33rd Annual INCOSE international symposium

hybrid event

Honolulu HI USA

Children's after school club on Systems Thinking and Sustainability

Adriana D'Souza , Airbus

Who we are

Airbus is a global aerospace pioneer, operating in the commercial aircraft, helicopter, defence and space sectors.
It has built on its strong European heritage to become truly international.

180
Locations worldwide

134,000
Employees

€59 bn
2022 revenues

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Our purpose

We pioneer sustainable aerospace for a safe and united world

Leading the journey towards clean aerospace

Helping customers defend their values

Connecting and uniting people across the globe

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AIRBUS

Helping customers defend their values

Safeguarding airspace, citizens and vital assets

Responding to humanitarian emergencies

Enabling search and rescue operations

Providing secure communication systems

Providing cyber security

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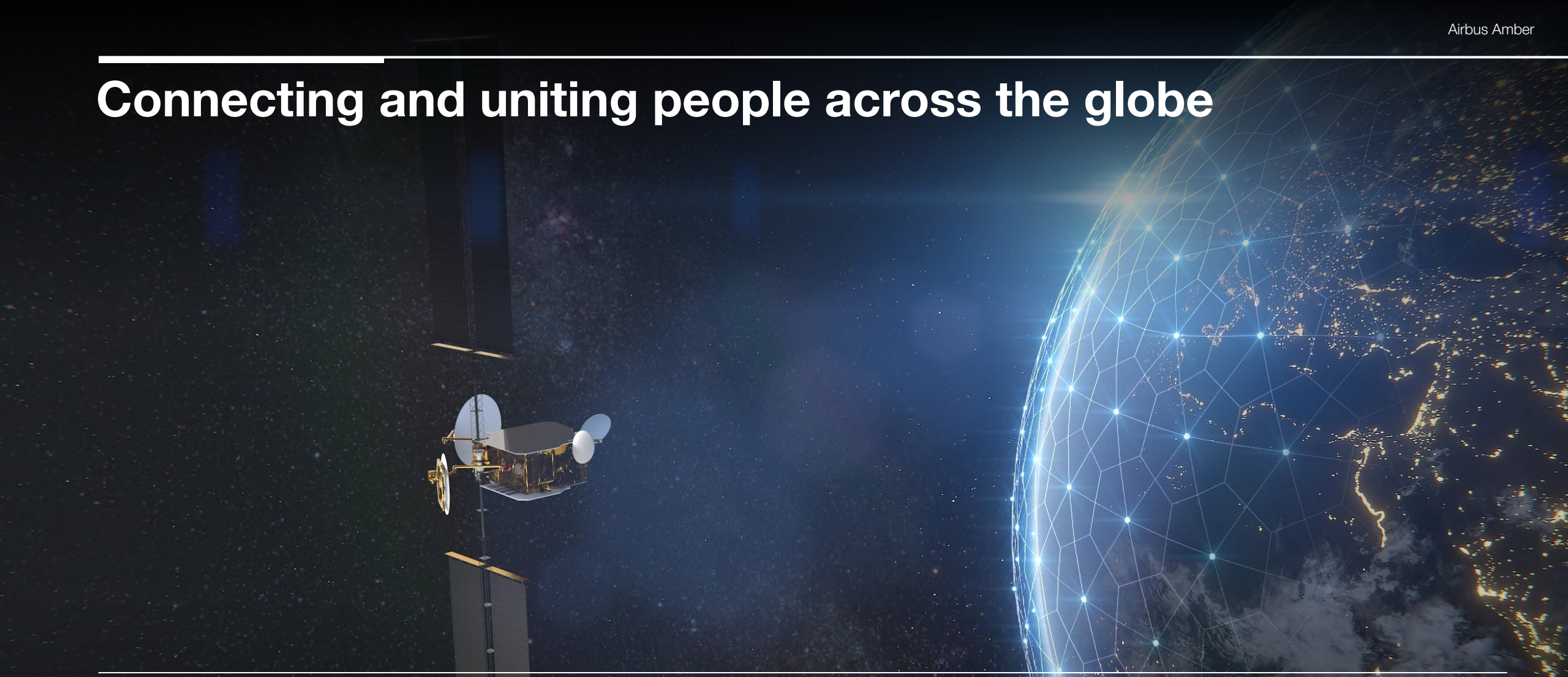
AIRBUS

Connecting and uniting people across the globe



Providing fixed and rotary wing aircraft serving destinations worldwide

Linking the globe through digital connectivity solutions

Enabling satellite navigation for land, maritime and air transport

Helping to coordinate relief efforts with satellite data

Developing new urban air mobility solutions

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The STEM Ambassador Programme

STEM AMBASSADORS Volunteer

- STEM Ambassadors are volunteers from a wide range of STEM roles from across the UK, who give their time & enthusiasm to support schools & youth groups.

- Volunteers are supported by a network of local STEM Ambassador Hubs who offer training & guidance for STEM Ambassadors, as well as facilitate requests for STEM & careers support from schools & youth groups.

- STEM Ambassadors **inspire young people** by helping to bring the STEM subjects to life, demonstrating the real life applications of the STEM taught in schools, and careers pathways into STEM.

The STEM Ambassador Programme is funded by UK Research and Innovation

https://www.stem.org.uk/stem-ambassadors

Children's after school club

Proposed the club on Systems Thinking and Sustainability at my daughter's school in 2022 and was accepted for summer term

Systems Thinking and Sustainability

Curriculum

Developed by me reviewed by the teacher and improved based on previous session

Timing

After school for 30 min (15:35-16:05)

How many?

10 children

Process

Club was listed along all other clubs and parents could choose it

Systems Thinking

… is a holistic approach to analysis that focuses on the way that a system's constituent parts interrelate and how systems work over time and within the context of larger systems.

… approach contrasts with traditional analysis, which studies systems by breaking them down into their separate elements.

Sustainability

Sessions

1 → 2 → 3 → 4 → 5 → 6 → 7 → 8

1 Intro into ST and Sustainability

2 ST Round Table
Sustainability topic around the school = where can we improve?

Lower The Stick Challenge!

3 Big Picture and Meaningful Connections Cards and drawing

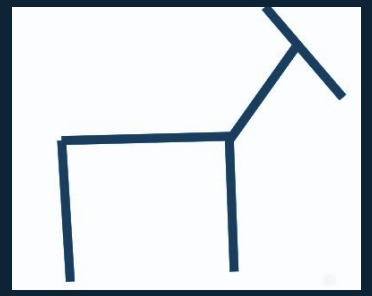
4 ST Round Table
"Thinking about the bigger picture - what influences sustainability at the school"

Invisible Gorilla experiment!

5 Big Picture Actions

6 ST Round Table
"Thinking about the actions that we need to take, how will they positively impact the school and school life?"

7 Action Plan



Buck the horse change direction!

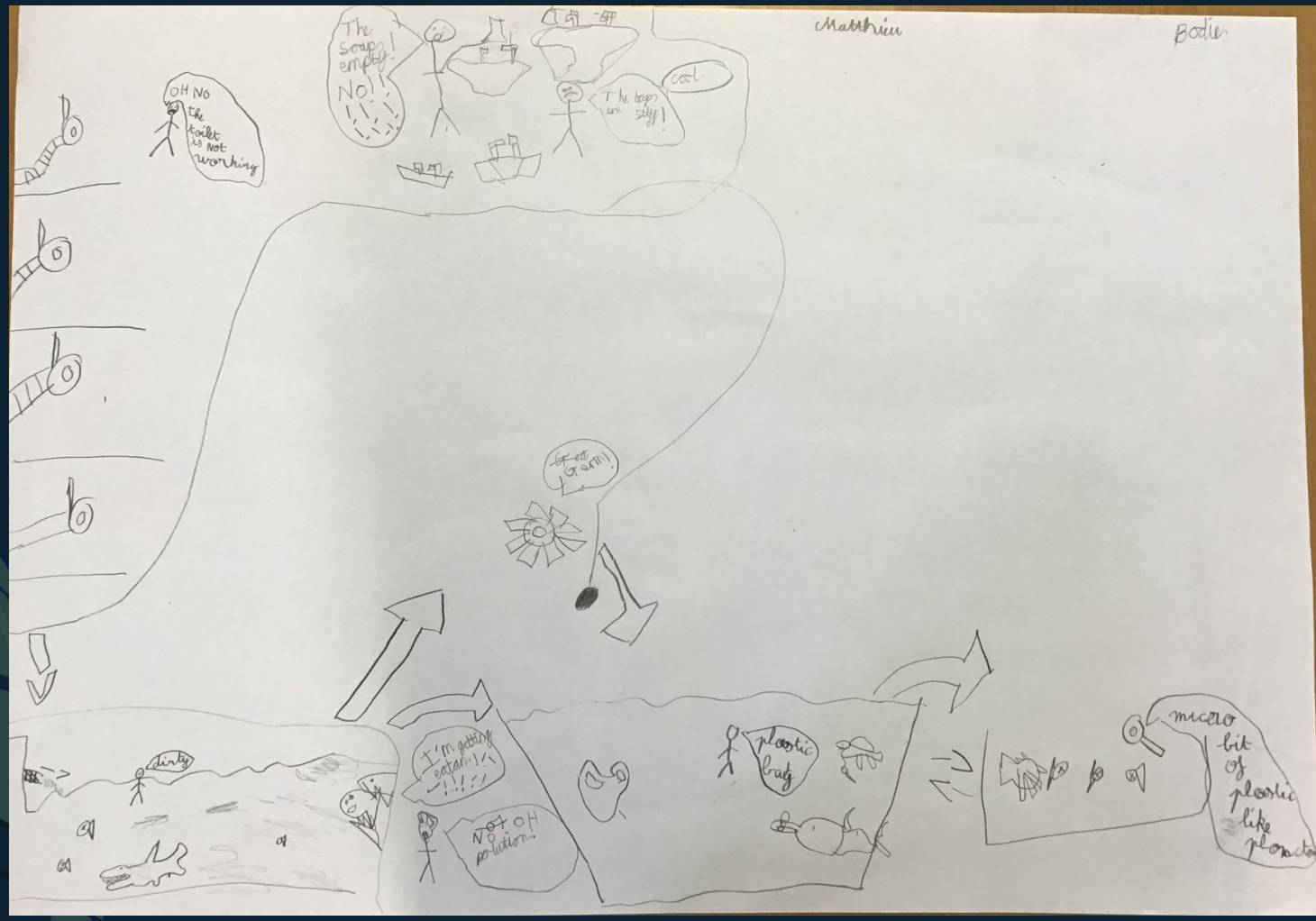
8 Finalize and Feedback

Results

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

Improve school facilities

Improve early birds building / Improve playground equipment/ Bigger swimming pool/ All toilets not working/ Reloading soap in toilet not often enough/ Have less stiff taps/Some taps not working / Electric busses

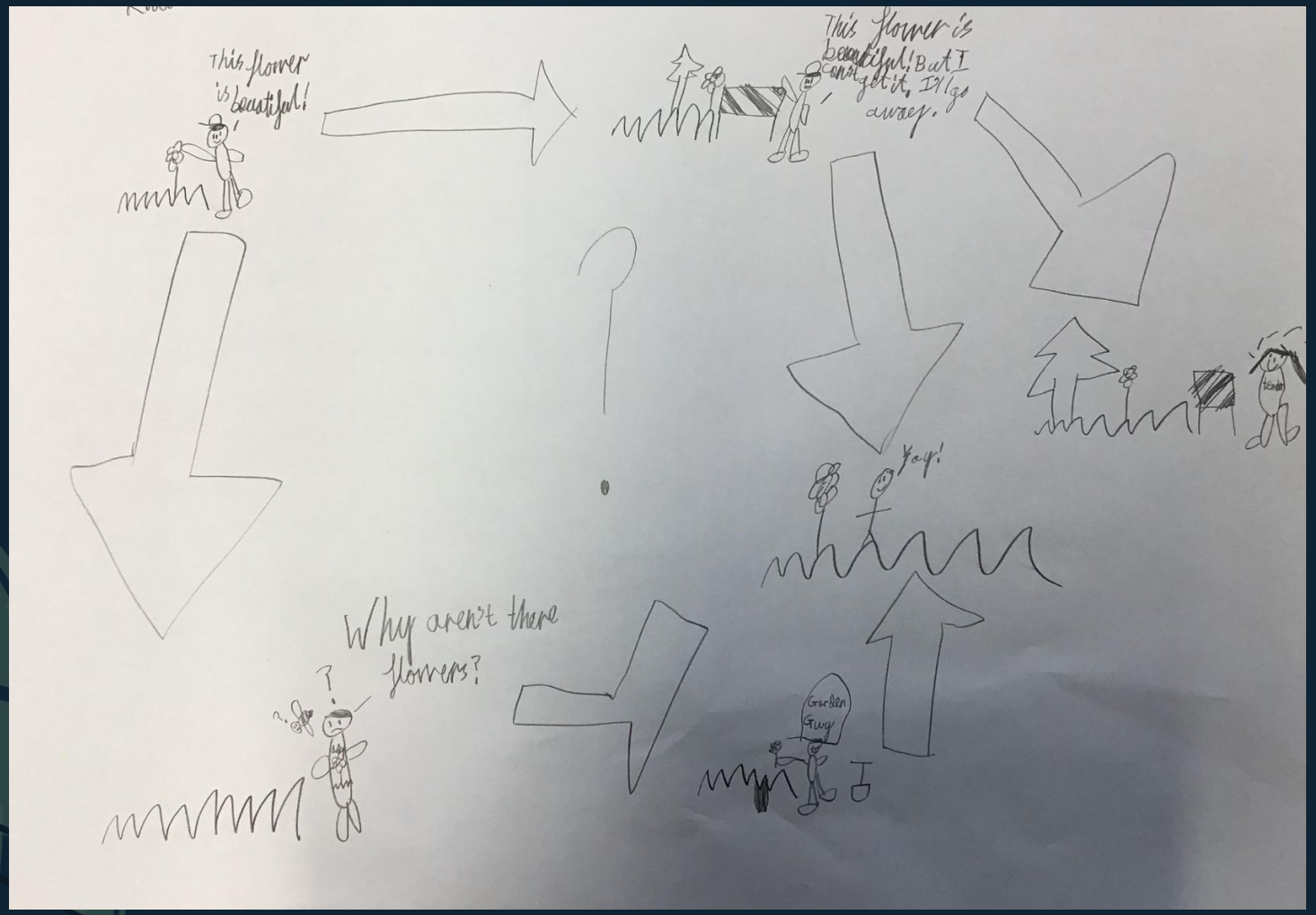


Results

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Improve school practice and policy

Use of less paper / Drinking more water / No picking on Nature

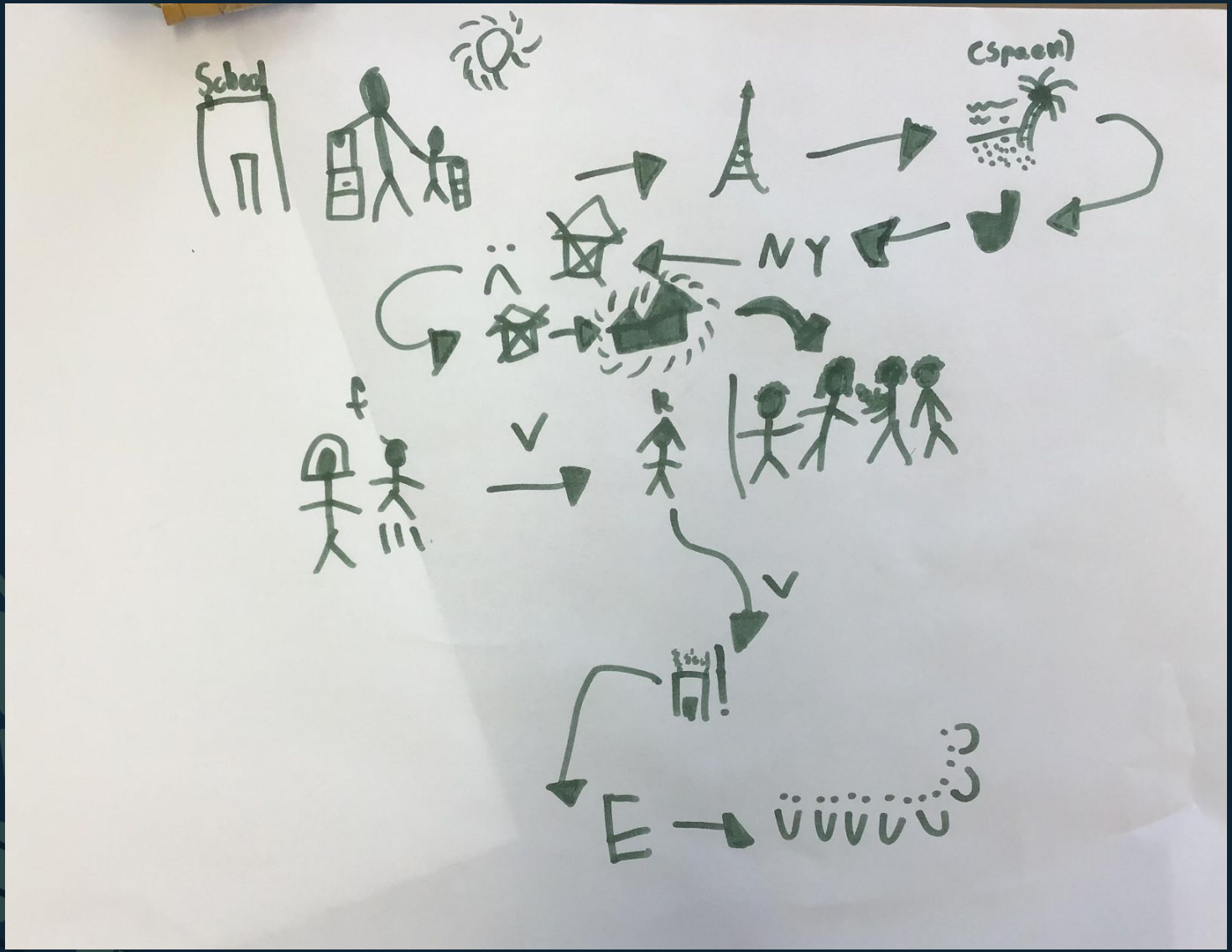


Results

10 REDUCED INEQUALITIES

Connection with school even after leaving it

Leaving School

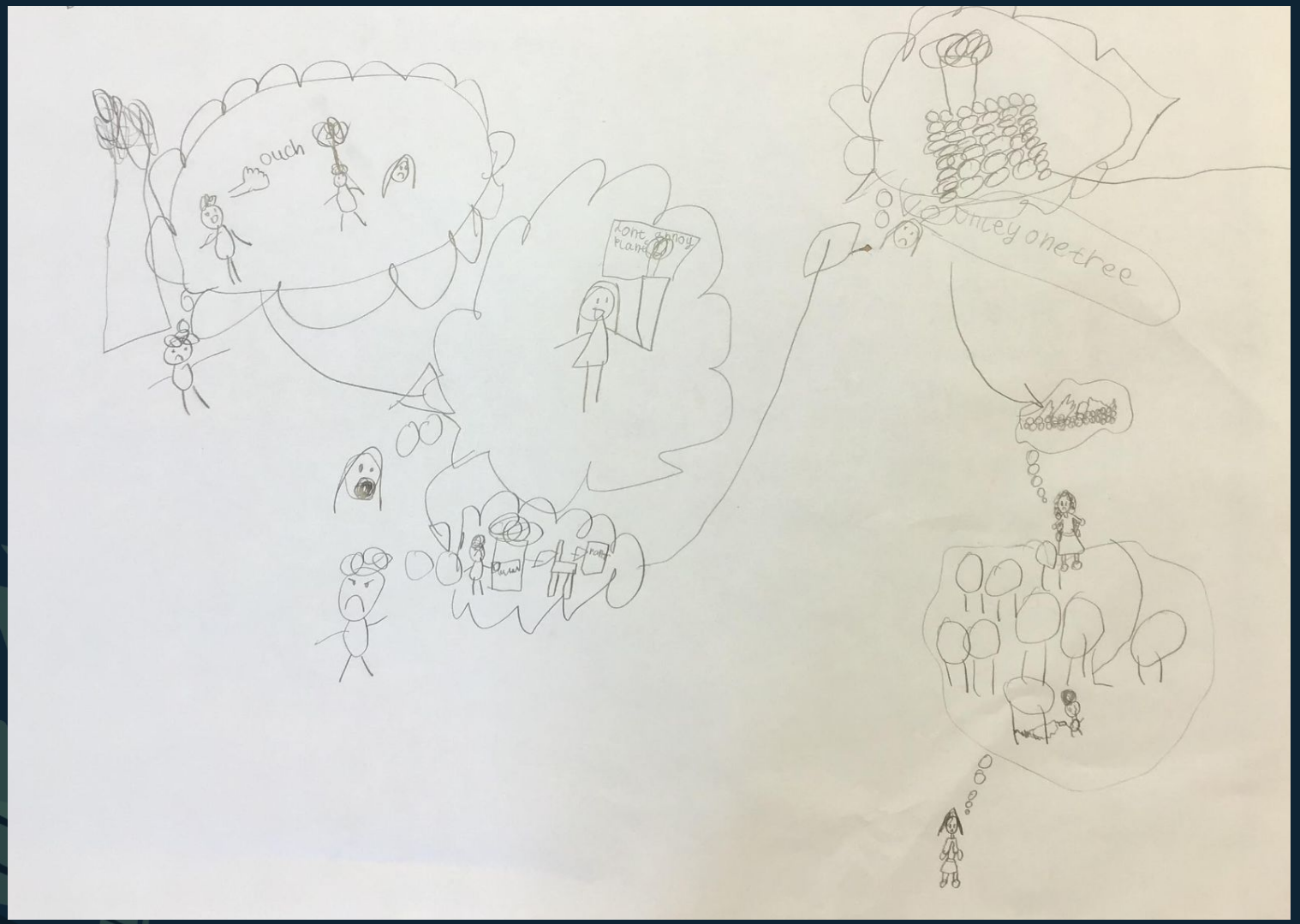


Results

15 LIFE ON LAND

Protect and enhance nature in and around school

Have more trees in the school / Not picking on Nature / Stop picking plants/ not annoy them

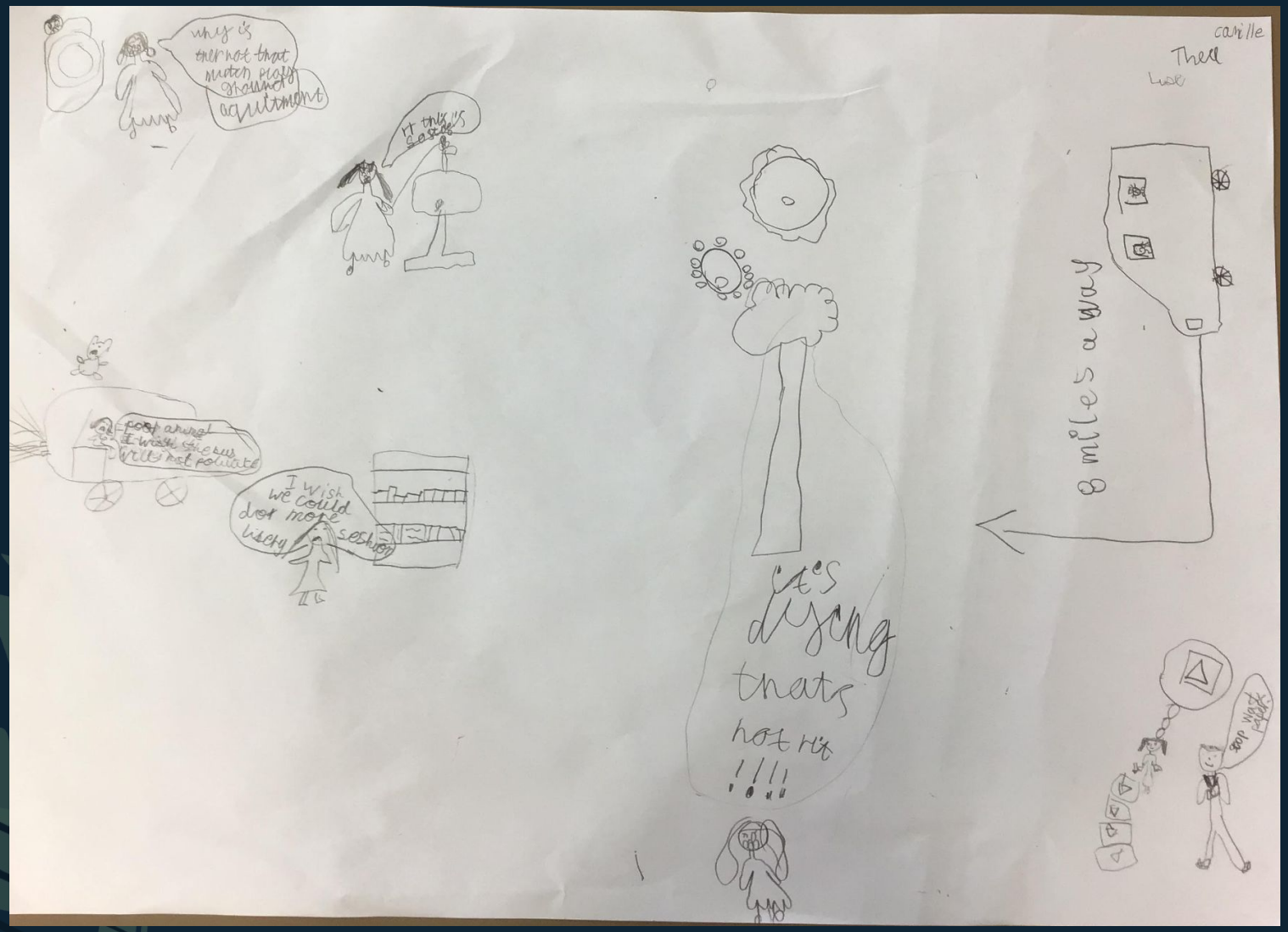


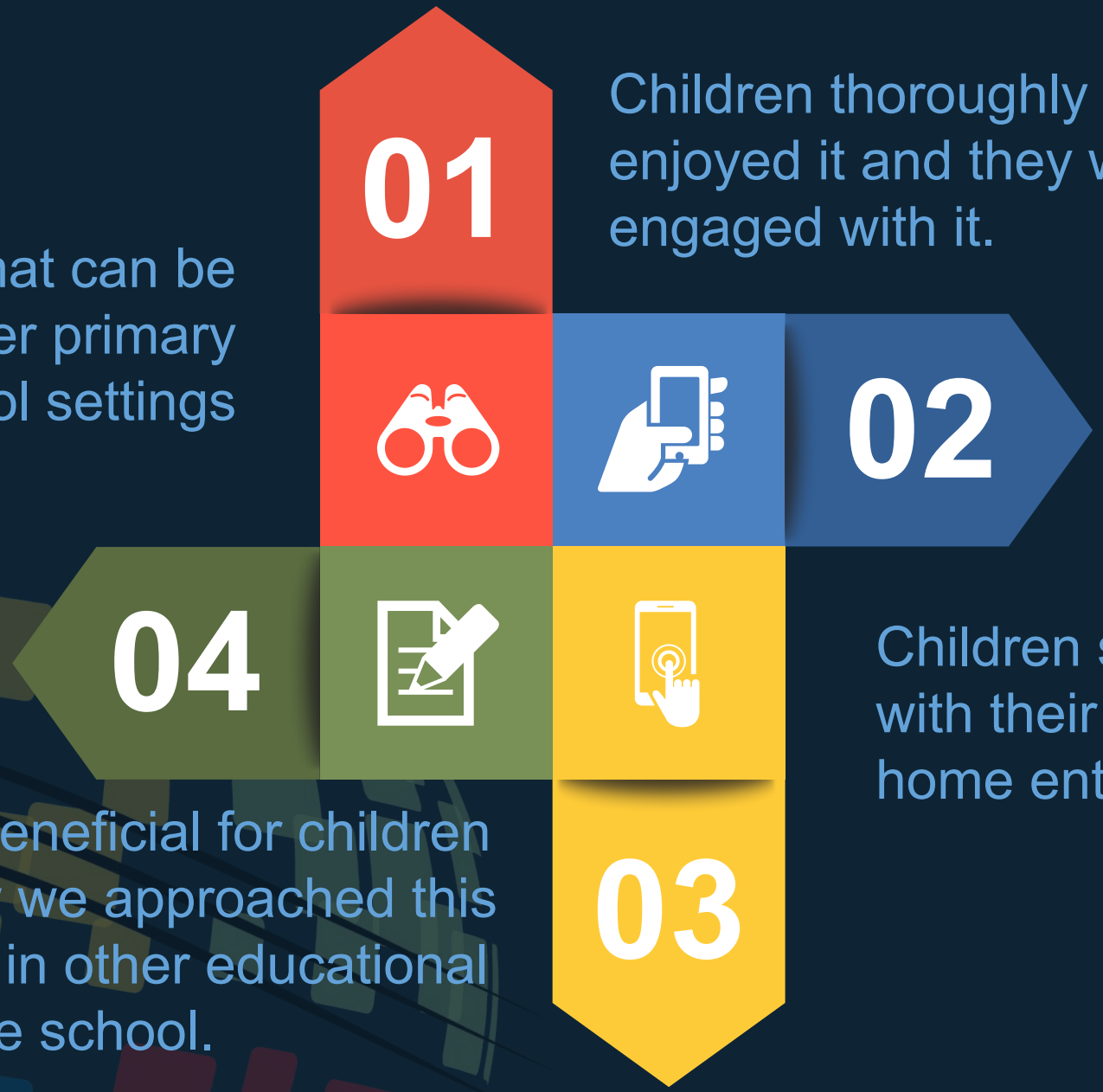
Results

4 QUALITY EDUCATION

Enhanced learning opportunities

Improve playground equipment / Improve early birds building / Have Adventure closer to school (bus ride quite long) / More art / Library only on Friday and sometimes missing it- more Library sessions





Children thoroughly enjoyed it and they were engaged with it.

author - format can be used in other primary school settings

Children shared learning with their parents at home enthusiastically.

teacher - beneficial for children to see how we approached this and useful in other educational areas in the school.

Thank You
Q&A

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www.incose.org/symp2023
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