



THE GLOBE PROGRAM

A Worldwide Science and Education Program

Ukraine



Clouds


**Хмари
е-тренінг**



THE GLOBE PROGRAM

A Worldwide Science and Education Program

Ukraine

THE GLOBE PROGRAM

ENGLISH

☰

THE GLOBE PROGRAM

ENGLISH

✕

Sign In

- Main Menu
- About
 - Join
 - Get Trained
 - Do GLOBE
 - GLOBE Data




THE GLOBE PROGRAM

A Worldwide Science and Education Program

Ukraine





THE GLOBE PROGRAM

Search: ENGLISH ▼ ✕

[Sign In](#)

Main Menu

- [About](#) ▼
- [Join](#) ▼
- [Get Trained](#) ▼
- [Do GLOBE](#) ▼
- [GLOBE Data](#) ▼
- [Community](#) ▼
- [News & Events](#) ▼
- [Support](#) ▼



Home > Get Trained

Share

Get Trained

Find a
Workshop in
Your Area

Using the
GLOBE
Website

Protocol
eTraining



Get Trained

GLOBE offers trainings around the world. In order to provide high-quality data to the scientific community, teachers are trained in GLOBE data-collection procedures. GLOBE protocols are written and reviewed by scientists.



Protocol eTraining

[Atmosphere](#)

[Biosphere](#)

[Hydrosphere](#)

[Pedosphere
\(Soil\)](#)

[eTraining
Requirements](#)

[eTraining
Community
Feedback](#)

[Discussion
Forums](#)

Protocol eTraining

To enter GLOBE data on this website or through the GLOBE data entry app, GLOBE users must complete the necessary training either by attending a [GLOBE workshop](#) or by completing the required online eTraining modules and assessment tests in this section. Please review the [eTraining Requirements](#) to learn which modules are required to become a trained GLOBE teacher or GLOBE Observer. Once your training is complete, you will be ready to start entering your measurements and will be joining a community of thousands teachers around the world!

Existing GLOBE teachers can continue to expand their GLOBE protocol knowledge by completing additional modules and assessment tests. Click on the [Trained GLOBE Users](#) link below to learn which tests are required to become certified in a particular GLOBE protocol.

The GLOBE community looks forward to welcoming you. Please [contact us](#) if you have any questions. Your question may also be answered in one of our [Discussion Forums](#), so check there as well.

A [summary document](#) about GLOBE eTraining is available for download.



Часто посещаемые Начальная страница



Home > Get Trained > Protocol eTraining

Share

Atmosphere

Protocol eTraining

- Atmosphere
- Biosphere
- Hydrosphere
- Pedosphere (Soil)
- eTraining Requirements
- eTraining Community Feedback
- Discussion



INTRODUCTION TO ATMOSPHERE

Learn about the GLOBE student investigations that explore the Earth's atmosphere, weather and climate. After completing this module, you will be able to describe the structure and composition of the atmosphere and explain how differential

CLOUDS

Learn how to select and define a GLOBE atmosphere Clouds protocol study site and get a step by step introduction of the protocol. After completing this module, you'll know how to explain what clouds are and how they form; explain why clouds are an important element of the Earth system; explain why cloud observations are important for understanding our changing Earth system; identify a Clouds study site and take observations of the sky; upload data to the GLOBE database; visualize data using GLOBE's Visualization Site and have ideas for questions you can address using cloud observations.

Download Module

Assessment Test

Test not completed



THE GLOBE PROGRAM

A Worldwide Science and Education Program

Ukraine



THE GLOBE PROGRAM

Protocol eTraining Assessment Test

Clouds Module

Click the "Start Quiz" button to begin. Good luck!

[Start Quiz](#)



Question 1 of 12 ▾ ▶

Point Value: 10 | Total Points: 0 out of 120



THE GLOBE PROGRAM

Protocol eTraining Assessment Test

Які основні фактори формування хмар?

What are the key factors in how clouds form?

- Water and energy
- Humidity and air
- Sunlight and water
- Water and nuclei and condensation

Вода та ядра конденсації

Submit All

Previous

Next



Question 2 of 12 ▾ ▶

Point Value: 10 | Total Points: 0 out of 120



THE GLOBE PROGRAM

Protocol eTraining Assessment Test

Які 3 характеристики визначають тип хмар?

What are the 3 characteristics that define cloud type?

- Shape, size and color.
- Shape, altitude and precipitation.
- Shape, thickness and water phase.
- Altitude, precipitation and shading.

Форма, висота і вологість

Submit All

Previous

Next



Question 3 of 12 ▾ ▶

Point Value: 10 | Total Points: 0 out of 120



THE GLOBE PROGRAM

Protocol eTraining Assessment Test

What factors determine if and what type of contrail will form? **Які фактори визначають формування інверсійного сліду?**

- Humidity and temperature **Вологість і температура**
- Humidity and pressure
- Altitude and temperature
- Pressure and airplane type

Submit All

Previous

Next



Question 4 of 12 ▾ ▶

Point Value: 10 | Total Points: 0 out of 120



THE GLOBE PROGRAM

Protocol eTraining Assessment Test

Які причини є для того, що вивчення хмар важливе?

What are some reasons that studying clouds are important?

- They make the sky interesting.
- They provide clues for weather forecasting.
- They moderate Earth's temperature.
- All of the above.

Це цікаво

Хмари – це ключ до прогнозу погоди

Вони визначають температуру Землі

Всі вище зазначені

Submit All

Previous

Next



Question 5 of 12 ▾ ▶

Point Value: 10 | Total Points: 0 out of 120



THE GLOBE PROGRAM

Protocol eTraining Assessment Test

Якщо на небі нема хмар, чи потрібно заповнювати протокол?

If the sky is empty of clouds, should you still submit a cloud observation report?

- No, because this is the clouds protocol.
- Yes, just to practice.
- Yes, because an observation every day is required.
- Yes, because clear sky observations are especially useful.

Так, чисте небо також дає багато інформації

Submit All

Previous

Next



Question 6 of 12 ▾ ▶

Point Value: 10 | Total Points: 0 out of 120



THE GLOBE PROGRAM

Protocol eTraining Assessment Test

Які особливості хмар роблять деякі дні темнішими?

What feature of clouds makes some days darker?

- Their thickness. **Їхня товщина**
- Their location with respect to the Sun. **Розташування відносно Сонця**
- The cloud cover. **Щільність хмарного покриву**
- All of the above. **Все вище зазначене**

Submit All

Previous

Next



Question 7 of 12 ▾ ▶

Point Value: 10 | Total Points: 0 out of 120



THE GLOBE PROGRAM

Protocol eTraining Assessment Test

Якщо іде дощ, то який тип хмар це може бути?

If it is raining, what two cloud types might it be? What is the difference?

- Nimbostratus or cumulonimbus
- Nimbostratus or stratus
- Cumulus or cumulonimbus
- Stratocumulus or stratus

Шарувато-дощові або купчасто-дощові

Submit All

Previous

Next



Question 8 of 12 ▾ ▶

Point Value: 10 | Total Points: 0 out of 120



THE GLOBE PROGRAM

Protocol eTraining Assessment Test

What is the type of cloud you are most likely viewing if you can imagine lots of fun shapes?

- Cirrus
- Cumulus **Купчасті**
- Stratus
- Cumulonimbus

Який тип хмар зазвичай утворює велику кількість веселих форм

Submit All

Previous

Next



Question 9 of 12 ▾ ▶

Point Value: 10 | Total Points: 0 out of 120



THE GLOBE PROGRAM

Protocol eTraining Assessment Test

Що ви можете використовувати при визначенні висоти хмари?

What can you use to help determine cloud height?

- A ruler
- Binoculars
- Your hand and eyes
- An altimeter

Руки та очі

Submit All

Previous

Next



Question 10 of 12 ▾ ▶

Point Value: 10 | Total Points: 0 out of 120



THE GLOBE PROGRAM

Protocol eTraining Assessment Test

Should you observe and report clouds all the way to the horizon?

Чи обов'язково спостерігати і звітувати про хмари на всьому горизонті?

- Yes, every cloud counts
- Yes, you should report everything you see
- No, only clouds straight overhead
- No, only clouds above a 14-degree view angle

Ні, тільки про хмари, які знаходяться вище кута в 14 градусів

Submit All

Previous

Next



Question 11 of 12 ▾ ▶

Point Value: 10 | Total Points: 0 out of 120



THE GLOBE PROGRAM

Protocol eTraining Assessment Test

How much of the sky needs to be obscured to report that state?

- 100%
- 75%
- 50%
- 25%

Який відсоток неба потрібно обстежувати для звіту?

Submit All

Previous

Next



Яка теза може бути прикладом питання для дослідження?

What's an example of a question you could explore or investigate based on cloud observations?

Як хмари змінюються щодня або сезонно?

How do clouds change day-to-day or seasonally?

Як різні типи хмар спричиняють зміну температури?

How do different types of clouds affect air temperature?

Як пов'язані спостереження за хмарами з Землі зі супутниковими?

How do ground cloud observations relate to satellite imagery?

All of the above

Все зазначене вище

Submit All

Previous

Next



Question 12 of 12 ▾ ▶

Point Value: 10 | Total Points: 0 out of 120



THE GLOBE PROGRAM

Protocol eTraining Assessment Test

What's an example of a question you could explore or investigate based on cloud observations?

- How do clouds affect the Earth's temperature?
- How do different cloud types affect the Earth's temperature?
- How do ground cloud observations relate to satellite imagery?
- All of the above

? Are you sure you want to submit all answers and finish the quiz?

Yes

No

Submit All



[Detailed Results](#) ▾

[Print Results](#)



THE GLOBE PROGRAM

Protocol eTraining Assessment Test



Congratulations! You successfully completed the Clouds module. Click 'Finish' to record your results.

Quiz Result

Your Score: **100%**

Passing Score: **80%**

[Review Quiz](#)

[Finish](#)



06/06/2019

Assessment Test

My eTraining Requirements

x

Recently completed module: **CLOUDS**

You have completed the required eTraining modules to become trained in **Clouds** and your training records have been updated.

[View your training records](#)

protocol study site and
g this module, you'll
ain why clouds are an
ervations are important
is study site and take
visualize data using
n address using cloud

Download Module

Assessment Test

Test not completed

Supporting Material:

[Contrail Formation Tutorial](#)

In this tutorial, you can explore the physics of contrail formation in the atmosphere and develop the ability to recognize the several types of contrails that form under varying atmospheric conditions. Practice classifying the type and abundance of contrails.

[Cloud Cover Practice](#)

This interactive web-based tool allows you to calibrate your eye by practicing cloud cover estimation using images on the computer.



CLOUDS

Learn how to select and define a GLOBE atmosphere Clouds protocol study site and get a step by step introduction of the protocol. After completing this module, you'll know how to explain what clouds are and how they form; explain why clouds are an important element of the Earth system; explain why cloud observations are important for understanding our changing Earth system; identify a Clouds study site and take observations of the sky; upload data to the GLOBE database; visualize data using GLOBE's Visualization Site and have ideas for questions you can address using cloud observations.

[Download Module](#)

[Assessment Test](#)

Test completed
06/06/2019