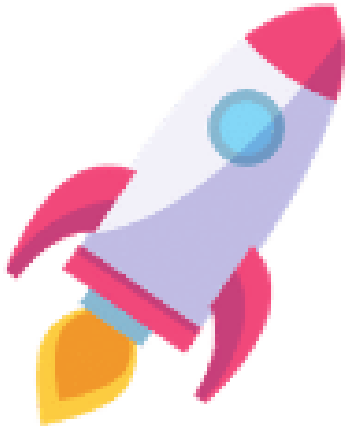
■Acrylic, ABS

Liquid Oxidant

■N2O



Burning !



Hybrid Rocket

Solid Fuel

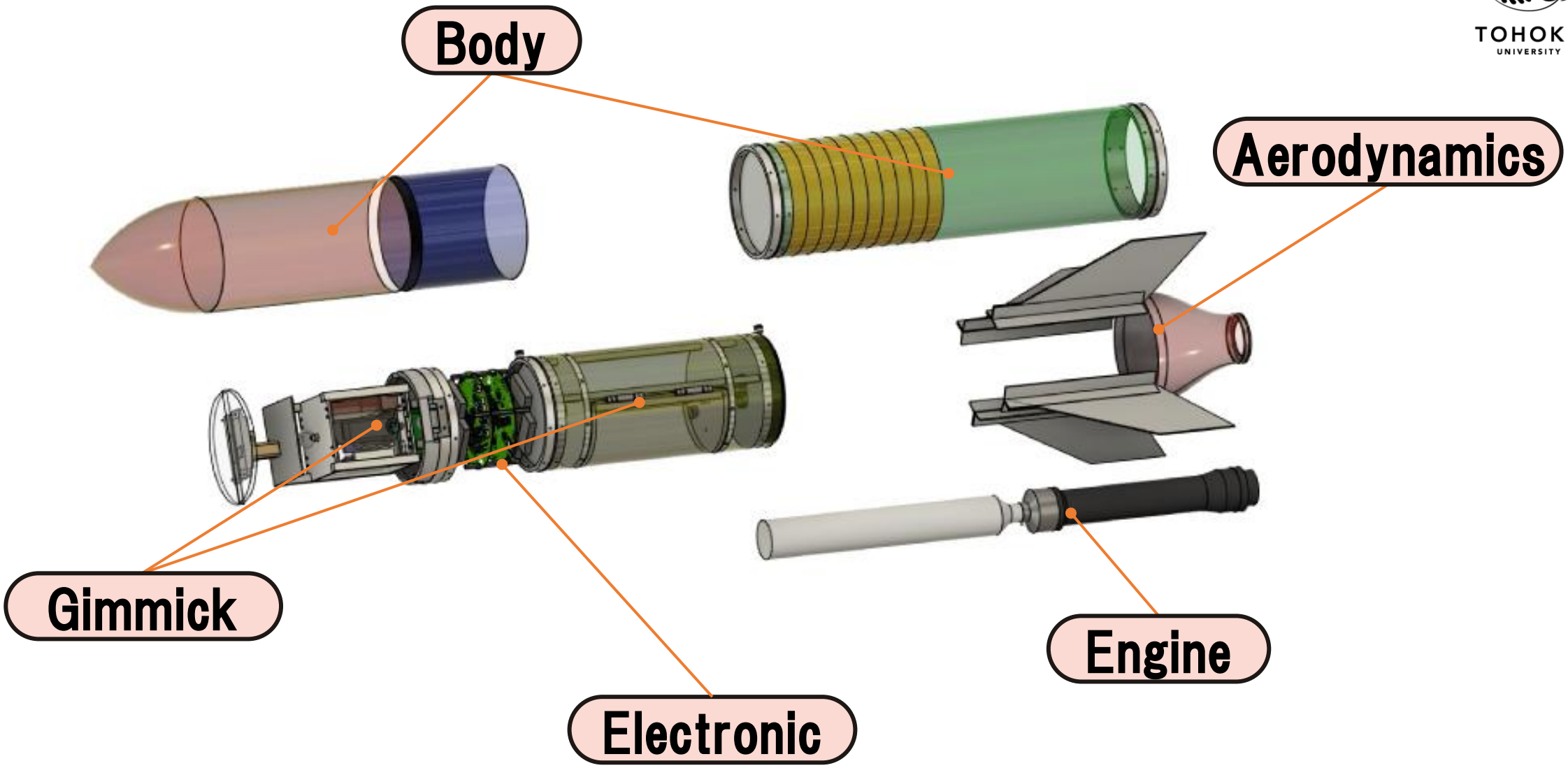
■Acrylic, ABS

Liquid Oxidant

■N2O

■Safe ◎

■Easy for control ◎


Body
Aerodynamics
Gimmick
Electronic
Engine

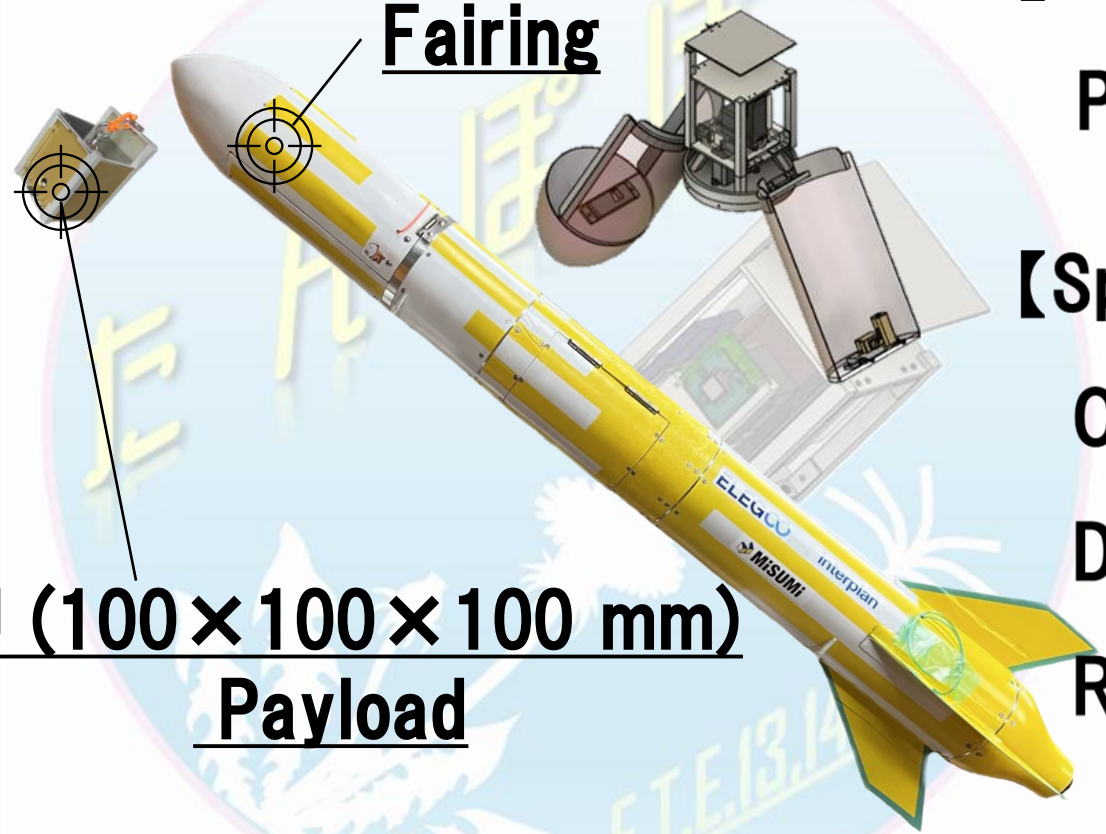
Productions

たんぽぽ (Tanpopo)

火垂 (Hotaru)

みかん (Mikan)

たんぽぽ（Tanpopo）



【Mission】

Payload release by opening fairing

【Spec】

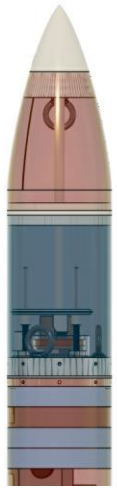
Overall length: 1496[mm]

Dry weight: 6.482[kg] (including 1 kg payload)

Reaching altitude: 297[m]

火垂 (Hotaru)

Upper and lower separation



【Mission】

Development and demonstration of a new mechanism for upper and lower separation

【Spec】

Overall length: 1196[mm]

Dry weight: 4.535[kg]

Reaching altitude: 412[m]

みかん (Mikan)

【Mission】

Technology Demonstration for

Next Generation Sea Launching Aircraft

【Spec】

Overall length: 1671[mm]

Dry weight: 4.917[kg]

Reaching altitude: 884[m]

Dev Engine

Pursuit of further safety and high thrust

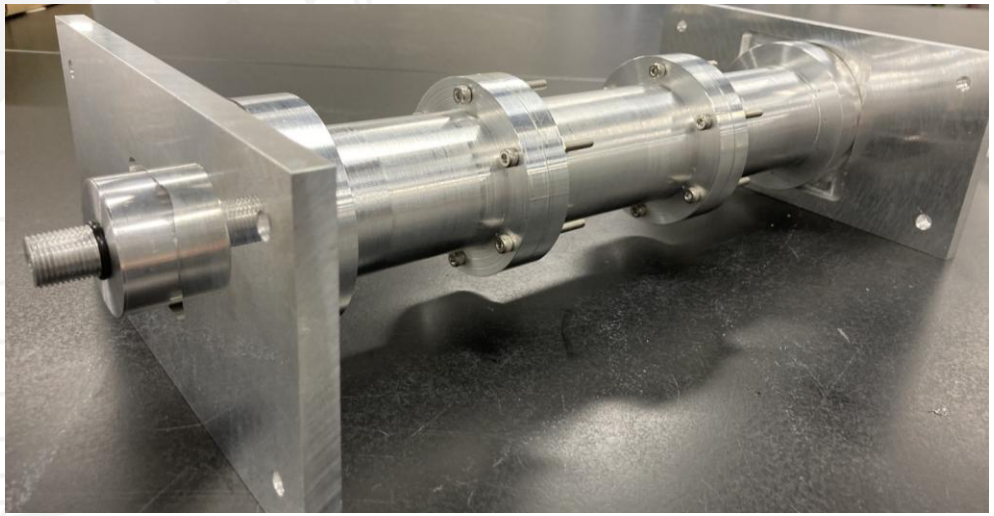
Development of engines

Purchase of off-the-shelf products

Lack of safety and flexibility

Freedom of thrust

Certainty of safety evaluation



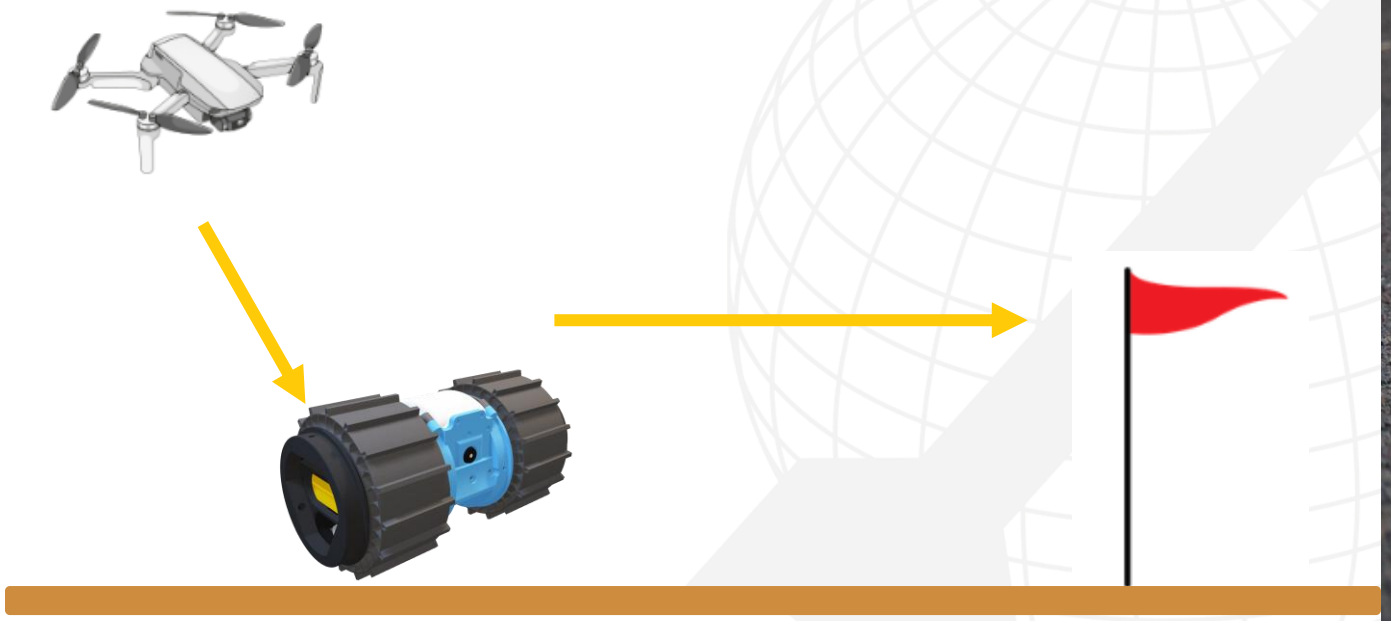
Development of the second engine

Flow of Use Test

1. Flow rate test
2. Pressure test
3. Combustion experiments
4. Equipped with actual equipment

CanSat

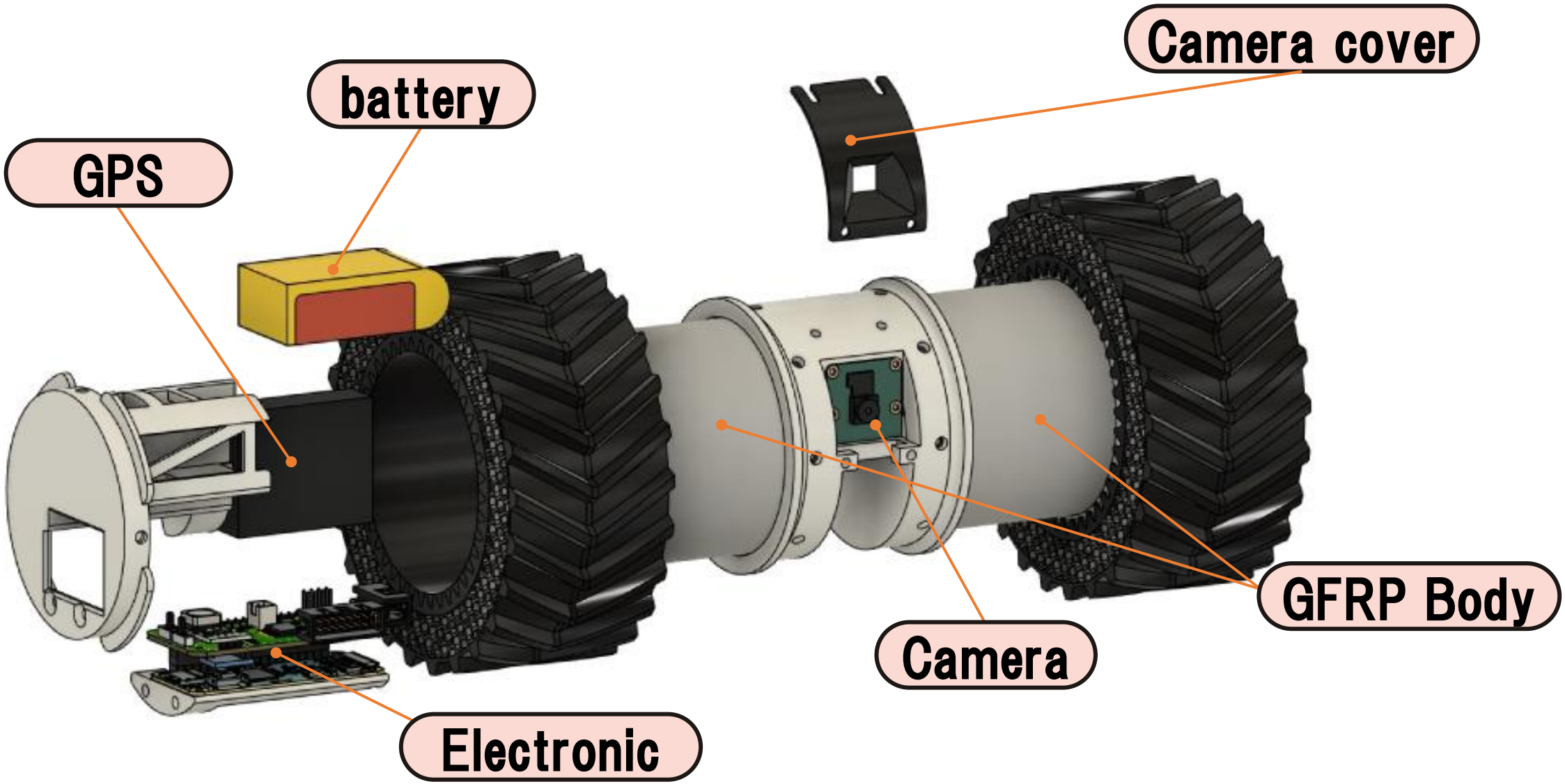
CanSat



Product example

Fist

Participated in the Noshiro Space event.


Camera cover
battery
GPS
GFRP Body
Camera
Electronic

Volunteer

Volunteer

Elementary school

- PET Bottle Rocket
- Umbrella bag rocket

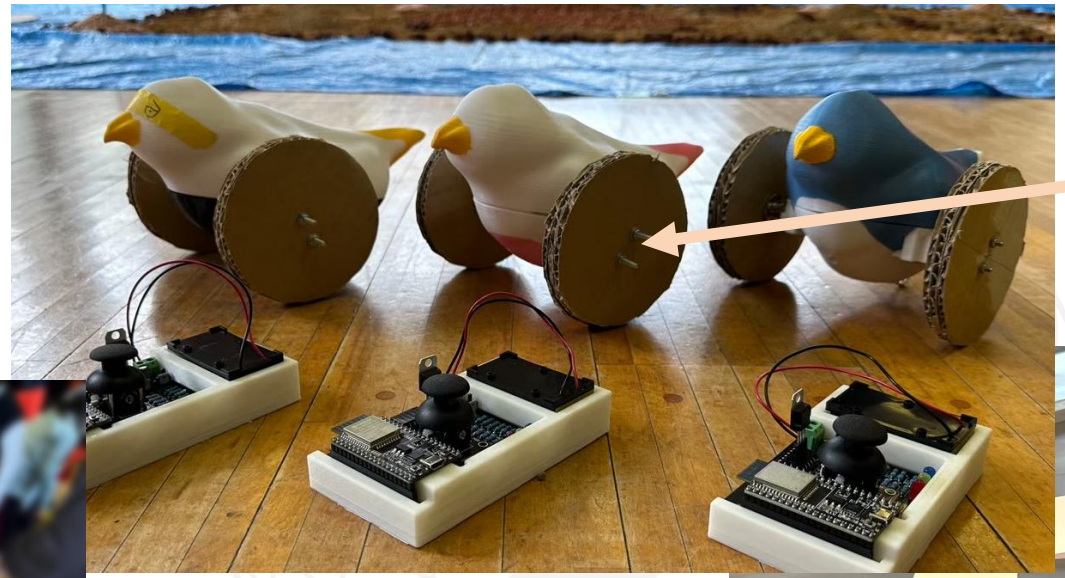
Volunteer

Junior highschool
Highschool

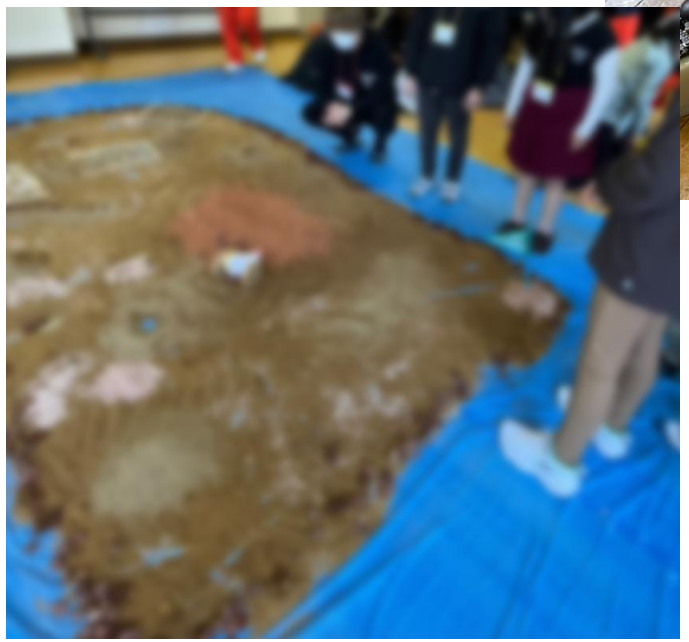
- Model Rocket
- Lecture on career paths

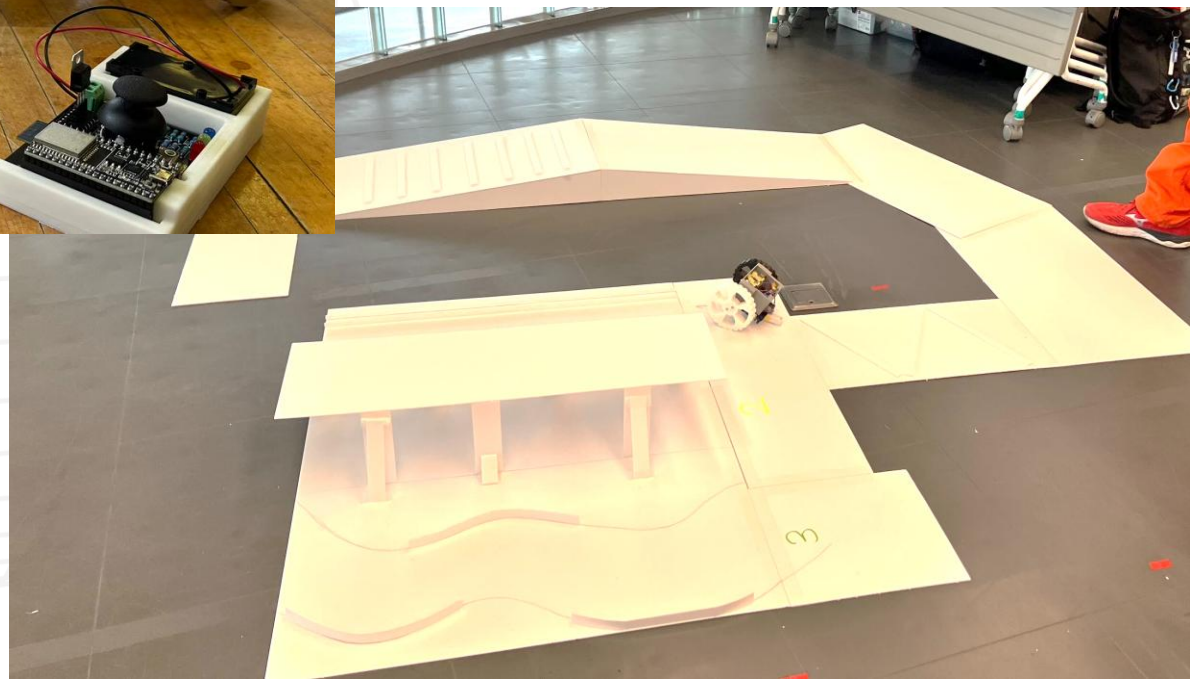
Volunteer

CanSat



By devising tires
Improved running performance!





Awards

- Two Corporate Awards (Noshiro Space Event)
  - Award for the most effective use of CAD and sophisticated design flow
  - Award for detailed analysis of rocket launch behavior based on slow motion video

- Management Award (Noshiro Space Event)
  - Award given to organizations that have worked hard to organize the event.

Awards

- **Extracurricular Activity Encouragement Award**
  - Awards given to organizations that have contributed to Tohoku University and the local community.

- **Science Day Awards**

  (Miyagi Industrial Technology Center Director's Award・Governor of Miyagi Prefecture Award)

  - Award given to organizations that hold outstanding science classes at an event called Science Day.

Thanks

Example

Pressure gauge is used for combustion experiments.

Prepreg is used for making rocket body.

Thank you for supporting us!