

Planet Protectors' Lesson Toolkit



In partnership with



Welcome to the Planet Protectors' Lesson Toolkit!

Every April, people around the world come together to take action for our planet, raising awareness of climate change, biodiversity loss, and sustainability. But we know that protecting our planet isn't just a one-month effort—it's something we can work on all year round.

That's why we've created the Planet Protectors Toolkit, a resource designed to help educators build the skills and competencies young people need to take action for nature, biodiversity, and climate, not just during Earth Month, but at any time of the year.



What to expect in this toolkit:

- A brief introduction to the toolkit
- An overview of the sustainability competencies
- 6 lesson plans, ppts, bite-sized activities and discussion questions to help you develop SDG skills/sustainability competencies within your students (you can pick and choose what activities work for you)
- Take a look at the categories below!

Data Explorer
Nature Guardian
Waste Warrior
Eco-Inventor
Visionary Artist



What are the Sustainability Competencies?

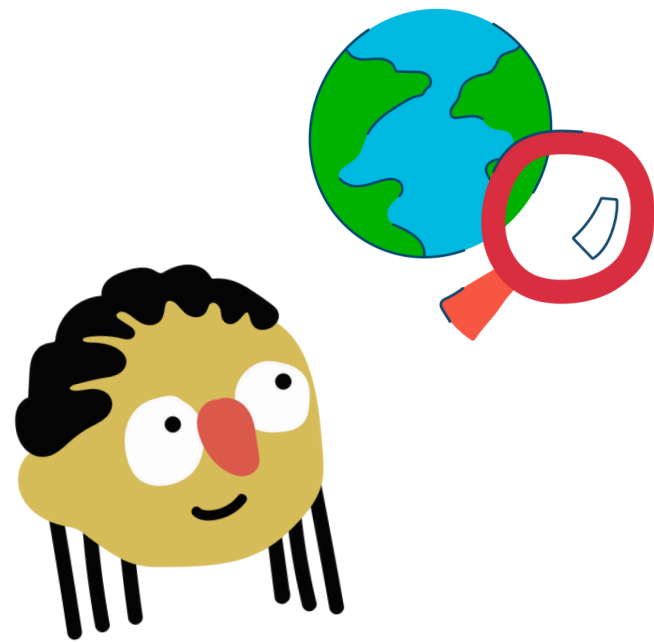
In 2023, The World's Largest Lesson created a report, ["Ready, Willing and Able? Accelerating the development of sustainability competencies through learning,"](#) which identified the skills and competencies youth need to make an impact. You will see them referred to as SDG skills in this toolkit and throughout our resources.

UNESCO defines competencies as the skills needed to navigate action and self-organisation in various complex contexts and situations.

In a world where young people wish to create change rather than simply advocate for it, sustainability competencies can act as a self-assessment or guiding tool. These tools help assess personal growth, highlight strengths, and identify areas for improvement.

DATA EXPLORERS:

SDG SKILLS: HARNESSING DATA, CRITICAL THINKING



SDG Skills Covered

Harnessing Data

- To identify and collect data. To clean, store, analyse and visualise large data sets for project monitoring, evaluation and decision making.

Critical Thinking

- To identify and explain how values vary among people and over time, while critically evaluating how they align with sustainability values.
- To be open to challenging your own personal role in sustainability.
- To reflect on personal values and how they play a role in our own impact on sustainability.

Bite-Sized Activity (15-30 minutes)

- Data Detective Challenge: students observe and collect data on an environmental issue in their school/community (e.g., plastic waste, energy use, or plant and trees)
- Students create a simple data visualisation (tally chart, bar graph, or infographic)
- Students suggest one action based on their findings

Sample Discussion Questions (15-30 minutes)

- What is data?
- Why do we collect data?
- Where do we see data in everyday life?
- How could numbers and patterns help us identify problems like pollution, climate change, or endangered species?
- How can data lead to action?

Introduction to Partner Activities:

[Data Explorers on Minecraft Education](#) (45 mins, ages: 11-14)

[Data Explorers Unplugged Edition](#) (45 mins, ages 11-14)

Slides for Your Students

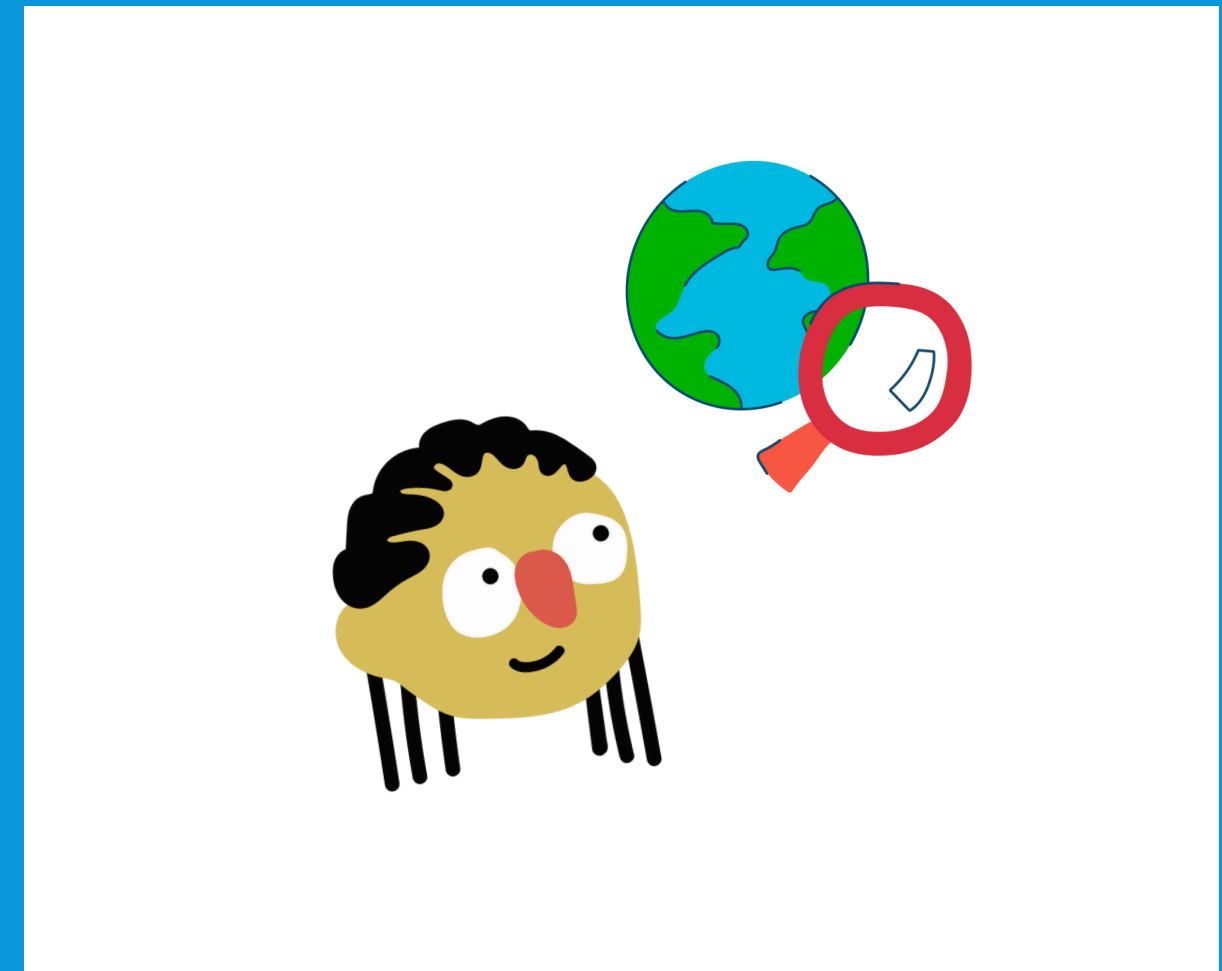
1. Bite-sized activity
2. Discussion questions



ACTIVITY TIME!

Data Detective Challenge:

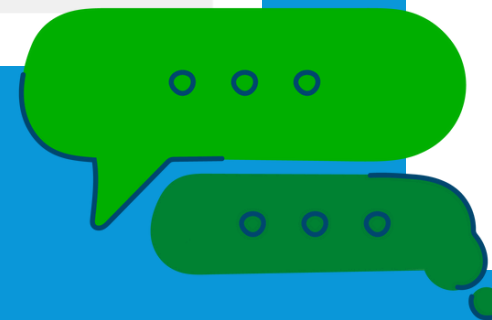
- *Observe and collect data on an environmental issue in our school/community (e.g., plastic waste, energy use, or plants and trees).*
- *Create a simple data visualisation (tally chart, bar graph, or infographic)*
- *Suggest one action based on your findings.*



LET'S CHAT!



- What is data?
- Why do we collect data?
- Where do we see data in everyday life?
- How could numbers and patterns help us identify problems like pollution, climate change, or endangered species?
- How can data lead to action? How can it help us find solutions?



NATURE GUARDIANS:

UNDERSTANDING PLANETARY BOUNDARIES, INDIVIDUAL ACTION, COLLECTIVE ACTION



SDG Skills Covered

Understanding Planetary Boundaries

- To understand how the nine earth life support systems (planetary boundaries) interconnect and intersect with each other.
- To understand how human activity impacts earth's life support system.
- To use the planetary boundaries as a guiding principle in developing sustainability solutions.

Collective Action

- To act for change in collaboration with others.
- To effectively communicate with others, using storytelling to showcase impact.
- To have compassion and empathy for others.
- To act effectively alongside people and communities that are different from oneself.

Individual Action

- To change lifestyle or behaviour in order to improve prospects for people and the planet.
- To have resilience and a growth mindset.
- To nurture mental and physical health for personal well-being.

Bite-Sized Activity (15-30 minutes)

- Get students to stand in a circle.
- Name a planetary boundary (e.g., climate change, biodiversity loss) and toss a ball to a student. The student should say one action to protect nature (e.g. Use less plastic) and passes the ball.
 - Round 1: Individual actions (e.g. Walk to school)
 - Round 2: Collective actions (e.g. Our school plants trees).
 - Wrap-Up: Discuss how small actions add up and why teamwork matters for protecting our planet

Sample Discussion Questions (15-30 minutes)

- Can you think of any human activity affecting planetary boundaries?
- Why is teamwork or collective action needed to save our planet?
- How can you make a difference as an individual?

Introduction to Partner Activities:

Climate Change Dodgeball (60-90 minutes, ages: 9-11)

Slides for Your Students

1. Introduction to planetary boundaries
2. Bite-sized activity
3. Discussion questions



INTRODUCTION



What are planetary boundaries?

- Limits set by scientists to show how much pressure can be put on the Earth without causing serious harm.
- Staying within these limits helps keep the planet safe and liveable for everyone.

9 Categories of the planetary boundaries

Climate change

CO₂ concentration, energy balance between Earth and space

Atmospheric aerosol loading

The amount of air pollutants

Stratospheric ozone depletion

Stratospheric ozone concentration

Ocean acidification

Carbonate ion concentration in the ocean

Freshwater change

Amount of water available for human and plants

Land use change

Size of forest area

Biosphere integrity

Percentage of functional diversity, speed of extinction

Biogeochemical flows

Outflow of nitrogen and phosphorus in synthesized fertilizers

Novel entities

Includes pollution caused by compounds such as plastics

ACTIVITY TIME



*Let's explore planetary boundaries +
actions we can take to protect nature!*



*Round 1: Individual actions.
Round 2: Collective actions*

LET'S CHAT!



- Can you think of any human activity affecting planetary boundaries?
- Why is teamwork or collective action needed to save our planet?
- How can you make a difference as an individual?

WASTE WARRIOR:

CONNECTION TO NATURE, INDIVIDUAL ACTION, COLLECTIVE ACTION



SDG Skills Covered

Connection to Nature

- To understand and feel that humans are part of nature.
- To respect the needs and rights of other species and of nature itself in order to restore and regenerate healthy and resilient ecosystems.

Collective Action

- To act for change in collaboration with others.
- To effectively communicate with others, using storytelling to showcase impact.
- To have compassion and empathy for others.
- To act effectively alongside people and communities that are different from oneself.

Individual Action

- To change lifestyle or behaviour in order to improve prospects for people and the planet.
- To have resilience and a growth mindset.
- To nurture mental and physical health for personal well-being.

Bite-Sized Activity (15-30 minutes)

- Go on a waste-hunt around the classroom or home — what looks wasteful?
- Share findings in small groups. Spot any patterns?
- Pick one item and come up with a way to reduce or avoid that waste.
- Draw or write one action you'll take to waste less.
- Wrap up by discussing how small actions add up to big change.

Sample Discussion Questions (15-30 minutes)

- How does waste affect our planet, and why is it important to reduce it?
- What are some simple ways we can reduce waste in our daily lives?
- How could we work together help reduce waste in our community or school?

Introduction to Partner Activities:

Food Heroes! (45-60 minutes, ages 8-14)

Slides for Your Students

1. Bite-sized activity
2. Discussion questions



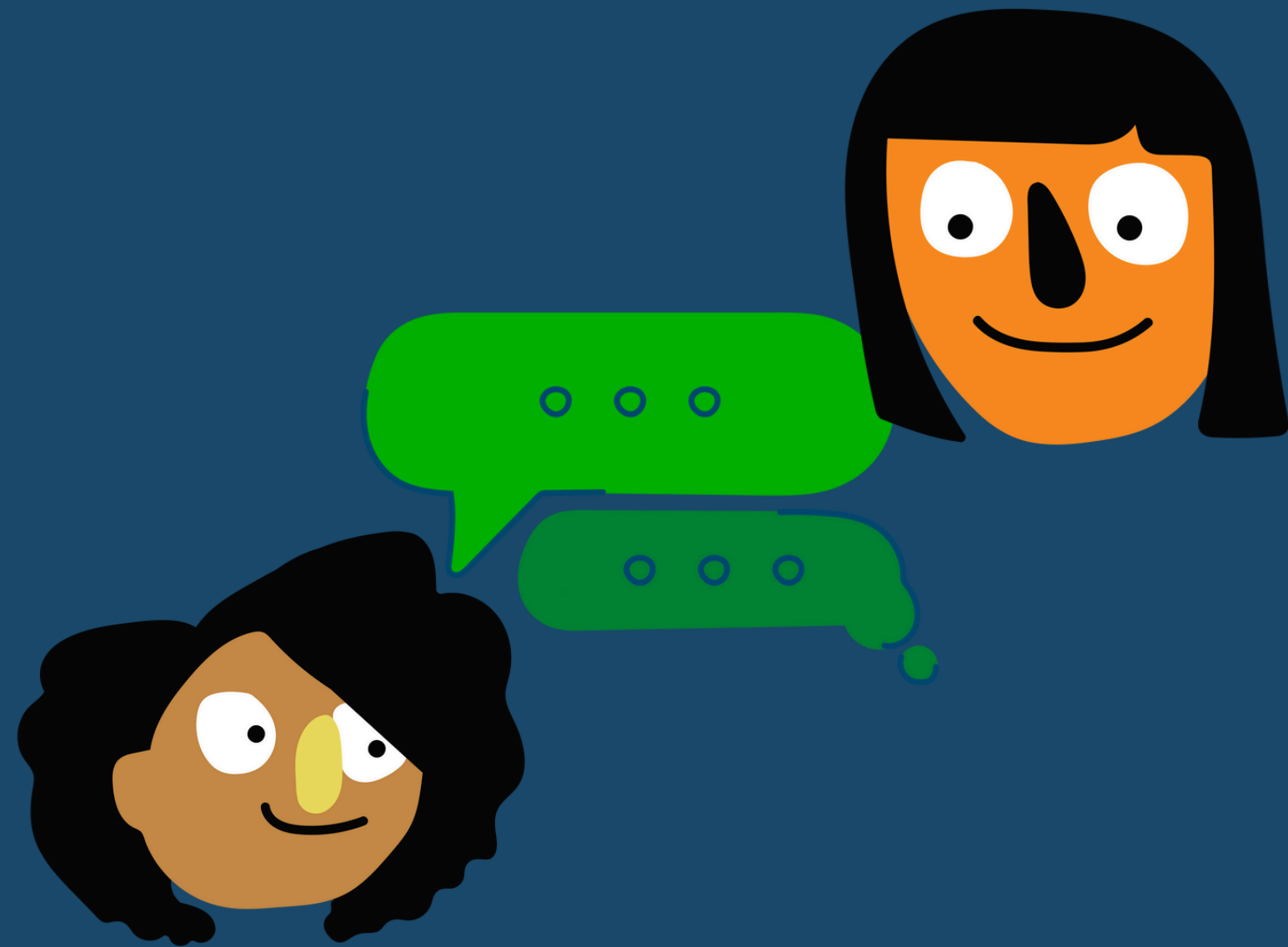
ACTIVITY TIME

Time for a waste hunt!

- Take a look around! What looks wasteful?
- Share findings in groups
- Pick one item and come up with a way to reduce or avoid that waste.
- What's one action you'll take to waste less?



LET'S CHAT!



- How does waste affect our planet, and why is it important to reduce it?
- What are some simple ways we can reduce waste in our daily lives?
- How could we work together help reduce waste in our community or school?

ECO INVENTOR

VALUING SUSTAINABILITY, CIRCULAR DESIGN THINKING, EXPLORATORY THINKING



SDG Skills Covered

Valuing Sustainability

- To reflect on personal values and how they play a role in our own impact on sustainability.
- To identify and explain how values vary among people and over time, while critically evaluating how they align with sustainability values.
- To be open to challenging your own personal role in sustainability.

Circular Design Thinking

- To act for change in collaboration with others.
- To effectively communicate with others, using storytelling to showcase impact.
- To have compassion and empathy for others.
- To act effectively alongside people and communities that are different from oneself.

Exploratory Thinking

- To approach sustainability problems from multiple angles.
- To apply creative thinking to develop new ways of doing things.
- To think holistically across different disciplines when having ideas.



Bite-Sized Activity (15-30 minutes)

- Students brainstorm in small groups to create an eco-friendly invention (e.g. Reducing waste, saving water). Don't worry about what is realistic or even possible, get creative and go wild!
- Each group presents their invention, explaining how it works and its environmental benefits.
- Discuss how design thinking can help create sustainable solutions for the planet.
- Wrap-up by encouraging students to think creatively about how they can make a difference.

Sample Discussion Questions (15-30 minutes)

- Can you name some inventions from history?
- Which inventions have helped people or the planet?
- What skills does an inventor need to help the Earth?
- How can inventions help solve problems like pollution or waste?
- Why should we think about nature when we create new things?

Introduction to Partner Activities:

- [Sustainability Hour](#) (60 minutes, ages 8-14)
- [do your :bit - Micro:bit Educational Foundation](#) (1-3 hours, ages 8-14)

Slides for Your Students

1. Bite-sized activity
2. Discussion questions



ACTIVITY TIME

*Design your own eco
invention!*



LET'S CHAT!



- Can you name some inventions from history?
- Which inventions have helped people or the planet?
- What skills does an inventor need to help the Earth?
- How can inventions help solve problems like pollution or waste?
- Why should we think about nature when we create new things?

VISIONARY ARTIST:

FUTURES LITERACY, EXPLORATORY THINKING



SDG Skills Covered

Futures Literacy

- To envision, describe and compare alternative sustainable futures.
- To identify the steps needed to get there.

Exploratory Thinking

- To approach sustainability problems from multiple angles.
- To apply creative thinking to develop new ways of doing things.
- To think holistically across different disciplines when having ideas.

Bite-Sized Activity (30 minutes)

- Students are introduced to the idea of futures literacy, where they imagine different futures for the planet.
- Encourage students to think creatively about how technology, nature, and people can work together in their future world.
- They create a visual representation (drawing, collage or digital art) of a future world they envision, focusing on sustainability.
- Each student shares their artwork, explaining the choices they made and how it promotes a positive future.
- Wrap-up by discussing how art helps us think about and shape the world of tomorrow.

Sample Discussion Questions (15-30 minutes)

- How do you imagine the world will look in 50 years?
- Why is it important to think about the future when making decisions today?
- What role does creativity play in solving global challenges like climate change?
- How can we use our imagination to create a better world for everyone?
- How can art inspire us to think about the future in new ways?

Introduction to Partner Activities:

- [Voices of Future Generations](#) (30-60 mins, 8-14)
- [A Visionary Earth Day Film Project](#) (2 lessons, 90 mins, 8-14)

Slides for Your Students

1. Intro to Collective Action
2. Bite-sized activity
3. Discussion questions



ACTIVITY TIME

Create an art piece of a future world you wish to see.

Tip: focus on sustainability!



LET'S CHAT!



- How do you imagine the world will look in 50 years?
- Why is it important to think about the future when making decisions today?
- What role does creativity play in solving global challenges like climate change?
- How can we use our imagination to create a better world for everyone?
- How can art inspire us to think about the future in new ways?

Big Thanks to Our Collaborators!



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Data Explorers

Data Skills Partner



Nature Guardian



Waste Warrior



Eco Inventor



Visionary Artist



Voices of Future Generations Children's Book Series



Check out their websites for more sustainability competencies content!

