

A close-up photograph of a human hand held palm-up, completely covered in a thick, vibrant green, fuzzy substance. The substance has a granular, almost crystalline texture, characteristic of a green algal bloom. The background is a blurred outdoor setting with grass and soil.

**What are algae?**

A close-up photograph of a person's hand holding a thick, green, slimy substance, likely a type of algae or cyanobacteria. The substance is spread across the palm and fingers, appearing moist and textured. The background is a blurred outdoor setting with grass and soil.

# **Discussion Question**

Talk in your group or with your partner what you already know about algae.

# Algae Observation

Look at the algae. What do you notice?

Write your observations about the algae in your science notebook.

- Color
- Size
- Environment
- Texture

**Draw and label a diagram of the container of algae.**

# Algae Observation

- What is similar about algae and plants?
- What is different about algae and plants?

# What are algae?

Algae are organisms that can undergo photosynthesis.



They are not plants because they do not have defined plant parts, like roots or petals. They are closely related to plants.

# Single-Celled Algae



*This picture was taken using a microscope. It shows what an alga looks like when magnified.*

This is a common single-celled alga that lives in ponds and rivers.

It uses the two long strands to move through the water. These strands are called flagella.

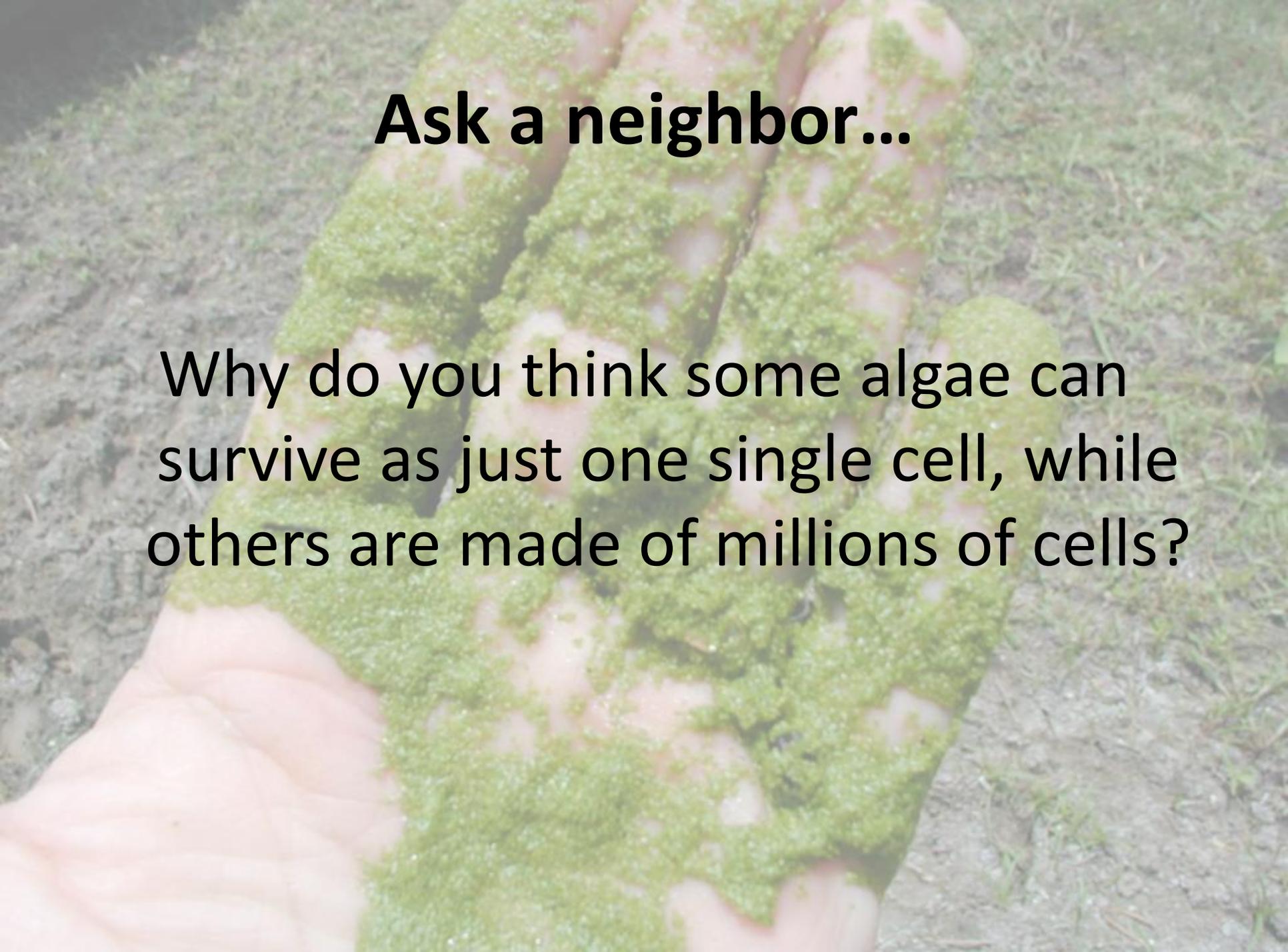
It gets its food from the sun's light.

# Multi-Celled Algae



This seaweed is a type of algae. It is made up of millions of cells.

Kelp is another type of multi-celled algae. These ocean algae do not have roots, so they can float on the surface to access sunlight.



## **Ask a neighbor...**

Why do you think some algae can survive as just one single cell, while others are made of millions of cells?

# Why are algae important?

Algae produce 60-70% of the earth's oxygen.  
Animals and humans need oxygen to breathe.



*The surface of this pond is completely covered by oxygen-producing algae.*

*Why do the algae prefer the surface of the pond?*

# Why are algae important?

Algae are the basis of most food chains in water ecosystems. They are an important energy source for fish and other consumers.



*This algae-eater fish has a mouth designed for sucking algae off of rocks.*



# Why are algae important?

Algae produce oxygen during photosynthesis. This emits oxygen into the water for fish to breathe.



# Why are algae important?

Algae use up carbon dioxide to undergo photosynthesis. Carbon dioxide is a greenhouse gas that many scientists think is leading to global climate change.



# Ask a neighbor...

- How will adding the algae to the eco-column be beneficial to the community of organisms living within?
- Which organisms in the eco-column will be most helped by adding the algae? How do you know?

# Science Notebook Reflection

In Stonybrook Lake, the water has become slightly more acidic than usual. This is causing the algae that live in the lake to disappear quickly. How will this impact the fish that live in Stonybrook Lake?