

The Design Challenge

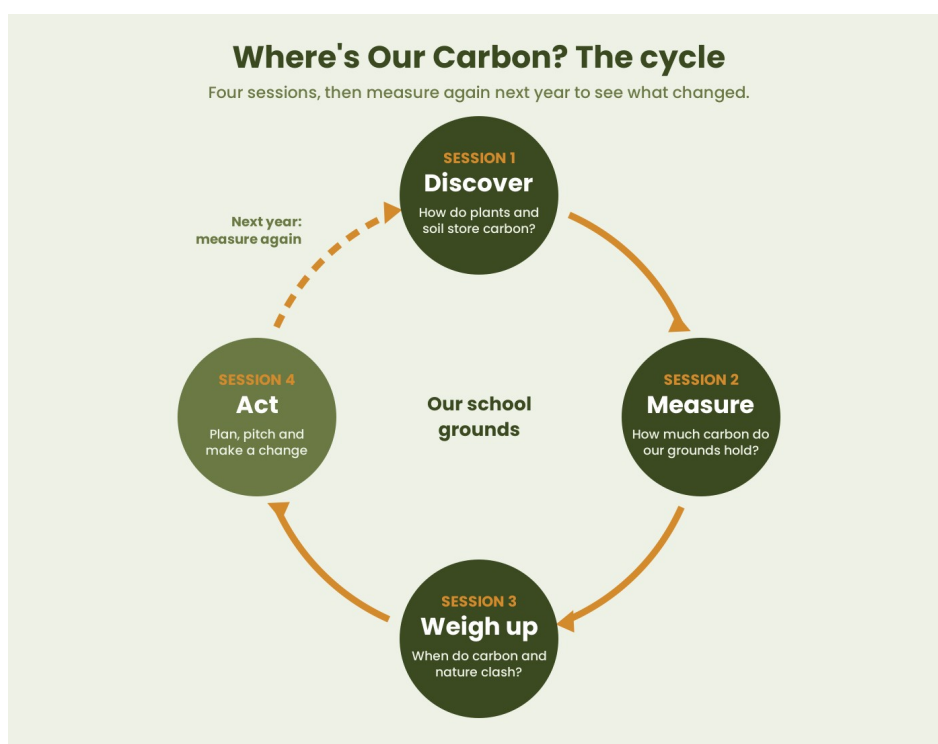
Plan one change to our grounds and make the case for it.

KS2 (Years 3 to 6) and KS3 · About 75 minutes, plus pitch time · Indoors



Facilitator notes

This is where the series turns into action. Pupils take one idea from the Session 3 shortlist, plan it properly, design it, and pitch it to the people who can say yes. The plan has to be honest about what difference it will make to carbon, and every pitch includes one energy-saving pledge, because Session 3 showed that energy matters most.



The series as a cycle. Share this with pupils at the start, and come back to it at the end.

At a glance

Big question	What one change could make our grounds better for carbon and for nature, and how do we make it happen?
Learning outcomes	All pupils: contribute to a plan for one change to the school grounds and explain who it helps. Most pupils: plan a change using evidence from earlier sessions, including cost, timing and who will look after it. KS3 and some upper KS2: present a persuasive, honest case that weighs carbon, nature and people, and say how success will be measured.
Curriculum links	KS2: Science (habitats), Geography (maps, fieldwork), Design and Technology (designing for a purpose), English (spoken language, persuasive writing), PSHE (taking part in decisions). KS3: Geography (human and physical interactions), Design and Technology, English (spoken presentation), Citizenship (taking action in the community).

Time	About 75 minutes, plus time for pitches. Pitches work well as a separate session with the headteacher, governors or the school council.
You will need	The Session 3 shortlist, the class carbon map from Session 2, pupil sheets A to D, coloured pencils, large paper for designs if you want them displayed.

National Education Nature Park link

This session matches the Nature Park's stage of planning and making improvements to your site. Once a change is made, update your habitat map on the Nature Park website so the change is recorded, and repeat the mapping next year to track it. Pupils' carbon scores and tree measurements from Session 2 give you a carbon baseline to sit alongside the Nature Park's biodiversity baseline.

Background for you

Pupils will be keen, and some ideas will be big. Encourage them to choose something the school could realistically do within a year. A modest change that actually happens teaches far more than an ambitious one that stalls.

Who looks after it is the question most often forgotten. Hedges need watering in their first summers, meadows need a yearly cut, ponds need clearing. A good plan names who does what, and when. The eco group, a class each year, families or the site team are all possible answers, but they need to agree first.

Money. Many of the best changes are free or cheap: mowing less, leaving dead wood, collecting seed. For bigger ideas, schools often look to the PTA, local businesses, the local council, and tree-planting charities. The Woodland Trust has run free tree schemes for schools, so check what is open in your area when you are ready to plant.

Timing matters. Use the table below to check when each change works best. It also appears on Sheet B.

Change	Best time to do it
Plant trees or a hedge	November to March, when trees are dormant
Sow wildflower seed	Early autumn or early spring
Stop mowing an area	Decide in early spring, then cut once in late summer and take the cuttings away
Dig a pond	Autumn or winter, so it fills with rain and avoids the spring breeding season
Leave leaves and dead wood	Any time. Autumn is a good start
Replace a hard surface	School holidays, usually with a contractor

Session plan

Part 1. Choose (10 minutes)

Show the cycle diagram and remind pupils of the journey so far. Display the Session 3 shortlist. Either the class votes for one idea that every group develops, or each group takes a different idea.

Say: *We know where our carbon is, how big it really is, and when carbon and nature pull in different directions. Now it is our turn to make something change.*

Part 2. Plan (25 minutes)

Groups complete Sheet A. Push for evidence: what were the carbon and wildlife scores for this area in Session 2, and what might they be after the change? Make sure every group answers who will look after it.

Part 3. Design (15 minutes)

Groups draw a bird's-eye design of the area after the change on Sheet B, with labels. Lower KS2 can draw before and after pictures instead.

Part 4. Prepare the pitch (20 minutes)

Groups use the six-part pitch planner on Sheet C. Each pitch should take about three minutes. Two parts are non-negotiable:

- **The honest bit.** Pupils say how much difference their change makes to the school's carbon, compared with energy use. It is fine, and impressive, to say: this is a small difference for carbon but a big one for nature.
- **The energy pledge.** Each group adds one energy-saving action the school or class could take, such as switching off at the end of the day, closing doors and windows when the heating is on, or a lights-off monitor.

Say: *Remember what we found in Session 3. Our grounds are the bonus, not the answer. A really good pitch shows we understand that.*

Part 5. Pitch (in a separate session if possible)

Invite the headteacher, a governor, the site manager or the school council to hear the pitches. Give each listener a copy of Sheet D. Agree beforehand what happens next, so pupils get a real answer, even if that answer is not yet.

After the series

- **Make it happen:** agree a date, a budget and the people responsible, and share progress with the whole school.
- **Record it:** update your Nature Park habitat map and add the change to your school's Climate Action Plan.
- **Measure again:** repeat the Session 2 audit at the same time next year. Measure the same trees, rescore the areas and compare. That is how pupils see that their decisions mattered.

Adapting the session

- **Lower KS2:** develop one class idea together. Pupils draw before and after pictures and each say one sentence in a class pitch.
- **Upper KS2:** groups develop their own ideas using all four sheets.
- **KS3:** add a costed materials list, a risk assessment, and a measurable target, such as twice as many flowering plant species in two years.

Sheet A: Our plan

Plan one change to our school grounds.

Names: _____

Our idea is to

Where in our grounds? What is it like now?

Scores before and after

	Before (from Session 2)	After (our prediction)
Carbon score (0 to 5)		
Wildlife score (0 to 3)		

Who uses this area now? Who do we need to ask?

What we need (materials, tools, help):

Cost (circle one): Free Under £50 £50 to £500 Over £500

Who will look after it, and what jobs need doing?

How will we know it has worked next year?

Sheet B: Our design

Draw a bird's-eye view of the area after the change. Label everything.

Names: _____

Our design

Key: _____

The best thing about our design is

When is the best time to make our change?

Change	Best time to do it
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Sheet C: Pitch planner

A three-minute pitch in six parts.

Names: _____

Part	What to say	Our notes
1. The place	Where is it and what is it like now? Use your scores.	
2. Our idea	What we want to change, and what it will look like.	
3. Carbon, honestly	What happens to carbon? How big is that compared with our energy use?	
4. Nature	Which plants and animals benefit?	
5. People	Who uses it? Who did we ask? What problems have we solved?	
6. The ask and our pledge	What we need, who looks after it, how we will measure it, and one energy-saving pledge.	

Looking back

The most important thing I have learned about carbon in our school grounds is

Sheet D: Listener feedback

For the headteacher, governors, school council or visitors hearing the pitches.

Your name and role: _____

Pitch 1: _____

What I liked	A question I have	Would I support it?
		Yes Maybe Not yet <i>because...</i>

Pitch 2: _____

What I liked	A question I have	Would I support it?
		Yes Maybe Not yet <i>because...</i>

Pitch 3: _____

What I liked	A question I have	Would I support it?
		Yes Maybe Not yet <i>because...</i>

Pitch 4: _____

What I liked	A question I have	Would I support it?
		Yes Maybe Not yet <i>because...</i>