

Earth Day Project

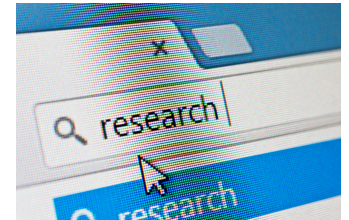
6th, 7th, 8th Grade

- ✓ Engaging Research Project
- ✓ Guided Research Process
- ✓ Develop Critical Thinking & Collaboration
- ✓ Develop Presentation Skills



Earth Day Project

✓ **Engaging Research Project** – Students investigate real-world climate change topics and develop research skills.



✓ **Multiple Presentation Formats** – Options include digital slideshows, poster boards, or news report videos.



✓ **Guided Research Process** – Includes structured worksheets, approved research sources, and teacher check-ins.

✓ **Critical Thinking & Collaboration** – Encourages teamwork, data analysis, and solution-based discussions.



Earth Day Project

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Students will develop their research skills, apply these skills to investigate the importance of Earth Day, and create a presentation to inform their classmates as well as improve their presentation skills.

DAY 1: CHOOSING OUR FOCUS

Introduction (20 mins)

- Watch these brief Earth Day videos - <https://www.youtube.com/watch?v=B-nEYyR1Yc> and either <https://www.youtube.com/watch?v=QdDeE6XKs> or <https://www.youtube.com/watch?v=RMfMfNtH4Qo>
- Introduce research topics
- Model research process
 - Show students how to research using 'The Research Process' presentation and worksheet

Research Topics (Students choose one):

1. **Ecological Footprint** – What is someone's ecological footprint and why does it matter? Do some people have larger footprints compared with others and what can you do to limit yours?
2. **Renewable Energy vs. Fossil Fuels: Which is the Best Path Forward?** – A comparison of renewable energy sources (solar, wind, hydro, geothermal, biomass) and fossil fuels and the environmental impact of both types of energy.
3. **How Do Solar Panels and Wind Turbines Work, and Are They Safe?** – The science behind solar panels and wind turbines as well as their environmental impact.
4. **Renewable Energy vs. Fossil Fuels** – How do different energy sources impact the environment?
5. **Deforestation and Reforestation** – What are the consequences of deforestation and how can reforestation help?
6. **Plastic Pollution and Ocean Conservation** – How does plastic pollution impact our oceans and ecosystems?
7. **Endangered Species and Conservation Efforts** – What are some endangered species and how can they be protected?
8. **Sustainable Agriculture and Food Production** – How can we produce food sustainably and protect the environment?
9. **Water Conservation and the Global Water Crisis** – Why is water important, and what can be done to protect water resources?
10. **Urbanization and Its Environmental Impact** – How do expanding cities impact the environment and biodiversity?
11. **Air Pollution and Its Effects on Health** – How does air pollution impact our health and ecosystems?
12. **Environmental Laws and Policies** – What are some of the environmental laws, and how do they help?
13. **The Role of Youth in Environmental Activism** – How are young people making a difference in protecting the planet?

Research Planning (30 mins)

- Form research groups (2-3 students)
- Complete planning template
- Begin guided research

DAY 2: GUIDED RESEARCH

Research Guidelines: Students must find and record in their 'Guided Research' worksheet.

Approved Research Sources:

1. **NASA Climate Change** – <https://climate.nasa.gov/>
 - Reliable climate science data and research from NASA.
2. **Environmental Protection Agency (EPA)** – <https://www.epa.gov/>
 - U.S. government agency site with information on pollution, climate change, and conservation.
3. **National Geographic Environment** – <https://www.nationalgeographic.com/environment/>
 - Articles and educational resources on environmental issues.
4. **The Nature Conservancy** – <https://www.nature.org/>
 - Focuses on conservation efforts and biodiversity protection.
5. **National Oceanic and Atmospheric Administration (NOAA) – Marine Debris Program** – <https://marinedebris.noaa.gov/>
 - Information on ocean pollution and marine conservation.
6. **World Wildlife Fund (WWF)** – <https://www.worldwildlife.org/>
 - Research and resources on endangered species and ecosystems.
7. **Greenpeace** – <https://www.greenpeace.org/>
 - Reports on environmental activism, deforestation, and climate policy.
8. **Earth Day Network** – <https://www.earthday.org/>
 - Official Earth Day organization with student resources and project ideas.
9. **Kids for Saving Earth** – <https://kidsforsavingearth.org/>
10. **Classroom textbook / Encyclopedia**

DAY 3: PRESENTATIONS

Presentation Options:

1. Digital Slideshow (5-7 slides)
2. Poster Board Display
3. News Report Video

Required Elements:

- Clear title - make sure your audience knows what your question is.
- Main facts - list your main facts using bullet points.
- Visual aids - provide at least 2 visual aids such as graphs and/or pictures.
- Data representation - show your statistics using your visual aids or separately.
- Solution proposal - provide a solution to your problem or conclusive explanation.
- Sources cited - list all your sources on the last slide.

DAY 4: PRACTICE, POLISH, and PRESENT

Presentation Practice

- Practice with partners
- Practice in front of peer who provide feedback

Presentation

Guided Research

Planning Template:

Topic Choice	
Research Questions – write down three questions that relate to your topic. Circle the research question you want to answer in this project.	1. 2. 3.
Information sources – include all your sources of information.	1. 2. 3.

Research:

For your chosen research question provide the following:

3 Key facts	1. 2. 3.
2 surprising discoveries	1. 2.
1 local connection. Relate your question to something happening in your town/city/etc.	

The Research Process:

How to Be a Science Detective



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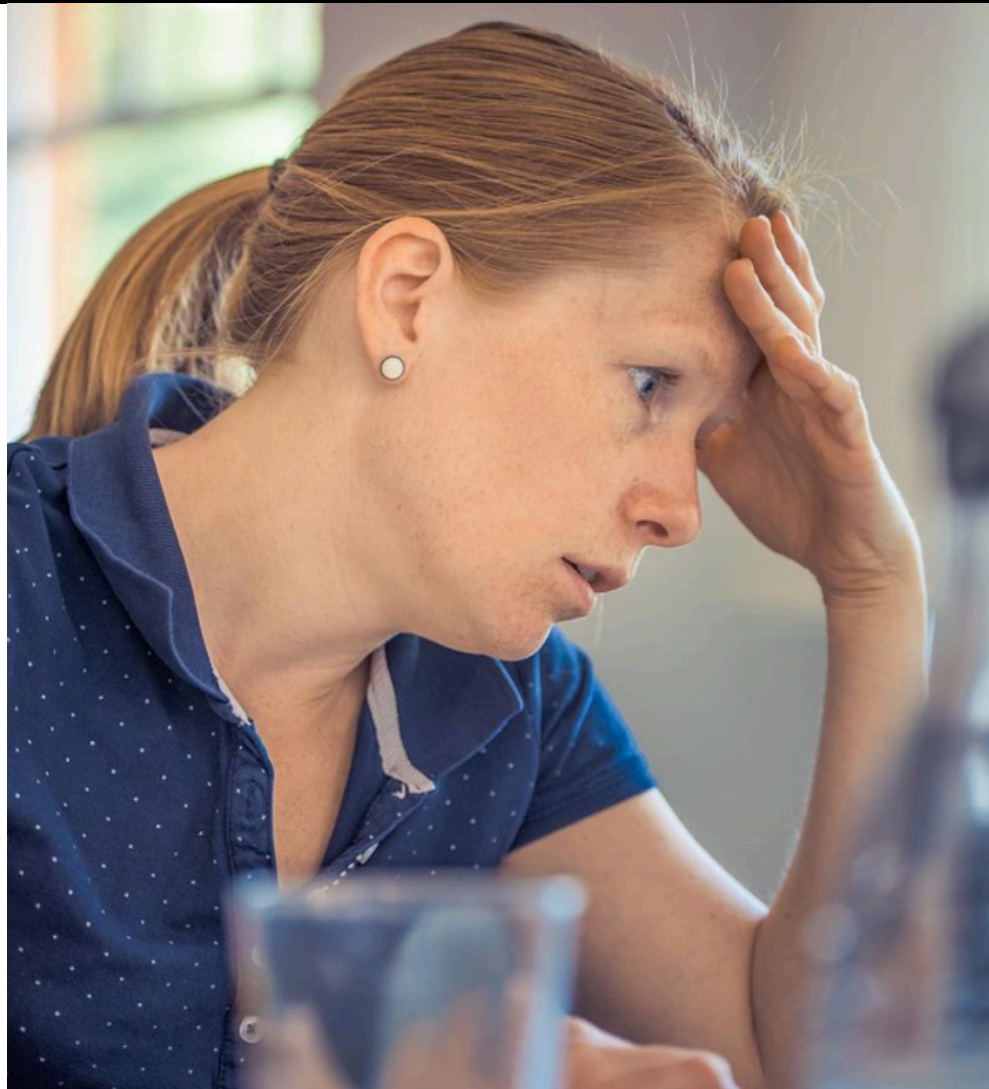
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Who's It For?

- **Middle School Science Teachers**
- **Teachers using NGSS**
- **Teachers who want to increase their student's engagement and retention**
- **Teachers not looking to reinvent the wheel**

Save yourself the **STRESS AND TIME**

TW/F



Spend your time WISELY



TWF