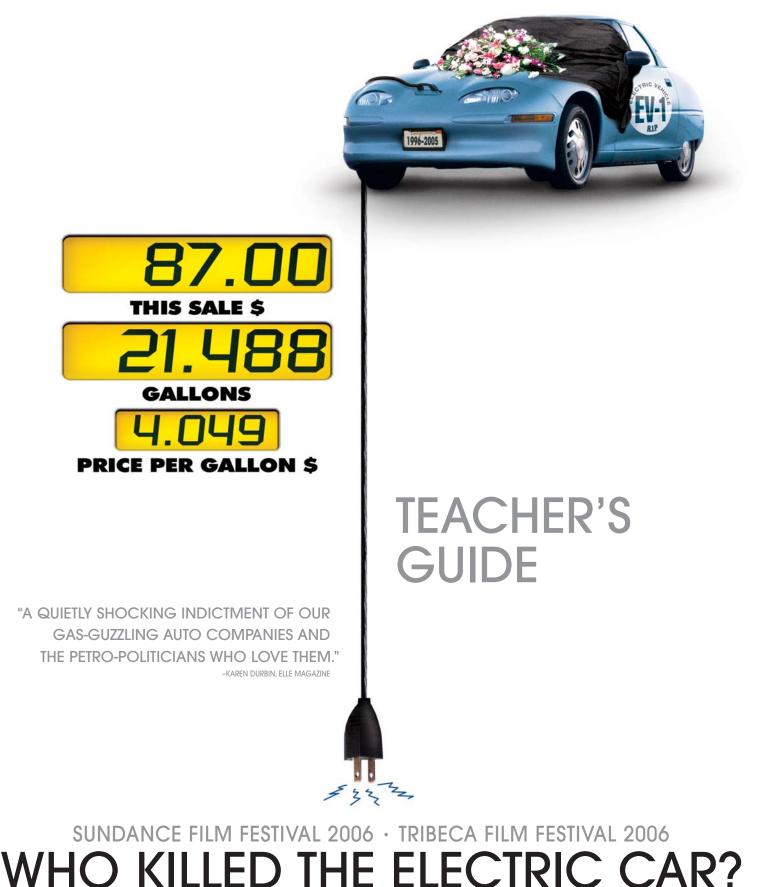
IN 1996, ELECTRIC CARS BEGAN TO APPEAR ON ROADS ALL OVER CALIFORNIA. THEY WERE QUIET AND FAST, PRODUCED NO EXHAUST AND RAN WITHOUT GASOLINE.

TEN YEARS LATER, THESE CARS WERE DESTROYED.





NOTE TO THE TEACHER

Who Killed the Electric Car? is a powerful tool pertinent to many academic disciplines and adaptable to a variety of abilities, learning styles, and classroom goals. This rich, self-contained film requires little or no additional research on the part of the instructor or the class, but can be used as the foundation for independent student research. The film divides neatly into two nearly equal and independent segments that can be shown on successive days or at different points in a unit. Both segments offer excellent discussion opportunities.

The classroom experience of students taking courses on environmental science or offerings that include a unit on air quality or environmental concerns would be enriched by viewing *Who Killed the Electric Car?*. Courses that encourage interest in engineering and practical math applications would also benefit. The ethical and civic questions that the film explores offer a natural connection for teachers working in the area of civics, government, ethics, and business ethics. In many of these courses the film could be treated as a case study. The ethical questions raised are nearly unlimited and a large variety of higher-level-thinking activities can be developed from the film.

Included in this packet are discussion prompts, class activities, and research suggestions.



FILM SUMMARY

Who Killed the Electric Car? is presented as a whodone-it mystery. Staying true to this genre, the film opens with necessary background information, describes the crime committed, answering all of the what, where, and when questions, and then in the style of Sir Arthur Conan Doyle gathers the suspects for close scrutiny, coming to a conclusion on the guilt or innocence of each.

Opening with a bit of automotive history that establishes the electric car as a competitive alternative to the internal combustion engine, *Who Killed the Electric Car*? takes the viewer back to the beginning of the twentieth century and the dawn of the automotive age. A straightforward explanation of why gasoline beats out electricity as the fuel of choice and how the internal combustion engine wins dominance concludes the broad overview.

The film then moves to the recent past with the introduction of the California Air Resources Board and their 1990 decision to require that ten percent of all cars sold in California by each car manufacturer be zero-emission vehicles by the year 2003. The Dr. Jekyll and Mr. Hyde response of automotive companies is revealed; production and marketing of zero-emission cars is detailed, a period during which the legal and political teams of the same manufacturers work to defeat the law that gave birth to modern electric vehicles. While several manufacturers are

included, the General Motors electric vehicle is featured. As this segment concludes, the success of the industry's legal strategy is symbolized by a celebrity-studded funeral for the electric car. This segment is filled with factual analysis that examines conflicting claims about emissions, practicality, costs of various fuels, and consumer demand.

The second half of *Who Killed the Electric Car*? is Sherlock Holmes at his best. The seven suspects identified in the first half of the film are scrutinized. One by one, consumers, batteries, oil companies, auto manufacturers, the U.S. government, the California Air Resources Board, and the newest villain, the hydrogen car, pass under the bare bulb in the inspector's interrogation room in an attempt to answer the question asked in the film's title: *Who Killed the Electric Car*? At the end of each segment the featured suspect is judged as guilty or innocent.

The film ends on a positive note, recognizing a grassroots movement that envisions cleaner air and energy independence. In a John Kennedy-style appeal, the film claims that those who solve our energy conundrum will be those that "change the world."

SELECTED SCENES FOR CLASSROOM REVIEW



1:19 Two million new cars are sold in California each year.



2:55 Cheap oil supports the combustion engine over the electric car.



3:35 Air quality in California: "Black cloud of death."



4:32 Each gallon of gasoline burned yields 19 pounds of carbon dioxide.



4:55 Introduce S. David Freeman.



22:43 Hydrogen Hummer and the hydrogen highway.



7:40 Creating demand for electric cars.



23:20 C.A.R.B. hearing on the emissions standards.



8:50 C.A.R.B. and California's zero-emission policy.



25:30 C.A.R.B. vote to kill the standards.

Manufacturers start to collect



12:40 Cost to run an electric car equals gasoline when gas is 60 cents per gallon.



14:10 Californians Against Utility Company Abuse

16:10



27:35

26:15

"Save the electric car" campaign, including the mock funeral.



29:30 Last EV1 collected.

the electric cars.



pure 557 that 1

19:10 Marketing; How far, how fast, how much?

according to demand.



3

31:20 FV1s in a G.M. lot.



21:21 Introduce Dr. Alan Lloyd of C.A.R.B.

Television advertisement for G.M.'s





22:30

19:40

electric car.

President Bush endorsing hydrogen technology in the State of the Union.



33:20 G.M. spokesperson explains the fate of the collected EV1s.



50:36 Suspect: Car Manufacturers



35:30 PBS at the car crusher.



56:20 Suspect: Government



36:58 S. David Freeman, "We're up against most of the money in the world."



1:03:57 Suspect: C.A.R.B.



37:15 Vigil for the EV1s.



1:07:02 Suspect: Hydrogen Fuel Cell



38:40 Would you buy one of these electric cars? Display check for 1.9 million dollars offered to G.M.



1:11:08 President Bush at a hydrogen filling station.



39:20 "Who controls the future? He who has the biggest club."



1:15:05 Last cars moved.



39:34 Scene from Naked Gun $2^{1}/_{2}$: The Smell of Fear.



1:18:52 Automotive Museum



40:25 List of suspects.



40:58 Suspect: Consumers



43:20 Suspect: Batteries



46:38 Suspect: Oil Companies



CAR COMPANIES

1:22:32

1:20:30

Verdicts.

"The fight about the electric car was quite simply a fight about the future."





1:23:58

Introduce James Woolsey and Plug In America.



"The one group of people that steps up to take it on is the group that will

change the world."

DISCUSSION PROMPTS

These prompts can be used for full-class discussion, small group conversations, or adapted for use as writing assignments of varying length and detail.

- What compromises related to cars and transportation are you willing to make to preserve and improve air quality? Brainstorm possibilities and then discuss each one, focusing on the average consumer.
- What one assertion in the film do you disagree with? Why?
- What one assertion in the film troubles you the most? Why?
- In your own words, explain why the car manufacturers collected and destroyed the electric vehicles.
- Did government serve the people in the case of electric cars? Why?
- Does government have the right to tell companies what to manufacture? Why?
- How important an issue is our nation's dependence on oil? Explain.
- Do you agree that those who solve the energy question will change the world? Explain.
- Should the world oil supply be divided evenly according to population, given to those able to pay the highest price, or reserved for developing nations? Explain your opinion.
- Is it acceptable for a nation to use oil as a weapon? Why/why not?
- Would you characterize each of the following as a good citizen or a bad citizen? Why?
 -The oil companies
 -U.S. consumers
 -The citizens trying to save the electric car
- Is energy a national security issue? Why/how? Explain.
- How is the use of hydrogen as a fuel related to the reemergence of nuclear power?
- Does drilling for more oil in the pristine wilderness make sense? Why/why not?
- Given the information provided in the film, do you believe electric cars are a reasonable alternative to combustion engines? Why/why not?
- Given the information provided in the film, do you believe you will be able to buy a hydrogen-powered car in the next 10 years? 20 years? Ever? Why/why not?





MOCK COURT

Choose defense and prosecution teams for each of the seven defendants identified in the film. Have the teams prepare for a mock trial using the information in the film and if desired, additional research. Stage a trial with a jury that has not seen the film.

Roles:

Judge: Acts as presiding officer maintaining order, resolving conflicts, and charging the jury.

Prosecution team: Presents evidence against the named defendant using witnesses, charts, graphs, and physical evidence. The team would also cross-examine defense witnesses. The prosecution's job is to prove beyond a reasonable doubt the guilt of the defendant.

Defense team: Presents evidence that rebuts the prosecution's view and may suggest alternative perpetrators. The defense may use witnesses, charts, graphs, and physical evidence. The team would also cross-examine prosecution witnesses. The defense's job is to create reasonable doubt as to the guilt of the defendant.

This activity can be used as an alternative assessment of student knowledge while also building critical thinking and oral presentation skills.



COMMON GOOD

Open the activity by reading the paragraph below. Allow for a few minutes of general comment on the concept of the "common good" and the claim by then G.M. president Charles E. Wilson: What's good for the country is good for General Motors and vice versa.

The preamble to the United States Constitution opens with the words: "We the People of the United States, in Order to form a more perfect Union, establish Justice, insure domestic Tranquility, provide for the common defense, promote the general Welfare, and secure the Blessings of Liberty to ourselves and our Posterity, do ordain and establish this Constitution for the United States of America." These words imply a common interest that is shared by citizens and government, a concept often referred to as the "common good." In 1953, the then president of General Motors, Charles E. Wilson, was nominated by President Dwight Eisenhower to serve as his Secretary of Defense. During Wilson's confirmation hearings, senators were concerned that he would have difficulty making a decision that could hurt General Motors, a major defense contractor, even if the decision was in the best interest of the United States. When asked this question, Wilson assured senators that he could make such a decision but that he could not imagine such a situation, "because for years I thought what was good for the country was good for General Motors and vice versa."

Student instruction

Who Killed the Electric Car? implies that the "common good" is not being served by the decision to abandon electric vehicles and embrace hydrogen technology. Write your own definition of the "common good." Make groups of 3 to 5 and share these definitions. Try to agree on a group definition. Evaluate General Motors' decision to kill the electric car program in light of your group's definition. Be ready to report your findings to the class. Do Mr. Wilson's thoughts from 1953 reflect the General Motors Corporation that is presented in the film? If the Senate called the current president of G.M. to explain the death of the electric car, imagine what he might say that would be quoted more than 50 years later.



HIDDEN AGENDA

Teacher introduction

As a class, brainstorm about the term "hidden agenda." When you get all the ideas on the board, make groups of 3 to 5. In groups, have the class discuss the ideas on the board and then write a definition of "hidden agenda" that the group can agree on. As a class, share these definitions and create one working definition for the whole class.

Have students return to their groups and discuss what "hidden agenda(s)" the following may have had. To make a claim, the group must have at least one piece of solid evidence from the film. Each group should decide which three of their claims are the strongest and prepare to present them to the class.

Present and discuss:

Automobile companies:
Hidden agenda:
Evidence:
Oil companies:
Hidden agenda:
Evidence:
Filmmakers:
Hidden agenda:
Evidence:
Car companies:
Hidden agenda:
Evidence:
Federal government:
Hidden agenda:
Evidence:
Fans of the electric car:
Hidden agenda:
Evidence:
C.A.R.B.:
Hidden agenda:

Evidence:

WHAT IS THE ROLE OF BUSINESS?

What is the role of business in a democratic/capitalist society? The complex interaction between business, government, and consumers is presented as a case study in *Who Killed the Electric Car*?. After viewing the film, clarify your own attitude toward the role of business, before any discussion, by using the prompts that follow. Prioritize the entire list from 1, most important, to 10, least important, and then write just a sentence or two that explains each ranking. Using your results, make groups that include individuals with different attitudes. While you discuss the movie, analyze how different views of business influence opinions about the film.

The role of business is to make a profit.

The role of business is to make a good product.

The role of business is to serve the consumer.

_____ The role of business is to support government.

The role of business is to educate government.

The role of business is to educate consumers.

_____ The role of business is to improve life.

The role of business is to protect the environment.

____ The role of business is to provide consumers with choice.

The role of business is to invent solutions to society's problems.

WHAT IS THE ROLE OF GOVERNMENT?

What is the role of government in a democratic/capitalist society? The complex interaction between business, government, and citizens is presented as a case study in *Who Killed the Electric Car?*. After viewing the film, clarify your own attitude toward the role of government, before any discussion, by using the prompts that follow. Prioritize the entire list from 1, most important, to 10, least important, and then write just a sentence or two that explains each ranking. Using your results, make groups that include individuals with different attitudes. While you discuss the movie, analyze how different views of government influence opinions about the film.

The role of government is to defend the nation.

The role of government is to create a just society.

The role of government is to protect the consumer.

The role of government is to protect business.

The role of government is to regulate business.

The role of government is to educate consumers.

The role of government is to improve life for all citizens.

The role of government is to protect the environment.

The role of government is to provide consumers with choice.

The role of government is to invent solutions to society's problems.

BUSH STATE OF THE UNION A January 29, 2003

MAKING THE CASE

In the second half of **Who Killed the Electric Car?**, each of the suspects in this mystery is held up to scrutiny. Acting as an unbiased detective, develop a list of the evidence offered for guilt and the evidence that indicates innocence. In groups or as a class, use these evidence lists as the basis for a debate that leads to a vote on each suspect.

The suspect_____

Evidence to convict

Evidence to acquit

SUSPECT

SUMEN

suseer OIL COMPANIES

HYDRO

11

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A SONY PICTURES CLASSICS RELEASE ELECTRIC ENTERTAINMENT PRESENTS A DEAN DEVLIN/PLINYMINOR PRODUCTION A FILM BY CHRIS PAINE "WHO KILLED THE ELECTRIC CAR?" NARRATED BY MARTIN SHEEN EDITED BY MICHAEL KOVALENKO CHRIS A. PETERSON DIRECTOR OF PHOTOGRAPHY THADDEUS WADLEIGH ORIGINAL MUSIC BY MICHAEL BROOK CONSULTING PRODUCER ALEX GIBNEY EXECUTIVE PRODUCERS DEAN DEVLIN TAVIN MARIN TITUS RICHARD D. TITUS PRODUCED BY JESSIE DEETER WRITTEN AND DIRECTED BY CHRIS PAINE

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