

High School
Self-Guided Itinerary

Sustainability:

Environmental Management and Responsible Manufacturing
at the Ford Rouge Factory Tour

Grades 9-12 Self-Guided Itinerary



Sustainability: Environmental Management and Responsible Manufacturing at the Ford Rouge Factory Tour

High School Self-Guided Itinerary

Use this self-guided itinerary as you explore the Legacy and Art of Manufacturing theaters, the Observation Deck, the Assembly Line and the Living Lab. You will see how environmental management and responsible manufacturing take place in the real world.



Sustainability: Using our resources in a responsible manner to ensure that these resources will be plentiful for future generations.

I. LEGACY GALLERY AND THEATER

Discover the history of the Ford Motor Company and Henry Ford's innovations at the Ford Rouge Complex.

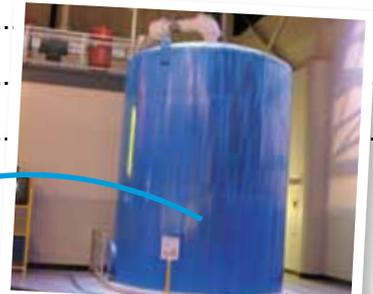
As you watch the film in the Legacy Theater showcasing the history of the Ford Rouge Complex, consider environmental attitudes at the time of construction and industrialization. Based on what you see in the movie, **how would you characterize the public's regard for the environment in the early 20th to mid-20th century?**

.....

.....

.....

DID YOU KNOW? The **cistern** located in the Legacy lobby holds up to 12,500 gallons of water collected from the Visitor Center roof! This water is used for landscaping irrigation, which conserves our freshwater resources.



II. OBSERVATION DECK

Find the kiosk in the Observation Deck to learn more about green building design pioneer William McDonough and his work at the Ford Rouge Complex.

📄 What were McDonough's goals for the environment in and around the Dearborn Truck Plant?

.....

.....



William McDonough

One component of sustainability involves protecting and managing our natural resources—air, water and soil. Visit the Observation Deck to learn more about the history of the Ford Rouge Complex and to get a bird's-eye view of the environmental innovations in action!

The Story of the Rouge – use the labels to answer the following questions:

📄 How did Henry Ford prepare the land at the Rouge for building his factory?

.....

.....



DID YOU KNOW? Industry contributes about 2% of the pollution in the Rouge River. The rest comes from our backyards, streets and driveways. You can help by not dumping oil, animal waste or other pollutants down storm drains.

Describe vertical integration. Were there any environmental advantages or disadvantages to this on-site manufacturing process?

.....
.....

At its peak in the 1930s, the Ford Rouge Complex employed over 100,000 workers. How did Henry Ford build social equity for his workers?

.....
.....

How did the oil crisis of the 1970s affect the American automotive industry?

.....
.....

21ST-CENTURY PROBE: How has the deep-water oil spill in the Gulf of Mexico changed the debate about renewable versus nonrenewable energy? In terms of shaping energy policy, how do you think this will compare with the oil crisis of the 1970s?

Who is William Clay (Bill) Ford Jr.?

.....
.....

How did Bill Ford plan on making the Rouge an icon of “the next Industrial Revolution”?

.....
.....

According to Bill Ford, “A good company delivers excellent products and services. A great company does all that and strives to make the world a better place.” Besides the living roof, what other environmental innovations can be seen from the Observation Deck?

Innovation:

Environmental Benefit:

.....
.....

How does the living roof save money?

.....
.....



DID YOU KNOW? The soils around the Ford Rouge Complex are contaminated with poly-aromatic hydrocarbons, or PAHs, resulting from decades of steel production. In a process known as **phytoremediation**, plant roots naturally break down these compounds.



DID YOU KNOW? The skylights and light boxes on the roof of the Dearborn Truck Plant can help save enough energy to electrify 1,000 homes. Solar energy is a **renewable energy** resource, which means it is naturally replenished.



III. ASSEMBLY LINE

Another component of sustainability involves protecting the health and well-being of all people in our society. This is also commonly referred to as Social Justice. As you tour the assembly line walkway, look for ways that the health and well-being of Ford employees are being protected.

Ergonomics: The science of designing the job, equipment and workplace to fit the worker.

 What innovations have been implemented at the Dearborn Truck Plant to manage the health, well-being and working conditions of the employees?

Innovation:

Benefit to Employees:

■
■
■

IV. LIVING LAB — GUIDED TOUR (available, weather permitting, mid-May to mid-October)

As you tour the Living Laboratory, look for ways that Bill Ford's vision for sustainability is being met. Explore the wetlands, orchard and native landscaping that all play a role in managing the air, soil and water at the Ford Rouge Complex.

 When Bill Ford and William McDonough considered revitalizing the Rouge, what did they envision?

.....
.....

 How do the living roof, wetlands and swales work together to manage storm water?

.....
.....

 How does this system of storm water management save Ford Motor Company money?

.....
.....

 How does the orchard help manage air and soil quality?

.....
.....

 What roles do the songbirds and honeybees play in this ecosystem?

.....
.....

TYING IT ALL TOGETHER: As part of McDonough's philosophy of "Cradle to Cradle," he always considers the following question before he starts the design process for a project: "**How do we love all of the children of all species for all time?**" How do the environmental innovations at the Ford Rouge Complex address his question?

Funded in part with a USGBC 2009 Excellence in Green Building Education Incentive Grant

The Henry Ford ■ 20900 Oakwood Blvd., Dearborn, MI 48124 ■ 313.982.6001 ■ www.TheHenryFord.org/education

