

The Disinformation Playbook

How Business Interests Deceive, Misinform, and Buy Influence at the Expense of Public Health and Safety

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Science helps keep us safe and healthy. The public safeguards that keep our drinking water clean and our children's toys safe rely on independent science and a transparent policymaking process. And we all rely on scientific information to make informed choices about everything from what we eat to what consumer products we buy for our families.

Too often, companies use the Disinformation Playbook to make public policy work for them, instead of for all of us. But the Playbook is not unstoppable—and it's time to push back.

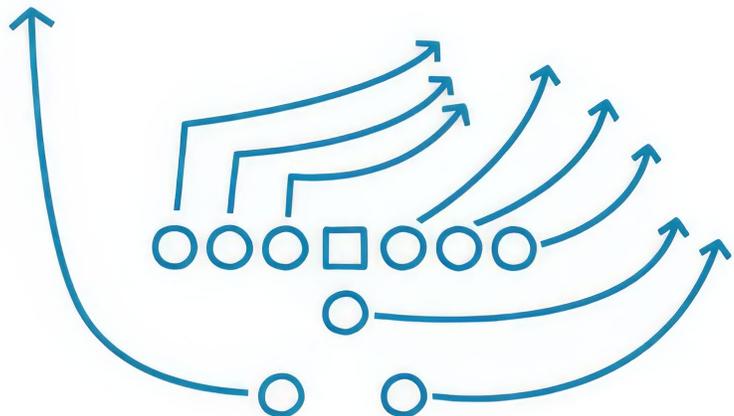
But the results of independent science don't always shine a favorable light on corporate products and practices. In response, some corporations manipulate science and scientists to distort the truth about the dangers of their products, using a set of tactics made famous decades ago by the tobacco industry. We call these tactics the Disinformation Playbook.

To be clear: most companies don't engage in disinformation. The deceptive practices that make up the Playbook are used by a small minority of companies—and yet, as we show, they are found across a broad range of industries, from fossil fuels to professional sports.

Here are five of the most widely used “plays” and some of the many cases where they have been used to block regulations or minimize corporate liability, often with frightening effectiveness—and disastrous repercussions on public health and safety.

1 The Fake

Conduct counterfeit science and try to pass it off as legitimate research



Companies underwrite a good deal of scientific research, and society often benefits from it. But bonafide scientific research demands a high degree of scientific integrity to ensure that results derive from the evidence, and not from a desire to meet a predetermined, non-scientific

objective. People who have a financial stake in research outcomes should not publish in scientific journals without full and clear disclosure of conflicts of interest—especially when the results involve the safety or effectiveness of a company’s products.

To evade these standards, some companies choose to manufacture counterfeit science—planting ghostwritten articles in legitimate scientific journals, selectively publishing positive results while underreporting negative results, or commissioning scientific studies with flawed methodologies biased toward predetermined results. These methods undermine the scientific process—and as our case studies show, they can have serious public health and safety consequences.

CASE STUDY



How Georgia-Pacific Knowingly Published Fake Science on the Safety of Asbestos

In an attempt to reduce litigation costs, Georgia-Pacific launched a secret campaign to produce and publish counterfeit science designed to raise doubts about the dangers of asbestos.

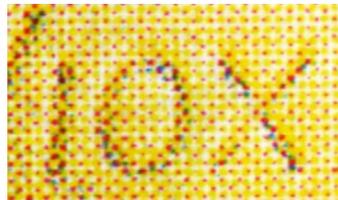
CASE STUDY



Industry Groups Used Cherry-Picked Science to Avoid Regulation of Chromium

An industry trade association, The Chrome Coalition, funded studies with shoddy methods in an attempt to weaken regulations that protect workers from the toxic heavy metal hexavalent chromium.

CASE STUDY



Merck Manipulated the Science about the Drug Vioxx

Scientists from pharmaceutical giant Merck skewed results of clinical trials in favor of the arthritis drug, Vioxx, to hide evidence that the drug increased patients’ risk of heart attack.

CASE STUDY



Fossil Fuel Companies Distorted the Science about the Dangers of Benzene

To avoid regulation and protect itself from lawsuits, the fossil fuel industry funded nearly \$40 million of research downplaying the link between the petrochemical benzene and cancer.

CASE STUDY

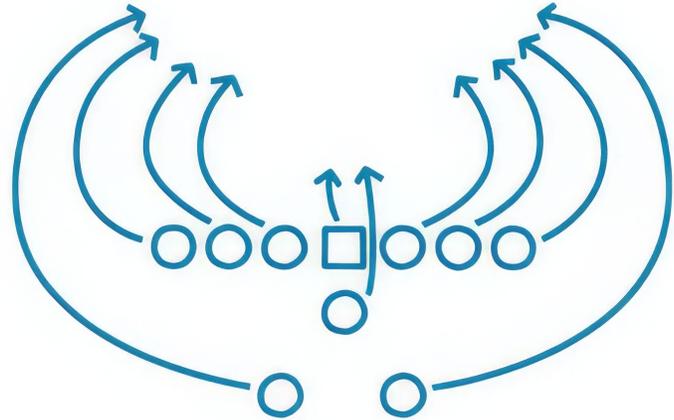


DuPont, 3M Concealed Evidence of PFAS Risks

For decades, chemical manufacturers knew that the substances known collectively as PFAS were hazardous to human health. And they hid what they knew from the public and from federal regulators.

2 The Blitz

Harass scientists who speak out with results or views inconvenient for industry



Companies and industry trade associations sometimes try to bury scientific information by harassing or intimidating scientists whose research threatens their bottom line. This coercion can take several different forms: our case studies show how corporations have threatened to defund scientists' research, interfere with their promotion or tenure, transfer them to other positions, or tarnish their reputations.

Some corporations have also sought to muzzle scientists by including gag orders in research or employment contracts, or through litigation and open records requests to tie up their time and resources, making universities less likely to support important, policy-relevant research.

Each of these tactics has the same goal: to silence scientists and stifle independent science. This behavior violates the spirit of scientific inquiry, which is open to all ideas and findings and inclusive of fellow experts looking to learn more about our world. Any efforts to make scientists feel threatened, or to discourage them from publishing or even continuing their research, are direct attacks on our country's scientific enterprise, compromising its ability to effectively serve the public.

CASE STUDY



[The NFL Tried to Intimidate Scientists Studying the Link between Pro Football and Traumatic Brain Injury](#)

Rather than honestly deal with its burgeoning concussion problem, the National Football League went after the reputation of the first doctor to link the sport to the degenerative brain disease he named Chronic Traumatic Encephalopathy.

CASE STUDY



[Syngenta Harassed the Scientist Who Exposed Risks of its Herbicide Atrazine](#)

Dr. Tyrone Hayes's work on the dangers of atrazine made him a target for agribusiness giant Syngenta.

CASE STUDY



[How the Fossil Fuel Industry Harassed Climate Scientist Michael Mann](#)

A Koch-funded think tank tried to harass and discredit prominent climate scientist Michael Mann by suing for access to his private correspondence. Mann defeated the effort—but fears the resulting “chill” could deter young climate scientists.

CASE STUDY

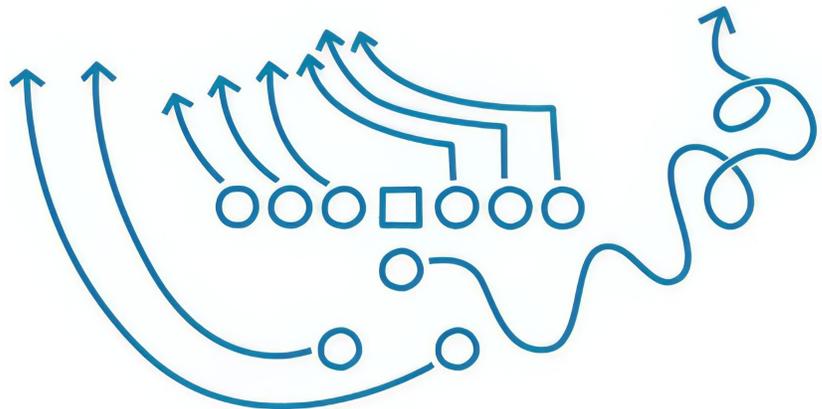


[GlaxoSmithKline Tried to Silence the Scientist Who Exposed the Dangers of its Drug Avandia](#)

When Dr. John Buse found that a diabetes drug had the side effect of higher risk of heart disease, GlaxoSmithKline officials threatened his integrity and career.

3 The Diversion

Manufacture uncertainty about science where little or none exists



As evidence emerges about a product’s adverse effects, companies will sometimes try to undermine the science by falsely spreading doubt about the harm, deceiving the public and undermining the efforts of regulatory bodies to protect the public. A now-infamous memorandum from a tobacco executive in 1969 captured this strategy well: “Doubt is our product, since it is the best means of competing with the ‘body of fact’ that exists in the minds of the general public.”

Our case studies show how corporations have deployed trade associations and front groups with innocuous-sounding names to undermine science, influence public opinion, and gain access to policy makers while maintaining the illusion of independence.

Working to manufacture doubt and create the appearance of uncertainty where little exists is a blatant abuse of the way independent science operates to develop knowledge and inform the public about threats to their health and well-being.

CASE STUDY



[How Fossil Fuel Lobbyists Used “Astroturf” Front Groups to Confuse the Public](#)

The top lobbyist for the fossil fuel industry in the western United States secretly ran more than a dozen front groups in an attempt to undermine forward-looking policy on climate change and clean technologies.

CASE STUDY



[Corn Refiners Association Used Front Groups to Spread Disinformation about Sugar and Health](#)

The sugar industry quietly funded public relations firms and front groups to sow disinformation about the health effects of added sugar.

CASE STUDY



[The Indoor Tanning Association Used Misleading Ad Campaigns to Distort Skin Cancer Science](#)

Trade associations representing indoor tanning salon owners have repeatedly made misleading representations in their advertising and marketing, downplaying evidence of the link between tanning bed exposure and melanoma.

CASE STUDY

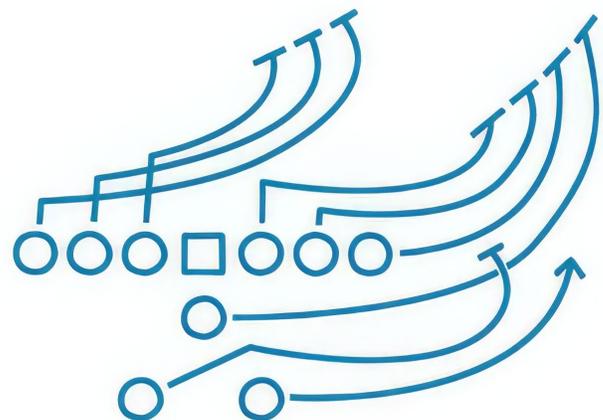


[How the American Chemistry Council Sowed Uncertainty about Formaldehyde Risks](#)

The American Chemistry Council worked for decades to downplay formaldehyde risks and to delay and obstruct standards proposed by the EPA.

4 The Screen

Buy credibility through alliances with academia or professional societies



Many companies forge strong financial connections with university research departments with the legitimate goal of advancing public knowledge. Corporations sometimes sponsor academic chairmanships, sponsor students, or fund research. Arrangements like these can help companies improve their image by affiliating with a prestigious academic institution or professional society.

Transparency and scientific independence are crucial in such relationships. As a group, industry-funded studies are more likely to produce results favorable to industry. This doesn't mean that corporate funding of scientific research will necessarily lead to biased results, but it underlines the need for full disclosure so that the objectivity of scientific literature can be adequately assessed.

As our case studies show, companies have sometimes exploited their academic alliances to influence research and spread misinformation that serves corporate interests while undermining science.

CASE STUDY



[How Coca-Cola Disguised Its Influence on Science about Sugar and Health](#)

Coca-Cola quietly funded a research institute out of the University of Colorado designed to persuade people to focus on exercise, not calorie intake, for weight loss strategies.

CASE STUDY



[Disinformation Playbook: Purdue Pharma](#)

By keeping the science away from patients and doctors and hiding behind the credibility of institutions, Purdue helped fuel an ongoing public health crisis of epic proportions.

CASE STUDY



[The Fossil Fuel Industry Hid the Truth about Its Funding of Fracking Research](#)

The Marcellus Shale Coalition, a fossil fuel trade association, has tried to use the reputation and credibility of universities and its scientists to promote natural gas.

CASE STUDY



Philip Morris Funds University Research—with Strings Attached

Philip Morris funded university research programs, sometimes with contracts that breach university ethics requirements, as part of a concerted public relations and marketing strategy to improve tobacco’s tarnished image.

CASE STUDY



The Case of ExxonMobil and the American Geophysical Union

Despite decades of deception on the climate risks of fossil fuel extraction, ExxonMobil for years sponsored the annual meeting of the American Geophysical Union, one of the nation’s most prominent scientific associations.

CASE STUDY

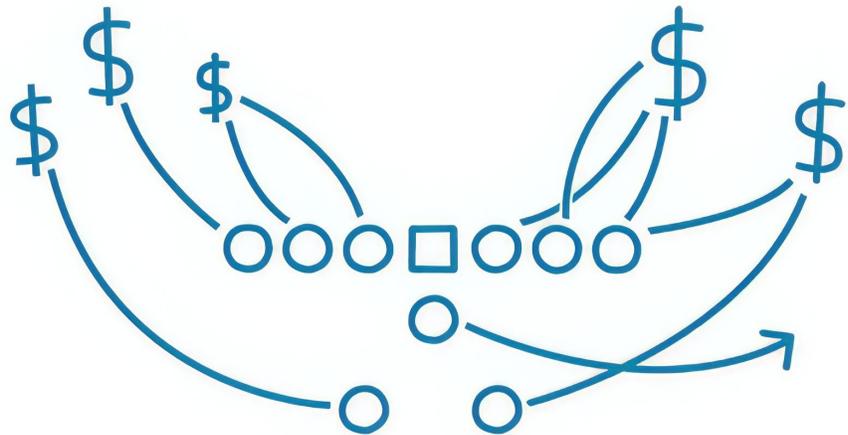


Alcohol Industry Funds Government Study

A \$100 million study on the health effects of moderate drinking was shut down after revelations of inappropriate contact between investigators and the alcohol industry.

5 The Fix

Manipulate government officials or processes to inappropriately influence policy



After meeting with and listening to talking points from Dow Chemical Company, the maker of the pesticide chlorpyrifos, the EPA announced it would reverse its decision to ban the chemical, which is linked to neurological developmental issues in children.

Like public interest organizations, many companies or industry trade associations lobby the government to help enact legislation favorable to their interests. Some companies, however, go so far as to undermine the way federal agencies use science to develop policy, pushing for changes that make it harder for agencies to fulfill their science-based missions, or using political connections to gain access to top-level agency officials. Such actions compromise the government's ability to protect the public.

Unfortunately, a "revolving door" between industry and government presents a huge opportunity for people with industry ties and clear financial conflicts of interest to hold key decision-making positions. Such officials can help develop policies that benefit a former or prospective employer, policies that may live on long after their departure.

While it's certainly reasonable for industry to participate as a stakeholder in policy decisions, transparency and public vigilance are needed to keep companies from using their deep pockets and powerful networks to promote policies that undermine scientific evidence and threaten public health and safety.

CASE STUDY



How Dow Chemical Influenced the EPA to Ignore the Scientific Evidence on Chlorpyrifos

After meeting with and listening to talking points from Dow Chemical Company, the maker of the pesticide chlorpyrifos, the EPA announced it would reverse its decision to ban the chemical, which is linked to neurological developmental issues in children.

CASE STUDY



Pfizer Pressured the FDA to Downplay the Risks of Its Arsenical Animal Drug

After an FDA study revealed that chickens treated with Pfizer's drug, Roxarsone, had dangerously high levels of arsenic in their bodies, the company colluded with the agency to downplay the risks in its communications.

CASE STUDY



How the NRA Suppressed Gun Violence Research

The NRA used its influence over a Congressman to codify language preventing the CDC from funding research into gun violence, which kills and injures tens of thousands of people in the US each year.

CASE STUDY



BP and Other Companies Exploited a Regulatory Agency to Continue Negligent Offshore Drilling

The fossil fuel industry's problematic dealings with a weak regulatory agency were a factor in the Deepwater Horizon disaster in the Gulf of Mexico.

CASE STUDY



How E-Cigarette Companies Manipulated the Government

Intense industry lobbying delayed and weakened FDA regulation of e-cigarettes, even as adolescent vaping rates soared.

[Stopping the Disinformation Playbook](#)

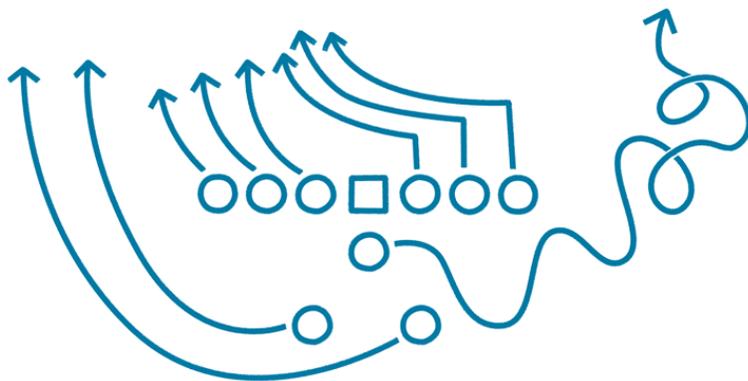
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[Stopping the Disinformation Playbook](#)

These are the recommended counters to the plays in The Disinformation Playbook. [Read on for further examples and tactics.](#)

Too often, companies use the Disinformation Playbook to make public policy work for them, instead of for all of us. And the Trump administration and the current Congress have been all too eager to play along, repeatedly [sidelining science](#) for the benefit of powerful interests.



But it doesn't have to be that way. The Playbook is not unstoppable. And the best defense, as the saying goes, is a good offense.

It's time for us to push back—exposing counterfeit science and manufactured uncertainty, defending targeted scientists,

and spotlighting undue corporate influence on government policy, processes, and officials, as well as conflicts of interest in industry-university relationships.

Here are some things you can do to help stop the Disinformation Playbook and keep federal science strong, independent, and focused on serving the public interest.

What you can do

All of us

- **Share the Playbook** with your social media networks, and when you see a new example of a company using a tactic from the playbook to sideline science, call it out! The more people are aware of these tactics, the harder it will be for companies to get away with them.
- **Push back against regulatory “reform” legislation** like the Regulatory Accountability Act, which would make science-based policymaking more burdensome for federal agencies by allowing industry lobbyists to question strong science being used by agencies and delay important safeguards. Start now by joining the fight against attacks on car fuel efficiency standards.
- **Set the record straight.** If you find someone spreading disinformation on a topic, counter it. If the disinformation appears in the media, correct it in a comment or letter to the editor. Check the credentials and affiliations of experts you come across in the media—and follow the money. The Center for Responsive Politics’ [Opensecrets.org](https://www.opensecrets.org) is a great resource to find lobbying and political contribution information for companies and PACs.
- Consider divesting your retirement funds and other investments and making conscious consumer choices to **avoid supporting companies that advance disinformation campaigns.**

Scientists

- Become a member of the [UCS Science Network](https://www.ucsnetwork.org) and apply your expertise to science-related issues. [The Scientist Advocacy Toolkit](https://www.scientistadvocacy.org) has helpful tools and trainings on how to engage with policymakers, take part in local action, and more

- Use your research and scientific expertise to advance the use of independent science in government by **nominating yourself or a colleague** to serve on a scientific advisory committee.

More recommendations

Companies

Company policies should state clearly that:

- Company employees must refrain from and reject acts of scientific misconduct such as fabrication of results, falsification of data, and plagiarism in proposing, conducting, and reviewing scientific analysis.
- Scientists employed at companies should disclose real and perceived conflicts of interest when publishing or presenting their scientific research in an accessible form.
- The company will not withhold negative results about the efficacy or safety of their products and activities.
- The company will publicly disclose all payments to politically active trade associations.
- When requested, the company will provide data and methodology to federal agencies (with appropriate confidentiality protections) to determine the safety and efficacy of products, byproducts, and practices.
- The company will not limit access to research materials that would allow independent scientists to verify the safety and efficacy of products, byproducts, and practices.

Companies should practice good corporate citizenship by:

- Encouraging employees, contractors, and trade associations to disclose conflicts of interest when providing testimony or comments for official government rulemakings, or when speaking or opining publicly.
- Breaking from trade associations or industry-affiliated groups that promote disinformation or using their leverage to end disinformation produced by the group and speaking publicly about these efforts.
- Following the lead of B Corporations, pledging to “do no harm and benefit all” and committing to higher standards of transparency and accountability.

Federal officials

Congress:

- Develop ways to limit access to and influence over decisionmakers through financial contributions.
- Maintain a commitment to protecting whistle-blowers and preventing retaliation for allegations related to agency scientific integrity policies, especially as they relate to interference with or manipulation of federal science for private gain.
- Investigate allegations of compromised scientific integrity, conflicts of interest, and other violations of ethics rules in the federal agency decision-making process and make the results of this investigation readily available to the American people.
- Close loopholes in the Federal Advisory Committee Act. The legislation should extend the act's rules to cover advisory committees organized by federal contractors, not just committees convened directly by an agency. Committee members, including nonvoting members who regularly attend meetings, should be asked to provide complete information on affiliations and conflicts of interest.
- Require that all individuals providing testimony before Congress disclose financial conflicts of interest, including non-government funding, in their public testimony.
- Reject the Financial Choice Act and similar legislative proposals that undermine the ability of investors to engage with public companies on social, environmental, and governance issues.
- Oppose any legislative attempts (like the Regulatory Accountability Act and the HONEST Act) to dismantle the science-based system for shaping and upholding public protections by creating more opportunity for industry lobbyists to obstruct or unduly influence the rule-making process.
- Direct the National Academy of Sciences to explore appropriate responses for scientists and institutions facing harassment or intrusive open records requests that interfere with their ability to pursue research.
- Leverage technology and innovation to make federal processes for gathering public input more inclusive and participatory so that disproportionately impacted communities, such as low-income communities and communities of color, can contribute meaningfully and sufficiently.

Executive branch:

- Agency heads should review, implement, and, as needed, improve existing scientific integrity policies to ensure that they include the following key provisions:
 - A clear and detailed policy and procedure for addressing allegations of scientific integrity violations and publicly reporting their resolution.
 - A declaration that employees who leave federal service should not be required to sign nondisclosure agreements restricting disclosure of government information that is neither classified nor proprietary nor contains confidential personal matters.
- Agency heads should ensure that ethics pledges for their employees are followed and that political appointees recuse themselves from decisions for which there is a perceived or direct conflict.
- Agencies such as the EPA and OSHA should create a publicly available federal registry, similar to the FDA's clinical trials registry, for scientific research submitted to the agency to support policy decisions.
- Agencies should require that all scientific information or critiques, including post-market research on regulated products, include a brief conflict of interest disclosure.
- Agencies should request full conflict of interest disclosures from all who make comments on federal rulemakings.
- The Office of Government Ethics should be given more power to enforce ethics standards, including more oversight of agency ethics activities and the power to work with agency inspector generals to investigate potential undisclosed conflicts of interest or violations of conflict-of-interest waivers in government.
- The Office of Management and Budget, in consultation with the Attorney General and the Office of Science and Technology Policy, should ensure the operation of a consolidated online request portal (in accordance with the FOIA Improvement Act of 2016). Commercial entities requesting FOIA exemptions should be required to explain why scientific information they ask to be withheld qualifies as trade secrets or privileged commercial information in order to shift this burden of proof from the federal government to the commercial entity.
- The president should maintain a commitment to protecting whistleblowers and direct his cabinet members to prevent retaliation against employees blowing the whistle regarding interference in science and abuses of agency scientific integrity policies.

- The Executive Branch should expand opportunities to increase public input into decision-making.

Academic institutions

- Require that all staff researchers submit annual financial disclosure forms and make these forms publicly available and easily accessible.
- Institute corporate ethics pledges, providing guidelines to foster ethical partnerships with corporate funders and partners. All contracts with corporate sponsors should be reviewed by the university's general counsel and held to these pledges.
- Refrain from agreeing to gifts that give donors control over curriculum, academic work, hiring and firing of personnel, or other decisions that could have a real or perceived influence on academic freedom.
- Create research integrity standards and refrain from allowing corporate recruiters on campus if they violate those standards.
- Consider setting aside funding for legal protection of researchers who are attacked by those who don't like their research focus, questions, or findings.

Scientific journals and organizations

- Peer-reviewed journals should require disclosure of all funder involvement in scientific studies, including from corporations, consulting firms, foundations, or other nongovernmental organizations, denoting whether the contract gave scientists the right to publish their findings without influence and without obtaining approval from the funder. These disclosures should be made available to the public for free.
- Scientific societies should disclose corporate sponsorship and pledge not to accept funds with strings attached related to their scientific work, or from companies that are actively participating in disinformation campaigns.

Media

- Avoid false equivalencies that distort scientific consensus on issues.
- Correct the record when scientific information is misrepresented.

- Report abuses of science in government and hold government officials accountable for actions that interfere with scientific integrity.
- Search for and report conflicts of interest from sources and those they quote.