



CARDBOARD HOUSE

Grades K-3/4-8

BUILD A CARDBOARD MODEL ENERGY EFFICIENT HOUSE

K-8: Students will build cardboard houses and have the option of decorating it like a gingerbread house during this multi-day activity.

SAIN UU!

5 min

Sain uu is Mongolian for hello! (pronounced say-noo)

Greet your students. Be friendly. Use their name, ask a question, give a high five, or a thumbs-up! Take roll. Mark down which students took a snack and tally the snacks given out.

SNACK / FREEPLAY

30 min

Enjoy Free Play:

Students enjoy playing outside and eating their snacks.

STORY TIME

15 min

Read the story:

Read the story of the day. Older students may choose to read their own books.

STEM TIME

50 min

Grades K-8: Cardboard house

Say- "Take everything you have learned from your prior experiments with the electronic supplies. We will be using all of those supplies to create a model energy efficient home. You will get to be inventive and creative, and think of ways to light up and cool your house."

Materials:

- Alligator clips
- Fans
- Lights
- Solar panels
- Cardboard boxes
- Scissors
- Paper
- Markers
- Craft supplies: Chenille pipe cleaners, pom pom balls, etc.
- Glue
- Tape
- Black light flashlights

Instructions:

1. Students will each get a tray with alligator clips, lights, fans, and solar panels.
2. They will get to tape their circuit to the inside of their cardboard house and ensure that the solar panel can get energy from the sunlight. To see if things work they can use a blacklight to model the sun if they are indoors.

The students can choose whether they would like to work on their own or in groups. This may take a while for the students to plan and build. Some students can be building furniture for the house and start to decorate the outside while others work on the electronic configuration to light things up. *Optional students can have a fan in their design and multiple lights.

Remind them that skylights and windows are great for energy efficient homes.

Encourage the students to take all the time they need. Walk around and complement the students on their creativity and highlight their ideas for other students use. Assist the students with their construction if needed.



SPORTS / GAMES

25 min

*Older students may practice their sport if they don't want to play the game.

Materials:

- 1 bowl of ice cubes for each team

HOMEWORK / FREE PLAY

20 min

CLEAN UP / DISMISSAL

5 min

Ice Cubes

Teams will work together to melt their ice cube before the other team.

Instructions- Organize the students into two equal groups. Have each team form a line facing each other. When the STEM Coach says "Go!" the player from each team closest to the bowl of ice will pick up an ice cube and try to melt it before the other team melts their ice cube. Each player can only hold the ice cube for 2-3 seconds before passing it down the line. They can rub it in their hands, rub it on their shirts, but they must not put it in their mouths. If it drops on the ground, they must pick it up immediately. If the cube makes it to the end of the line, the cube will continue to be passed back down the line toward the start. Whichever team melts their cube first wins that round. Multiple rounds can be played!

Instructions:

Allow your students some homework time. If they need help let them know you can help them. If they do not have any homework they can have some reading time, or they can have free time to go outside and play.

Clean up/pack up/dismissal

Clean up, pack up and head home.