NASA@ My Library

A National Earth and Space Science Initiative that Connects NASA, Public Libraries and their Communities

SPACE SCIENCE INSTITUTE

NCIL National Center for Interactive Learning

Celebrate 60 Years of Earth Observations with NASA!

The webinar will begin at 1:00 p.m. (MT) and will be recorded.

While you're waiting:

1) Introduce yourself in the chat box and answer our poll question
2) Test your audio by clicking on "Meeting" and then "Audio Setup Wizard". You will not need a mic for this webinar.

Audio problems? Click and highlight the  button at the top of your screen. You can also click "Meeting" > "Audio Setup Wizard". You will not need microphone capabilities.

NASA ALA American Library Association Cornerstones of Science PACIFIC SCIENCE CENTER EDC Learning transforms lives. COSDA Chief Officers of State Library Agencies

Agenda for Today

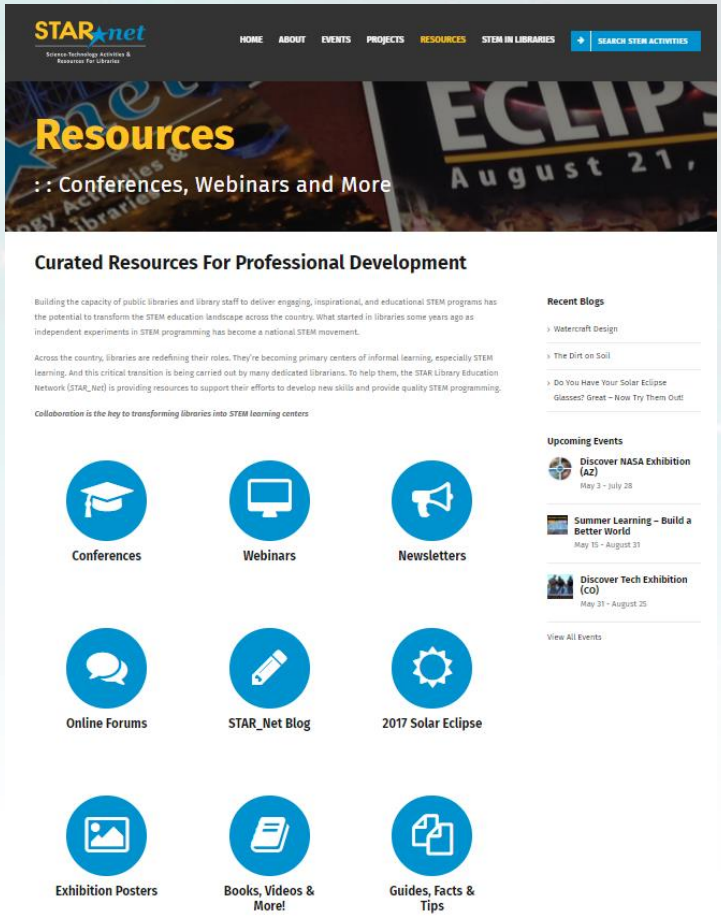
- Introduction and Reminders
- 2018 Earth Day Page and Special Announcement
- Hands-on STEM: UV Kid
- Celebrating Earth Day with NASA! (with Marile Colon Robles and Jessica Taylor)
- Other Earth Science Activities
- Q&A

NASA@ My Library

A National Earth and Space Science Initiative that Connects NASA, Public Libraries and their Communities

NCIL National Center for Interactive Learning

Join STAR Net!



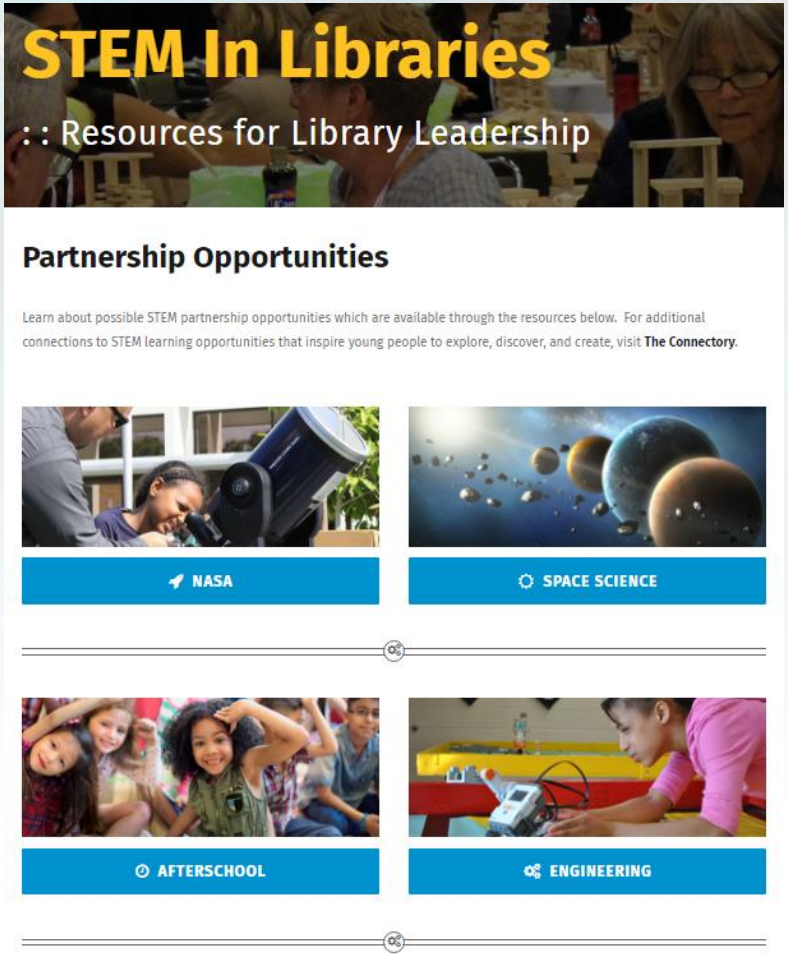
Professional development resources, including webinars, newsletters, blogs, forums, videos, and much more!

NASA ALA American Library Association Cornerstones of Science Pacific Science Center EDC Learning transforms lives. COSLA

FREE Resources

- Reports and Tools for Library Leaders
- STEM Activity Clearinghouse
- Professional Learning Opportunities
- Blogs
- *STAR Net News*

Reminders



- www.starnetlibraries.org/stem-in-libraries/collaboration/partnership-opportunities/

Reminders

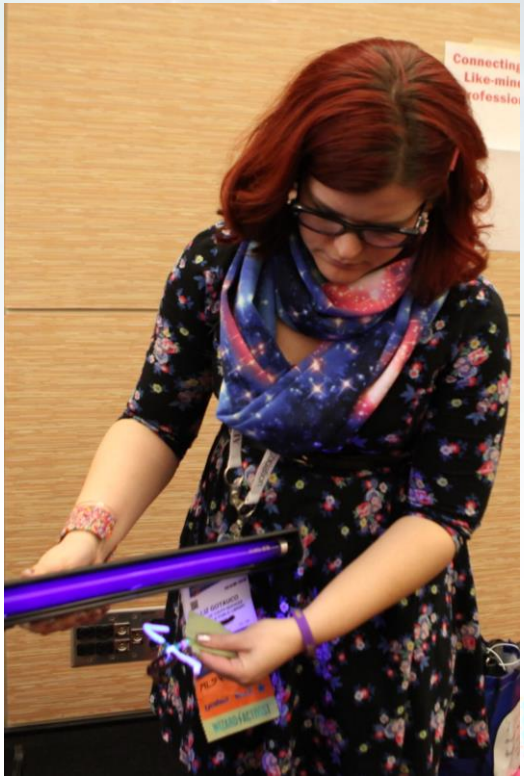
Off to Mars! Programming Ideas for the Insight Launch

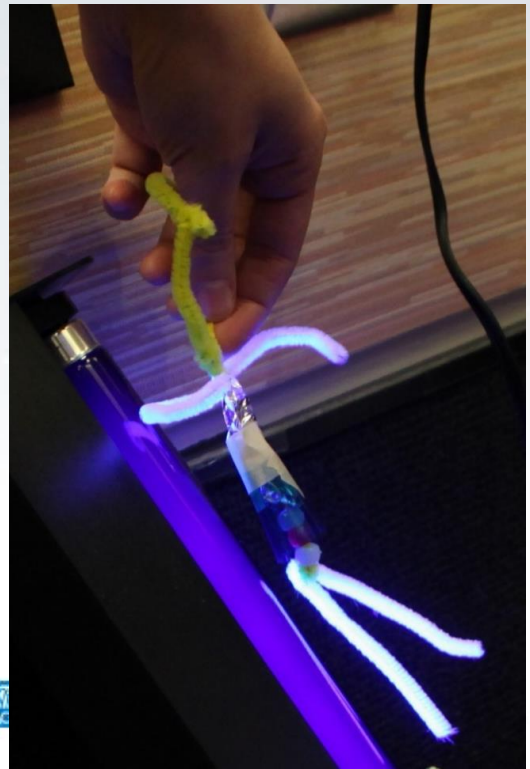
[Register Here]

Tuesday, April 3rd, 2018 at 3:00 p.m. (EST), 2:00 p.m. (CST), 1:00 p.m. (MST), 12:00 p.m. (PST)

UV Kid

Credit: American Library Association





Today's Speakers

Marilé Colón Robles
NASA GLOBE Clouds lead

I am an education specialist and lead for NASA GLOBE Clouds. I love working with educators on different ways to engage all learners in real-world STEM activities. I was honored to be the recipient of the 2017 Women of Color STEM Award for Educational Leadership – Corporate Promotion of Education. I was also privilege to be a panelist for NASA's 2017 Hispanic Heritage Month celebration titled '¡Latinos STEM Up'! Before I started at NASA Langley in 2010, I was researching interactions between clouds and aerosols as I earned my graduate degree in Atmospheric Sciences from the University of Illinois at Urbana-Champaign. I was born and raised in Río Piedras, Puerto Rico. I am wife and mother of two beautiful girls, an accomplished musician, and an avid volleyball player.

Jessica Taylor
NASA LaRC Science Education Team Lead

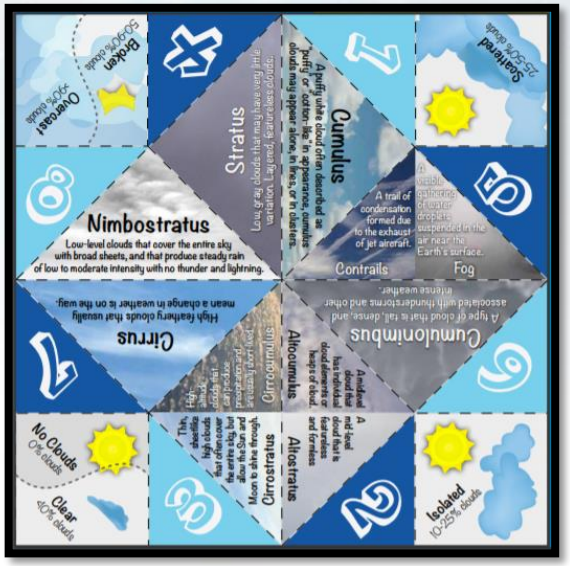
I grew up nearby Tampa, Florida – the lightning capitol of the world! I loved watching storms from the back porch, and would calculate the distance of thunderstorms by counting the number of seconds between the flash and the thunder. I went on to study Meteorology at Florida State University and that's where I began collecting data with The GLOBE Program. It's awesome to be working for NASA and to share my love for doing science with GLOBE.

GLOBE Observer: Clouds

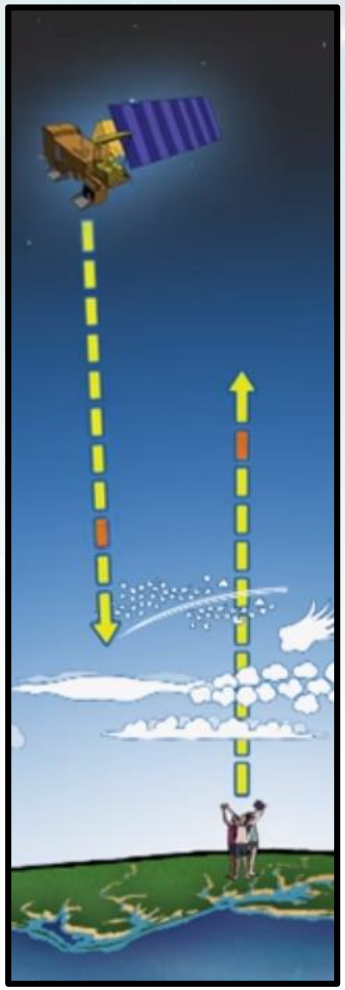
Hands-on Activities:

1. **Estimating Cloud Cover(above)**

2. **Cloud Teller (right-hand side)**



NASA GLOBE Clouds with satellite match



Cloud observations submitted through GLOBE Observer Clouds are matched with satellites overhead of the observer taking measurements at about the same time!

GLOBE Observer App

Objective: Submitting cloud observations to NASA!

Audience:

- Families with school-aged children
- Tweens and Teens
- Adults

Materials: smart phone or tablet; access to outside

GLOBE Observer App

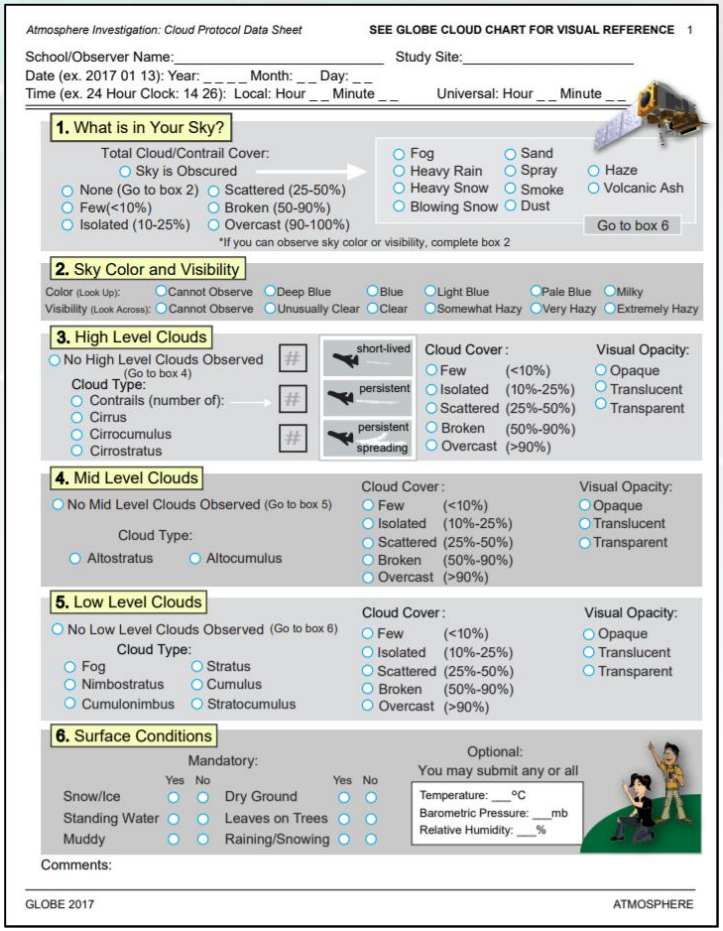
PLEASE NOTE:

1. Not all patrons will have a phone, or want to download the app.

2. The library can engage with different audiences, including school-aged children, if it has devices with the app on it to showcase the app and make observations.

Other Resources: Cloud Observations

Data Sheet:



Atmosphere Investigation: Cloud Protocol Data Sheet **SEE GLOBE CLOUD CHART FOR VISUAL REFERENCE** 1

School/Observer Name:_____ Study Site:_____

Date (ex. 2017 01 13): Year: _ _ _ _ Month: _ _ Day: _ _

Time (ex. 24 Hour Clock: 14 26): Local: Hour _ _ Minute _ _ Universal: Hour _ _ Minute _ _

1. What is in Your Sky?

Total Cloud/Contrail Cover:

○ Sky is Obscured

○ None (Go to box 2) ○ Scattered (25-50%)
○ Few(<10%) ○ Broken (50-90%)
○ Isolated (10-25%) ○ Overcast (90-100%)

○ Fog ○ Sand ○ Haze
○ Heavy Rain ○ Spray ○ Volcanic Ash
○ Heavy Snow ○ Smoke
○ Blowing Snow ○ Dust

Go to box 6

*If you can observe sky color or visibility, complete box 2

2. Sky Color and Visibility

Color (Look Up): ○ Cannot Observe ○ Deep Blue ○ Blue ○ Light Blue ○ Pale Blue ○ Milky
Visibility (Look Across): ○ Cannot Observe ○ Unusually Clear ○ Clear ○ Somewhat Hazy ○ Very Hazy ○ Extremely Hazy

3. High Level Clouds

○ No High Level Clouds Observed (Go to box 4)

Cloud Type:
○ Contrails (number of): #
○ Cirrus #
○ Cirrocumulus #
○ Cirrostratus #

short-lived
persistent
persistent spreading

Cloud Cover:
○ Few (<10%)
○ Isolated (10%-25%)
○ Scattered (25%-50%)
○ Broken (50%-90%)
○ Overcast (>90%)

Visual Opacity:
○ Opaque
○ Translucent
○ Transparent

4. Mid Level Clouds

○ No Mid Level Clouds Observed (Go to box 5)

Cloud Type:
○ Altostratus ○ Altocumulus

Cloud Cover:
○ Few (<10%)
○ Isolated (10%-25%)
○ Scattered (25%-50%)
○ Broken (50%-90%)
○ Overcast (>90%)

Visual Opacity:
○ Opaque
○ Translucent
○ Transparent

5. Low Level Clouds

○ No Low Level Clouds Observed (Go to box 6)

Cloud Type:
○ Fog ○ Stratus
○ Nimbostratus ○ Cumulus
○ Cumulonimbus ○ Stratocumulus

Cloud Cover:
○ Few (<10%)
○ Isolated (10%-25%)
○ Scattered (25%-50%)
○ Broken (50%-90%)
○ Overcast (>90%)

Visual Opacity:
○ Opaque
○ Translucent
○ Transparent

6. Surface Conditions

Mandatory:

	Yes	No		Yes	No
Snow/Ice	○	○	Dry Ground	○	○
Standing Water	○	○	Leaves on Trees	○	○
Muddy	○	○	Raining/Snowing	○	○

Optional:
You may submit any or all

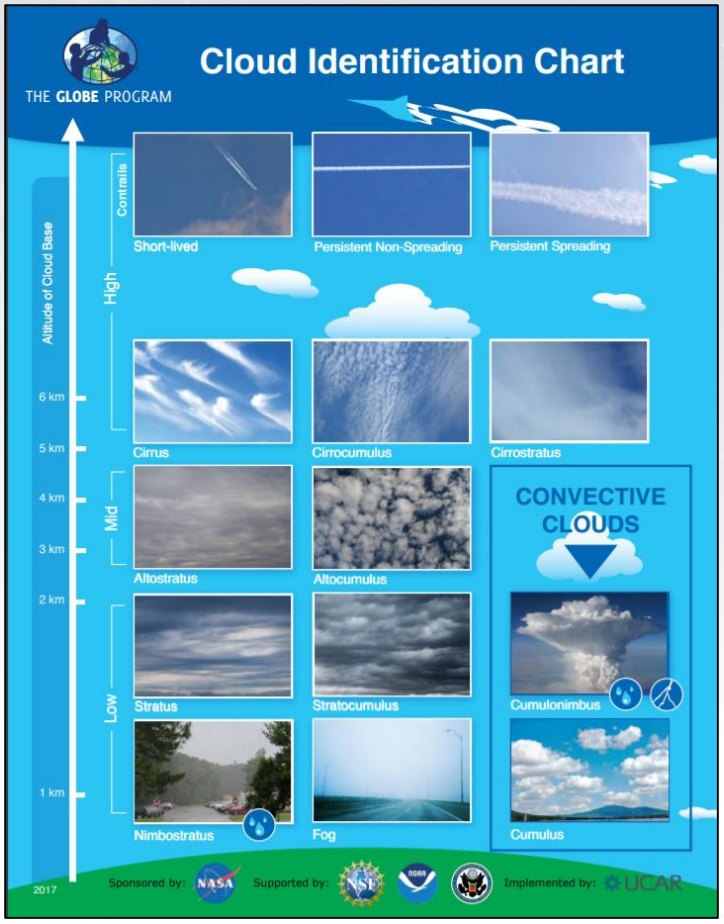
Temperature: ___°C
Barometric Pressure: ___mb
Relative Humidity: ___%

Comments:

GLOBE 2017 ATMOSPHERE

https://www.globe.gov/documents/348614/624fab53-4159-438e-b974-4a79c402c3cb

Cloud Charts (available in different languages)



https://www.globe.gov/do-globe/globe-teachers-guide/atmosphere

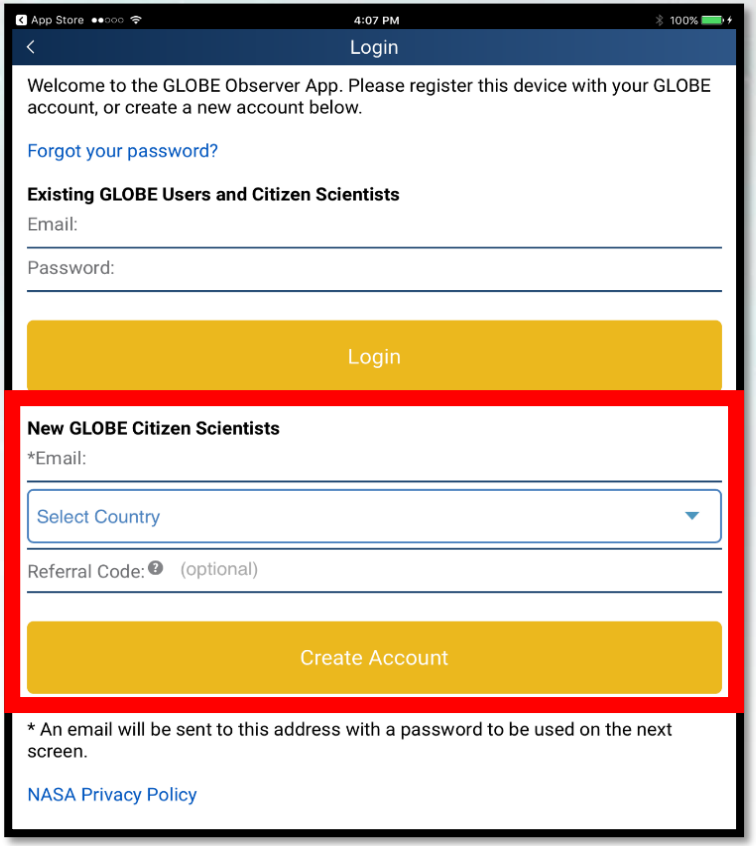
How to Download the App

Icon of the app

Download on the App Store

GET IT ON Google Play

Join the Team: Referral Code

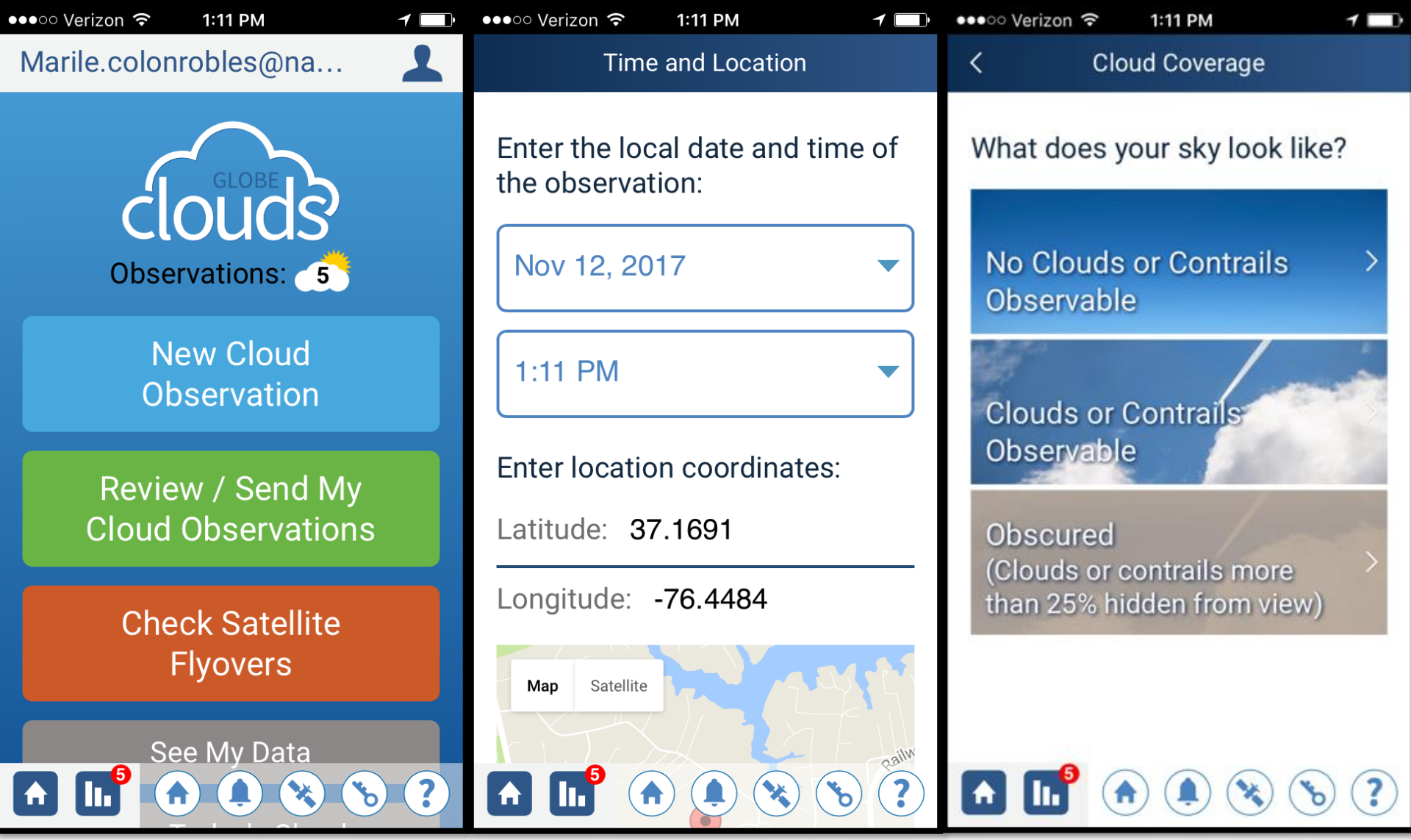


What is a Referral Code?

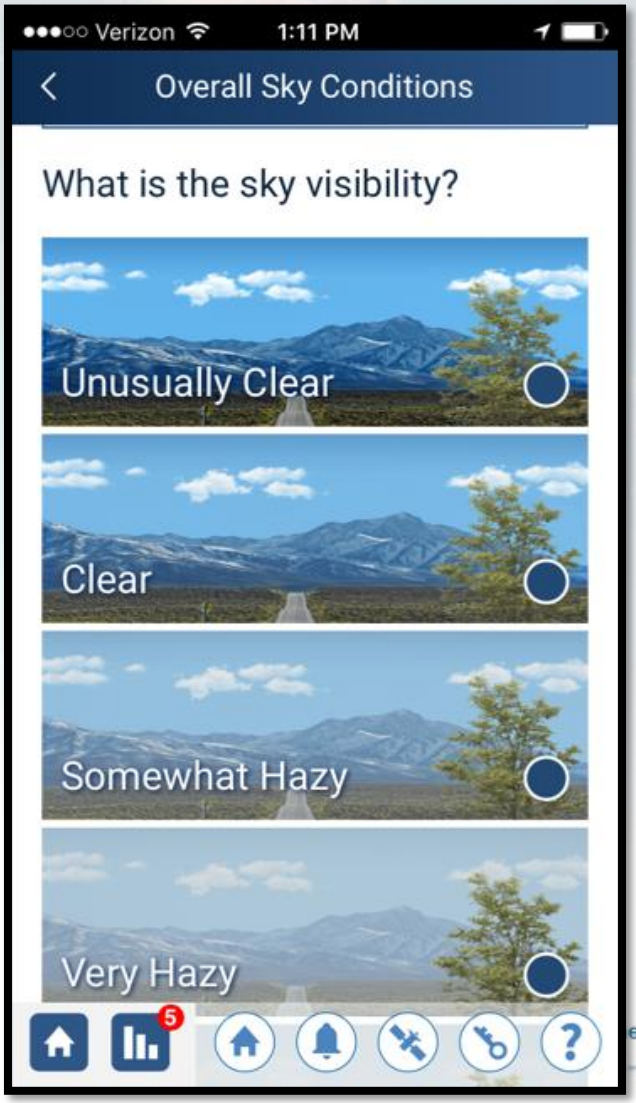
- A way to join the team
- Anyone can use the code
- The code does not expire

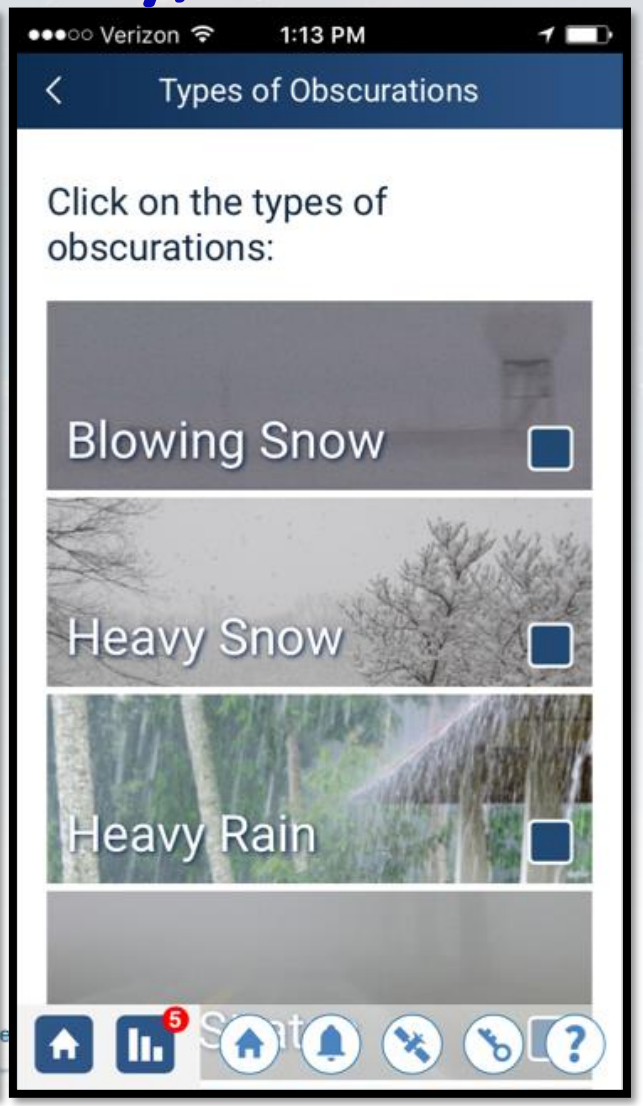
Referral Code: library

NOTE: The app and use are completely free. The referral code helps us identify which users learned about the app at a library event! ***An email is sent rapidly with a password.***

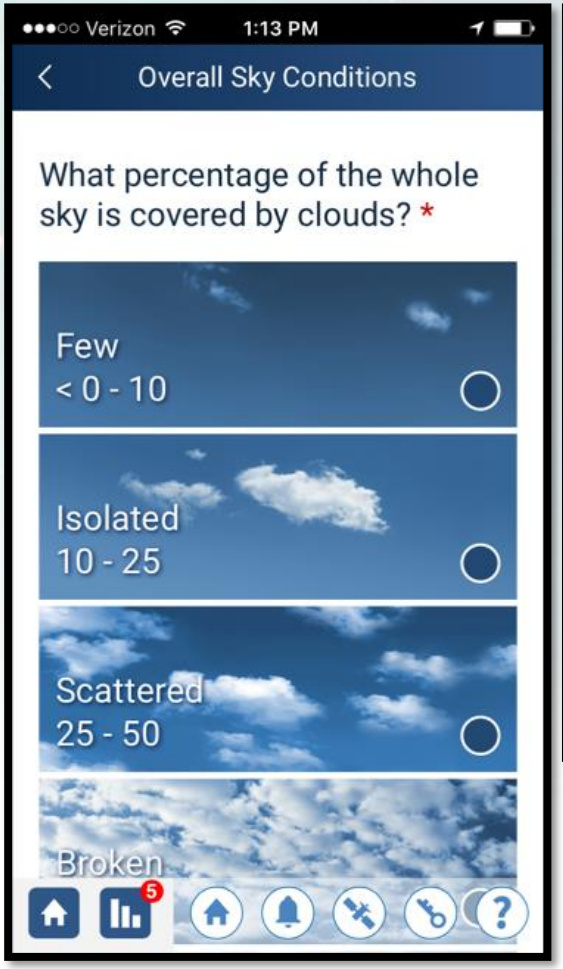

Verizon 1:11 PM
Marile.colonrobles@na...
GLOBE clouds
Observations: 5
New Cloud Observation
Review / Send My Cloud Observations
Check Satellite Flyovers
See My Data
Time and Location
Enter the local date and time of the observation:
Nov 12, 2017
1:11 PM
Enter location coordinates:
Latitude: 37.1691
Longitude: -76.4484
Map
Satellite
Cloud Coverage
What does your sky look like?
No Clouds or Contrails Observable
Clouds or Contrails Observable
Obscured
(Clouds or contrails more than 25% hidden from view)

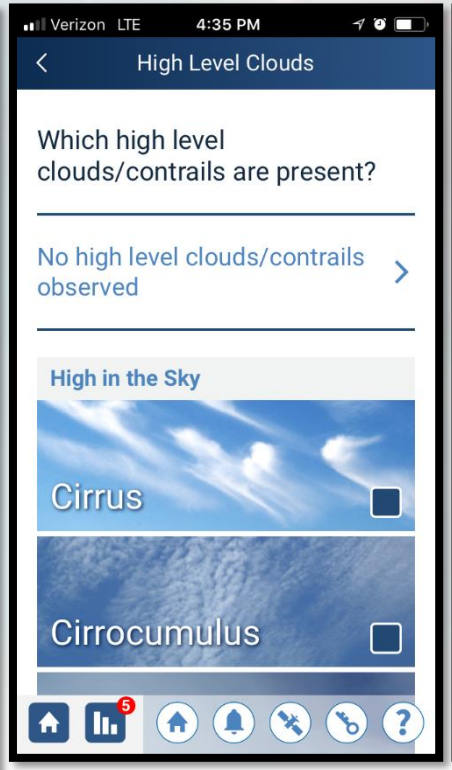
If no clouds or can't see sky, then:

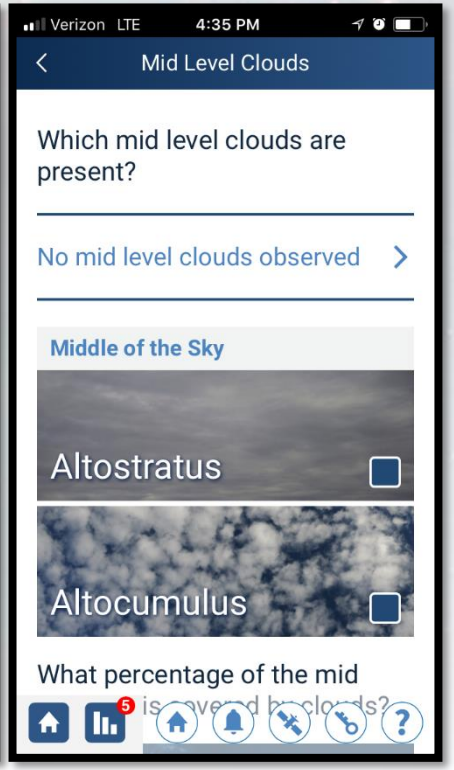


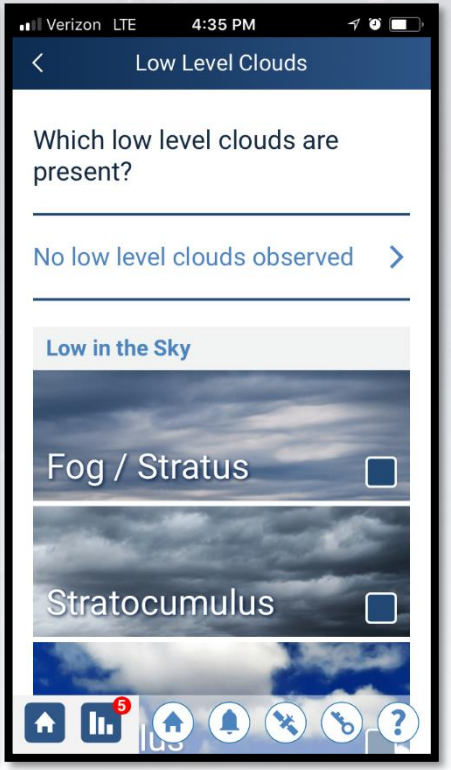


If there are clouds, then:



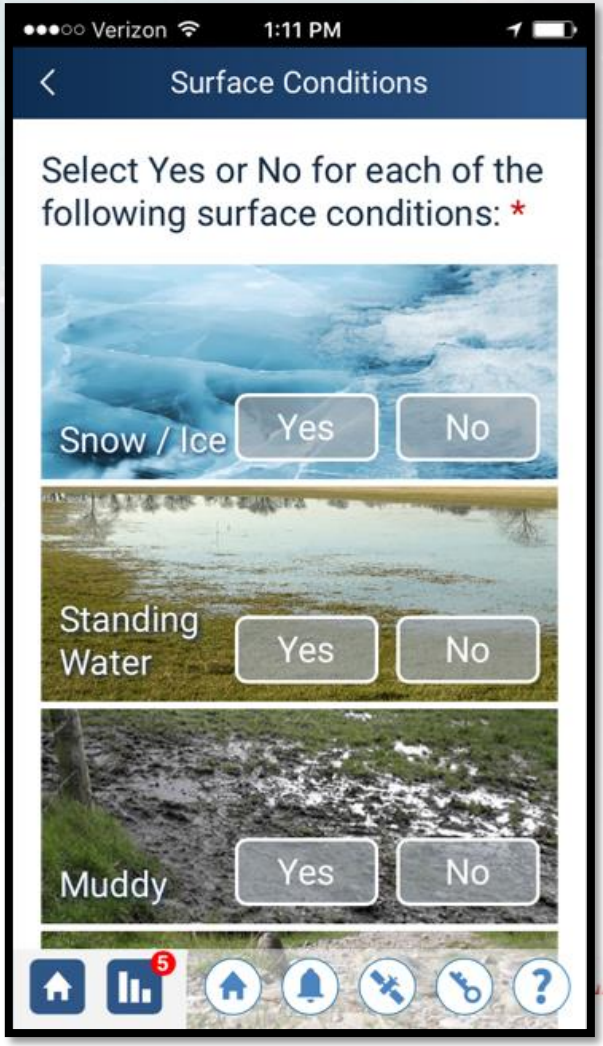


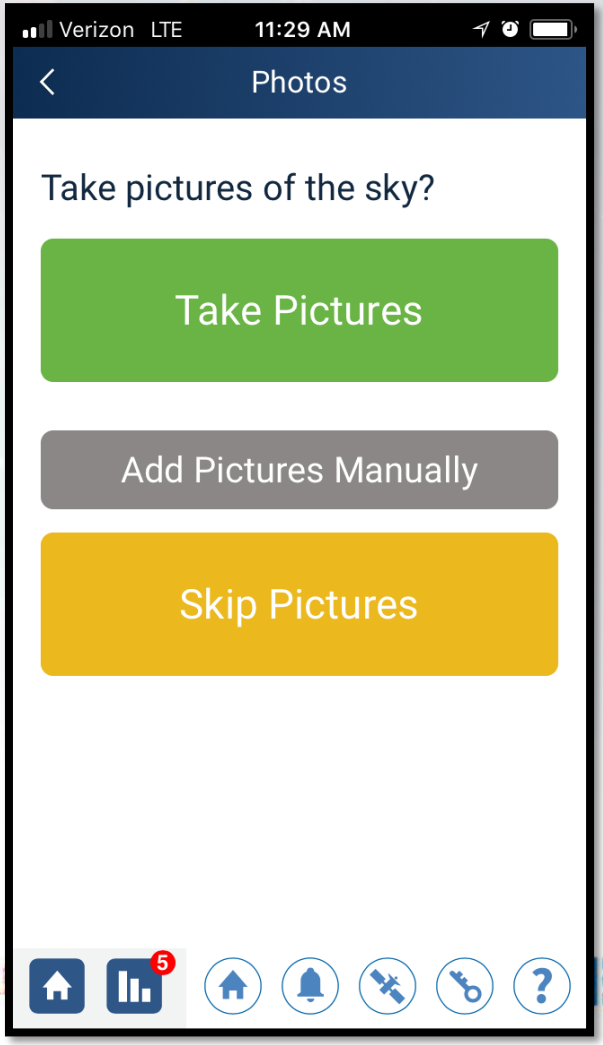




NOTE: Each step is a YES/NO, with visual examples to help the patron identify the cloud.

Information about your surroundings





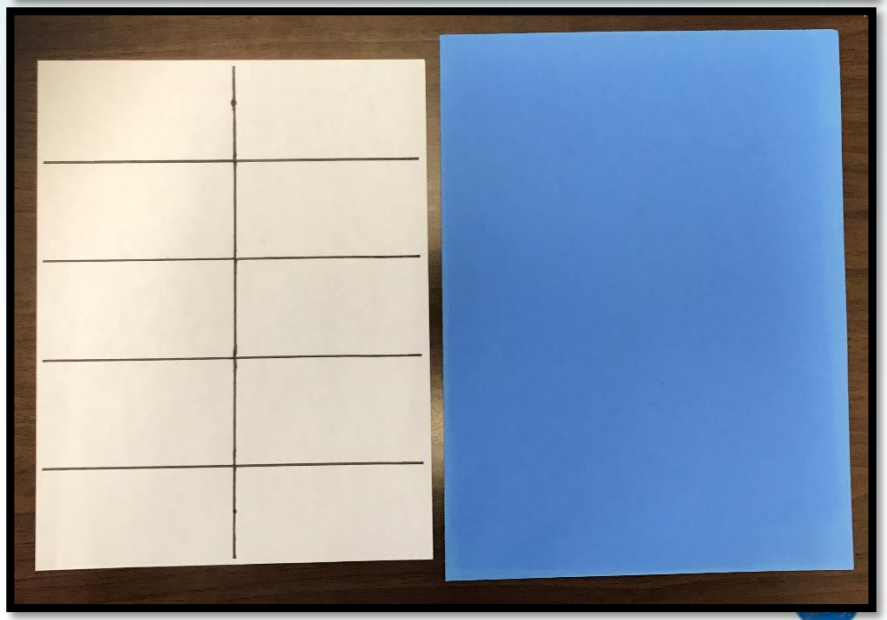
Optional: Submit your pictures

Guide to taking pictures:

- Be sure to be outside!
- Move the phone/tablet until the letter is in the circle. The app will automatically take the picture for you.
  - North-South
  - East-West
  - Up-Down

Image uploaded via GLOBE Observer of clouds observed in Redmond, Washington.

Estimating Cloud Cover Activity



Objective: Visual practice of cloud cover percentages.

Audience:

- Families
- School-aged children
- Tweens

Materials: blue paper, white paper, scissors*, glue

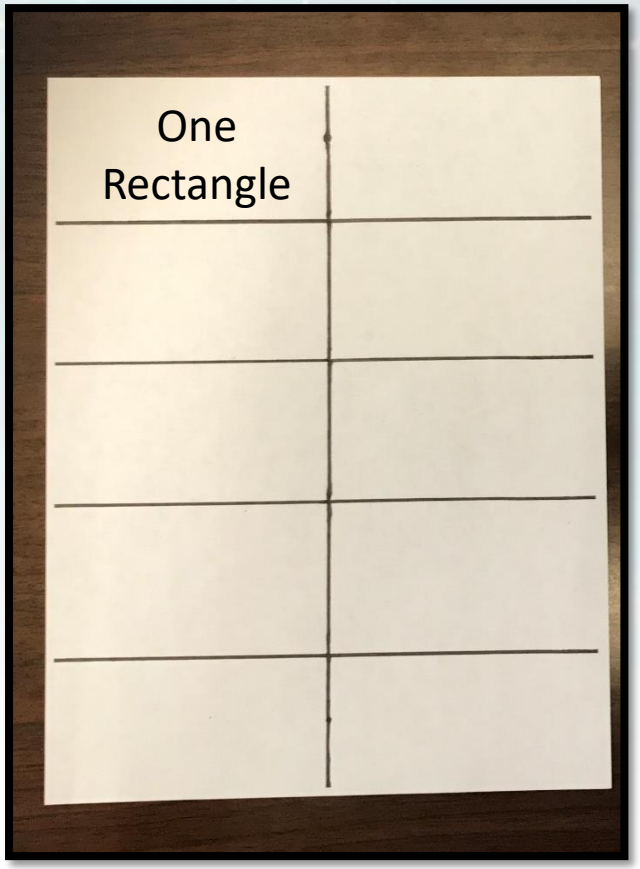
*** Optional; students can also rip paper.**

Estimating Cloud Cover Activity

Visual Practice to Identify Cloud Cover:

Patrons cut out white paper to make clouds. They can make their own cloud scene that represents a given percentage of cloud cover and have others guess the percentage for their cloud scene.

Cloud Estimation Activity



Patrons can cut or rip paper.

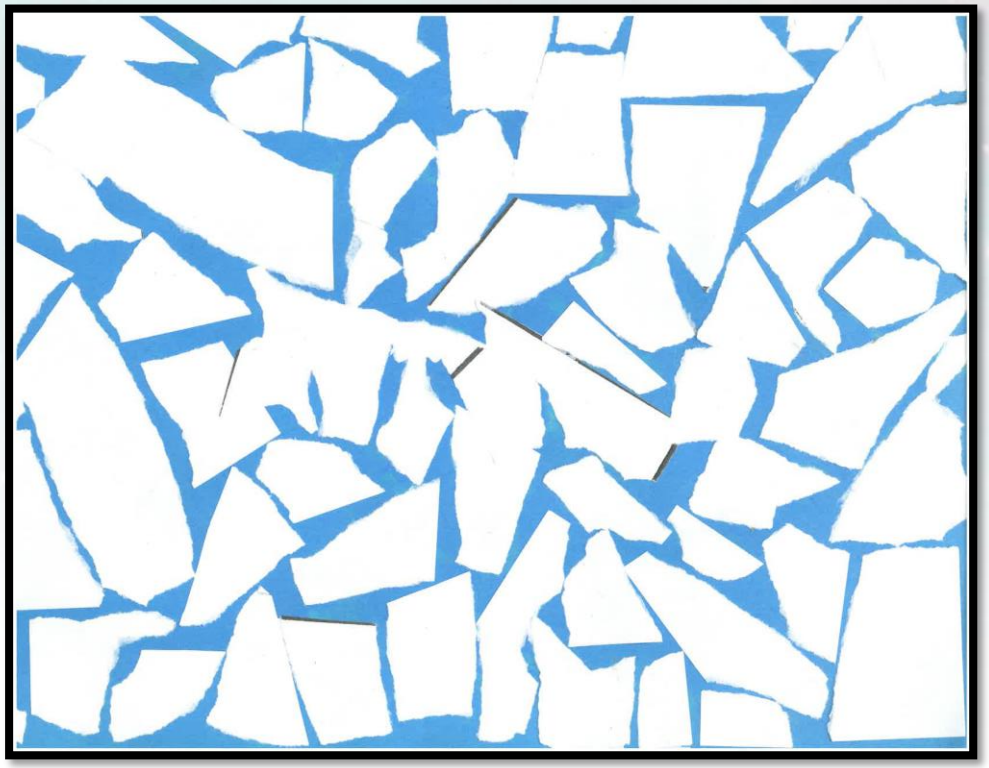
Tip measure percentages:

Divide a piece of paper into 10 equal rectangles. If you use just one rectangle for your cloud scene, you would have 10% cloud cover.

Examples:

One Rectangle → 10% Cloud Cover
Five Rectangles → 50% Cloud Cover
Eight Rectangles → 80% Cloud Cover

What is the cloud cover percentage?

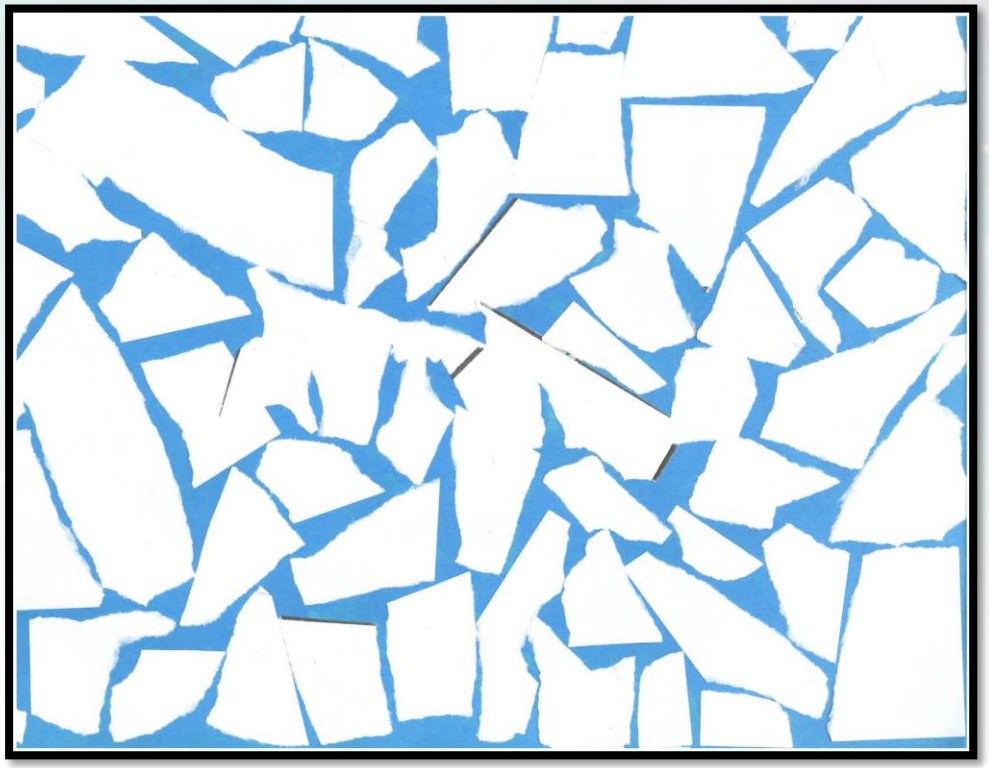


Which best represents the cloud scene?:

Few (less than 10%)
Isolated (10-25%)
Scattered (25-50%)
Broken (50-90%)
Overcast (more than 90%)

What is the cloud cover percentage?

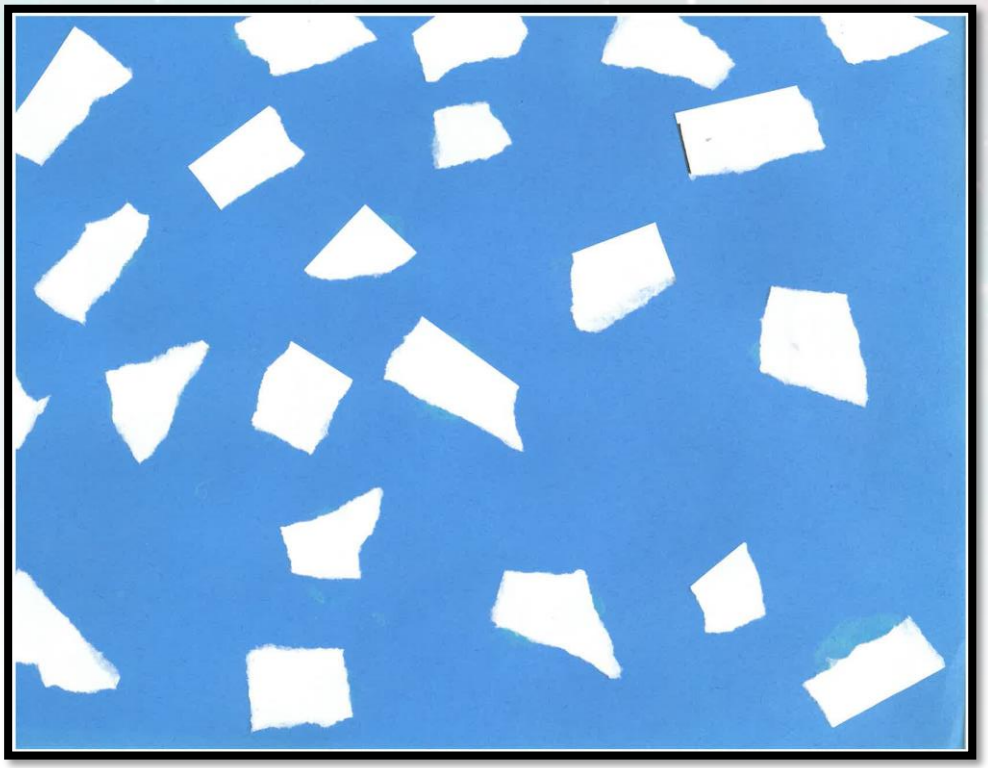
90%



Which best represents the cloud scene?:

Few (less than 10%)
Isolated (10-25%)
Scattered (25-50%)
Broken (50-90%)
Overcast (more than 90%)

What is the cloud cover percentage?

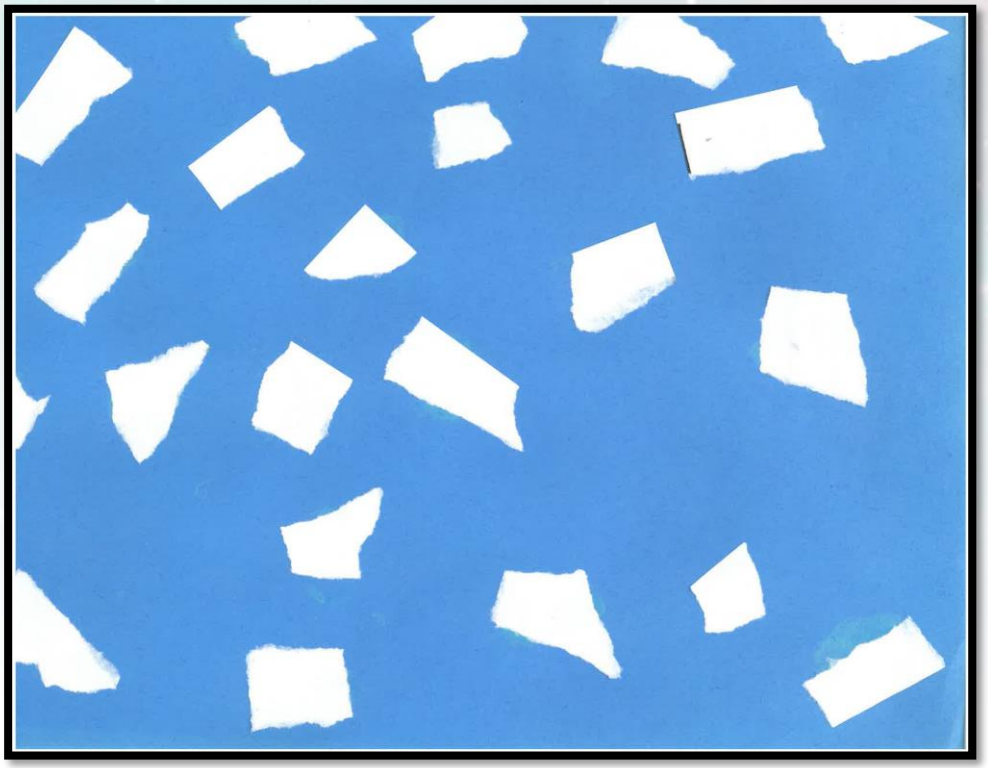


Which best represents the cloud scene?:

Few (less than 10%)
Isolated (10-25%)
Scattered (25-50%)
Broken (50-90%)
Overcast (more than 90%)

What is the cloud cover percentage?

20%



Which best represents the cloud scene?:

Few (less than 10%)
Isolated (10-25%)
Scattered (25-50%)
Broken (50-90%)
Overcast (more than 90%)

NASA@ My Library

A National Earth and Space Science Initiative that Connects NASA, Public Libraries and their Commun

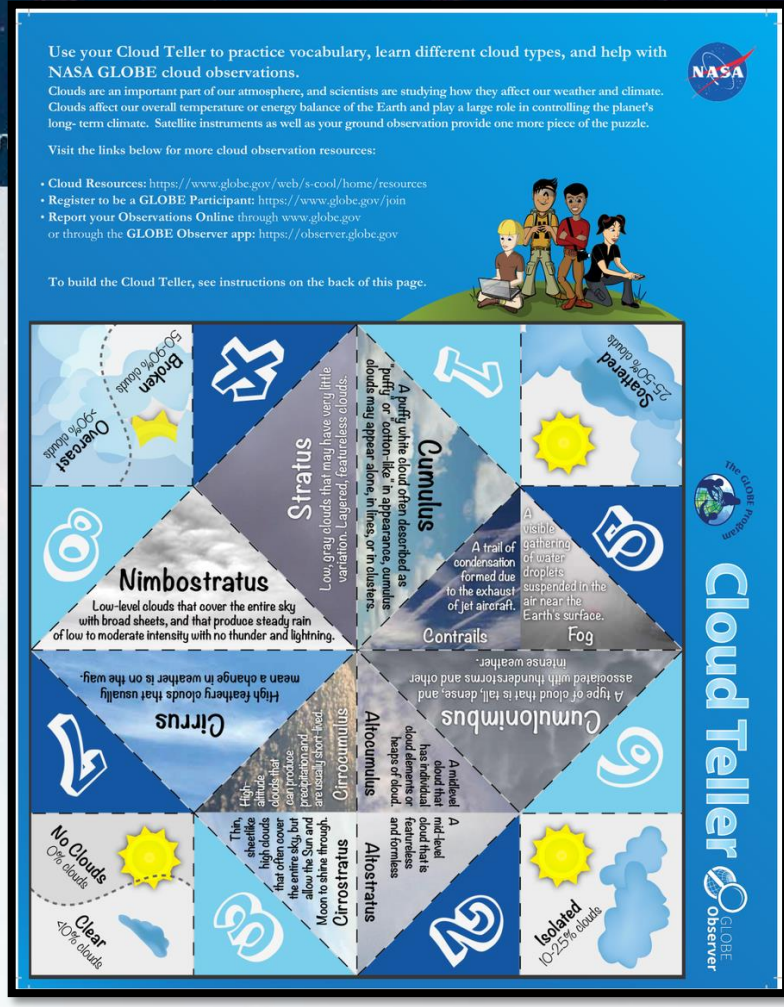
Cloud Teller

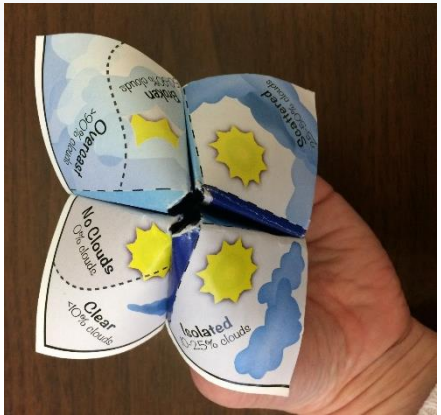
Objective: Fold a teller and learn about clouds

Audience:

- School-aged children
- Tweens
- Families

Materials: teller, scissors





Make a UV Detector

Make a UV Detector

Use tonic water to make an ultraviolet light detector!

Open Activity

How-to Video

Family Guide

Write a review

Content Area
Earth Science
Astronomy and Space
Physics

Age Group
Early Elementary
Upper Elementary
Tweens (9-12)
Teens

Time to Complete Activity
Under 10 minutes

Time needed to prep Activity
Under 5 minutes

Cost associated with Activity Materials
$1-$5

Difficulty Level (by content)
Medium

Mess Level
Low

Protect

1. “Normal” UV bead
2. Protective material #1
3. Protective material #2

Test!

UV flashlight

OR

Sunlight

Results

Daylight in a Bottle

Tweet | Share | Google+ | Pinterest

Send to a friend

Print

Daylight in a Bottle

Students will experiment with radiant energy and the concept of refraction to develop a lighting system made out of recycled materials.

Open Activity

Family Guide

Write a review

Content Area
Physics

Age Group
Family
Early Elementary
Upper Elementary

Time to Complete Activity
40 minutes to 1 hour

Time needed to prep Activity
Under 5 minutes

Cost associated with Activity Materials
$0 ("found" items)

Difficulty Level (by content)
Easy

Mess Level
Medium

Report a broken link

Categorized Incorrectly? Let us know!

And now... a SPECIAL ANNOUNCEMENT!!!

Questions?