

Lesson 2.1 - Night Light

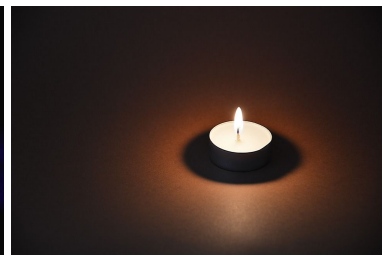
Student Workbook Component

Warm Up – Scientific Investigation

What is important in creating a nightlight?

Highlight the words you think are important when designing a nightlight?

Bright	Dim	Slow	Relaxing	Exciting
Wake up	Sleep	Quiet	Noisy	Fast



Why are those features important? Write in complete sentences.

Mini-lesson

What is the purpose of man-made light?

Add the purpose or reason for these objects in the space below. Remember, there can be more than one.

Object	Purpose / Reason
Fridge Light	
Mobile Phone Screen	
Street Light	
Torch	
Traffic Light	

Can you link the keywords with the correct description?

Purpose
Reflection
Design
Feature






A plan before creating
The reason for being created
Light bouncing off any object or surface
A characteristic of the object

Worked Example

Design a SAM system to project a light

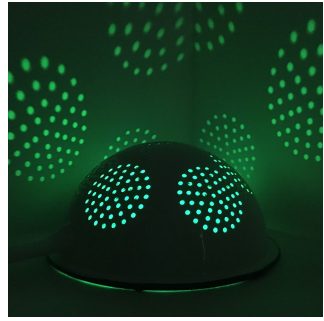
Look at the pictures and read the sentences that describe Challenge 1. What happens First? Second? Third? Write the number of the step below each picture.

Step 1 has been completed for you.

Steps	Instructions	Workspace
	Connect the output of the Toggle block to the Interval block.	
	Connect the Key Press block output to the input of the Toggle block.	
	Turn on and pair the LED Light block. Connect the output of the Cycle Colours block to the input of the LED Light block.	
	Connect the output of the Interval block to the Cycle Colours block.	
Step 1.	Drag these blocks onto the Workspace: <ul style="list-style-type: none"> • Key Press block • Toggle block • Interval block • Cycle Colours block • LED Light block 	

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	Place a colander over the top of the blocks and activate the system.	
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We can use transitional phrases to talk about the order events or actions that take place. Practice by using transitional phrases to discuss the steps you took to create your night light.

Time & Sequence	Compare (+)	Contrast (-)	Cause and Effect
first/second/third	also	but	because
next	equally	however	so
after	likewise	otherwise	therefore
then	in addition	on one hand... ...on the other hand	as a result
finally/overall/to sum up	similarly	opposite	due to