

Sustainable Palm Oil Debate

In this activity, students act as stakeholders involved in the development of Asian rainforests and discuss the issues surrounding the global sustainable palm oil industry.

Middle School Life Sciences:

NGSS Performance Expectations:

MS-ESS3-3 **DCI:** ESS3.A Natural Resources & ESS3.C Human Impacts on Earth Systems

MS-ESS3-4 **DCI:** ESS3.A Natural Resources & ESS3.C Human Impacts on Earth Systems

MS-LS2-1 **DCI:** LS2.A Interdependent Relationships in Ecosystems

MS-LS2-5 **DCI:** LS2.C Ecosystem Dynamics, Functioning and Resilience & LS4.D Biodiversity and Humans

MS-ETS1-1 **DCI:** ETS1.A Defining and Delimiting Engineering Problems

Common Core: WHST.6-8.1, WHST.6-8.7, WHST.6-8.8, WHST.6-8.9, RST.6-8.1, RST.6-8.8, RI.8.8, SL.8.1 & SL.8.4

High School Life Sciences:

NGSS Performance Expectations:

HS-ESS3-4 **DCI:** ESS3.A Natural Resources, ESS3.C Human Impacts on Earth Systems & ETS1.B Developing Possible Solutions

HS-LS2-6 **DCI:** LS2.C Ecosystem Dynamics, Functioning and Resilience & LS4.D Biodiversity and Humans

HS-LS2-7 **DCI:** LS2.C Ecosystems Dynamics, Functioning and Resilience, LS4.D Biodiversity and Humans & ETS1.B Developing Possible Solutions

HS-ETS1-1 **DCI:** ETS1.A Defining and Delimiting Engineering Problems

HS-ETS1-3 **DCI:** ETS1.B Developing Possible Solutions

Common Core Standard: RST.11-12.1, RST.11-12.7 & MP.2

Background

If you are interested in saving orangutans, tigers, elephants and rhinos in the wild, it is important to learn about the palm oil industry. Palm oil is a type of vegetable oil found in many foods and bath products. It is mostly grown in the biodiverse rainforests of Asia on the islands of Borneo and Sumatra. These islands are the only habitat of many endangered species.

Palm oil is not part of the rainforest; it is an introduced crop that can be grown in different ways. There is a conservation group called the Roundtable on Sustainable Palm Oil (RSPO). They ensure that palm oil is grown in a sustainable way which reduces the impact on the rainforests, the people, and animals that live there. The companies that join the RSPO use sustainable palm oil in their

products. Today 15% of the palm oil that is produced globally is sustainable palm oil. When palm oil is grown in a non-sustainable way, rainforests that are home to many endangered species of animal are cut down.

Objectives:

- Students will be able to effectively engage in a collaborative discussion on conservation issues to construct an explanation based on research and explain the reasoning behind their decision.
- Students will be able to construct an argument to demonstrate the way in which human interests, attitudes, and actions influence an individual's decision on the environment.
- Students will be able to define the challenges involved in balancing the needs of people and wildlife and provide evidence to support their solution to the problem.

Materials:

- Sustainable palm oil PowerPoint
- Sustainable palm oil research materials (students gather on their own)
- Mock RSPO newspaper article
- Role cards (Optional: placards identifying each group)

Procedure:

1. In this lesson, students will discuss their ideas and role-play a debate on the conservation issue of sustainable palm oil.
2. Students will read the mock newspaper article about the RSPO's invitation to all stakeholders involved in the sustainable palm oil industry to discuss the issue.
3. Students will be assigned to different interest groups and research their viewpoints.
4. They will produce a list of the pros and cons of supporting the RSPO and the production of sustainable palm oil. Students will need to provide evidence to support their conclusions.
5. A discussion will follow, led by the RSPO representative, to rally support for their cause.
6. After the different groups have decided whether they will support the RSPO, the whole class will discuss the complex issue of wildlife conservation and alternatives to sustainable palm oil.

Websites with Background Information:

Cheyenne Mountain Zoo- www.cmzoo.org/conservation/palmOilCrisis/

Roundtable on Sustainable Palm Oil- www.rspo.org

Report on Profitability & Sustainability in Palm Oil Production-

http://awsassets.panda.org/downloads/profitability_and_sustainability_in_palm_oil_production_update.pdf

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