WHY ALL THE PLASTIC? (LEVEL 1)

Description	Learners will have the opportunity to conduct science experiments to better understand the environment and present their learnings as a poster convince their family to reduce-reuse.
Leading Question	Can you develop an alternative to plastic?
Total Time Required	4.5 hours total over 5 days.
Supplies Required	A tool to dig with, any two sticks to write on, pens, any fruit core or green leaf, a piece of plastic. Pens, paper, discarded cloth, jute, paper, plastics, etc.
Learning Outcomes	1. Understanding what is biodegradable and composting 2. Historical understanding of the evolution of materials 3. Critical thinking and design.
Previous Learning	None

DAY 1

Today you will learn about plastic and recycling.

Suggested Duration	Activity and Description
5 minutes	• Discuss with the learner that they will have the opportunity to understand more about plastic.
15 minutes	Discuss the day of the week, the date of the month and the month of the year we are in.
20 minutes	Design your own weekly calendar on a large piece of paper with space to write the daily plan i.e. make 7 boxes and write the dates of the month. Learners will write the first letter of the month and first letter of the days of the week (if learners are unable to support, parents can help with the writing).

20 minutes	For each of the days of the week, learners should mark or draw the project activity that they intend to do on the calendar i.e. Day 1: Make a calendar, Day 2: Dig and Bury (Learners can draw the digging tool) Day 3: Uses of plastic (Learners can draw something that is plastic) Day 4: Alternatives to plastic (and Day 5: What happens to plastic

DAY 2

Today you will learn what biodegradable is and how to recycle.

Suggested Duration	Activity and Description
30 minutes	• Learners will learn the word biodegradable – something that breaks down naturally and turns into soil. • We will do an experiment to explore what happens to plastic and natural food items. • Dig two small holes in the soil of the garden/lawn (or plant pots if a backyard is not available.) • Put any plastic trash in one and fruit core or green leaf in the other. • Cover both the holes with soil land insert a stick marking the plastic hole with P and the fruit core/green leaf with F or L • Learners will think about what they think they will find after a week.

DAY 3

Today you will learn what plastic is used for around the house.

Suggested Duration	Activity and Description
15 minutes	• Learners will identify 5 most common uses of plastic at home and make a list (or illustrate a list) Prompt: grocery bags, plastic containers, toiletry bottles or sachets, bags of chips, plastic toys
30 minutes	• Learners will interview their grandparents and other members of their home and understand whether they used as much plastic for as many different things.

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	• Prompt questions: Did you have as much plastic at home when you were growing up? What did you use instead of plastic?
15 minutes	• Learners will draw comparison images of things from the past without plastic and in the present with plastic.

DAY 4

Today you will learn about different materials you can use other than plastic.

Suggested Duration	Activity and Description
5 minutes	• Learners will pick 3 of the commonly used plastic items as identified the previous day.
15 minutes	• Learners will discuss with the family what material options can be used instead of plastic. E.g. cloth, paper, glass, jute, etc.
20 minutes	• Learners will experiment with trying to replace plastic with the chosen other material options. E.g. what else can you store shampoo in? how else can you package chips, etc.
20 minutes	• Learners will reflect on whether these new solutions would work or not. Learners will try and identify the key characteristics that made plastic so special and used so commonly • Prompt questions: Do other materials get wet? Are other materials as durable - do they get torn or destroyed as easily?

DAY 5

Today you will practice drawing and presenting about recycling.

Suggested Duration	Activity and Description
20 minutes	• Learners will dig around the holes and check the progress of the plastic and food. Based on their observation, they will share what they think will happen and why.
30 minutes	• Learners will compile all of their work from the week to do a presentation including the images, lists, drawings and calendar and share their main learnings with the family

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ASSESSMENT CRITERIA

- Analytical thinking and observations made.
- Ability to prepare and ask meaningful questions and follow up questions.
- Critical thinking and problem solving to design alternatives to plastic.

ADDITIONAL ENRICHMENT ACTIVITIES

- The activity can be extended with more time to observe the biodegradation that typically takes 4 months.