



Lesson Plan

Nature
Art
Science



Summary

Craft name	Terrarium Stories
Subjects	Art; media arts
Year group	Year 5+ UK, Grades 4+ US
Key words	Parallel circuits, dried terrarium
Curriculum alignments	<p>English National Curriculum Key Stages 2 and 3</p> <p>Nature (geography, biology)</p> <ul style="list-style-type: none"> • Use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies • The interdependence of organisms in an ecosystem, including food webs and insect pollinated crops <p>Art</p> <ul style="list-style-type: none"> • Increase their proficiency in the handling of different materials • Select from and use a wider, more complex range of materials, components and ingredients, taking into account their properties • Select from and use specialist tools, techniques, processes, equipment and machinery precisely <p>STEM</p> <ul style="list-style-type: none"> • Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches • Identify whether a lamp will light in a simple series circuit, based on whether the lamp is part of a complete loop with a battery
	US Curriculum Grades 3-8

	<p>Art</p> <ul style="list-style-type: none"> • Visual arts, Creating: Investigate [VA:Cr2.2.3a, VA:Cr2.2.4a, VA:Cr2.2.5a, VA:Cr2.2.6a, VA:Cr2.3.3a, VA:Cr2.3.4a, VA:Cr2.3.5a] • Visual arts, Creating: Reflect - Refine - Continue [VA:Cr2.1.3a, VA:Cr2.1.5a] • Media arts, Creating: Conceive [MA:Cr1.1.3, MA:Cr1.1.4, MA:Cr1.1.5] <p>STEM</p> <ul style="list-style-type: none"> • Science (NGSS), Energy [4-PS3-2, 4-PS3-4]
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You will need

<u>Terrarium Stories storyboard</u>	
Part 1	
	<ul style="list-style-type: none"> • Found dry nature materials (features, bark, flowers, grass) • Nature prints • Craft moss • Tweezers and scissors
Part 2	
	<ul style="list-style-type: none"> • A wide jar that twists • Ruler • Cardstock paper (250GSM)
Part 3	
	<ul style="list-style-type: none"> • Corrugated cardboard • Coin cell battery (3V CR2016) • Foam tape • Conductive fabric tape* • Double sided tape • Polka pen
Part 4	
	<ul style="list-style-type: none"> • Conductive fabric tape • LED light stickers

* For paper circuit materials, we use [chibitronics](#)

Learning objectives

Students will explore natural materials by collecting, selecting, and layering items such as dried plants, feathers, and bark, developing an understanding of texture, translucency, and how organic forms interact with light.

Students will design and construct a multi-layered terrarium inside a jar, demonstrating craftsmanship in 3D composition, material handling, and creative reuse while exploring form, balance, and personal expression.

Students will build and integrate a functional circuit using conductive tape, LEDs, and a battery pack, demonstrating an understanding of basic electrical circuits and how energy flow can be used to illuminate their 3D designs.

Lesson outline

Duration	Guide
1.5 hours	<p>Part 1: Ideating your terrarium design</p> <p>Students will explore and select natural materials such as dried plants, feathers, and bark, considering how they interact with light and shadow. They will begin composing their terrarium by layering textures and experimenting with form, using tweezers to handle delicate elements.</p> <p>Discussion prompts</p> <ul style="list-style-type: none"> * What do your chosen materials tell you about the place where you found them? * 🛠️ What kinds of natural materials did you find, and how do their shapes or textures help spread or block light? 🛠️ How do you decide which materials to layer together to create interesting shadows or textures?
0.5 hour	<p>Part 2: Creating jar divisions</p> <p>Students will measure and cut paper dividers to fit inside their jars, folding and fitting them to create four distinct sections. They will also create a paper base to anchor their natural materials and support their layered designs.</p> <p>Discussion prompts</p> <ul style="list-style-type: none"> 🛠️ How did you make sure your paper dividers fit neatly inside the jar? 🛠️ What challenges did you face when folding or fitting the paper, and how did you solve them?

	<p>⚡ How does dividing the jar into sections help you plan your design?</p>
0.5 hour	<p>Part 3: Constructing and fitting your battery pack Students will build a battery pack using cardboard, foam tape, and conductive materials, then attach it to the jar lid. They will extend circuit lines from the battery to the jar's edge, preparing the structure for lighting.</p> <p>Discussion prompts</p> <p>⚡ What do you notice about how the conductive tape connects to the battery?</p> <p>⚡ What might happen if the tape or battery isn't touching properly?</p> <p>⚡ How can you hide the battery pack in a way that still fits your design? What materials did you use to decorate or disguise the battery, and why?</p>
1.5 hours	<p>Part 4: Lighting it up Students will complete the circuit by attaching LEDs and running conductive tape down the inside of the jar, aligning it with their design. They will test the circuit by twisting the lid to activate the lights, then add final decorative layers and markings to complete their illuminated terrarium.</p> <p>Discussion prompts</p> <p>⚡ How does electricity travel from the battery to the LED lights in your jar?</p> <p>⚡ What do you need to check if your lights don't turn on when you twist the lid?</p> <p>⚡ How does the position of the tape and LEDs affect how your terrarium lights up? How do the lights change the way your terrarium looks when it's dark?</p> <p>⚡ What choices did you make to balance the light, colour, and materials in each section?</p>

Differentiation and extension activities

- ✿ Create a terrarium that tells the story of a local ecosystem, including plants, stones, and natural textures found in the same area.
- ✿ Use a nature journal to sketch and label the plants used in your terrarium, noting their names, habitats, and any seasonal changes.

- ✿ Make a nature materials library to inspire your craft.
- 🪄 Design a terrarium with a specific mood or theme (e.g., “forest at dusk” or “spring awakening”) using colour, light, and texture.
- 🪄 Incorporate a personal craft skill—such as origami, embroidery, or paper cutting—to add a unique artistic element to your terrarium.
- 🪄 Change the number of divisions you have in your terrarium based on a theme, e.g., two for “night and day” or four for “four seasons”.
- 🪄 Create a series of terrariums that explore different artistic styles (e.g., minimalism, collage, or surrealism) using natural materials.
- 🪄 Compare how different materials (e.g., bark, feathers, translucent leaves) affect the brightness and colour of the LED light.
- ⚡ Experiment with different circuit layouts (e.g., side-to-side or bottom-up) to explore how design affects light distribution.
- Extend your printing techniques. Have a look at our [YouTube channel](#) for new ideas!