

Energy Efficient at Home

Grades

4-10

Created by Mike Page & Nate Lott

*Requires accounts with CoSpaces Edu Pro & Tinkercad



Difficulty 3



2-60 minutes



1 to 1

Tags: Science, CoSpaces Edu, Tinkercad

App/Tech Tools

CoSpaces Edu Pro accounts, Tinkercad Education account, MERGE Cube, MERGE Headset (optional), device (phone/tablet)

Materials

Learning Objectives

- Demonstrate understanding of energy saving devices at home, control and manipulate objects on a 3D plane.

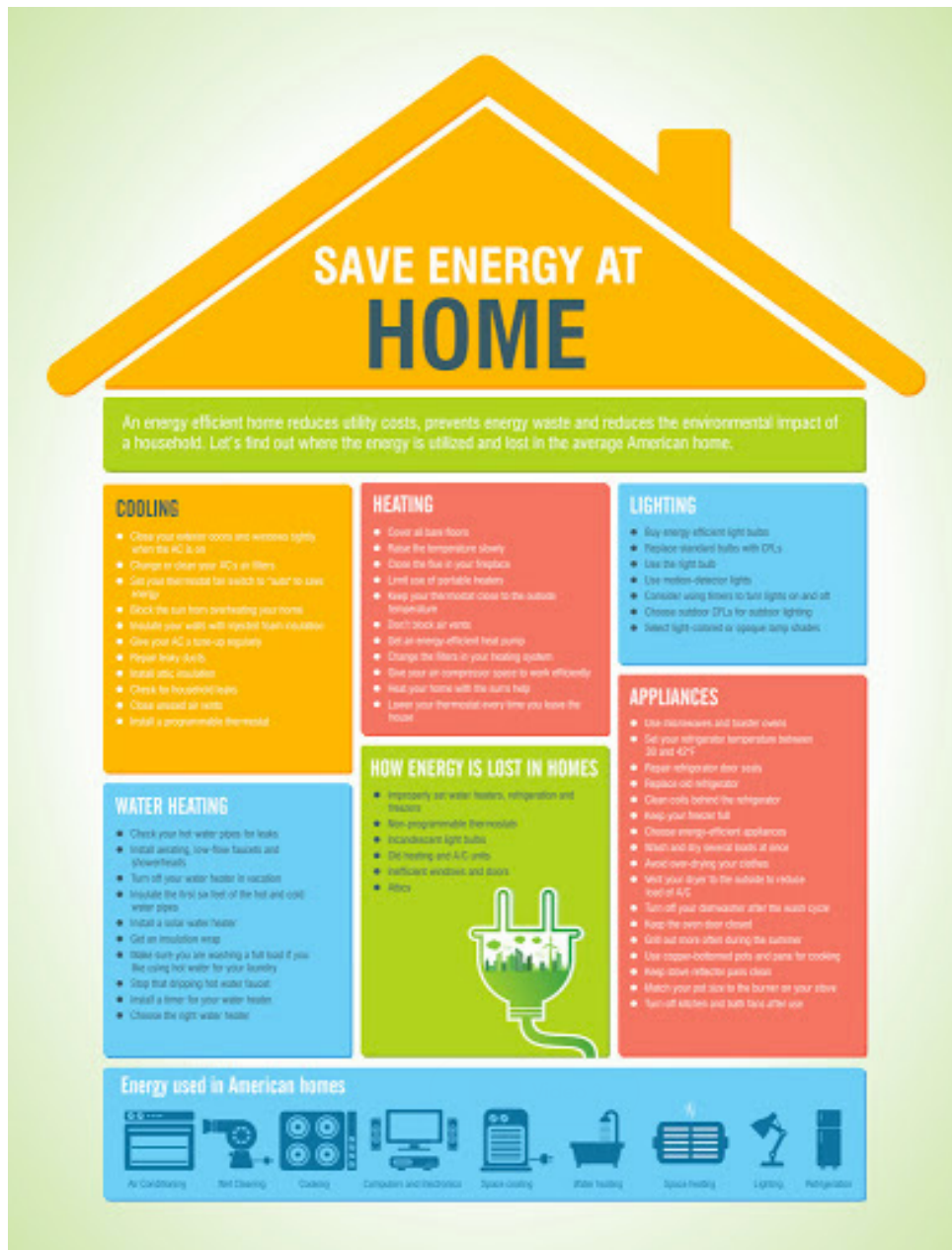
Suggested Vocabulary: Carbon footprint, Clean energy, Efficient, Grid, Kilowatt, Radiation

Activity

*Go [here](#) to view finished project idea.

1. Draw a house on the board with 6 different rooms. Ex. bedroom, kitchen, bathroom, etc. Ask the students 3 ways they think they could save energy in these 6 rooms. Students can brainstorm ideas in small groups and present their ideas in a class discussion. Perhaps each group could focus on one room in the discussion. Then the teacher can bring up the image below and talk about each room, there are hundreds of sites on the internet that describe how to be energy efficient.

*See next page for example.



2. Tell students they will be placing 6 items on their Merge cube so they can code it to talk about how to be energy efficient at home.
3. Students will be given a Merge Cube and a tablet.
4. Students can then view the two videos [here](#) and [here](#) on how to place objects from Google Poly in CoSpaces on the Cube.
5. Students can pose questions about their 3D objects on their Merge Cube that other students could write the answers to as they view their creation.

Suggested Questions

- Do you turn your computer off?
- Do you wash clothes in hot water?
- Do you drive short distances?
- Are you buying incandescent bulbs because they're "cheaper"?
- Is your sink or toilet leaking?
- Leaving your appliances plugged in when you're not using them?
- Are your air filters dirty?
- Are you throwing recyclables into the trash?
- Drafty windows?
- Buying bottled water?

Extension Idea

- Students can create their own objects to be more energy efficient in Tinkercad. From a creation of a simple lamp to solar panels, they can construct many objects to place onto the MERGE Cube to view in AR.

