**Activity 1: Peer Evaluation**

Group: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [Name/No. of the group conducting the evaluation]

Lamp Owner:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [Name/No. of the group that owns the lamp]

Thank you for participating in the evaluation of the lamp. Your feedback will help assess its brightness and aesthetics. Please answer the following questions based on your observations and personal preferences.

If possible, please conduct the evaluation in a dim or dark area to better assess the brightness of the lamp. Ensure that the lamp is the primary light source in the room during the evaluation.

**Brightness Evaluation**:

1. On a scale of 1 to 5, with 1 being the lowest and 5 being the highest, rate the brightness of the lamp.\_\_\_\_\_\_\_

2. Did the lamp provide sufficient light for its intended purpose?

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3. Were there any specific tasks or activities where the lamp's brightness was particularly useful or lacking?

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**Aesthetics Evaluation:**

1. On a scale of 1 to 5, with 1 being the least aesthetically pleasing and 5 being the most aesthetically pleasing, rate the lamp's design and appearance.\_\_\_\_\_\_\_

2. Describe the overall style of the lamp (e.g., modern, traditional, minimalist).\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Activity 2: Self Evaluation**

Answer the following questions with a "Yes" or "No" based on your observations and any available information. You can also add necessary information wherever required.

| **Question** | **Yes** | **No** | **Not sure** |
| --- | --- | --- | --- |
| Is the solar lamp durable and able to withstand impacts?  *Instructions: Conduct a table height drop test to assess durability.* |  |  |  |
| Does the solar lamp have weather-resistant features? |  |  |  |
| Does the solar lamp have appropriate seals or covers to protect internal components from moisture? |  |  |  |
| Does the solar lamp have a high-temperature tolerance to withstand extreme heat or cold? |  |  |  |
| Are the materials required for the solar lamp easily accessible? |  |  |  |
| What was the approximate cost of the solar lamp? | | | |

**Activity 3: Reflections and Improvement**

1. Did your solar lamp meet the design specifications? How do you know your group has met these design specs?

Fill in the table below.

| **Design Specification** | **Description** | **Met design spec? (Y/N)** | **How do I know we have met the design specification?** |
| --- | --- | --- | --- |
| Light Output | The lamp should provide sufficient **brightness** for the intended use. |  |  |
| Battery Capacity | The lamp should include a rechargeable battery to store solar energy during nighttime or cloudy conditions. |  |  |
| Charging Time | The solar panel should efficiently charge the battery within a reasonable amount of time. | N/A | *cannot be tested due to time constraints* |
| Operation Time | The lamp should provide illumination for a specified duration, such as 4-8 hours, after a full charge. | N/A | *cannot be tested due to time constraints* |
| Durability | The lamp should be designed to withstand outdoor conditions, including resistance to water, dust, and impact. |  |  |
| Aesthetics | The lamp's design should be visually appealing and suitable for the intended environment, considering factors like size, shape, and color. |  |  |

2. Does your solar lamp require modification?

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3. Rate the necessary level of change for each criterion (brightness, durability, weather resistance, aesthetics) in your solar lamp modification plan.

| **Criteria** | Level 1 (Minimal Change) | Level 2 (Moderate Change) | Level 3 (Significant Change) |
| --- | --- | --- | --- |
| **Brightness** | ☐ | ☐ | ☐ |
| **Durability and Weather Resistance** | ☐ | ☐ | ☐ |
| **Aesthetics** | ☐ | ☐ | ☐ |

If there are modifications required, elaborate on how your group plans to make these changes.

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4. If your solar lamp was sufficiently bright (i.e. you are making Minimal Change to the design to improve the brightness), what is the trade-off you are making? (Hint: Is more current consumed in series or in parallel circuits?)

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