14-IN-1 SOLAR ROBOT

OBJECTIVES

•Modifying and creating designs* •Understand informational text* •Interpreting information* •Discussion participation* •Strengthen engineering and creativity skills* •Make observations for trial and error* •Follow written directions

*Indicates STEM and/or Common Core objectives

GRADES

5-7

ESTIMATED TIME

2 hours

MATERIALS NEEDED

•14-in-1 Solar Robot
•Sunlight or halogen lights

SETTING THE STAGE

Discuss as a class: What are energy sources? *Ex: gas, sun, wind, coal, oil, etc*

PROCEDURE

Have students work in pairs or groups to construct one of the robots listed in the instruction manual. This will familiarize students with how the gears and motors interact.

Students should take notes about their construction as they see fit.

After they successfully build a robot, students will build a robot that is not listed in the instructions.
During this process:
-Students take notes on things that work and don't work during the building process.
-If skills and time allow, students can write instructions for other students to follow.

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FOLLOW UP

- Was it more enjoyable to follow directions or create your own?
- What strategies did you use while following written directions?
- What task is your robot able to complete?
- What didn't work well when you were inventing your own robot?
- What worked well while you were inventing your own robot?
- How did you and your partner work as a team? What were important characteristics?

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