



Your mission today is to collect data about clouds to help NASA conduct Earth science research and become a citizen and community scientist with Science Action Club (SAC)..

Focus Skills: Critical Thinking, Math, Language Arts, STEAM Focus: Science

Ages: 10+

MATERIALS: Sky Survey Charts, Sky Survey Worksheets, Cloud Cover Grids (drawn out on a transparent bag the size of a sheet of paper), Sky Color Strips, GLOBE Observer Account Creation Guide (for adults)

STEP 1. Explain to the children that you will all be observing the sky today to verify observations made by NASA satellites. Using the tools provided, children will fill out the Sky Survey Worksheet with the information that most closely matches the current sky conditions. At the end of this activity, you will submit the children's data on the GLOBE Observer App and become a citizen and community scientist.

STEP 2. Have the children use the Sky Survey Chart to determine what the sky looks like. They'll hold the Cloud Cover Grid up to the sky and count how many squares have clouds in them. The children will then multiply the total number of squares by five to calculate the percentage of the sky covered by clouds. Then they will use the Sky Survey Chart to decide on the cloud coverage category.

STEP 3. Next, explain that they should hold the Sky Color Strips 45 degrees up towards the sky and match the darkest part of the sky to the corresponding blue. Using the Sky Survey Chart, the children will decide on the visibility of the sky.

STEP 4. Now, it's time to identify clouds. Have the children look at the low, middle, and high parts of the sky and use the Sky Survey Charts to identify the clouds they see in each portion of the sky. Cover and opacity are determined using the chart.

STEP 5. Finally, the children will relay the data they collected on the Sky Survey Worksheet back to you to submit through the Clouds protocol on the GLOBE Observer App using the guide linked.

MODIFICATIONS: If the weather is not ideal to be outside, kids can do this activity indoors from any window available to them.

To add complexity, use this video and have children test their ability to identify and pronounce cloud names.

Safety Note: Children should always collect data with a trusted adult. That same adult should create an account in the GLOBE Observer App.

