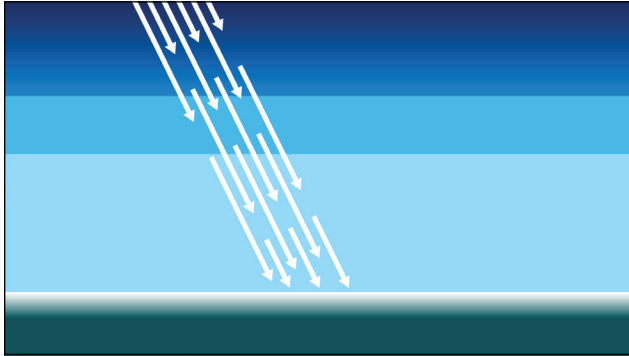


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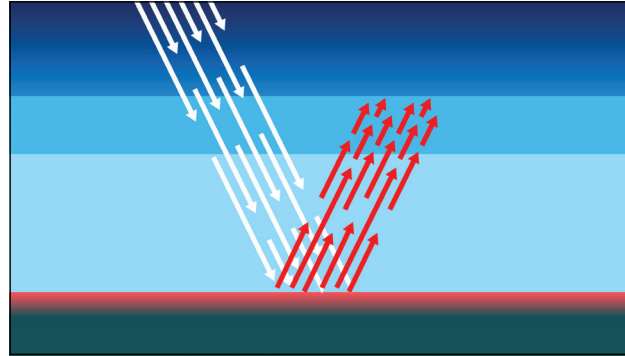
1 5 sec



Voice Over:
Greenhouse gases let sunlight through to warm the surface.

Visual: White arrows continually move into the Earth's surface. Earth's surface glows white.

2 3 sec



Voice Over:
The surface then glows with infrared light.

Visual:
Earth's surface glows red. Red arrows move away from the ground reducing in speed as they move through the greenhouse gas.

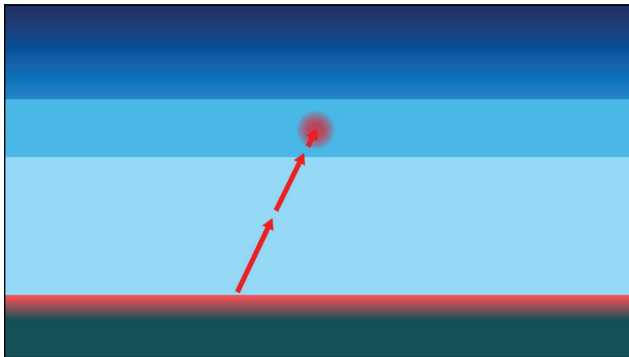
3 4 sec



Voice Over:
Our eyes aren't tuned to its frequency so it's invisible to us.

Visual:
All arrows and glows disappear.

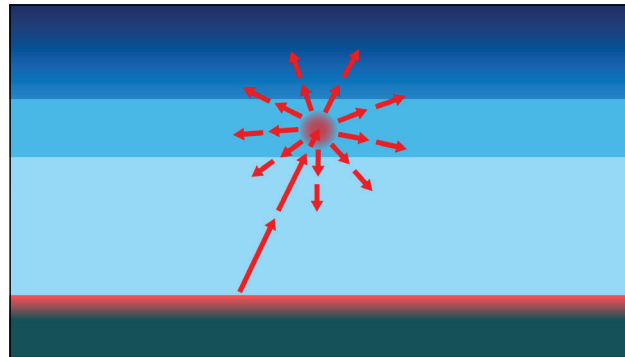
4 7 sec



Voice Over:
But greenhouse gases absorb some of this infrared. At the same time, they glow with their own infrared.

Visual:
Glow reappears and a single arrow continually moves up from the ground in the greenhouse gas. The a small section of the greenhouse gas glows where the arrow collides.

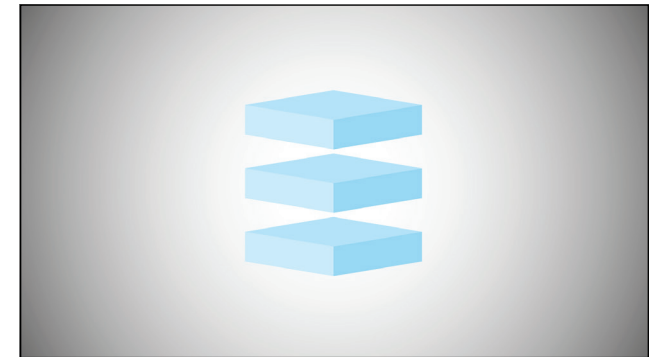
5 8 sec



Voice Over:
They glow in all directions, and the part of the glow that goes up can be absorbed by greenhouse gases further up in the atmosphere.

Visual:
Arrows are emitted from the glow in the greenhouse gas.

6 3 sec



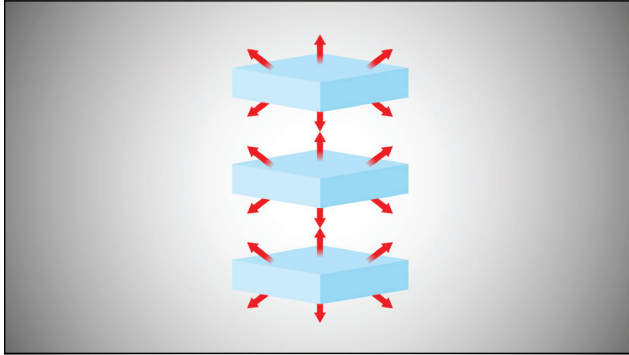
Voice Over:
It's useful to think of the atmosphere as layers.

Visual:
Cut to new scene showing layers of atmosphere.

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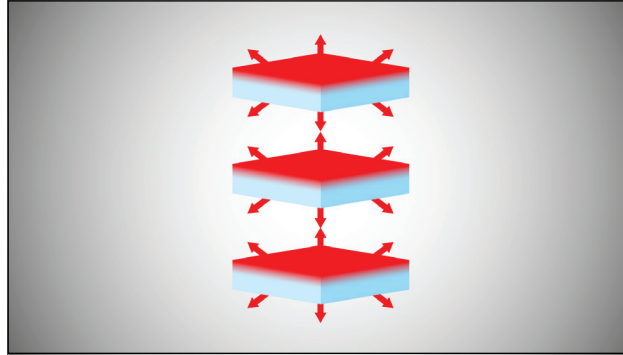
7 4 sec



Voice Over:
Each layer of the atmosphere has a greenhouse glow in every direction.

Visual:
Layers separate more and arrows are emitted.

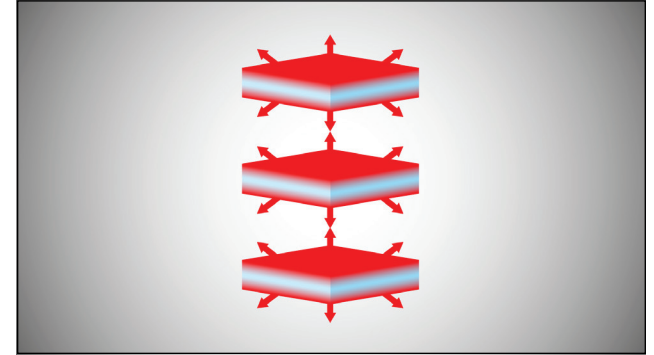
8 5 sec



Voice Over:
Meanwhile, each layer absorbs some of the infrared glow that comes from the layer above,

Visual:
Top of layers glow.

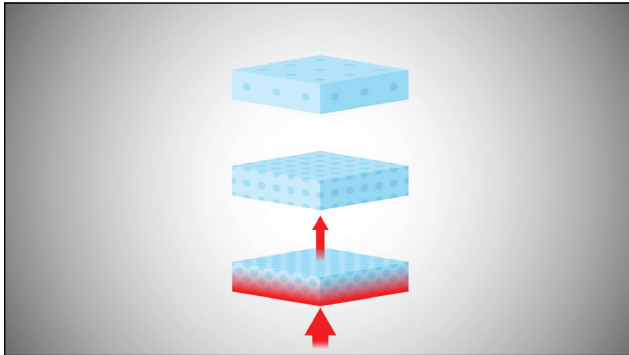
9 3 sec



Voice Over:
and some from the layer below.

Visual:
Bottoms of layers start glowing.

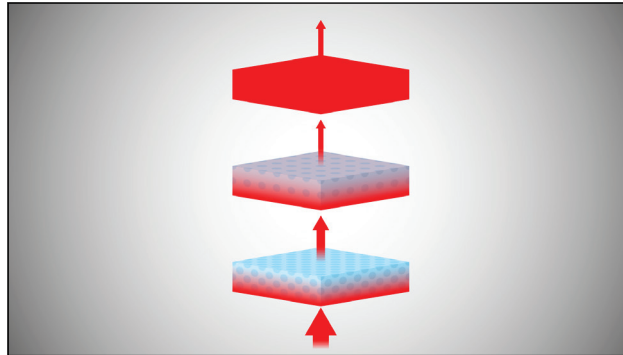
10 9 sec



Voice Over:
Low down in the atmosphere, the air is thicker than higher up. Each layer has enough greenhouse gas to absorb much of the infrared going through it.

Visual:
Glow and arrows are removed. Dots appear in layers to indicate air thickness. A new arrows moves through the bottom layer and reduce in size. The bottom of the layer glows.

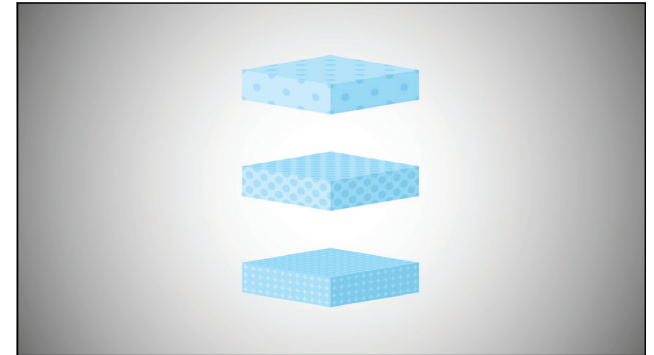
11 11 sec



Voice Over:
Higher up in the atmosphere, the air gets thinner. That's why it's harder to breathe at the top of a mountain. Each layer doesn't have enough greenhouse gas to fully trap passing infrared.

Visual:
Arrows move through all of the layers reducing in size.

12 9 sec

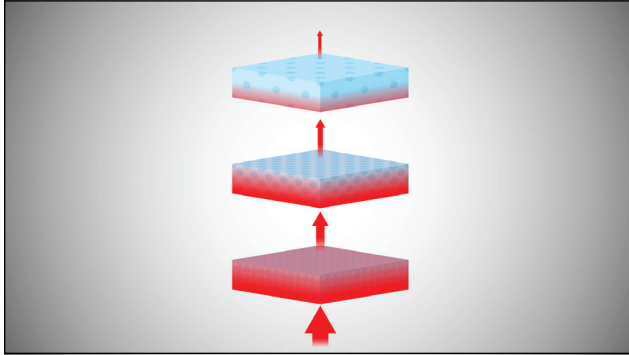


Voice Over:
Burning coal, oil and gas releases carbon dioxide, a greenhouse gas. Stirred by the winds, it mixes through the atmosphere.

Visual:
Arrows and glows are removed and extra dots appear in each layer.

13

10 sec



Voice Over:

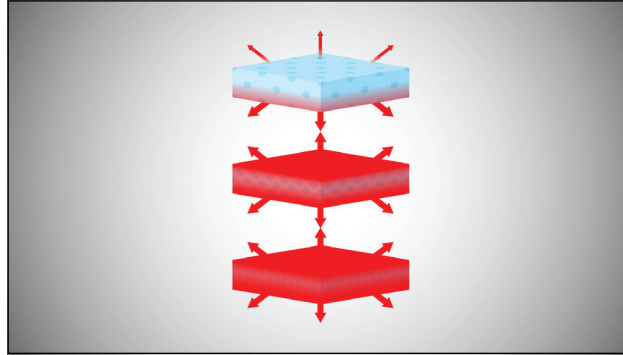
The biggest effect is high up where the air is thinner.
This is where infrared previously escaped to space.
Adding more greenhouse gases captures this infrared.

Visual:

Arrows move through all of the layers reducing in size and stopping at the top layer.

14

9 sec



Voice Over:

This upper layer now glows a little more brightly. A
little more heat is recycled back into the atmosphere.
This is how adding more greenhouse gases makes us
warmer.

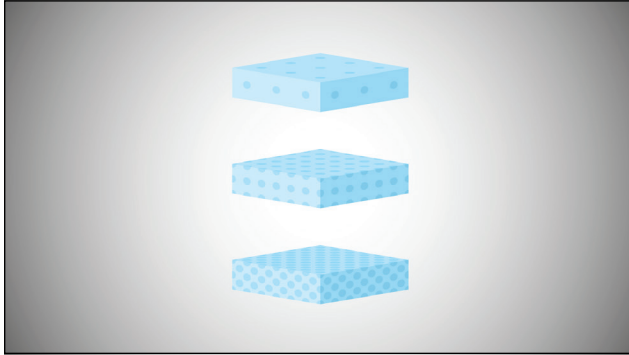
Visual:

Arrows are removed and new arrows are appear
sequentially from the top to bottom.

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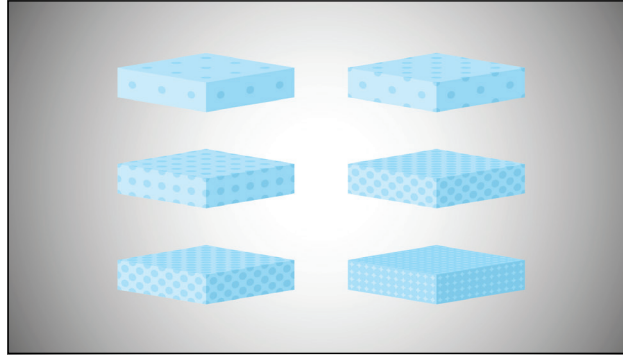
1 9 sec



Voice Over:
In the upper layers of the atmosphere, the greenhouse effect isn't saturated. The concentration of greenhouse gases is a lot less than in Angstrom's tube.

Visual:
Layers of atmosphere appear.

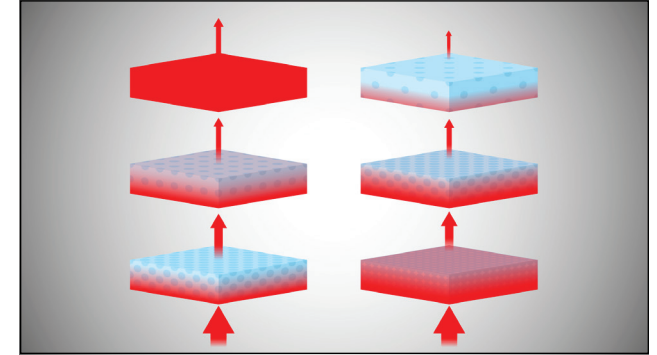
2 6 sec



Voice Over:
Adding greenhouse gases blocks the infrared's escape path to space.

Visual:
Layers of atmosphere and greenhouse gases appear.

3 8 sec



Voice Over:
Some of the infrared that used to escape to space has now been trapped. The layer's greenhouse glow sends some of it back down to warm us up.

Visual:
Arrows move through layers.