SCHOLASTIC Teachers Parents Kids Administrators Librarians

Sign in -or- Register

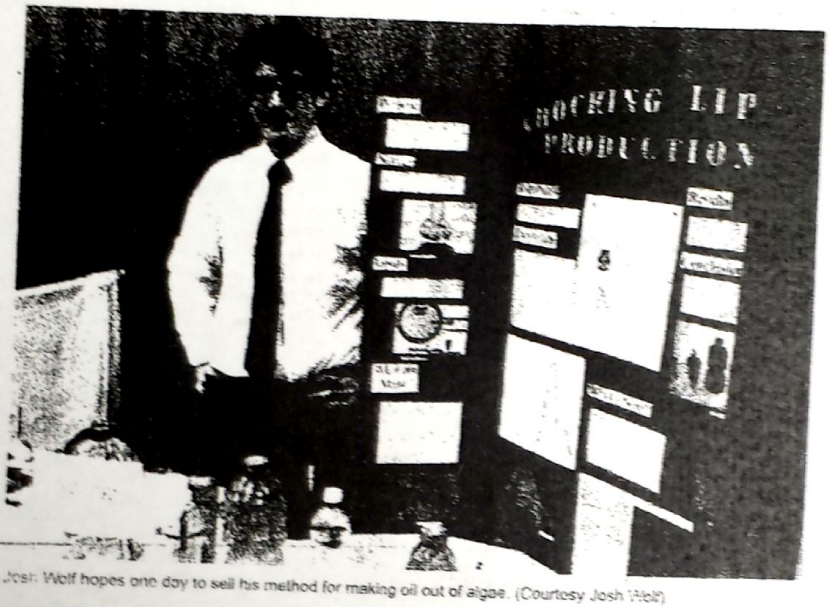
CRCPGVM

My Book Lists

Where Teachers Come First

Search the Teachers Site

Resources & Tools | Strategies & Ideas | Student Activities | Books & Authors | Products & Services | Shop The Teacher Store | Storia™ eBooks



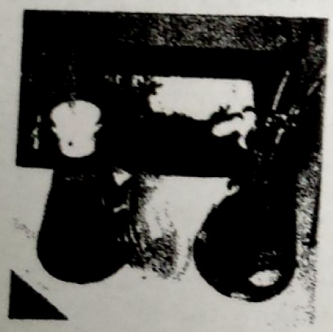
Josh Wolf hopes one day to sell his method for making oil out of algae. (Courtesy Josh Wolf)

Student Makes Fuel From Algae

A Minnesota teen has discovered a way to power trucks and cars with algae

By Jennifer Marino Walters | September 5 , 2012

PRINT EMAIL



Josh keeps the algae he uses alive so that it will continue to produce fuel. (Courtesy Josh Wolf)

Sixteen-year-old Josh Wolf spends up to 40 hours each week in a portable garage behind his family's home in Elk River, Minnesota. But he's not working on cars. He's making his own diesel fuel—the type of fuel used to power trucks, trains, buses, boats, farm and construction vehicles, and even some automobiles—from algae.

Inside the garage, Josh grows algae in a large trash container filled with water. Using parts he took from an old toy rocket launcher, he shocks the algae with low levels of electricity. This causes oil inside the algae to shoot out and float to the surface of the water. About 40 hours later, Josh skims the oil from the water and adds household chemicals to it to turn it into diesel fuel. He produces about one liter of diesel each day, which he sometimes uses to fuel his friends' pickup trucks.

"Getting to see my spark of an idea be [turned] into great work has been one of the most [thrilling] experiences . . . in my life," Josh told *Scholastic News*.

SOURCE

Scholastic News Online

Scholastic News Online is a free resource with breaking news and highlights from the print magazine.

Available for grades 1-6, Scholastic News magazine brings high-interest current events and nonfiction to millions of classrooms each week.

Additionally, our subscribers have FREE access to Scholastic News Interactive, an exclusive online learning tool featuring digital editions, videos, interactive features, differentiated articles, and much more.

Scanned by CamScanner

Some companies already make diesel fuel out of dried algae using machines that squeeze oil from it. But Josh uses live algae, which he keeps alive to produce fuel over and over. And while the companies' method costs about $20 per gallon of diesel fuel, Josh estimates his method costs only about 3 cents per gallon (plus an additional 90 cents per gallon to clean it up.)

FUEL OF THE FUTURE

Before starting his algae project last year, Josh had perfected turning cooking oil into diesel fuel. His method will soon help power Elk River school buses. He is also working on making gasoline out of plastic shopping bags, which are made from petroleum. So far he's gotten a lawnmower to run using the product that resulted from this latest project.

But it's Josh's algae project that has gotten the most attention. Josh was named one of seven finalists in the 2011 International Algae Competition, the only high school student of the group. He gives presentations about his work at events. And he has a lawyer who is working on getting a patent for his oil production process, which would mean only he would have the right to use or sell it.

Josh is now looking for investors to help fund the project, which he's been paying for with his allowance. He hopes to eventually sell his process to large fuel companies that can mass-produce the algae-based oil and turn it into various types of fuels, including gasoline and even jet engine fuel.

"I would like to see this running on a large-scale setup," Josh says. "But only time will tell."

School to Home

Reading Club (Book Clubs)
Book Fairs

Teacher Resources

Book Lists
Book Wizard
Instructor Magazine
Lesson Plans
New Books
New Teachers
Scholastic News Online
Kids Press Corps
Strategies and Ideas
Student Activities
Daily Teacher Blogs
Videos
Whiteboard Resources

Products & Services

Author Visit Program
Classroom Books
Classroom Magazines
Find a Sales Representative
Free Programs and Giveaways
Guided Reading
MATH 180
Product Information
READ 180
Reading is Fundamental
Request a Catalog
Scholastic Achievement Partners
Scholastic Professional
Tom Snyder Productions

Online Shopping

ListBuilder
Printables
Teacher Express
Teacher Store

Share Feedback

Sign up today for free teaching ideas, lesson plans, online activities, tips for your classroom, and much more.

Enter your email address

Choose your grade range:

Sign Me Up! See a sample >

PRIVACY POLICY · Terms of Use · TM ® & © 2013 Scholastic Inc. All Rights Reserved.

25 Cent Summary

Scanned by CamScanner