Biology A · Unit 3 · Level 1

Biofuel & Energy



TODAY'S PLAN

- ⚡ Energy
- 🧈 Oil from algae
- 🌡️ Hot or cold
- 🔄 Carbon cycle

Review · 5 minutes

Quick Review



🌿 Algae use **sun** to make food.

🧈 Algae make **oil**.

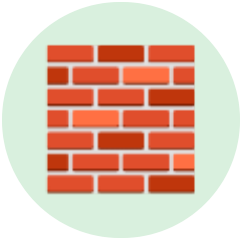
👉 Point: what do algae need? ☀️ 💧 💨

Words to Know

Words to Know



Energy
makes things move or change



Matter
stuff you can touch



Potential energy
stored energy, waiting



Kinetic energy
moving energy

Learn

What Is Energy?



⚡ Energy makes things **move** or **change**.

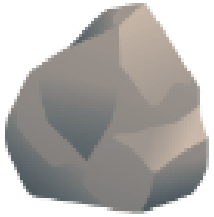
🧱 Matter is stuff you can **touch**.

Compare

Two Kinds of Energy



Stored



🪨 Rock on a hill

⛽ Fuel in a tank

Moving



🪨 Rock rolls down

🚌 Bus drives

🃏 Check 1 of 3



Which one is moving energy?

Point to the picture!

🔋 Battery on a shelf

🏃 Kid running

✅ Answer · Card 1 of 3



Kid running

Running is moving energy.

Learn

Energy Kinds



Chemical
in food and fuel



Heat
warm



Light
from the sun



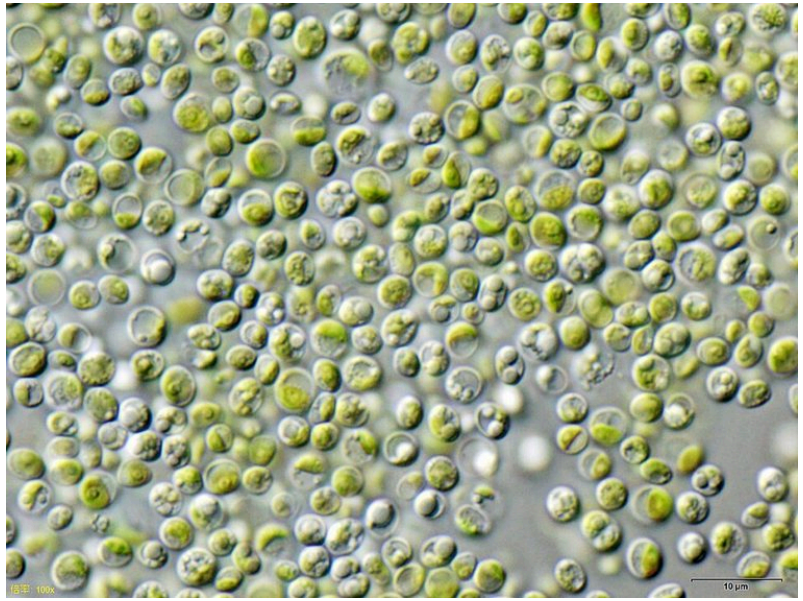
Moving
makes things go

Learn

Algae Make Oil

🌿 Tiny **algae** grow fast.

🧈 They make **oil** (fat).

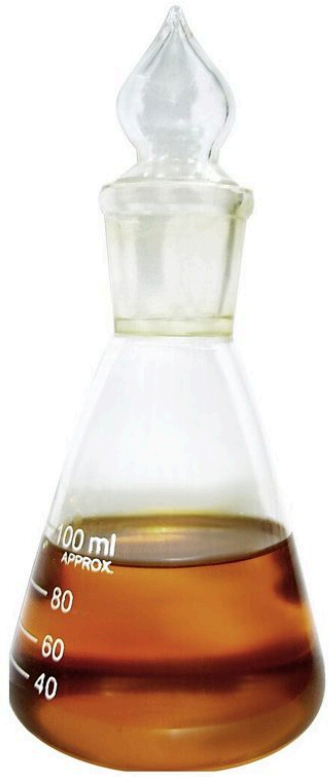


Learn

Oil Into Fuel

🧪 The teacher mixes oil to make **biodiesel**.

👀 We **watch** and **record**.





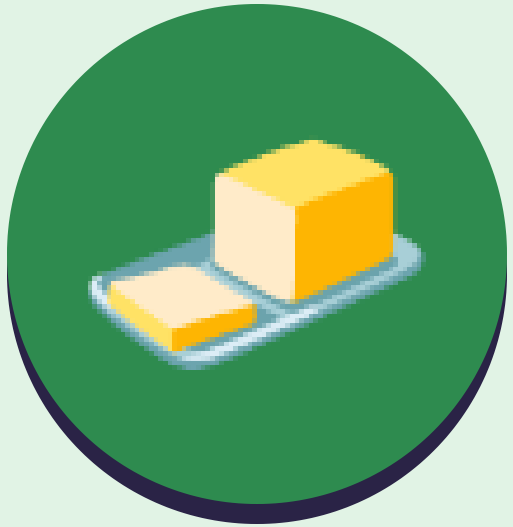
Biodiesel is made from...

Point to the picture!

Plant oil

Candy

✅ Answer · Card 2 of 3



Plant oil

Biodiesel is made from plant or algae oil.

Learn

Burn Fuel = Heat

🔥 Burning fuel makes **heat**.

🚌 Heat makes the bus **go**.



Compare

Hot or Cold?



Gets hot



🌡️ Number goes **up**

🧤 Hand warmer

Gets cold



🌡️ Number goes **down**

🧊 Cold pack

Check 3 of 3



The cup gets cold. It is...

Point to the picture!

Cold reaction

Hot reaction

✅ Answer · Card 3 of 3



Cold reaction

Cold means energy went in (endothermic).

Compare

Fuels



Grows back

♻️

🌿 Algae
🌽 Corn

Runs out

⛏️

🛢️ Oil from the ground
🪨 Coal

Steps

Carbon Goes Around



1. 💨 Carbon is in the **air**.
2. 🌿 Algae **take it in**.
3. 🔥 Fuel **burns**.
4. 💨 Carbon goes **back** to the air.

Wrap-Up

Recap



Energy
makes things move



Algae
make oil



Biodiesel
fuel from oil



Renewable
grows back

Wrap-Up

Great Job!



⚡ I can point to energy.

🛢️ Biodiesel comes from oil.

♻️ Algae fuel can grow back.