

Climate Change Literacy Quiz*

Question Sheet

At **THIS! Is What We Did** (ThisIsWhatWeDid.org), we believe climate change is the biggest threat in the history of humanity, yet its very bigness can hinder learning about it. We developed this quiz to help people develop "Climate Change Literacy," the ability to understand the implications of the climate crisis so as to be able take effective action.

Directions: Circle your answer to each question (**before looking at the answer sheet** if you have it!). We have tried to make the quiz interesting, surprising and a little bit tricky. We encourage you to focus on what you are learning rather than how well you do on the quiz. And then join us at **THIS! Is What We Did** to help rescue the future! (<https://thisiswhatwedid.org/contact/>)

The Problem

- 1) The U. S. Department of Defense classifies climate change as a national security threat.
 - a) True
 - b) False

- 2) Think of the power of a Hiroshima-sized bomb. How many Hiroshima-sized bombs would have to be exploded to equal the increase in global warming each day?
 - a) 4
 - b) 40
 - c) 400
 - d) 40,000
 - e) 400,000

- 3) Some climate scientists believe global collapse is the most likely outcome from climate change. Why?
 - a) 9 of the 15 known "climate tipping points" that regulate the state of the planet have been activated and others are close.
 - b) It will take longer to transition to zero emissions than the time we have before a global tipping cascade results in a "hothouse earth" climate.
 - c) We are headed for 4°C increase in the temperature of the earth and the planet will only be able to sustain less than a billion people (there are now 7.5 billion people on the earth)
 - d) All of the above

- 4) The permafrost, a subsurface layer of soil in the Arctic Circle, holds more carbon than has ever been released by humans through fossil fuel consumption.
 - a) True
 - b) False

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"Solutions"

- 5) Which of these actions identified by Drawdown (<https://drawdown.org/>) could have a positive impact on climate change?
- a) Solar Electricity
 - b) Electric Vehicles
 - c) Planting trees
 - d) Refrigerant Management
 - e) All of the above
 - f) None of the above
- 6) Drawdown says "We have enough technology right now to reach zero emissions by 2040."
- a) True
 - b) False

Barriers

- 7) The leaders of fossil fuel companies like Exxon knew about the dangers of climate change more than 40 years ago.
- a) True
 - b) False
- 8) For every dollar the fossil fuel industry donates to politicians, it receives back \$56 in government subsidies.
- a) True
 - b) False
- 9) The fossil fuel industry spent nearly \$2 billion between 2000 and 2016 to prevent climate change action in the U. S. Congress.
- a) True
 - b) False

Going BIG

- 10) At its peak, Ford Motor Company manufactured B-24 Liberator Bombers at the rate of 10 per day to help win World War 2.
- a) True
 - b) False
- 11) The huge mobilization of the U.S. economy and society that President Franklin D. Roosevelt was able to lead to fight and win World War 2 would be impossible to replicate today to combat climate change because of the deep divisions that exist in the U.S.
- a) True
 - b) False

Needed: a Mass Movement

- 12) Research by Erica Chenoweth and Maria Stephan demonstrates that nonviolent civil resistance movements are more effective than violent ones. Why?
- a) Nonviolence is ethically superior to violence.
 - b) The bigger the movement the greater the likelihood of success, and nonviolent movements have more entry points for people to join.
 - c) Violent resistance movements stimulate violent responses from the authorities, which can destroy the momentum of the movement.
 - d) This is a trick question. Chenoweth and Stephan came to no conclusion on the effectiveness of nonviolence v. violence.
- 13) Chenoweth and Stephan's research found that civil resistance movements were much more likely to succeed if they reach what percentage of the population?
- a) 3.5%
 - b) 10%
 - c) 17.5%
 - d) 33%
 - e) 51%.
- 14) The reason **THIS!** is initially focusing on divesting from climate-bad banks that finance the fossil fuel industry is because
- a) People's money invested in climate-bad banks helps those banks be profitable.
 - b) 75% of CO2 emissions are caused by the fossil fuel industry, and without lending from banks, the industry could not continue its destruction of the planet.
 - c) Climate-bad banks typically have only about 7.5% of their investment portfolio in fossil fuels. They can easily make profits investing in things that don't destroy the planet including renewable energy sources.
 - d) Divesting from climate-bad banks is a way for everyday people to strike a blow against climate change.
 - e) All of the above

Thank you for taking our Quiz! We hope you enjoyed it and better understand what we mean by Climate Change Literacy. Let us know what you think of the Quiz: email us at Jim@ThisIsWhatWeDid.org

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Share our Quiz: over family dinners, in book clubs, with friends, church groups, teacher & parent groups, colleagues at work, wherever people need to be Climate Change Literate (which is pretty much everywhere!).

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THIS! Is What We Did

Climate Change Literacy Quiz*

Master Copy with Answers

The Problem

- 1) The U. S. Department of Defense classifies climate change as a national security threat.
- a) True
 - b) False

Answer: a — True. In its 2010 Quadrennial Defense Review, the Department of Defense described climate change as a national security threat. In its 2014 Quadrennial Defense Review, the Department of Defense called climate change a “threat multiplier” that will amplify and worsen poverty, environmental degradation, political instability, and social tensions.

<https://www.pewtrusts.org/-/media/assets/2010/03/31/pewqdrfactsheet.pdf>

<https://climateandsecurity.org/2014/03/climate-change-and-national-security-in-the-2014-quadrennial-defense-review/>

- 2) Think of the power of a Hiroshima-sized bomb. How many Hiroshima-sized bombs would have to be exploded to equal the increase in global warming each day?
- a) 4
 - b) 40
 - c) 400
 - d) 40,000
 - e) 400,000

Answer: e — 400,000. The rate of increase in global warming is equivalent to exploding 400,000 Hiroshima atomic bombs daily according to James Hansen at Columbia University (about 5 every second). This perhaps more than any other statistic illustrates the suicidal course we are on if we don't drastically and quickly reduce the heating of the planet.

<https://archive.thinkprogress.org/earths-rate-of-global-warming-is-400-000-hiroshima-bombs-a-day-44689384fef9/>

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 - b) It will take longer to transition to zero emissions than the time we have before a global tipping cascade results in a “hothouse earth” climate.
 - c) We are headed for 4°C increase in the temperature of the earth and the planet will only be able to sustain less than a billion people (there are now 7.5 billion people on the earth)
 - d) All of the above

Answer: d — All of the above.

<https://www.resilience.org/stories/2020-06-08/collapse-of-civilisation-is-the-most-likely-outcome-top-climate-scientists/>

- 4) The permafrost, a subsurface layer of soil in the Arctic Circle, holds more carbon than has ever been released by humans through fossil fuel consumption.
- a) True
 - b) False

Answer: a — True. The permafrost has been frozen for tens of thousands of years but is now melting. This is important because the enormous amount of carbon that can be emitted from thawing permafrost has not been included in most of the models used to predict the climate change’s impact.

<https://climate.nasa.gov/news/2785/unexpected-future-boost-of-methane-possible-from-arctic-permafrost/>

“Solutions”

- 5) Which of these actions identified by Drawdown (<https://drawdown.org/>) could have a positive impact on climate change?
- a) Solar Electricity
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 - e) All of the above
 - f) None of the above

Answer: e and f — All of the above & None of the above. All of these actions, if taken by massive numbers of people in solidarity, can have an impact. If taken by individuals acting alone, the impact will be tiny.

- 6) Drawdown says “We have enough technology right now to reach zero emissions by 2040.”
- a) True
 - b) False

Answer: a — True. The problem we face is not primarily a technological one. It is a problem of political power that prevents the use of these technologies at scale.

<https://www.abc.net.au/news/science/2020-03-03/drawdown-report-climate-change-reducing-emissions-technology/12012118>

Barriers

- 7) The leaders of fossil fuel companies like Exxon knew about the dangers of climate change more than 40 years ago.
- a) True
 - b) False

Answer: a — True. Scientists employed by fossil fuel companies understood the problem of global warming and alerted company leaders in the 1970s. Oil companies began designing taller drilling rigs because they knew the sea level would rise, and started looking closely at frozen areas of the globe where drilling would open up as sea ice melted.

What they didn't do is help the world understand the problem. Instead the leaders of fossil fuel companies used their influence and resources to muddy the waters and prevent action to deal with global warming at a time when it would have been much easier to deal with. The fossil fuel industry used the same playbook used by the tobacco industry to keep smoking from being regulated. Bill McKibben's quote is appropriate: "There should be a word for when you commit treason against an entire planet."

<https://www.scientificamerican.com/article/exxon-knew-about-climate-change-almost-40-years-ago/>

- 8) For every dollar the fossil fuel industry donates to politicians, it receives back \$56 in government subsidies.
- a) True
 - b) False

Answer: b – False. It's \$119 dollars per dollar.

<http://priceofoil.org/fossil-fuel-industry-influence-in-the-u-s/>

- 9) The fossil fuel industry spent nearly \$2 billion between 2000 and 2016 to prevent climate change action in the U. S. Congress.
- a) True
 - b) False

Answer: a – True. It is not surprising that Congress, in which politicians from both major parties take donations from the fossil fuel industry, is unwilling to act on the biggest threat in the history of humanity. Some people think government is unable to deal with problems, which is not true. Government is good at dealing with the problems of those who control it (p.s. It's not us!).

<http://priceofoil.org/2018/07/20/fossil-fuel-industry-has-spent-nearly-2-billion-on-lobbying-to-kill-climate-laws/>

Going Big

- 10) At its peak, Ford Motor Company manufactured B-24 Liberator Bombers at the rate of 10 per day to help win World War 2.
- a) True
 - b) False

Answer: b — False. At its peak in its mile-long Willow Run plant, Ford manufactured B-24 Liberator Bombers at a rate of 1 per hour (24 per day).

- 11) The huge mobilization of the U.S. economy and society that President Franklin D. Roosevelt was able to lead to fight and win World War 2 would be impossible to replicate today to combat climate change because of the deep divisions that exist in the U.S.
- a) True
 - b) False

Answer: b — False. The U.S. was extremely divided in the 1930s and 40s. Much of the population was opposed to entering the war on the side of England and France. Many Americans were anti-Semitic and not sympathetic to the plight of the Jews in Europe threatened by Nazism. Popular figures like Charles Lindberg ("Lucky Lindy") and powerful industrialists like Henry Ford were political enemies of FDR, and were vocally opposed to entering the war. Many powerful business interests were more afraid of the communist Soviet Union than the fascist Germany.

This is not to diminish the challenge of mounting a huge mobilization with government playing its important part. But as the climate crisis hits more and more people personally, the popular mood will change much as some conservative state leaders are now mandating wearing a mask after opposing it not long ago.

Needed: a Mass Movement

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 - d) This is a trick question. Chenoweth and Stephan came to no conclusion on the effectiveness of nonviolence v. violence.

Answer: b. Older people, disabled people, youth, parents caring for children and many others are not willing or able to use violence even in a cause in which they believe. A nonviolent movement gives many more easy-access on-ramps to becoming part of it than a violent struggle.

<https://news.harvard.edu/gazette/story/2019/02/why-nonviolent-resistance-beats-violent-force-in-effecting-social-political-change/>

- 13) Chenoweth and Stephan's research found that civil resistance movements were much more likely to succeed if they reach what percentage of the population?
- a) 3.5%
 - b) 10%
 - c) 17.5%
 - d) 33%
 - e) 51%.

Answer: a — 3.5%. In the U.S. 3.5% is 11.5 million people, an entirely doable number!

<https://news.harvard.edu/gazette/story/2019/02/why-nonviolent-resistance-beats-violent-force-in-effecting-social-political-change/>

- 14) The reason **THIS!** is initially focusing on divesting from climate-bad banks that finance the fossil fuel industry is because
- a) People's money invested in climate-bad banks helps those banks be profitable.
 - b) 75% of CO2 emissions are caused by the fossil fuel industry, and without lending from banks, the industry could not continue its destruction of the planet.
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 - d) Divesting from climate-bad banks is a way for everyday people to strike a blow against climate change.
 - e) All of the above

Answer: e — All of the above. Join a Move-Your-Money Cohort to strike your own blow against climate change in solidarity with others: (<https://thisiswhatwedid.org/move-your-money/>)

The figure of 75% CO2 emissions from burning fossil fuel in answer #2 is here:

<https://www.eia.gov/energyexplained/energy-and-the-environment/where-greenhouse-gases-come-from.php>

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