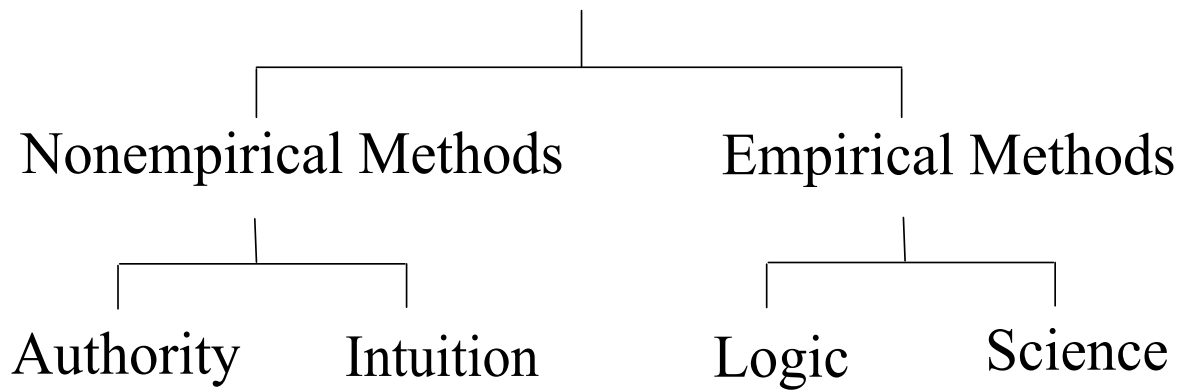


# Science and Environmental Policy

# Ways of Knowing



**method** - a procedure or way of doing something in an orderly, logical series of steps

**empirical** - derived from experiment and observation

**observation** - information gained by the use of the five senses (touch, sight, smell, taste and sound)

**authority** - parent, media, expert, government

**logic** - the science of reasoning

**intuition** - spontaneous perception not based on reasoned mental steps

**science** - a way of obtaining knowledge by means of objective observation

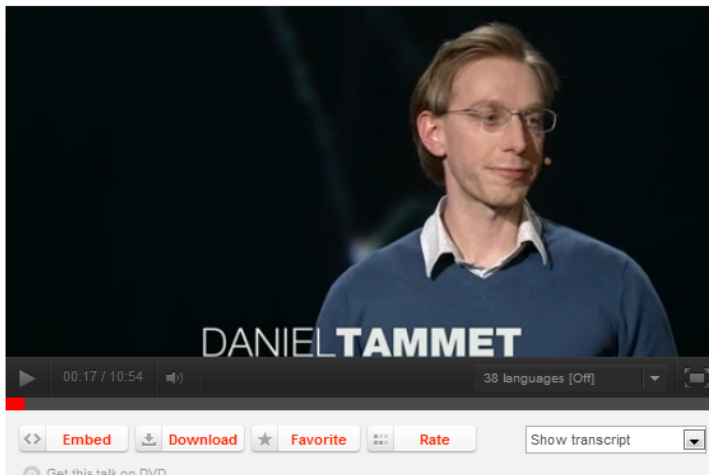
[http://www.ted.com/talks/daniel\\_tammet\\_different\\_ways\\_of\\_knowing.html](http://www.ted.com/talks/daniel_tammet_different_ways_of_knowing.html)



## TALKS

### Daniel Tammet: Different ways of knowing

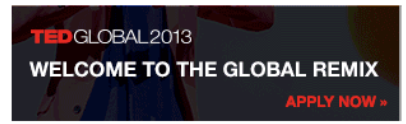
FILMED MAR 2011 • POSTED JUN 2011 • TED2011



743,461 Views

Daniel Tammet has linguistic, numerical and visual synesthesia – meaning that his perception of words, numbers and colors are woven together into a new way of perceiving and understanding the world. The author of "Born on a Blue Day," Tammet shares his art and his passion for languages in this glimpse into his beautiful mind.

Daniel Tammet is the author of "Born on a Blue Day," about his life with high-functioning autistic savant syndrome. He runs the language-learning site Optimnem, and his new book is "Embracing the Wide Sky: A Tour Across the Horizons of the Mind." [Full bio »](#)



## PLANE

Synesthesia can involve any of the senses. The most common form, **colored letters and numbers**, occurs when someone always sees a certain color in response to a certain letter of the alphabet or number. For example, a synesthete (a person with synesthesia) might see the word "plane" as mint green or the number "4" as dark brown. There are also synesthetes who hear sounds in response to smell, who smell in response to touch, or who feel something in response to sight. Just about any combination of the senses is possible. There are some people who possess synesthesia involving three or even more senses, but this is extremely rare.

4

Synesthetic perceptions are specific to each person. Different people with synesthesia almost always disagree on their perceptions. In other words, if one synesthete thinks that the letter "q" is colored blue, another synesthete might see "q" as orange.

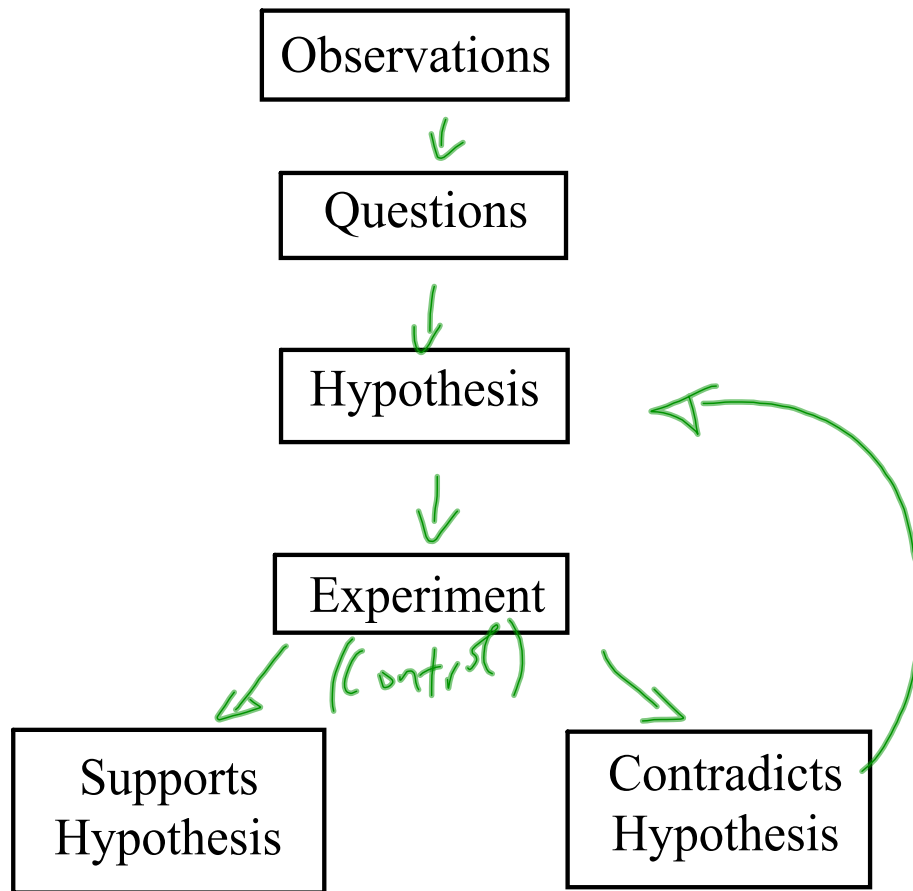
<http://www.youtube.com/watch?v=6vs-ez62DVc>



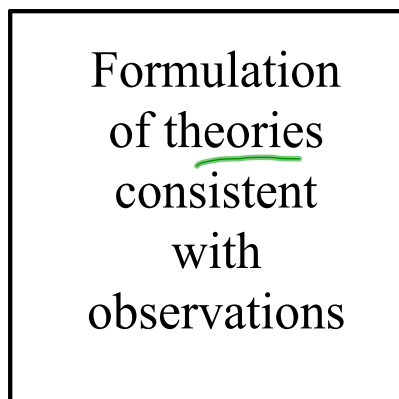
# Scientific Method



The way of gaining knowledge is called the scientific method.



Further questions, tests, and observations



# POST MORTEM



- elected official with no medical training deciding cause of death
- blind coroner (forty years in office)
- "Bare Hands Only" sign
- no background check on forensic pathologist involved with incompetent autopsies
- Coroner re-hired by same organization
- no consequences for pathologist - district attorney suspended
- cremation of James Jordan
- lack of proper medical facilities
- lost body parts
- coroner siding with police (defensive, 10 -four year terms)
- girl strapped down - injection marks
- high school diploma required for coroner's position

## Junk Science

Junk science is information that is presented as scientifically valid, but does not conform to the rigors imposed by the scientific community.

It can take many forms:

- presentation of selective/false results
- politically motivated distortions of scientifically sound papers
- publication of poor work in unreviewed journals and books

Junk science is quite often generated by special-interest groups trying to influence the public debate about science-related concerns.

# Government of Canada

## Worksheet



**Environmental Science 122**  
Government of Canada

1. What are the three levels of government in Canada?

federal, provincial, municipal

2. The Federal Government is headed by the Governor General of Canada on the advice of the Prime Minister.

3. David Johnston is the Governor General of Canada.

4. Stephen Harper is the Prime Minister of Canada.

5. Which of the following are registered political parties in Canada? Print Y (yes) or N (no) on the line provided.

- KA** a) Absolutely Absurd Party N  
b) Animal Alliance Environment Voters Party of Canada Y  
c) Bloc Quebecois Y  
d) Canadian Action Party Y  
e) Christian Heritage Party of Canada Y  
**J** f) Communist Party of Canada Y  
g) First Peoples National Party of Canada Y  
h) Green Party of Canada Y  
i) Liberal Party of Canada Y  
j) Libertarian Party of Canada Y  
**C** k) Marijuana Party Y  
l) Marxist-Leninist Party of Canada Y  
m) New Democratic Party Y  
n) People's Political Power Party of Canada Y  
**K** o) Pirate Party of Canada Y  
p) Progressive Canadian Party Y  
**J** q) Rhinoceros Party Y  
r) United Party of Canada Y  
**D** s) Western Block Party Y

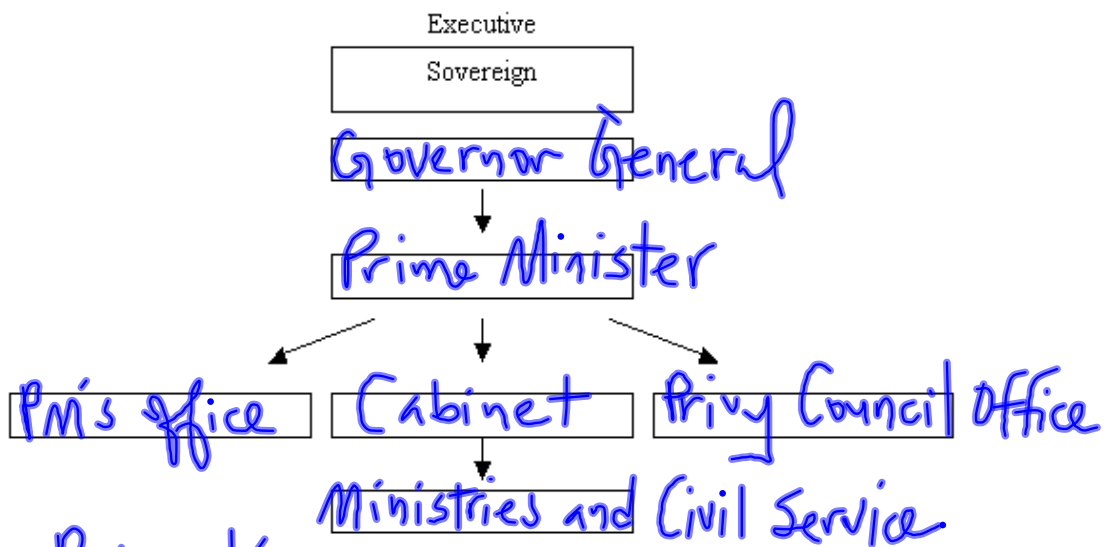
6. The Provincial and Territorial Governments are headed by a Lieutenant Governor (provinces) or Commissioner (territories) on the advice of a Premier (provinces) or Government Leader (territories).



Lieutenant-Governor of NB is Graydon Nicholas.



8. The Premier of New Brunswick is David Alward
9. Municipal governments are headed by a mayor
10. The Mayor of Miramichi is Gerry Cormier
11. Complete the flow chart below to show the structure of the Federal Government.



12. Peter Kent is Canada's Minister of the Environment.
13. Bruce Fitch is the Minister of Environment for New Brunswick.
14. \_\_\_\_\_ implements the Government of Canada's environmental agenda.

✓ Environment  
Canada

## Environment and Local Government

[http://www2.gnb.ca/content/gnb/en/contacts/dept\\_renderer.139.html#structure](http://www2.gnb.ca/content/gnb/en/contacts/dept_renderer.139.html#structure)



## Government of Canada



## Environment Canada





# Environmental Science

## 122

Environment Canada



## How is the environment governed?

- ✓ • Environment Canada was established in 1971
  - ✓ • It is a branch of the federal government responsible for protecting Canada's environment, natural heritage, and meteorological information
  - ✓ • It relies on credible science and sound environmental decisions
- 
- Considered to be an environmental science research leader
    - Conducts and publishes 80% of its research with external agencies
    - This research helps wildlife populations, improves ecosystems, assesses environmental risks, issues weather warnings, and supports policy and legislative action

## What topics do they research?

- ✓ • Climate change
  - Causes and impacts
- ✓ • Meteorological and weather research
  - Improve weather and environmental prediction
- ✓ • Air quality research
  - Air pollutants, acid rain, source of pollutants, impacts on health and environment
- ✓ • Water
  - Changes in levels and pollutants
- ✓ • Nature
  - Preserves biodiversity

3



## How do they enforce their laws?

- Responsible for environmental and wildlife legislation
- Develops and administers other acts
- Advises federal agencies on other pieces of legislation
- Monitors the manufacture and use of toxic substances
- Import and export of hazardous materials
- Protection of domestic water and internationally shared water



## Who do they work with to enforce these laws?

- ✓ Industries
- ✓ Farmers
- ✓ Businesses
- ✓ Provinces, municipalities
- ✓ Customs officials
- ✓ Hunters
- ✓ The US EPA
- ✓ Fisheries and Oceans Canada
- ✓ RCMP

④



## Other government agencies helping the environment...

- Canadian Conservation Institute
- Canadian Environmental Assessment Agency
- Canadian Polar Commission
- Environmental Protection Review Canada
- Fisheries and Oceans Canada
- National Research Council Canada
- Natural Resources Canada

5

## More agencies...

- ~~National Research Council Canada~~
- ~~Natural Resources Canada~~
- Natural Sciences and Engineering Research Council of Canada
- National Energy Board
- Policy Research Initiative

## Laws and Policies of the Canadian Government

- The Canadian government strongly promotes research and development when creating policy
  - A policy is a deliberate plan of action to guide decisions and achieve rational outcomes
- A law is a system of rules and guidelines typically enforced through a set of institutions
- Both laws and policy are created to help protect the environment
- Many government and public agencies as well as private corporations and citizens help create them

## Environmental Policy - Businesses



### A Good Policy Should...

- be simple and jargon-free
- be short and concise (~1 page)
- include an introduction to the company (services, products, what you do)
- indicate a commitment to:
  1. compliance with legislation
  2. continual improvement of environmental performance
  3. prevention of pollution
- refer to objectives and targets
- have support from top management (signature)
- be current (date)
- \* be communicated to all staff (internal and external)
- \* be implemented

### Environmental Academy - Environmental Policy

<http://www.environmental-academy.com/about/environmental-policy.html>



### LUSH Cosmetics

<http://www.youtube.com/watch?v=1I8ao4jlzXc>



May 14 / 13

# Zero Waste

<http://www.youtube.com/watch?v=E1n3Fb5FqyU>



<http://www.youtube.com/watch?v=ZQiqHgE0h3U>



<http://www.youtube.com/watch?v=Wj0JBJ6muDs&list=PL2157E467569FD1C8>



# Newsletter

<http://danhierlihy.wix.com/dans-newsletter#>



Environmental Law and Policy  
Law 271 - Lecture 1



## Policies

There are a range of policies in place to protect the environment at the international, federal and provincial levels.

### International Agreements

Ramsar Convention  
Montreal Accord  
Bruntland Report  
Kyoto  
UNESCO

### Federal Legislation

Clean Air Act  
COSEWIC  
Oceans Act  
National Parks Act

### Provincial Legislation

Protected Areas  
Provincial Parks



## Attachments

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Intro to Environmental Science 120 - Government - Canada.doc