

Applying **Patterns** to the Phenomenon of *Why does a greenhouse heat differently from its surrounding environment?*

- 1) Describe the System

A greenhouse is a system with transparent walls and a roof that let sunlight in. The surfaces inside the greenhouse absorb sunlight and warm up.

- 2) What Kinds of pattern have you identified?

The main Crosscutting Concept (CCC) is Pattern.

- 3) Illustrate the pattern through a graph, chart, image, or formula.



NASA/JPL-Caltech. (n.d.). *Greenhouse traps heat* [Image]. NASA Science.  
<https://science.nasa.gov/kids/earth/what-is-the-greenhouse-effect/>

- 4) Is there a pattern at a different scale that helps explain the pattern you identified? If so, describe/illustrate that pattern?

According to NASA Climate Kids (n.d.), this is similar to how Earth's atmosphere traps heat through the greenhouse effect, where sunlight warms the surface and heat is held near the ground by greenhouse gases.

- 5) What cause-effect relationship might this pattern suggest? Explain. It connects to Cause and Effect because the surfaces absorb heat and release heat inside.

## References

NASA Climate Kids. (n.d.). *What is the greenhouse effect?* <https://climatekids.nasa.gov/greenhouse-effect/>

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NASA Space Place. (2018, April 24). *What is the greenhouse effect?* [Video]. YouTube.  
<https://www.youtube.com/watch?v=SN5-DnOHQmE>