

# HELIOSTAT: Electricity from Sunlight

**Museum of Science and Industry**

**Target Exhibit Summary:** Visitors use a portion of the heliostat's beam to illuminate and operate photovoltaics and power toys on a racing track

**Evaluators:** Joy Wattawa and Pamela Martin

# Evaluation Goals

How much of the science of solar cells do people need to understand in order to understand the concept that sunlight contains energy?

What contextual topics related to solar cells are people interested in? (e.g. physics/'how it works,' green energy applications, etc?)

# Evaluation Method

Two part oral survey consisting of six questions:

Part 1: Solar toy interactive,  
followed by three questions

Part 2: Concept board,  
followed by three questions



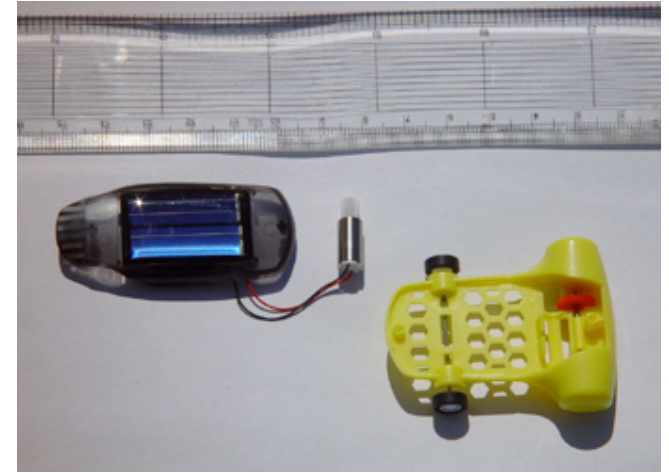
# Solar Toy Interactive

Oral Directions while demonstrating:  
“Shine the lights on the cars to make them move fast and slow.”

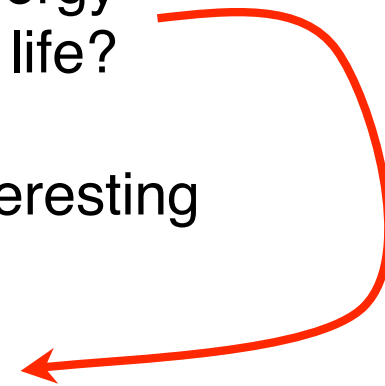
Question 1. What do you think the demonstration was trying to show you?

Question 2. How do you think solar energy might impact or be a part of your daily life?

Question 3. What do you find most interesting about solar energy?



*After 15 surveys*



# Concept Board

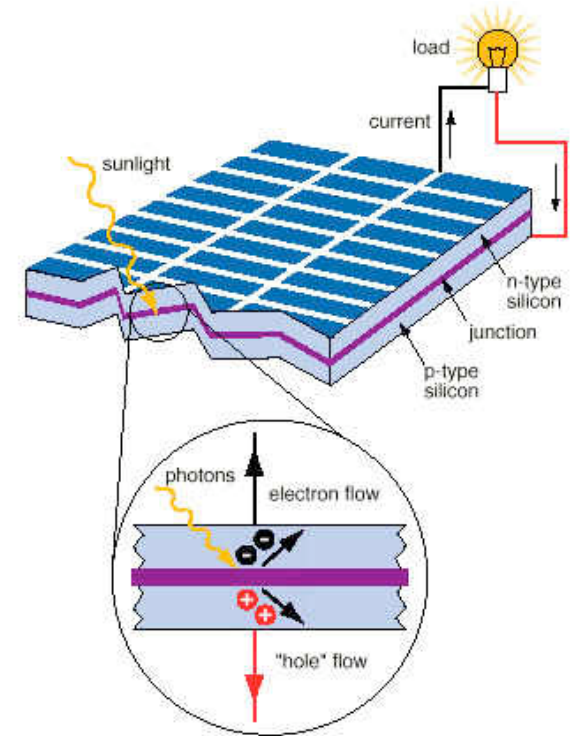
Oral Explanation:

“These are some images we put together about solar energy”

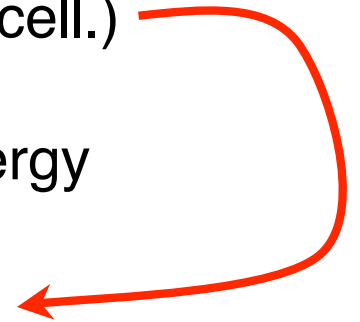
Question 4. Which of the pictures would it be interesting to know more about?

Question 5. Would you like to be shown about how solar cells work? (We showed a picture of a solar cell.)

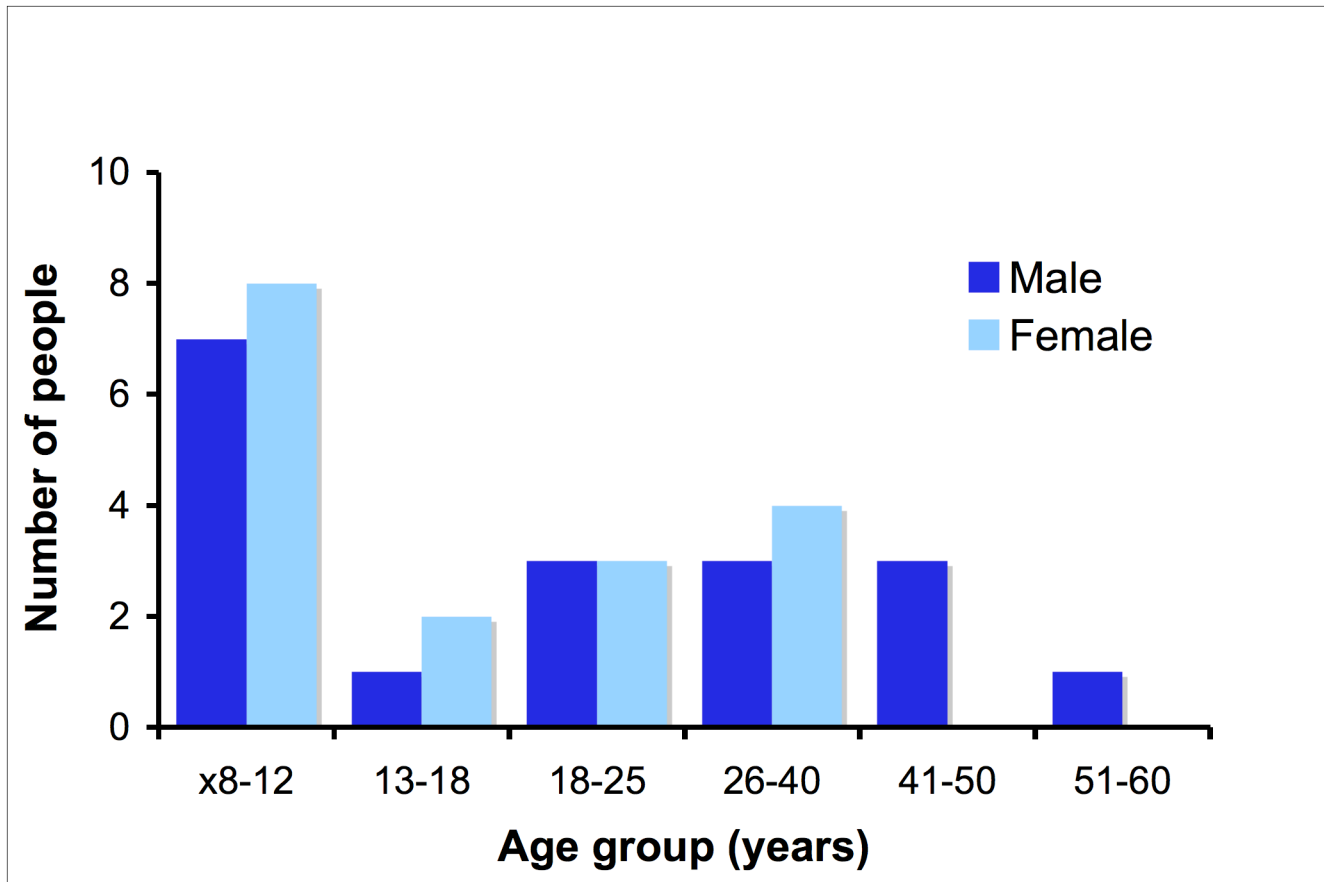
Question 6. Do you have any questions about solar energy that you would like to see addressed in an exhibit?



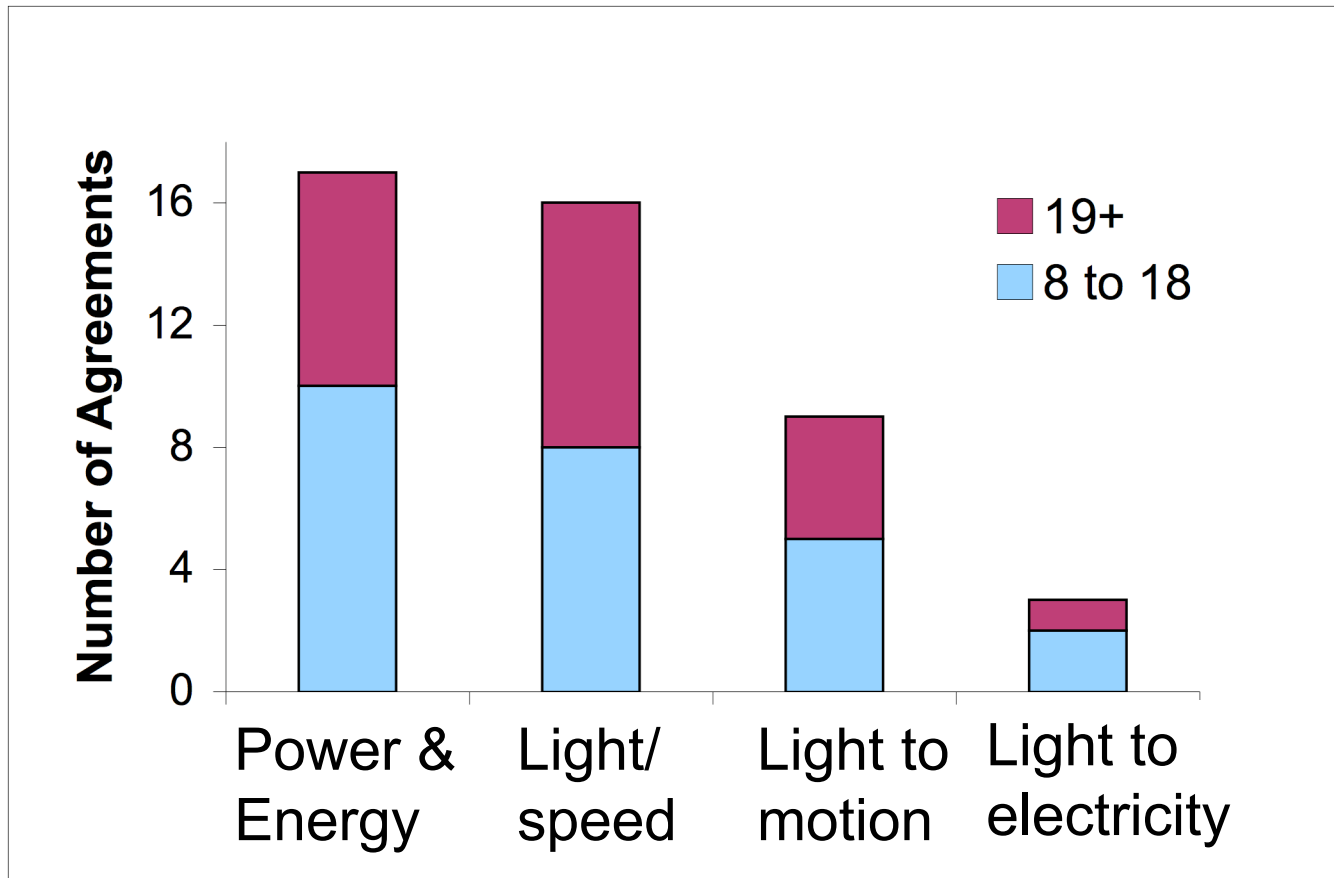
*After 15 surveys*



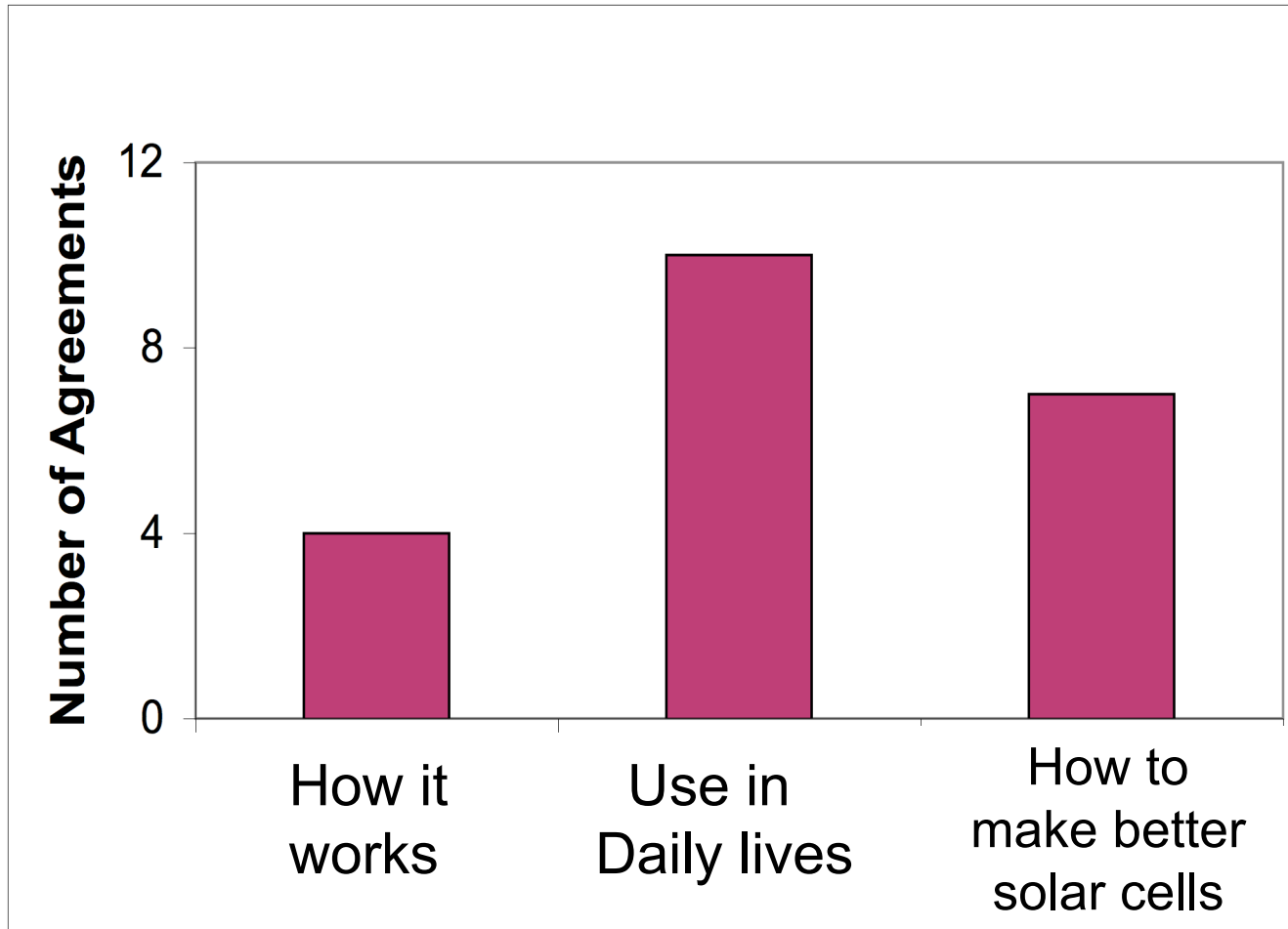
# Survey Participants (25 surveys, ~60 people)



# What do you think the demonstration was trying to show you?

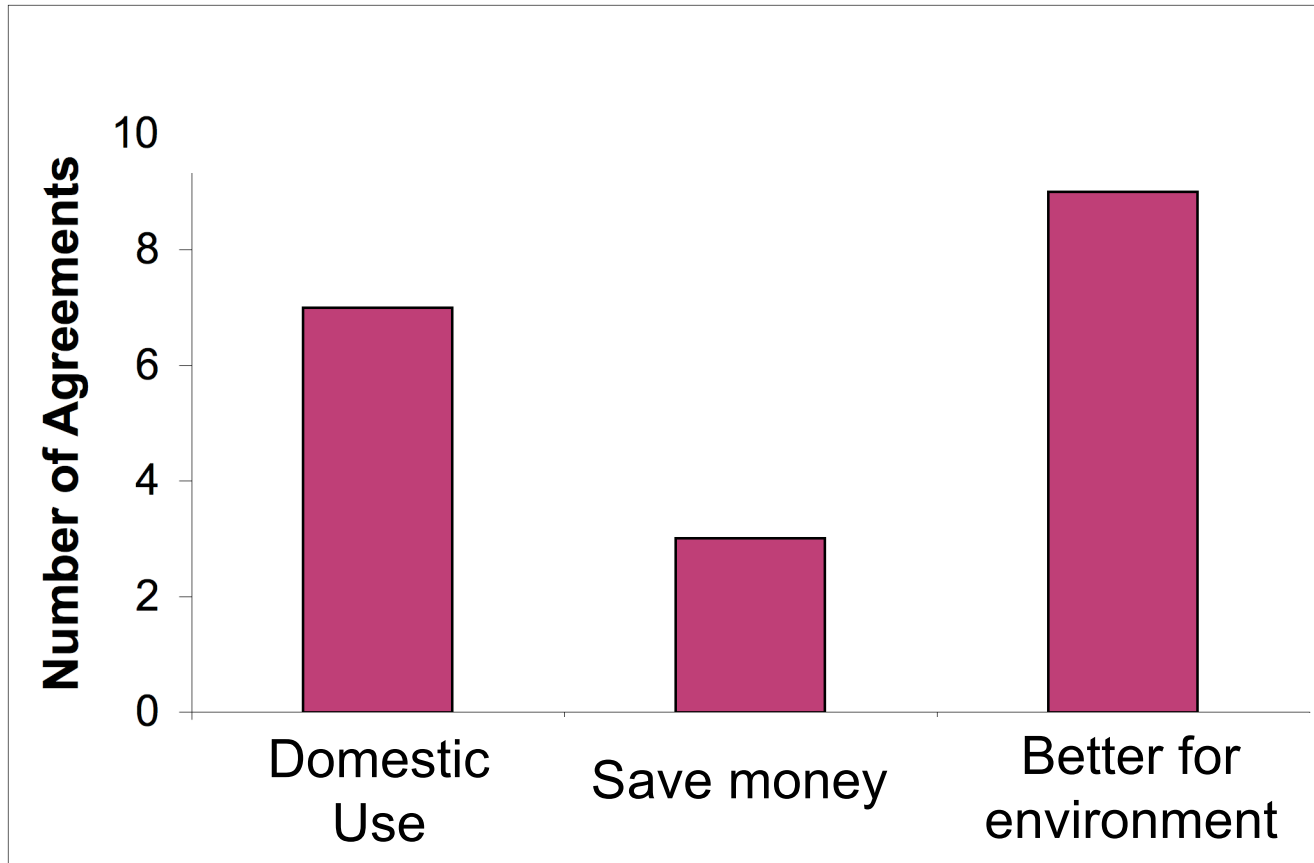


# What do you find the most interesting about solar energy?

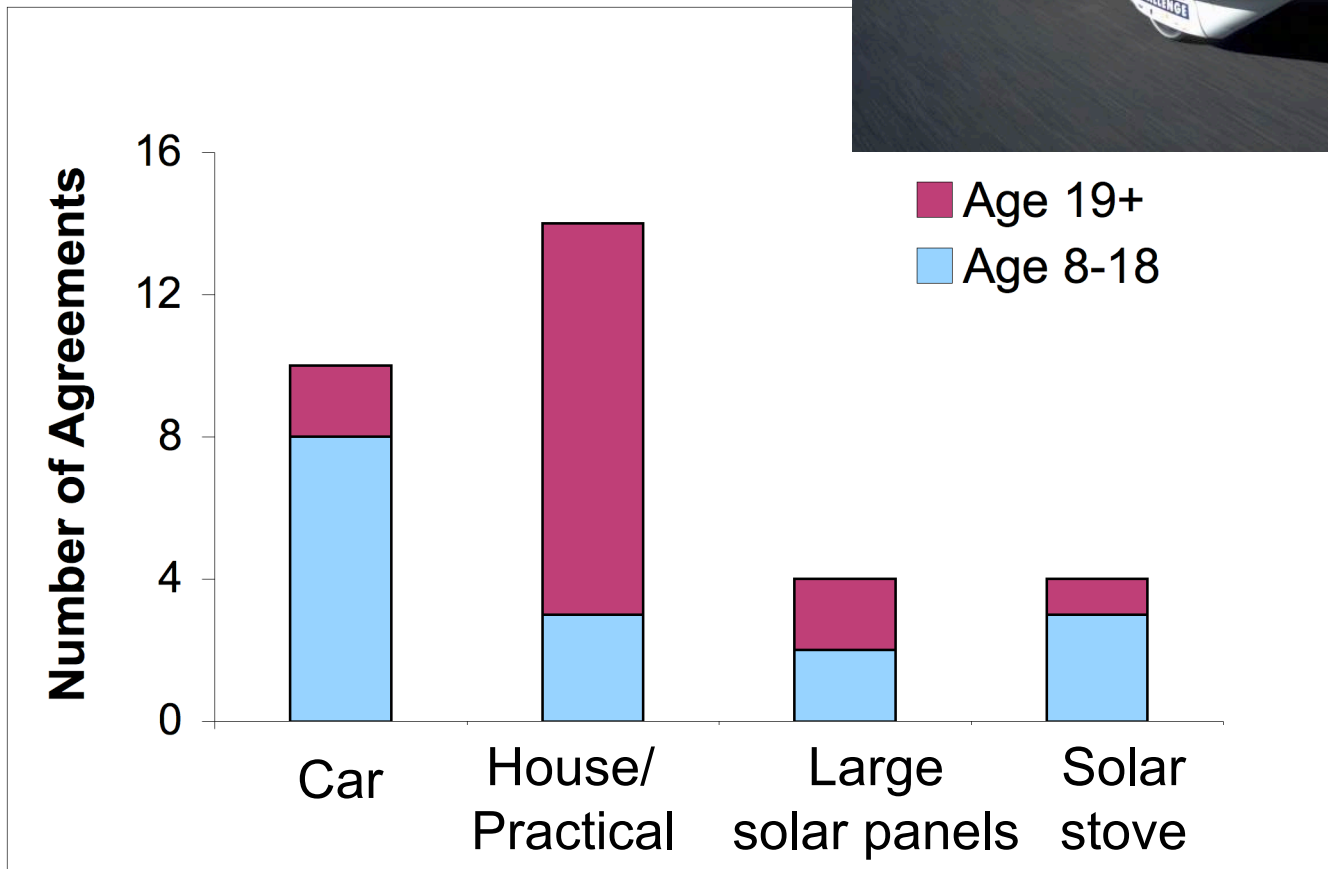




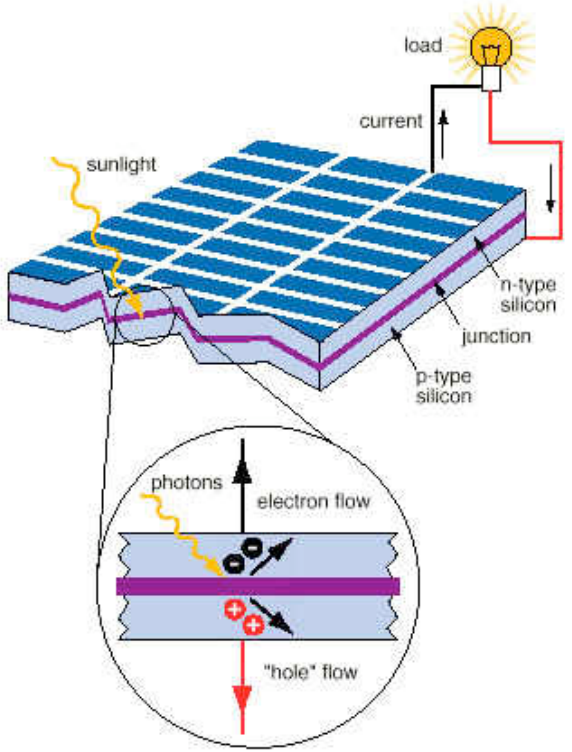
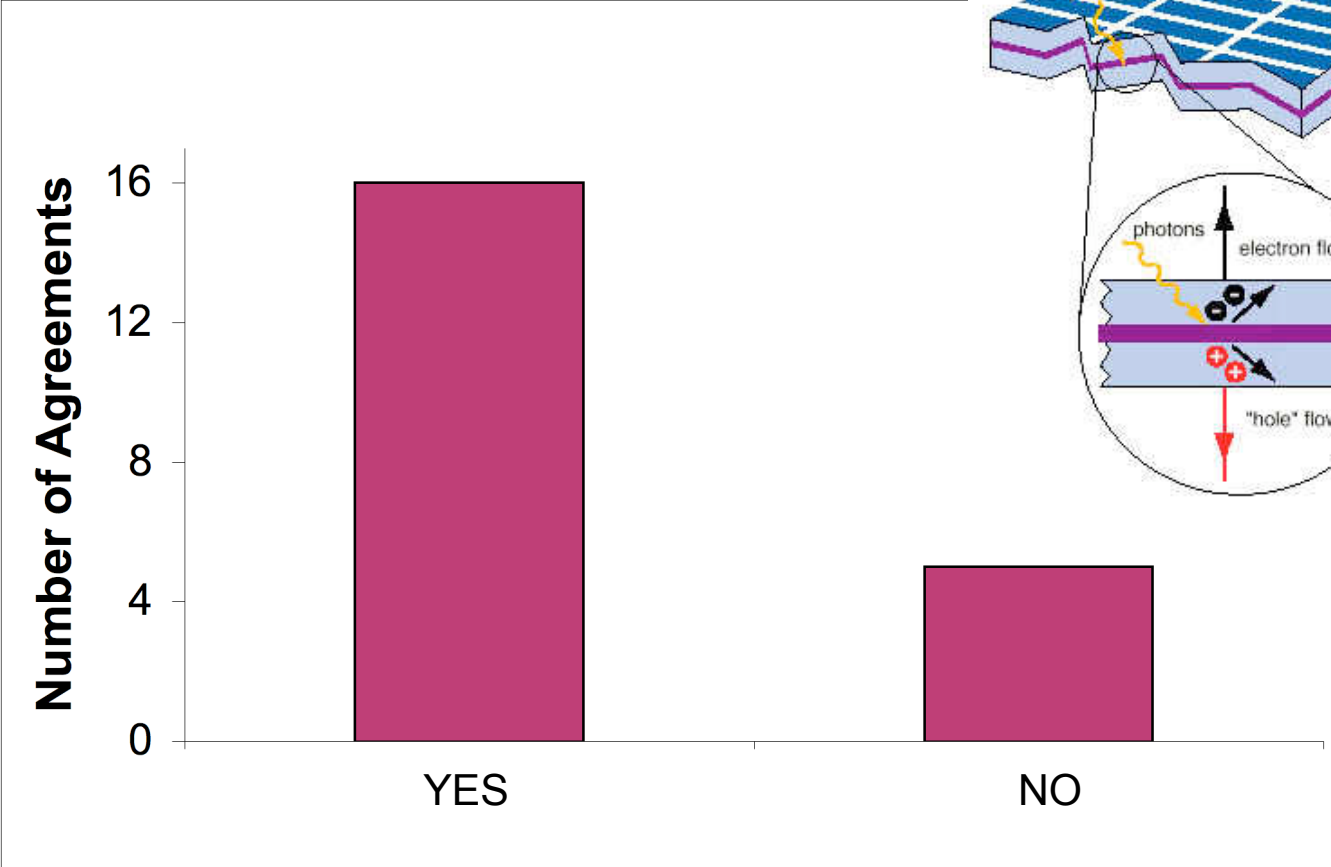
# How do you think solar energy might impact or be a part of your life?



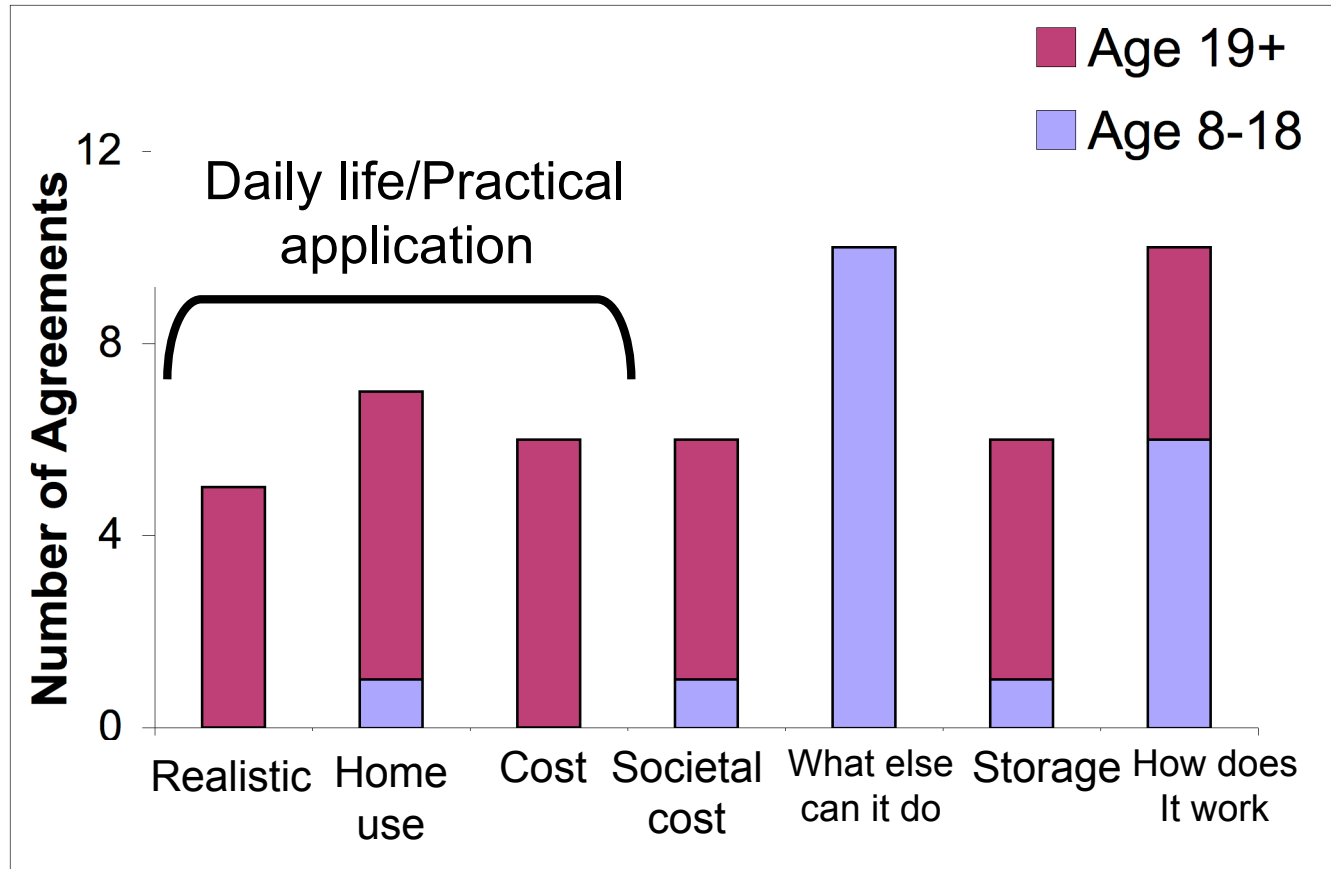
# Which pictures would be more interesting to know more about?



# Would you like to know more about how solar cells work?



Do you have any other questions about solar energy that you would like to see addressed in an exhibit?



# Evaluation Summary

How much of the science of solar cells do people need to understand in order to understand the concept that sunlight contains energy?

- Very little detailed understanding necessary
- Idea of conversion of energy contextual
- Similar for adults and kids

What contextual topics related to solar cells are people interested in?

- Adults: practical application, (local) feasibility
- Kids: uses, not necessarily in their daily lives
- Interest in how it works, similar across age groups