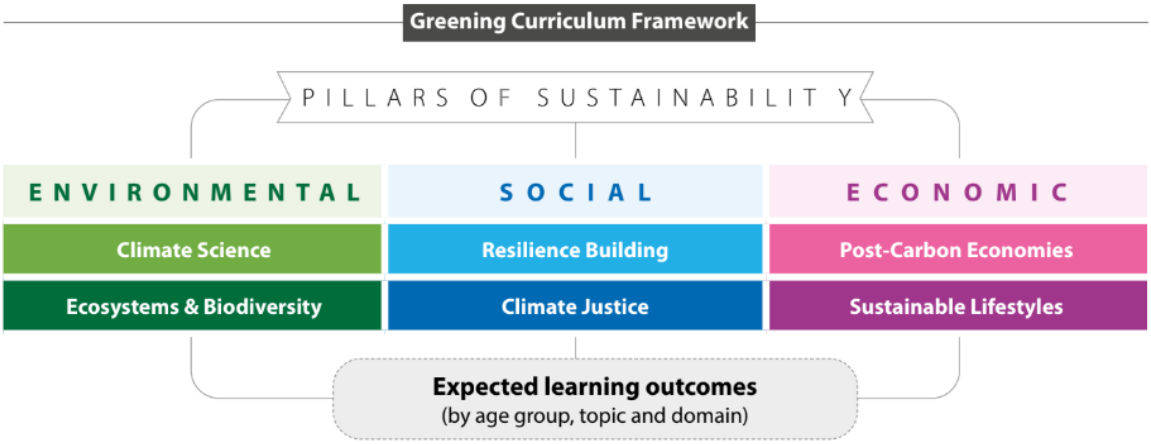
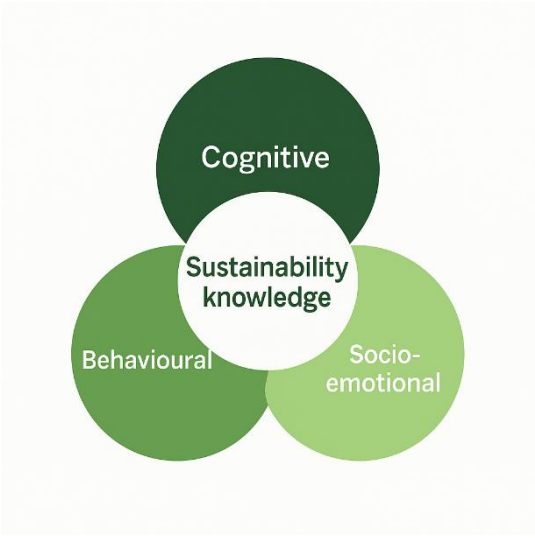
GUIDELINES FOR CREATING A LESSON PLAN

#GreeningEducation

"Healthy people on a healthy planet: Transforming food behaviours for sustainability"

This document provides teachers with guidelines on developing a lesson plan on ***Healthy People on a healthy planet: Transforming food behaviours for sustainability***. To improve your chances of winning the Lesson Plan Competition, please include as many details as possible and bear in mind that your lesson plan needs to address one of the following pillars of sustainability and teach more than just cognitive knowledge:





We thank you in advance for your participation and will do our best to share it with our network.

- Foundation for Environmental Education

1. AUTHOR DETAILS

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5. Programmes the school is participating in (Eco-Schools/LEAF/YRE/other)	Eco-Schools, YRE, Blue School
6. Submission date (dd/mm/yyyy)	20/04/2026

2. LESSON DETAILS

1. Lesson Title	Eco-Coders: Programming a Greener Future
2. Age Group	12-13 years old — 7th Grade (Year 7)
3. Time Required	2 x 50-minute lessons
4. Remote Preparation (if any)	Students may explore the UBBU platform (ubbu.io) at home, completing any available free introductory coding activities and watching a short video about the UN Sustainable Development Goals (SDGs) — particularly SDG 13 (Climate Action) and SDG 15 (Life on Land).
5. Planning Considerations	Ensure all computers/tablets have reliable internet access and UBBU accounts are set up in advance (ubbu.io — free school plan). Prepare printed SDG reference cards for each group. Have a class projector available to demonstrate UBBU's block-based coding interface. Arrange the classroom in groups of 3–4 students. Plan for a whole-school "Digital Green Fair" display of finished projects.
6. Lesson tested in the classroom	● Yes ○ No

3. THE LESSON PLAN

A. Wider Sequence of the topic - *Indicate how this lesson fits into the wider sequence of the topic. Show its connection to earlier lessons and how it prepares for the next ones.*
Example: 1. Introduction to soil types → 2. The carbon cycle → 3. Soil and agriculture (submitted lesson plan) → 4. Crops and their nutrients.

This project fits within a broader unit on Computational Thinking in Year 7 Science:

1. Introduction to computational thinking and block-based coding using UBBU → 2. Exploring the UN Sustainable Development Goals through UBBU's SDG-themed lessons → 3. Lesson 1: Researching a local environmental problem and planning a digital awareness project in UBBU (this lesson plan) → 4. Lesson 2: Building and coding an interactive sustainability awareness game or animation in UBBU → 5. Digital Green Fair: sharing finished projects with the school community and presenting solutions.

B. Objectives or Learning Outcomes for the presented Lesson Plan – *List 3-5 objectives/learning outcomes that you are expecting to achieve during the lesson.*

Students are able to + [action verb] + [object/context].

1. Objective: *Students are able to identify at least two local environmental problems and link them to specific UN Sustainable Development Goals (SDGs).*
2. Objective: *Students are able to use UBBU's block-based programming environment to create sequences, loops and events to build a simple interactive project.*
3. Objective: *Students are able to design a storyboard for a digital sustainability awareness game or animation that communicates a clear environmental message.*
4. Objective: *Students are able to code a functional interactive project in UBBU that incorporates sustainability content and at least two programming concepts (e.g. loops, conditionals, events).*
5. Objective: *Students are able to present their finished UBBU project to peers, explaining the environmental issue addressed and how their coding choices communicate their sustainability message.*

C. **LESSON OUTLINE** from the submitted lesson

This table is designed to help structure your lesson outline. As the educator, you decide how to adapt it, including the number of development phases (which includes the classroom activities) you include, and how you consolidate their outcomes. It is essential to link your numbered learning objectives to each step of the lesson, ensuring that every activity contributes directly to achieving the intended outcomes.

Lesson Phase	**Learning Objectives** *(O1, O2,O3, …)*	**Teacher Activity** *e.g. poses a question "…", arranges pupils into groups, …*	**Pupil/Student Activity** *e.g. reads an article, filters information, writes down their own definition, …*	**Method/Social Form** *Plenary discussion, Think–Pair–Share, Small group work, Guided questioning, etc.*	**Material needed** *e.g. pptx, exercise sheet, poster, plants, ingredients*	**Didactic Intention** (incl. pillars of sustainability, cross-cutting + SDG competencies) *e.g. This activity is designed to create space for reflection on fairness and justice, linking global issues to students' own lives.*
LESSON 1 — Exploring Sustainability with Code: Research, Sustainable Development Goals (SDGs) and Storyboarding (50 min)						
Introduction (8 min)	O1	Projects a world map showing areas affected by deforestation, plastic pollution and climate change. Asks: "Which of these problems exist near our school?" Briefly introduces the UN's 17 Sustainable Development Goals (SDGs) — global targets for 2030 covering climate, nature, health and equality — and explains how UBBU	Students discuss in pairs and share their ideas with the class. Each pair suggests one local environmental problem and tries to match it to an SDG.	Think–Pair–Share	Projector, world map image, printed SDG reference cards, computers/tablets with UBBU accounts	Activates prior environmental knowledge and emotional connection to local issues; generates curiosity and purpose for the coding project. Links to SDG 13 (Climate Action) and SDG 4 (Quality Education). Introduces the concept of technology as a tool for change.

		uses them as the theme for its coding lessons. Asks: "Which SDG do you think connects to our problem?"				
UBBU Exploration & SDG Mapping (10 min)	O1, O2	Demonstrates UBBU's interface on the projector, showing how to log in, navigate to an SDG-themed activity and use the block-based editor. Guides students to explore the platform freely for 5 minutes, then shows the SDG wheel and asks: "Which goal connects to our problem?"	Students log into UBBU and explore at least one SDG-themed activity. They then complete a "My Environmental Problem" card: name the problem, the SDG it links to, and who is affected.	Guided questioning / Whole class	Projector, UBBU accounts (ubbu.io), "My Environmental Problem" worksheet, SDG wheel poster	Builds digital literacy and environmental awareness simultaneously. Links SDG 4 (Quality Education), SDG 13 (Climate Action) and SDG 15 (Life on Land). UBBU's SDG content makes global challenges concrete and age-appropriate.
Development Phase 1: Project Planning & Storyboarding (20 min)	O2	Distributes the storyboard template. Guides groups to decide: What is their environmental message? Who is their audience? What will happen in their UBBU game or animation? Circulates, asking: "How will the	In groups of 3–4, students complete a 4-panel storyboard for their UBBU project: panel 1 (the environmental problem), panel 2 (why it matters / SDG link), panel 3 (what happens in the game/animation), panel 4 (the call to	Small group work / Hands-on making	Storyboard template (printed or digital), pencils/pens, SDG reference cards, computers with UBBU open for reference	Develops computational thinking (decomposition, abstraction) through design planning. Encourages values-based reasoning and creative problem-solving. Links to SDG 17 (Partnerships) through collaboration, and SDG 16 (Peace, Justice, Strong Institutions) through responsible communication.

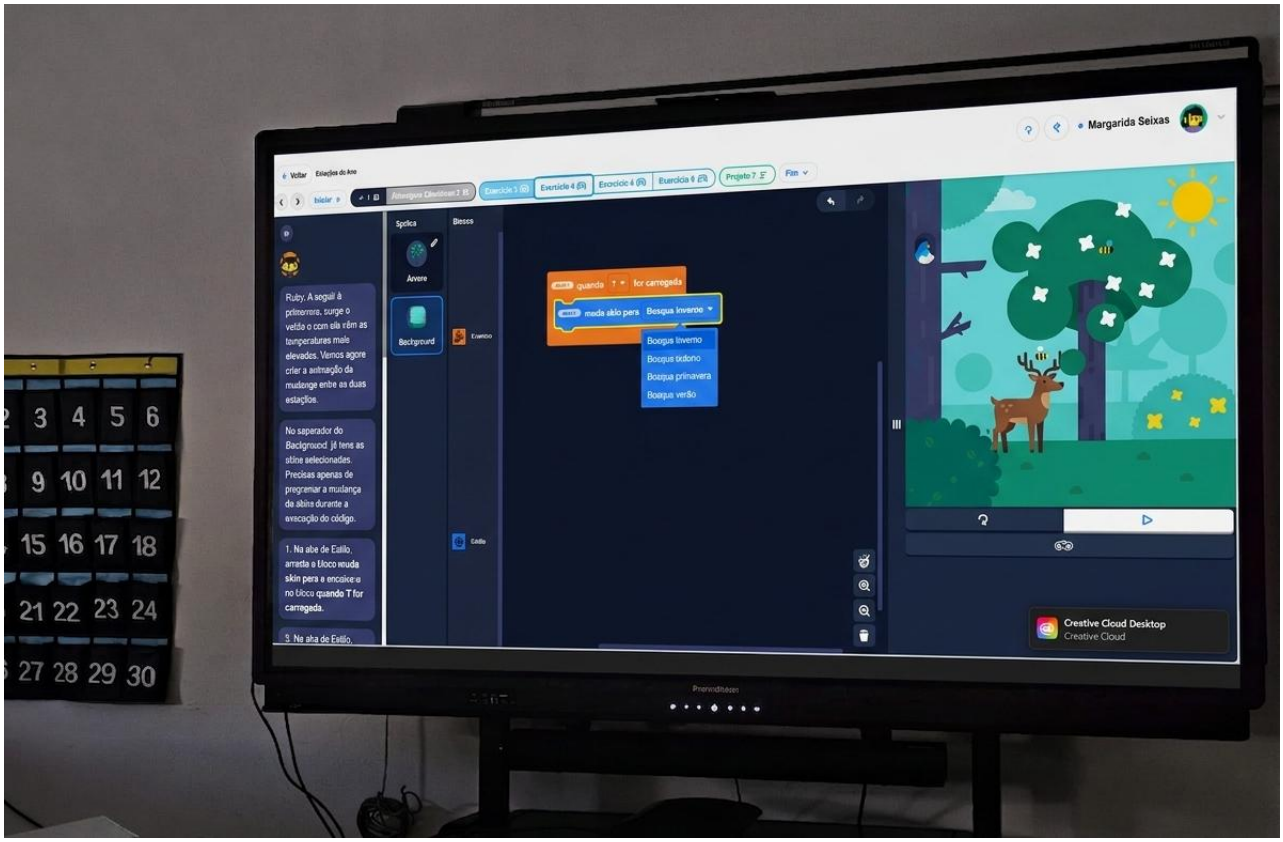
		player/viewer know what to do to help?"	action for the viewer).			
Securing Learning (Phase 1): Group Storyboard Sharing (10 min)	O1, O3	Invites each group to share their storyboard idea in 60 seconds. Gives constructive feedback using the prompt: "Your message is clear / needs to be clearer because..." Points out any UBBU features that could help bring the idea to life.	Each group presents their storyboard (60 seconds). Classmates give one piece of feedback using sticky notes: one star (something strong) and one wish (one suggestion for improvement).	Small group experiment / Inquiry-based	Completed storyboards, sticky notes (two colours), projector for sharing	Develops peer feedback and communication skills. Provides formative assessment of design thinking before students begin coding. Models constructive critique as a collaborative practice aligned with SDG 17.
Reflection & Lesson Close (5 min)	O1, O3	Returns to the world map from the introduction. Asks: "Did looking at UBBU's SDG content change how you think about the problem your group chose? How can coding help raise awareness?"	Students write a one-sentence exit ticket: "My group will use UBBU to show [environmental problem] because [reason it matters]." They hand it in as they leave.	Whole class discussion	Exit ticket slips, student notebooks, projector	Consolidates the connection between digital creativity and environmental responsibility. The exit ticket provides formative assessment data to guide Lesson 2 differentiation. Links to SDG 13 (Climate Action) competency: taking individual and collective action.
LESSON 2 — Coding a Sustainability Project in UBBU (50 min)						
Introduction (5 min)	O4	Shows two finished UBBU student projects on the projector — one game, one animation — both	Students watch the example projects and identify programming concepts used (loops, events,	Whole class / Video	Projector, two example UBBU projects (teacher-prepared), exit tickets from	Builds motivation by showing what is achievable; links creative coding to real sustainability communication. Reviewing feedback models iterative

		with sustainability themes. Asks: "What coding blocks do you think were used here? What is the message?" Returns exit tickets from Lesson 1 so groups can revisit their plan.	conditionals). They review their storyboard, incorporate any feedback from Lesson 1, and confirm their project plan before opening UBBU.		Lesson 1, storyboards	design thinking — a core computational habit of mind.
Development Phase 2: Coding the Sustainability Project in UBBU (28 min)	O4	Live-codes a brief UBBU demo on the projector: adds a background, a character, and a simple event block ("when clicked → show message"). Circulates to support groups, asking guiding questions: "What should happen first? How will you use a loop here? What does the player do to help the environment?"	Groups build their UBBU project following their storyboard: they add scenes/backgrounds, code character behaviours with at least two programming concepts (e.g. loop + event, or conditional + sequence), and include a clear sustainability message visible to the user.	Small group work / Project-based learning	Computers/tablets with UBBU accounts, storyboard for reference, UBBU block-coding reference card (teacher-prepared), projector	Integrates computational thinking (sequencing, loops, events, conditionals) with values education and environmental literacy. UBBU's project-based approach develops creativity, collaboration and problem-solving — all competencies for SDG 4 (Quality Education).
Securing Learning (Phase 2): Test, Debug & Peer Review (8 min)	O4, O5	Invites each group to play/run their project for another group. Asks: "Is the environmental message clear? Did the code do what	Groups test their partner group's UBBU project and give one piece of specific feedback. They then apply any quick fixes to their	Plenary sharing / Peer feedback	Computers with UBBU projects open, projector (optional for whole-class sharing)	Reinforces iterative thinking and debugging as core coding practices. Peer review develops evaluative thinking and communication skills. Sharing the UBBU project link

		you intended? What would you fix with more time?"	own project and ensure it is saved and shareable via the UBBU link.			prepares students for the Digital Green Fair audience.
Final Reflection & Outlook (7 min)	O5	Explains the Digital Green Fair plan: each group will share their UBBU project link on a display board and give a 90-second presentation explaining the environmental issue and how they coded their message. Invites groups to name which SDG they addressed.	Students prepare a display card for the fair (group name, SDG addressed, one-sentence project description, UBBU project link/QR code). They draft their 90-second spoken presentation on a cue card.	Whole class + individual planning	Cue cards, student notebooks	Connects the project to a meaningful, authentic audience; develops communication and presentation skills alongside scientific understanding.
DIGITAL GREEN FAIR — School Showcase Event (~30 min)						
Live Performance & Science Explanation	O1–O5	Facilitates the Digital Green Fair in a common area or corridor of the school. Sets up a laptop or tablet at each group's station with their UBBU game running. Introduces each group and encourages visiting students and staff to	Each group presents their UBBU sustainability game: visitors play the game for 2 minutes, then the group gives a 90-second explanation of the environmental problem they coded, the SDG it links to, and one action viewers can take in real life.	Public showcase / Peer teaching	Laptops/tablets with UBBU games open, display cards with SDG info and QR codes, cue cards for presentations, optional printed "visitor passport" for other students to stamp at each station	Provides an authentic audience and real-world purpose; consolidates all five learning objectives through interactive demonstration, public speaking and peer teaching. Aligns with SDG 4 (Quality Education), SDG 13 (Climate Action) and SDG 17 (Partnerships for the Goals) in a celebratory and inclusive context.

		interact with the games.				

D. Photos and Material – *Please add material, classroom pictures, from the presented lesson here (if available)*



E. Evaluation and Assessment – *How will you check that the Objectives or Learning Outcomes were achieved?*

Learning outcomes will be assessed through the following methods:

- *Lesson 1 — Observation: Teacher circulates during the UBBU exploration and storyboarding activities, noting students' ability to identify environmental problems, link them to SDGs, and plan a coherent game concept (O1, O3).*
- *Lesson 1 — Exit Ticket & Storyboard: Students' completed "My Environmental Problem" card and 4-panel storyboard are assessed informally for SDG understanding, design thinking and project clarity (O1, O3).*
- *Lesson 2 — UBBU Project Review: Each group's finished game must include at least two programming concepts (e.g. loops, events, conditionals) and communicate a clear sustainability message. Teacher uses a simple checklist assessing functionality, clarity of message, and code complexity (O2, O4).*
- *Digital Green Fair — Showcase: Students' 90-second presentation is assessed for accuracy of environmental content, clarity of SDG link, and confidence. A simple peer/teacher checklist with three criteria (message, code, delivery) is used (O5).*

F. Adaptations for stretch and challenges – *if any gifted pupils/students with learning difficulties*

For students who need additional challenge:

- *Add a scoring system to their UBBU game that rewards the player for making sustainable choices, using variables and conditionals to track the player's "eco-score".*
- *Add multiple levels to the game, each representing a different SDG or environmental scenario, using UBBU's scene-switching and event blocks.*
- *Research real local data (e.g. recycling rates, CO_2 emissions) and incorporate it as factual content in the game's dialogue or end screen, citing the source on their display card.*

For students with learning difficulties:

- *Provide a pre-filled storyboard template with sentence starters (e.g. "The problem I chose is... because...") and a visual SDG matching card.*
- *Offer a partially built UBBU project template with the character, background and basic movement blocks already in place, so students focus on adding the sustainability message content.*
- *Assign clear, specific roles within the group (e.g. researcher, coder, designer, presenter) and pair with a peer mentor; reduce the presentation requirement to one key sentence about their chosen SDG.*

G. Background information for teachers - *Include any website links and resources that would provide teachers with useful information about the lesson's topic*

UBBU (ubbu.io) is a browser-based, block-coding platform designed for children aged 6–12. At the 10–12 level, students work with open-ended project creation, game design and programming as a tool to build new worlds. Every lesson and activity on UBBU is mapped to the UN's 17 Sustainable Development Goals (SDGs), making it ideal for cross-curricular sustainability projects. Students can create, save and share their projects via a unique link, enabling authentic peer review and community showcasing without requiring any downloads or installations.
The 17 UN Sustainable Development Goals (SDGs) are a set of global targets adopted by all United Nations member states in 2015 as part of the 2030 Agenda. They cover the world's most pressing environmental, social and economic challenges — from clean water and decent work to climate action and life on land. SDG 13 (Climate Action), SDG 14 (Life Below Water), SDG 15 (Life on Land) and SDG 12 (Responsible Consumption and Production) are particularly relevant to young learners and lend themselves to creative digital storytelling. Using UBBU to build games around these goals gives students agency: they are not passive consumers of sustainability content but active creators of it.
Useful resources:

- UBBU platform for schools: https://ubbu.io/school
- UBBU curriculum and SDG mapping: https://ubbu.io/curriculum
- UN Sustainable Development Goals overview: https://sdgs.un.org/goals
- Foundation for Environmental Education — #GreeningEducation resources: https://www.fee.global/

H. References – *Acknowledge the resources that were used while developing the Lesson Plan.*

- UBBU. (2024). UBBU — Code to Create. https://ubbu.io
- United Nations. (2015). Transforming our world: The 2030 Agenda for Sustainable Development. https://sdgs.un.org/2030agenda
- Wing, J. M. (2006). Computational thinking. Communications of the ACM, 49(3), 33–35.

• Foundation for Environmental Education. (2025). #GreeningEducation Lesson Plan Competition Guidelines.