

GET SCIENCE RIGHT - Sample questions for candidates

1. Funding research

In the last 8 years, the federal government has underfunded discovery-driven research and government research to fund market-driven research while promising that it would stimulate R&D investments in the economy, and create more jobs.

Facts:

- ✓ According to the latest data from Statistics Canada, business investment in R&D has decreased drastically, from \$17 to \$14 billion spent between 2006 and 2013, after inflation;
- ✓ *Total investments in R&D in Canada were \$27.7 billion in 2013 while they were \$30 billion in 2006 (2007 dollars), after inflation;*
- ✓ *Investments made by the federal government in government research is also down by 6.1% since 2007, after inflation;*
- ✓ *About 4,000 government scientists were let go as a result of federal cuts in recent years.*

Question: To restore the level of investment in R&D in Canada back to the level observed in 2006, and to achieve our short and long term economic potential, we would need to spend at least \$2.5 billion of new R&D money in 2015 alone, when adjusted for inflation. How do you propose to do that?

2. Discovery-driven research

Underfunding discovery-driven research can limit innovation and job growth. A narrowing focus on commercialization removes the creativity and unexpected discovery key to discovery-driven research, and distorts the focus of scientific investigation.

In the area of medical research, for instance, the obsession with commercial outcomes has encouraged an emphasis on minor modifications to existing drugs and devices, rather than fundamental explorations of disease prevention and population health.

We should remember that discovery-driven research led to many key unanticipated innovations such as X-rays, nylon, Teflon, GPS technology, informatics, superconductivity and medical imaging.

Question: What do you think should be the role of the federal government in funding discovery-driven research?

3. Peer-review process/Academic Freedom

The federal government has changed the composition of the boards of the granting councils by appointing industry and political figures at the expense of scientific experts.

Furthermore, public agencies such as the National Research Council are seeing their mandate narrowed and explicitly tied to industrial interests. When governments bind research too closely to industry needs or political preferences, clear dangers arise. The commercialization of research undermines the integrity of public research. Industrial partners, interested in preserving their commercial interests, have attempted to suppress or delay the publication of research results and to steer research away from inquiry that promises public benefit but offers little commercial profit.

Questions:

- What you think should be done to give the power back to scientists to decide what research proposals get funded?
- What would you do to protect the academic freedom of college and university researchers?

4. Unbiased and non-partisan advice on science policy

Canadians and their elected representatives need unbiased and non-partisan advice on science policy. The Office of the National Science Advisor was designed to fill this role, however imperfectly, until it was eliminated in 2008 by the Conservative government.

Questions:

- What would you do to guarantee that parliamentarians get sound advice on science policy?
- What would you do to bring more facts into policy development?
- Will you bring back the long-form Census?

5. Muzzled scientists

A major survey of federal government scientists commissioned by the Professional Institute of the Public Service of Canada (PIPSC) found that:

- ✓ 90% feel they are not allowed to speak freely to the media about the work they do, and if faced with a departmental decision that could harm public health, safety or the environment, 86% feel they would face censure or retaliation for doing so;
- ✓ 74% believe the sharing of scientific findings has become too restricted in the past five years;
- ✓ 71% believe political interference has compromised Canada's ability to develop policy, law and programs based on scientific evidence.

Questions:

- Under your government, will government scientists be free to speak publicly about their findings?
- What will you do to protect that freedom?