




The science behind the sky

A

The chemistry of the sky



When sunlight hits a rain droplet, some of the light is reflected. The electromagnetic spectrum is made of light with many different wavelengths, and each is reflected at a different angle.

Light bounces off of air molecules in the Earth's atmosphere, scattering in all directions. Blue light is scattered more than other colors of light because of its shorter, smaller waves.

This is why the sky is blue, rather than any other colors

This is how a rainbow is formed.



The chemistry behind the sky



Clouds



Clouds are what make rain fall!



Clouds form when the invisible water vapor in the air condenses into visible water droplets or ice crystals. For this to happen, the parcel of air must be saturated, i.e. unable to hold all the water it contains in vapor form, so it starts to condense into a liquid or solid form.



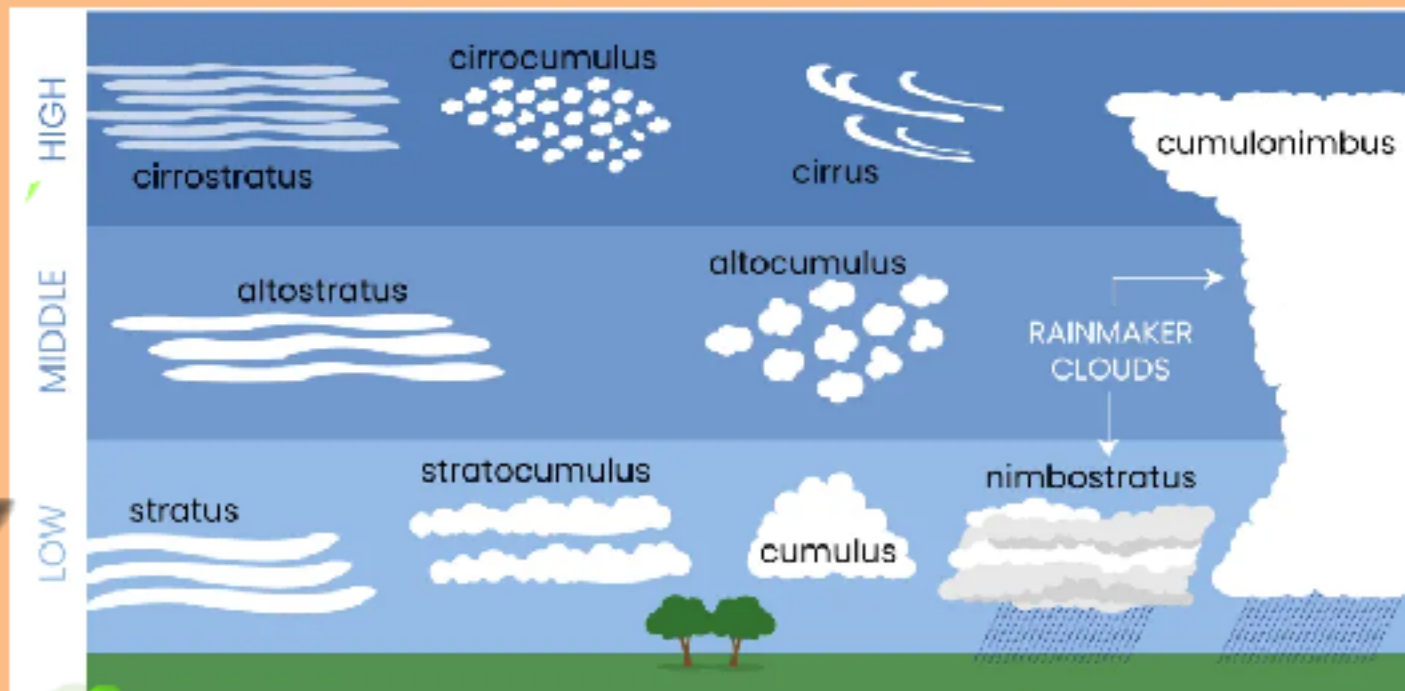
To this!

When a cloud gets too full with water droplets or ice, it lets go of everything inside it causing rain, snow, sleet, or hail.

From this...

Cirrus clouds are wispy, curly, or stringy. Stratus clouds are horizontal and stratified, or layered. Stratus clouds can blanket the entire sky in a single pattern. Cumulus clouds are created by strong updrafts of warm, moist air.

These are the different types of clouds!



The earth's atmosphere is what protects us from too much radiation and heat.

The atmosphere

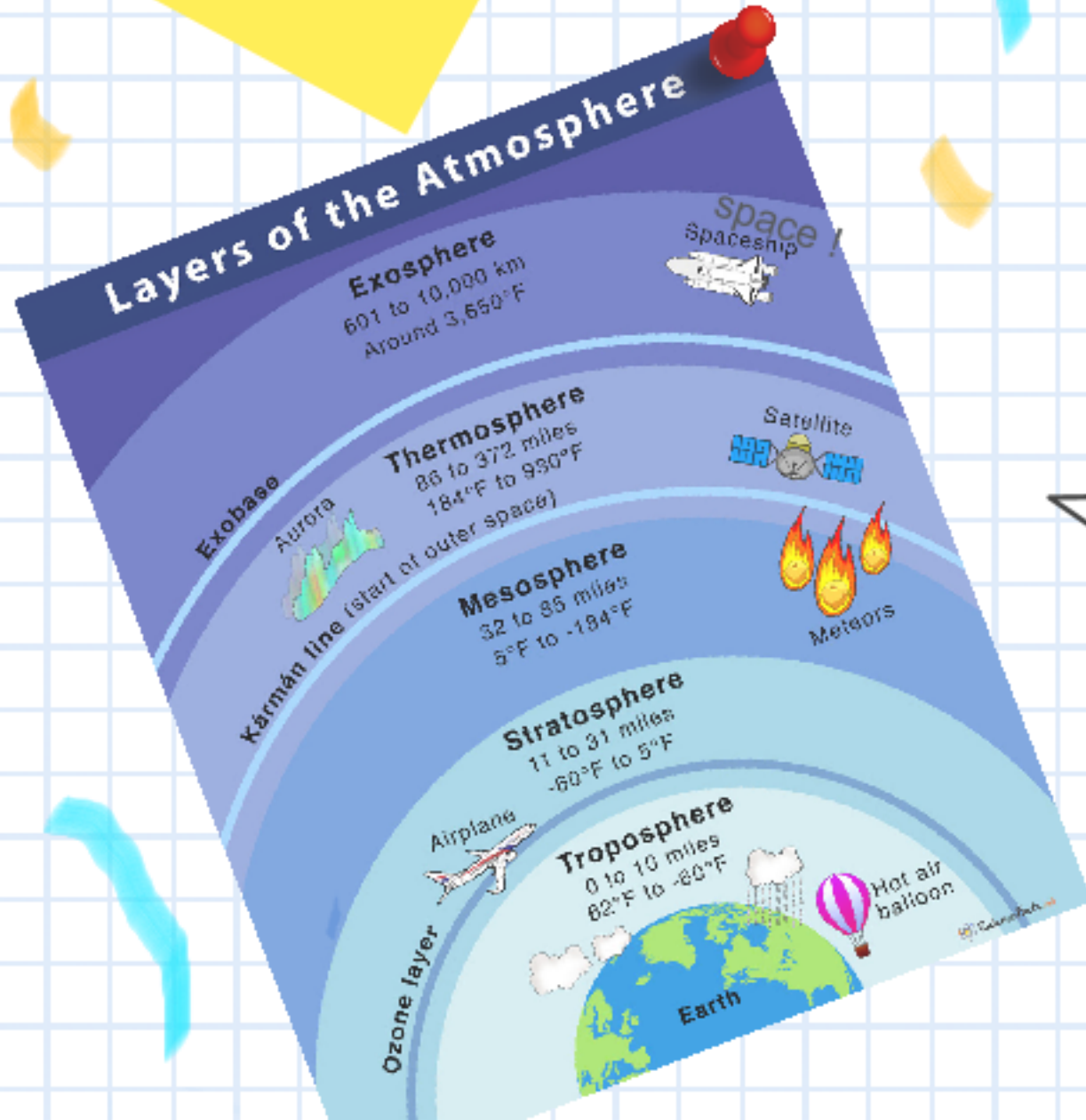
Earth's atmosphere is composed of about 78 percent nitrogen, 21 percent oxygen, 0.9 percent argon, and 0.1 percent other gases. Trace amounts of carbon dioxide, methane, water vapor, and neon are some of the other gases that make up the remaining 0.1 percent.



The earth's atmosphere is big and is composed of gravity

The densest part of the atmosphere only extends to about 20km above the ground.

These are the earth's atmosphere's layers.



O₂

N

Fun facts about the sky!

Clouds can weigh millions of tons of water!

The atmosphere is 4.6 BILLION years old!

A double rainbow appears when light is reflected twice in a raindrop.

The word sky comes from the Old Norse sky, meaning 'cloud, abode of God'

The atmosphere's composition has changed over millions of years because of volcanic and microbial activity.



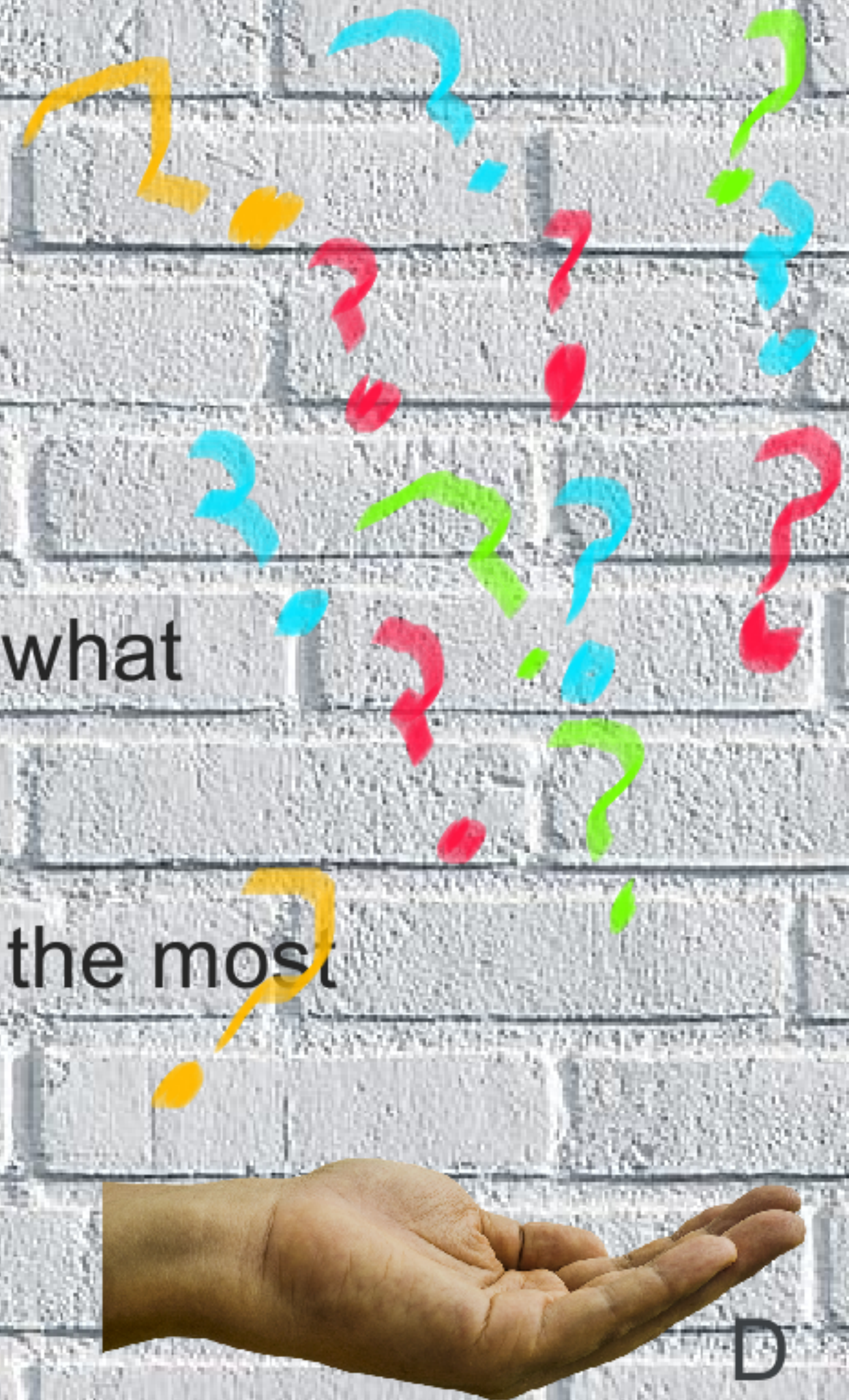
Practice questions

1. How do clouds form?

2. Why is the sky blue ?

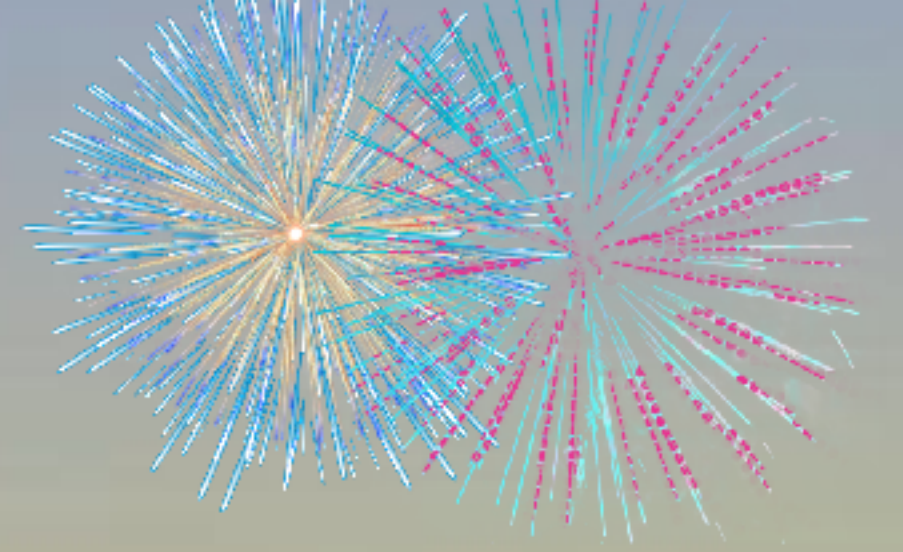
3. When light is reflected twice in a raindrop, what forms?

4. What does the earth's atmosphere contain the most of?





Practice answers



1. Clouds form when the invisible water vapor in the air condenses into visible water droplets or ice crystals.
2. Light bounces off of air molecules in the Earth's atmosphere, scattering blue the most.
3. Double rainbows
4. Nitrogen



BBBBBYYYYEEEEEEEEEE - D,A, and N

can we play gimkit ?

tee hee

:D