

Lesson plan (1) 3H curriculum

Unless you have a full day workshop it's unlikely that the whole 3H curriculum will be used in one session. This template will help you adapt 3H PowerPoint content to suit your project, time-scale and audience. It is designed to have everything you need to use in one place, so you can easily pick out the content you need and create a bespoke lesson plan.

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How to use this template

1. **Assess your context.** Establish:
 - Your time limit
 - Your key learning objective(s)
 - Your audience
2. **Choose your content.** Use the '3H Content & timings' as a key. Scan through the lesson plan and decide what you would like to cover. Pick out:
 - Content that matches your LO's
 - Activities that suit your time limitations
3. **Copy and paste these points into the empty template.** Add the 'content covered' and slide numbers to the empty template. Use the 'Direction and considerations' column to note down adaptations you will make to ensure the content matches your site.
4. **Duplicate the PowerPoint and amend it to match your plan.** Duplicate the PowerPoint, then remove the scenes you are not using. Then you're ready to go with your personalised lesson template!
 - a. If you are not using the Point, in this step you can copy the script straight into the 'Considerations' column, to be used as a prompt during the session

Don't forget you can add your amended PPT to the teams folder, someone else might find it useful.

Empty Template

Considerations

- *Add session time frame*
- *Add key learning objective(s)*
- *Add specific needs of your learners*

		<i>Add additional resources</i>		<i>Before the session ends make sure you provide participants with additional resources and details of additional workshops.</i>
Total			ADD TIME	


3H Curriculum

Reminder of the content covered in the 3H curriculum.

HEAD	HEART	HAND
Content covered		
<p>Recognising pollution:</p> <ul style="list-style-type: none"> • What is pollution? • Polluting chemicals • Identifying pollution <p>Introduction to bioremediation:</p> <ul style="list-style-type: none"> • The process • What is a natural organism? • SymBioRem activities 	<ul style="list-style-type: none"> • Local use of project site • Our project stories, challenges and progress • Application of bioremediation science at the project site 	<ul style="list-style-type: none"> • Preparation/completion of bioremediation activity • Reflection on bioremediation and project activities • Decision making about pollution remediation projects

3H Content & timings

Activities are highlighted grey. Note: the timings in this section are very generous, they allow you time to talk through the slide slowly and respond naturally to the training context.

	Slide	Technique
3H HEAD: RECOGNISING POLLUTION		
5mins	2-4	Learners are welcomed to the course. Facilitator highlights how long it will take, and why it's important.
5-10mins	5-9	Icebreaker: mythbuster quiz
3mins	10-11	What is pollution? <ul style="list-style-type: none"> • Definition • Polluting activities
5mins	12	Discussion: individual vs. community responsibility. <i>If it's not us individually causing these problems, How much can/should we be doing?</i>
15 mins	13-20	Polluting chemicals <ul style="list-style-type: none"> • Visible Vs. Invisible • Polluting chemicals • Effects on water and soil • Entering the environment
5mins	21	Discussion: polluted areas near you <i>How has your local area been affected by pollution?</i>
5mins	22-24	Identifying pollution <ul style="list-style-type: none"> • Identifying pollution in water & soil.

		<ul style="list-style-type: none"> • 5 most polluted sites in europe
10mins	25-26	Task: participants and facilitators share their knowledge of site history.
3mins	27	Introducing bioremediation <ul style="list-style-type: none"> • Overview of bioremediation
10 mins	28	Activity: pollution recap activity <ul style="list-style-type: none"> • Explain to your partner/ competition for which team can remember the most ways to identify pollution
3mins	29	Wind Down <ul style="list-style-type: none"> • Introduction to community participation • Signpost to further resources
3H HEAD: INTRODUCING BIOREMEDIATION		
2mins	31-32	Introducing bioremediation
2mins	33	Question: What do the organisms used in bioremediation and healthy smoothies/ probiotics have in common?
15mins	33-38	The process <ul style="list-style-type: none"> • High level overview of the process of bioremediation • What is a natural organism? • Specific bioremediation techniques (floating wetlands)
10mins	39	Activity: explain the process of bioremediation to your partner
10-15mins	38-42	SymBioRem activities <ul style="list-style-type: none"> • Process/project cycle • Bioremediation in your area • Benefits and challenges

5mins	43	Questions: Quick fire quiz <ul style="list-style-type: none"> • Session recap
7mins	44-45	Session wind-down <ul style="list-style-type: none"> • Confidence gauge • Learners' role • Signposting to further materials.

3H HEART: BIOREMEDIATION IN [ADD SITE NAME]

2mins	2-4	Introduction Outlines session intention: put the science of bioremediation into context in their area.
10mins	5	Activity: explain the process of bioremediation to your partner
5-10mins	6-7	Bioremediation recap <ul style="list-style-type: none"> • Polluting chemicals are and why they pose a risk to ecosystems • Bioremediation/ the microorganisms chosen • The symbiorem projects, how this cycle is carried out • Introducing your site
15mins	8-9	Task: how do you use the site?
5mins	10-11	Our story <ul style="list-style-type: none"> • Meet our team • Our findings: pollution found at this site
5mins	12	Question: Have you witnessed any signs of pollution on this site?

10mins	13-18	Challenges at this site <ul style="list-style-type: none"> • Effects of pollution in this site • Feedback from local communities
20mins	19	Activity: dream fixes! Imagine the [local authority] has awarded you an unlimited grant - what would your group do with this site?
15mins	20-23	Bioremediation at this site <ul style="list-style-type: none"> • Bioremediation process at this site • Our chosen strategy • Project update • How participants can get involved
5mins	24	Homework task: over to you Option A: provide details of activity participants should do in their own time, i.e. tell a neighbour, investigate the site (provide worksheets for this) Option B: provide details of an organised event, i.e. guided walk, water/soil sampling Option C: leave the classroom complete an activity now

3H HAND: CONSULTATION

3mins	2-3	Introduction Outlines session intention: work towards participation in bioremediation activities.
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30mins	4	Activity: over to you Learners may have completed a bioremediation/ community engagement activity before the session. Or you could include one in this session. Either now, or later. See PowerPoint for a full list.
5mins	5	Question: Quick-fire quiz
10mins	6-7	Activity: bioremediation in action If applicable, participants recap science content through direct application to the activities they've covered.
5mins	8-9	Project update Facilitators share project updates to participants enthusiastic about the potential of bioremediation. Participants feedback on their participation in bioremediation activities.
10. Introduce discussion section and choose one of the discussion activity screens.		
30mins	11	Consultation Participants discussed, feedback and contribute to decisions related to bioremediation activities.
30mins	12	Q&A with project leader/local partners
30mins	13	Lessons learnt: feedback data collected.
7mins	14-15	Session wind down <ul style="list-style-type: none"> • Confidence gauge • Signposting

Example: 1hr session - introduction to the project

[Example] Considerations

- Session needs to be 1hr
- LO's: introduce science of bioremediation & the project site
- Audience is new to environmental science, but from another community group so can assume they are interested in projects that affect the local area.

In this scenario, the facilitator will have made a new PowerPoint and populated it with slides from the 3H PowerPoints.

Time		Slide/ section	Content covered	Direction and considerations
3H CURRICULUM: 1HR PROJECT INTRO				
13:30	5mins	HEAD 2-4	Learners are welcomed to the course. Facilitator highlights how long it will take, and why it's important.	Session is short so will reassure learners that they will get summative resources to take away (e-learning & ppt).
13:35	2mins	HEAD 10-11	What is pollution? <ul style="list-style-type: none"> • Definition • Polluting activities 	
13:37	5 mins	HEAD 13-20	Polluting chemicals <ul style="list-style-type: none"> • Visible Vs. Invisible • Polluting chemicals • Entering the environment 	Focus on key points of invisible pollutants and entering the environment. Don't discuss each pollutant in detail, just show the image and then move to the next slide to discuss exactly what pollutants are present on this site.
14:02	7mins	HEAD 32-37	Question: how is bioremediation like probiotics? The process <ul style="list-style-type: none"> • High level overview of the process of bioremediation • What is a natural organism? • Specific bioremediation techniques 	Introduce bioremediation as a way of tackling these effects of pollution.
14:09	10mins	HEAD 39	Activity: explain the process of bioremediation to your partner	
14:10	10mins	HEART 8-7	Task: how do you use the site?	
14:20	10mins	HEART 10,11,22&23	Bioremediation at this site	

			<ul style="list-style-type: none"> • Meet the team • Our chosen strategy • Project update • How participants can get involved 	
14:25	5mins	HAND 4,5	<p>Question: Quick-fire quiz</p> <p>Participants are informed of activities they can be involved with.</p>	Participants have covered the 'benefits of bioremediation' so I will replace that with another question. Potentially one related to our project.
14:30	5mins	HAND 14,15	Session wind down	<p>End the session signposting to our next bioremediation activity. Provide takeaway resources including:</p> <ul style="list-style-type: none"> - Summary PDF's - Project journal - Podcast (and encourage them to listen to it around the lake)

Total 1hr

