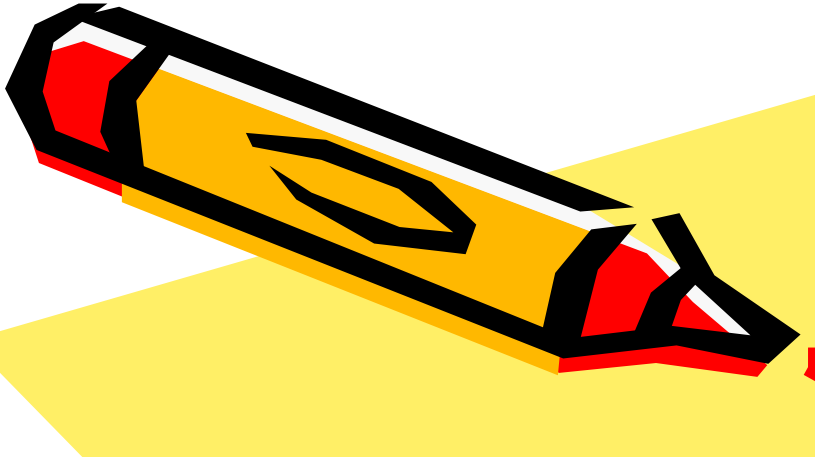


Introduction of the Course

Presented by Dr.Hassan Yasoob
Assistant Professor

Action 1 (2 min)

Introduction of your friend

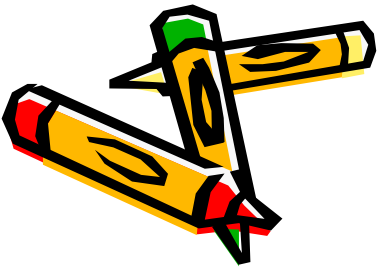
1 To find friend (to divided students in groups)

2 To visit your friend' name

3 When graduated and which university

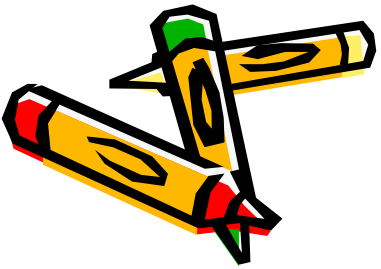
4 Who is his/her Mentor now

5 To introduce your friend in English or Urdu or Local Language



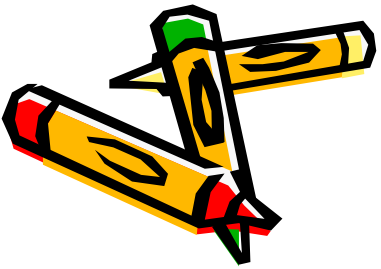
What is the purpose of action

- Ability construction
- Investigation
- Group co-operation
- Group spirit



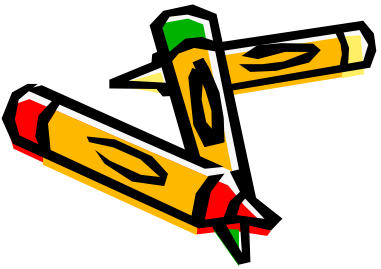
Object of the course

- To establish systematic Learning Approaches ;
- To master research methods for Entomological studies
- To enhance mood behaviour during studies
- To master basic principles and new study methods in students community and to find a dynamic system in Entomological studies with concerned course
- Knowing well the progress in students learnings



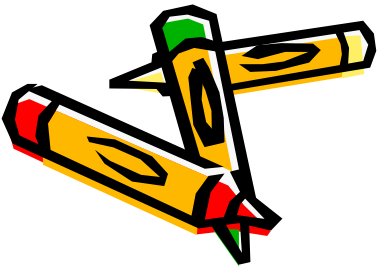
Content

- Will be provided with each lecture
- Focus on advance studies in concerned courses

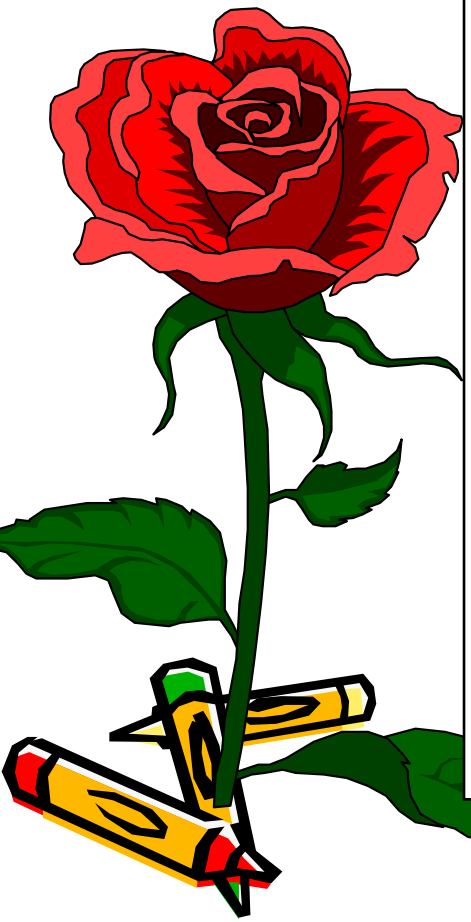


Teaching method

- Participatory :
- Discussion、 presentation
- Case analysis、 design of experiment、
- Multi-media demonstration
- Lecture, debate
- Homework and course work



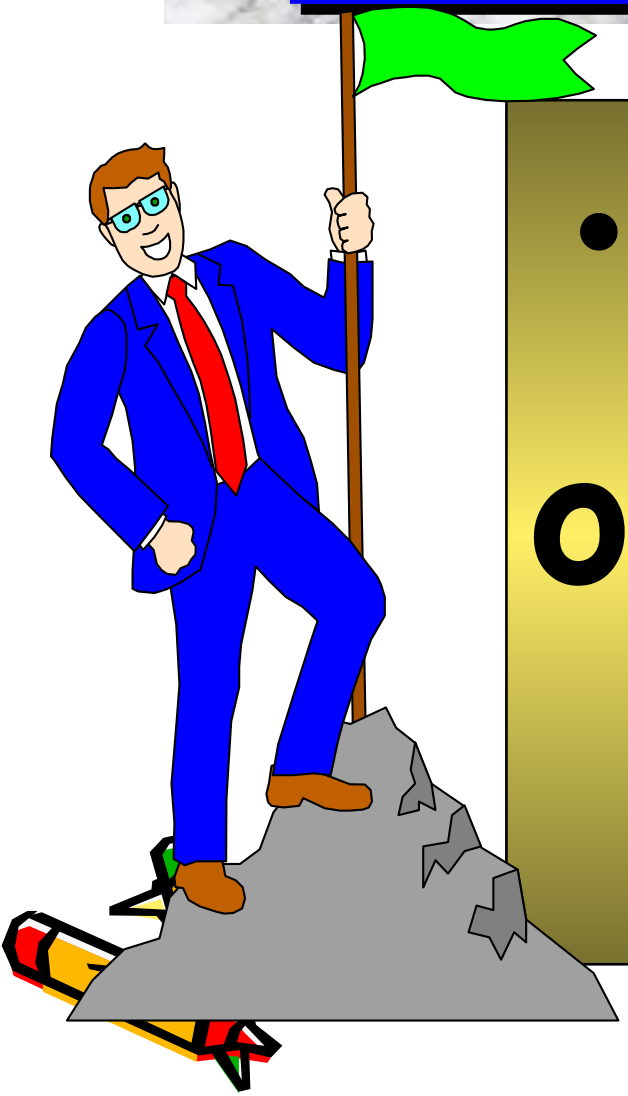
Refernce books



BOOKS RECOMMENDED

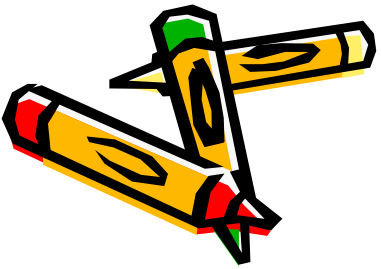
1. Cbiran, D.D. 2010. Environmental Science. 8th Edition Jones and Bartlett Publishers, London
2. Gregory, K.J. Simmons, I.G. Brazel, A.J. Day, W.J. Keller, E.A. Sylverter, A.G. and Yanez. A,A. 2009. Environmental Science: a Students companion. SAGE London.
3. Huffaker, C.B. 1999. Ecological Entomology. John Wiley Sons.
4. McEwen, F.L. and Stephenson, G.I. 1979. The Use and Significance of Pesticides in the Environment. John Wiley and Sons Inc., N.Y.
5. Perry, A.S. 1998. Insecticides in Agriculture and Environment: Retrospects and Prospects. Elsevier, New York.
6. Ashfaq, M. and Saleem, M.A. 2010. Environmental Pollution and Agriculture. Pak Book Empire, Lahore, Pakistan.
7. Suhail, A. and A. Suhail. 2006. Agriculture and Environmental Pollution. Deptt of Agri. Entomology. U.A.F., FSD
8. Teja Tschrntke Bradford A. Hawkins. 2002 ultrachic Level interactions Cambridge University press. 282pp.

First subject

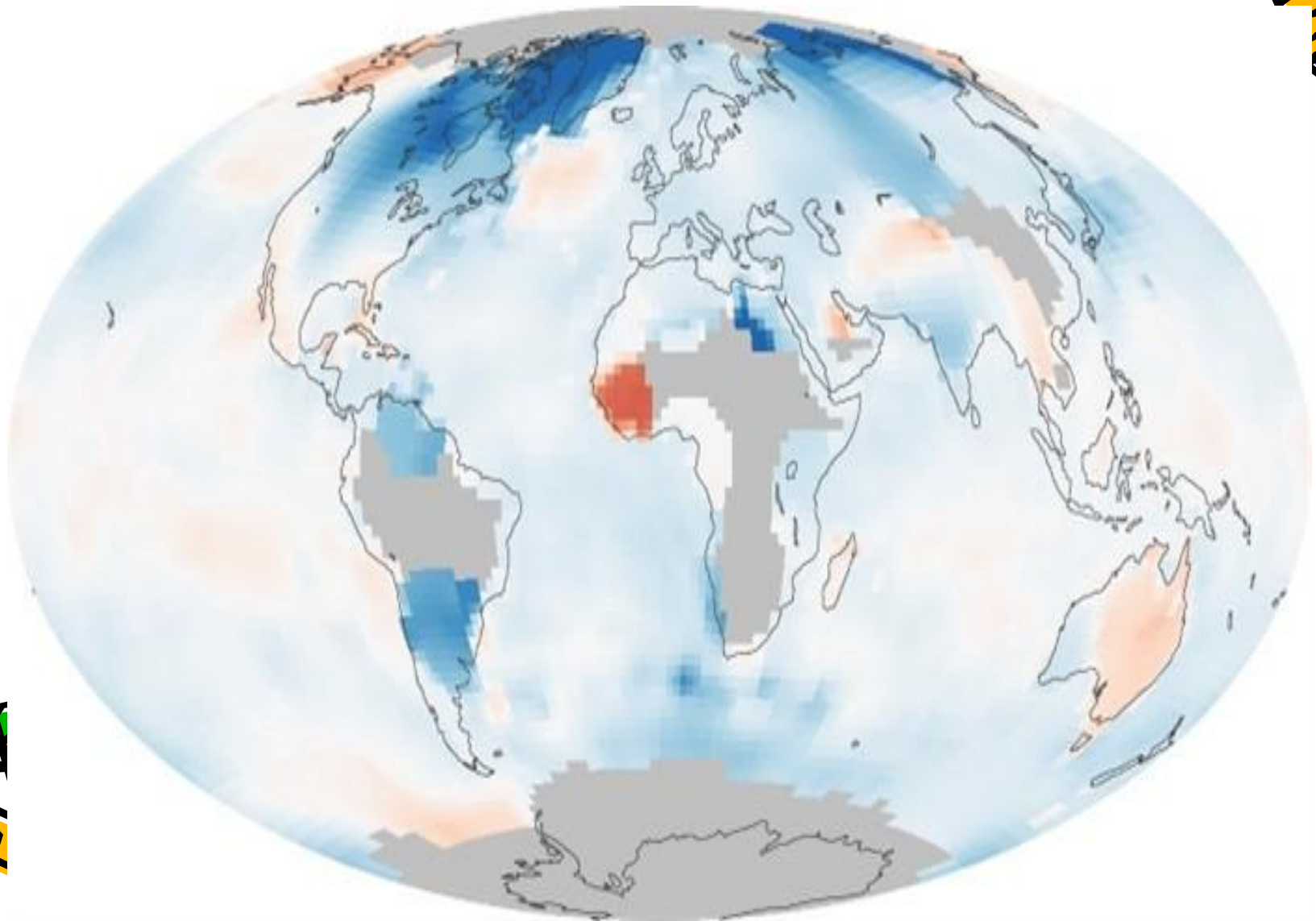


- Introduction of the Course

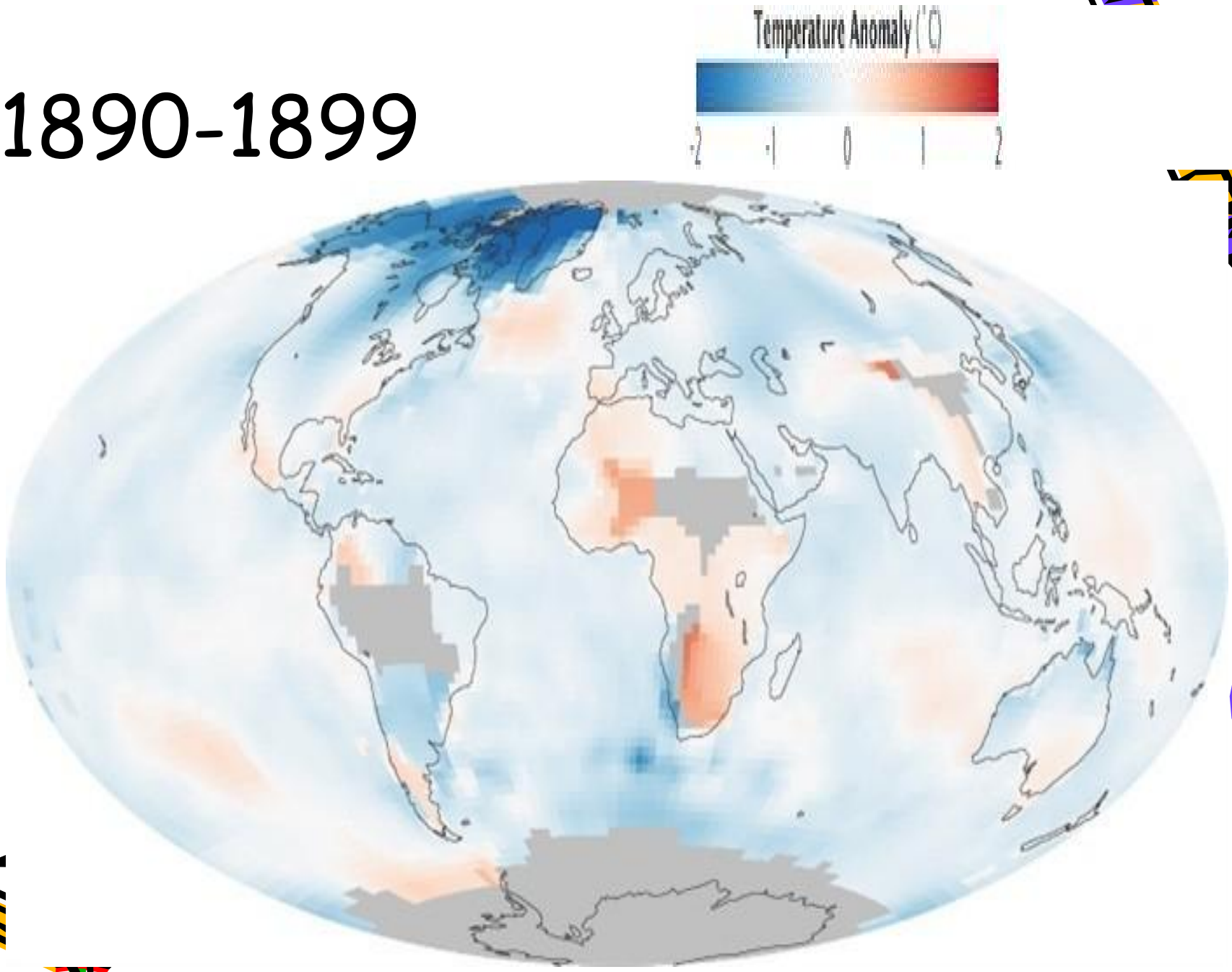
Sharing information



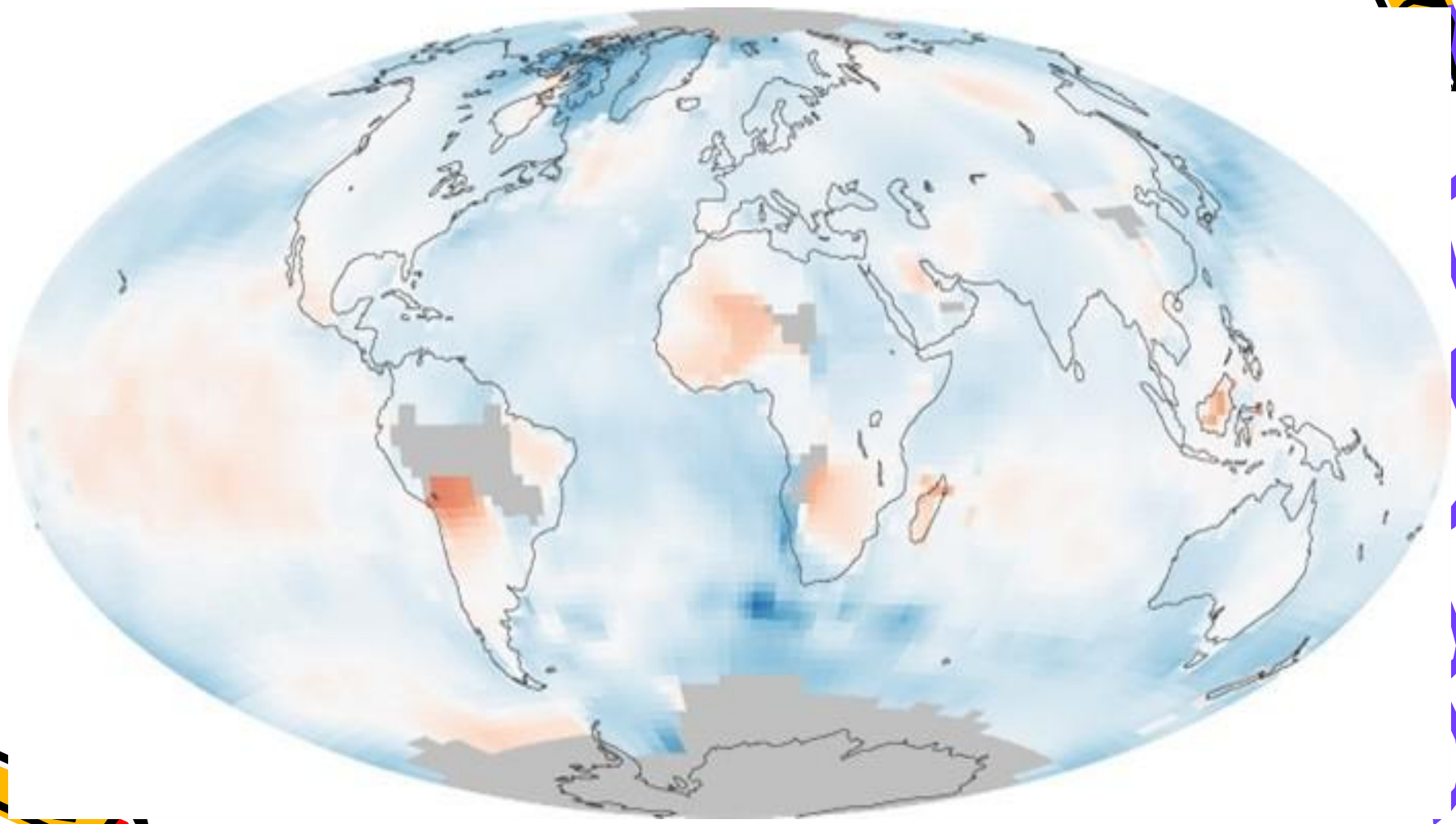
1880-1889



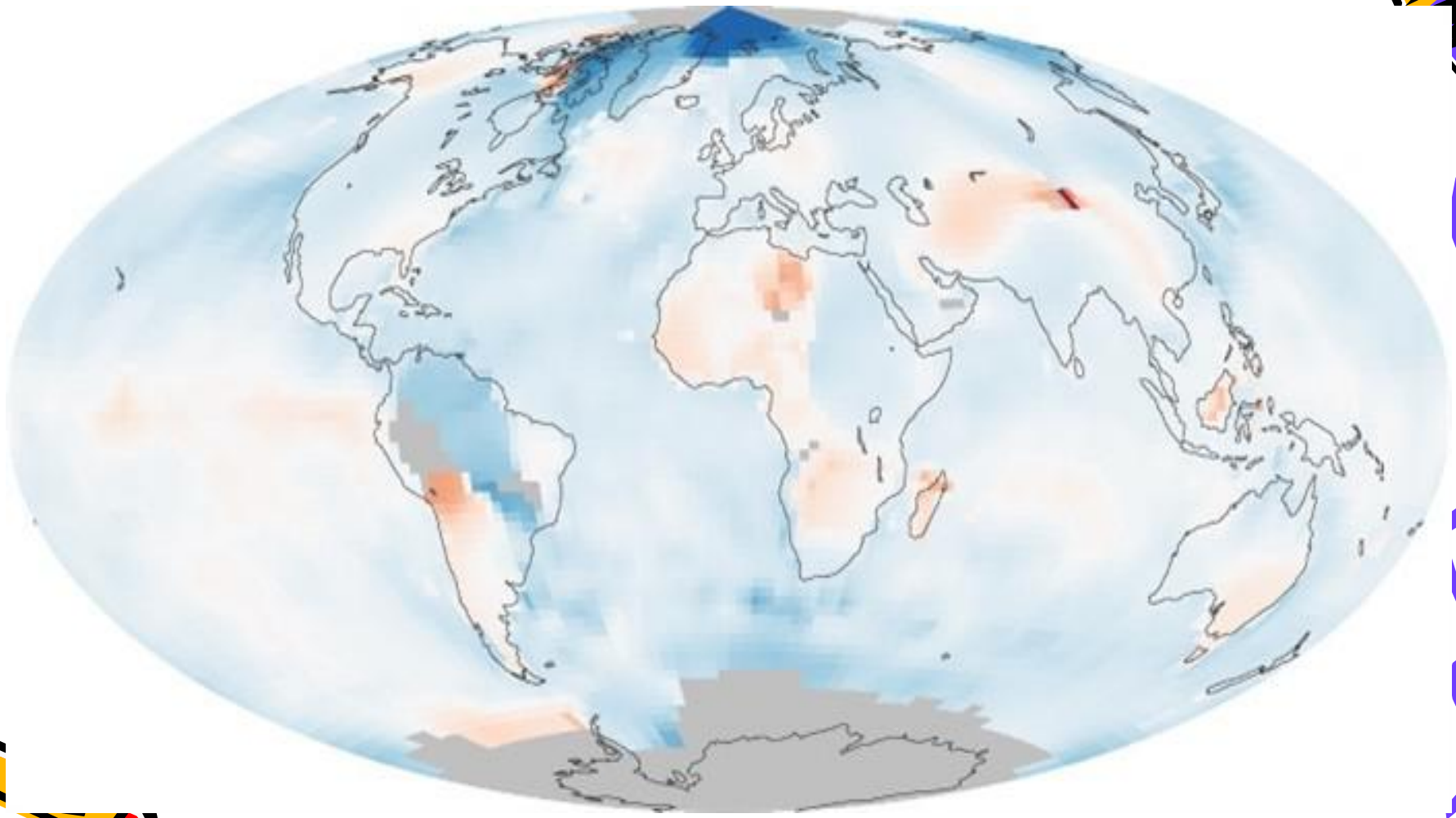
1890-1899



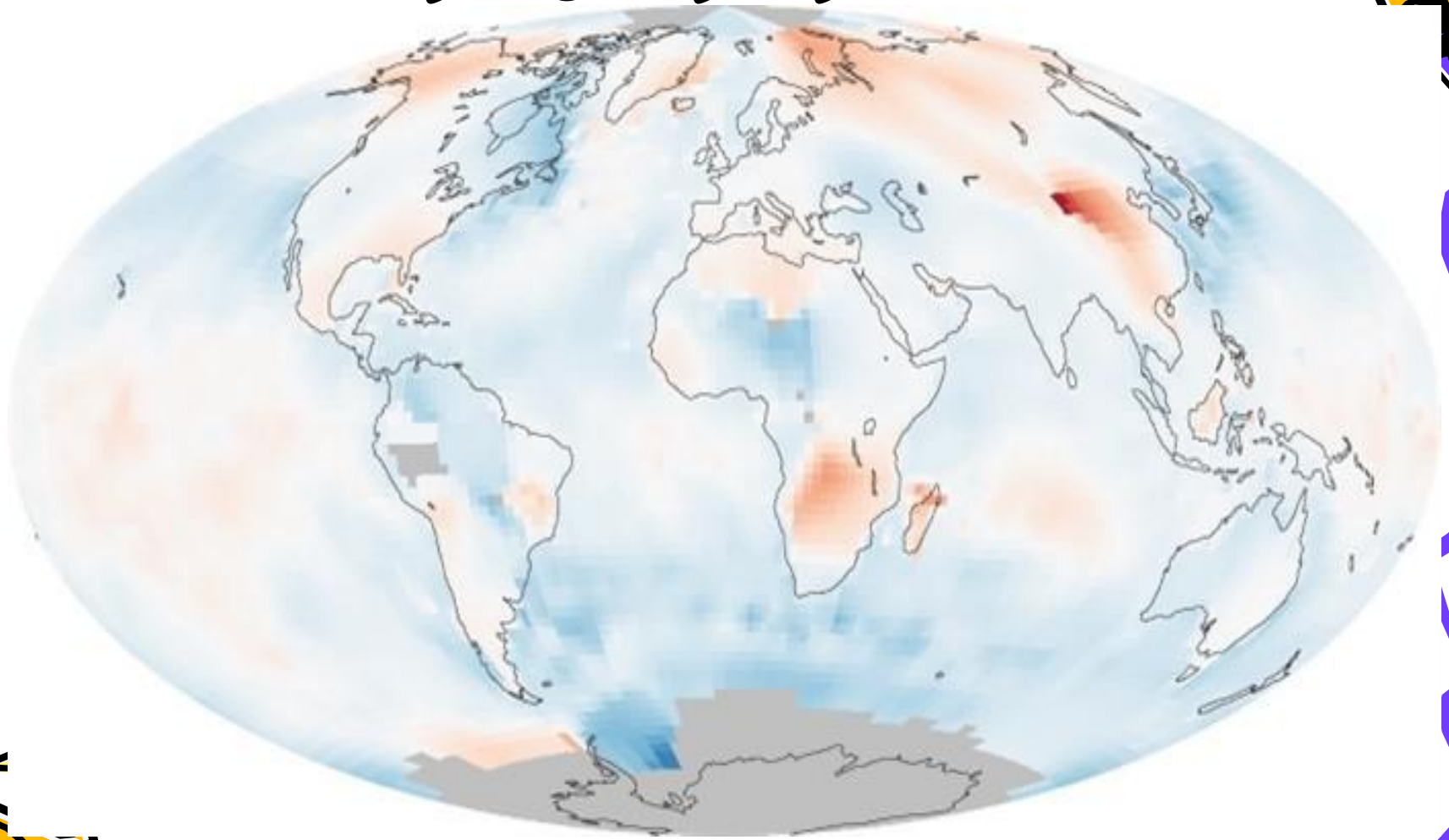
1900-1909



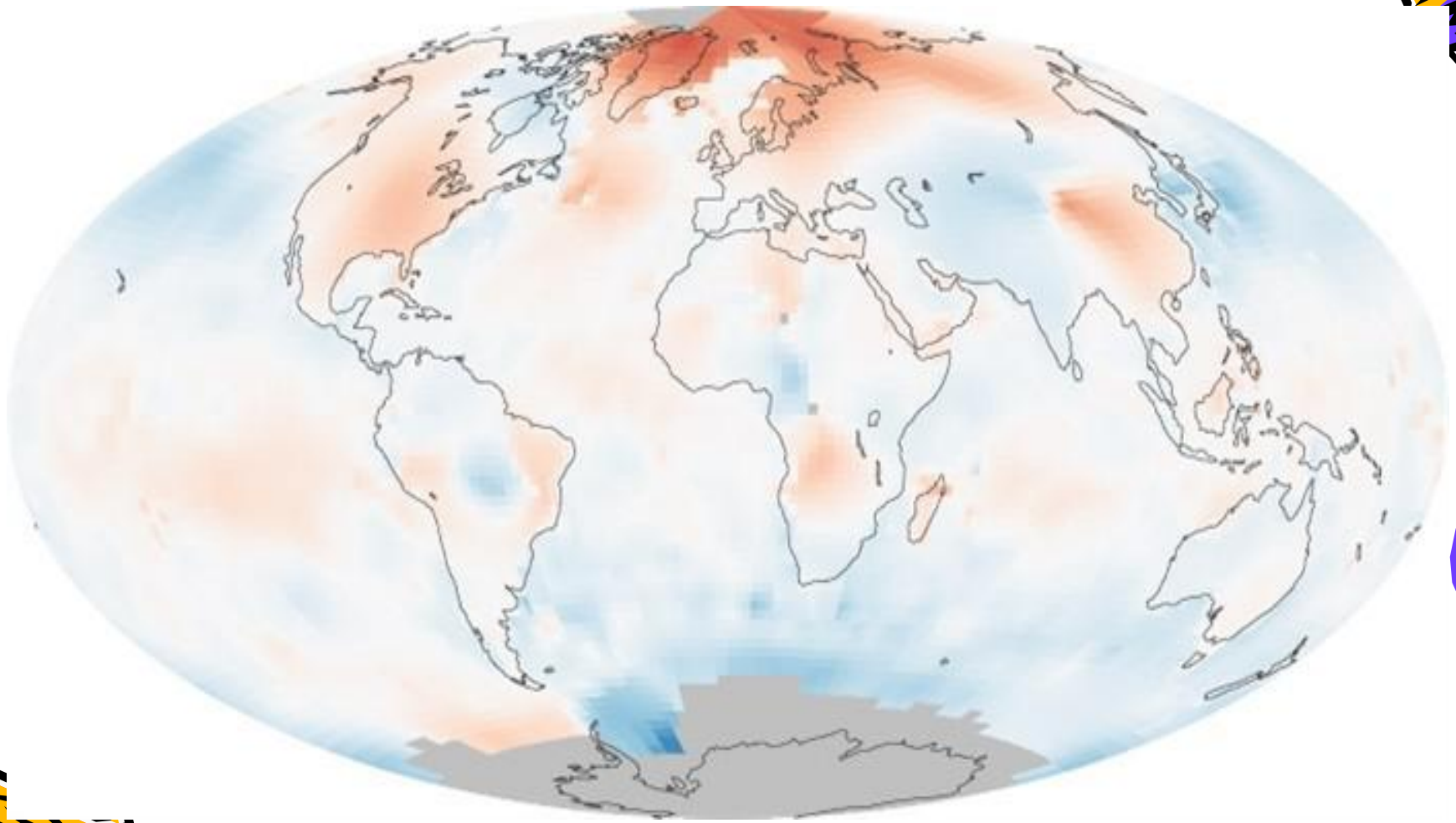
1910-1919



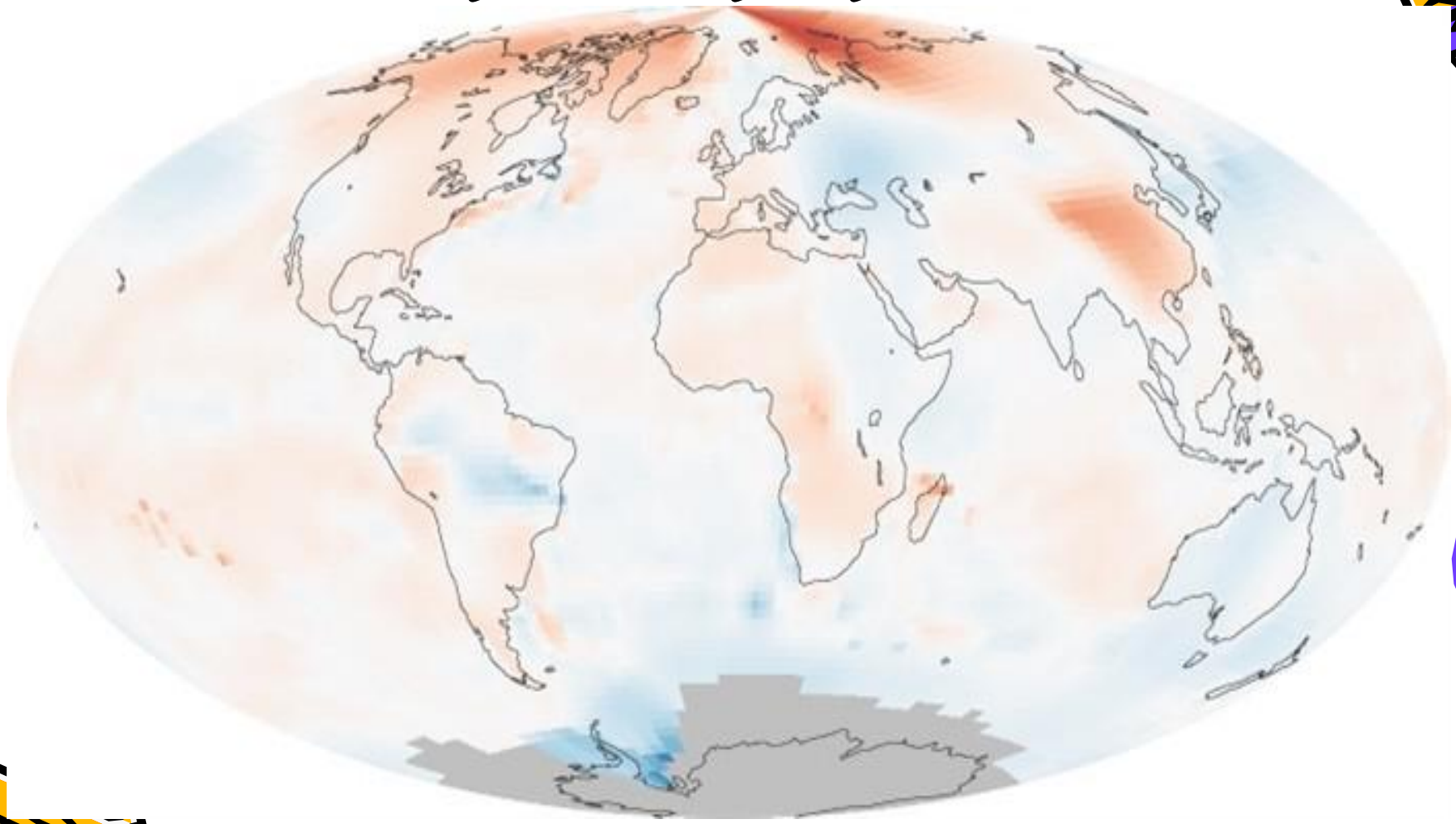
1920-1929



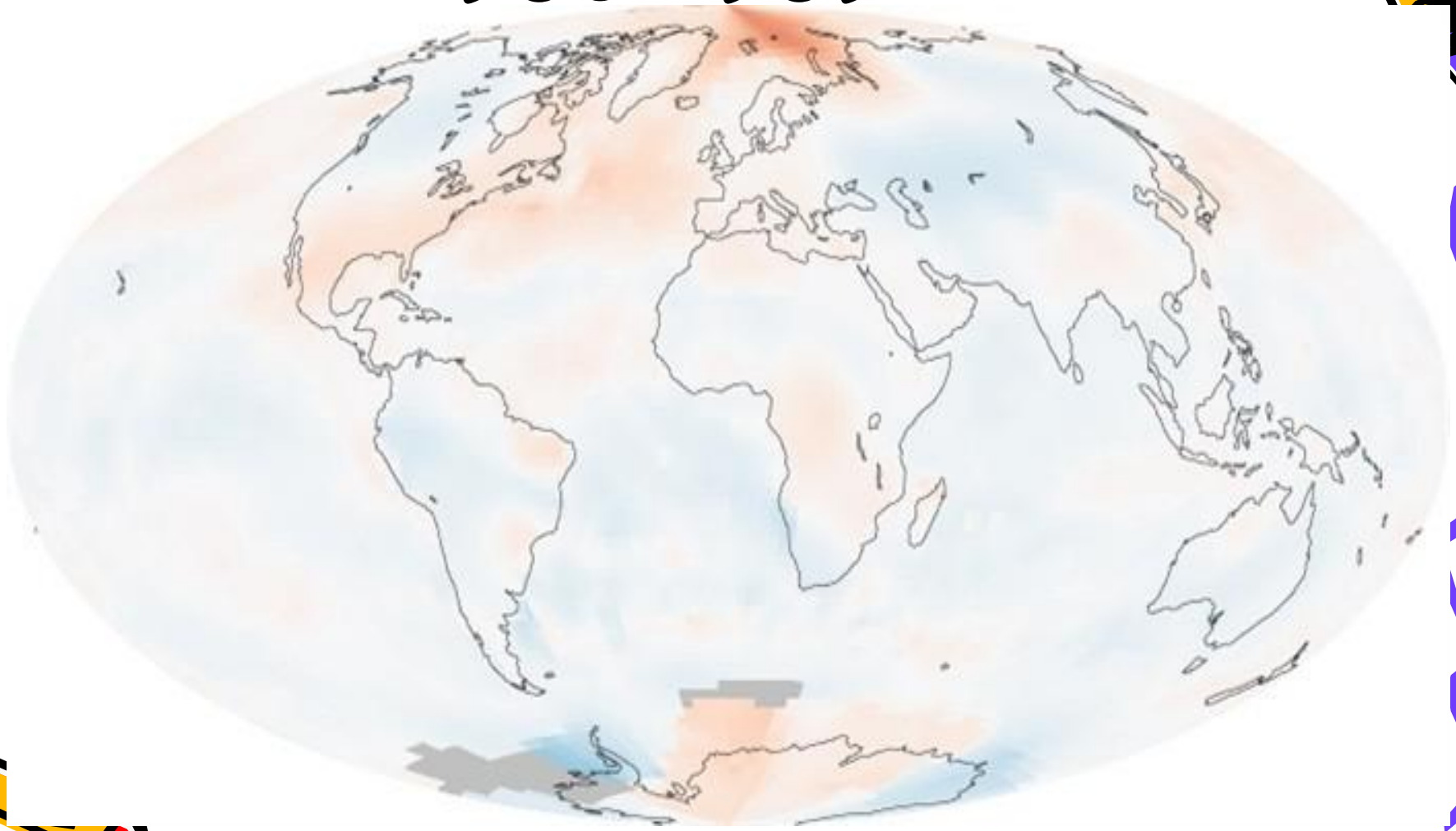
1930-1939



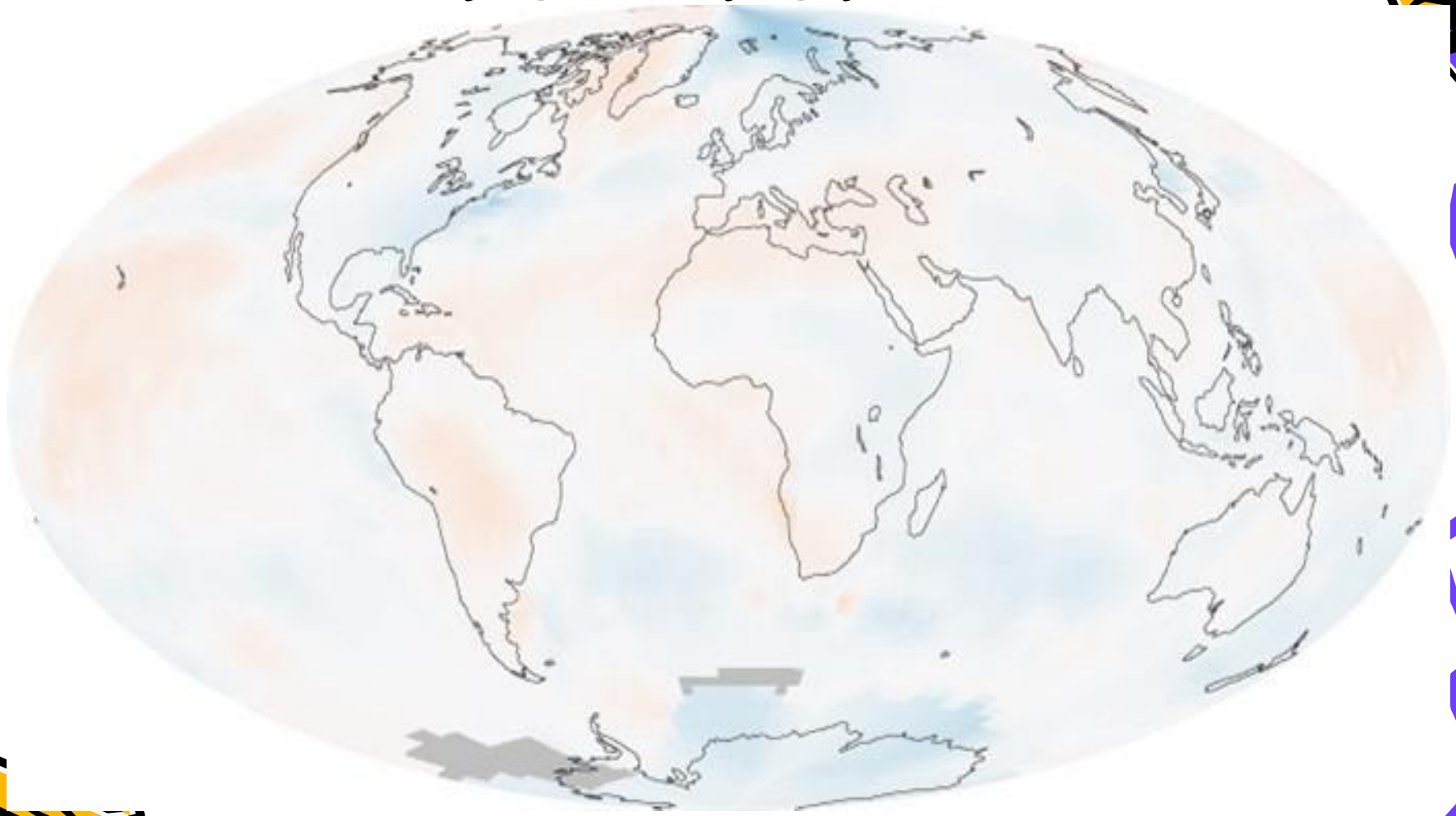
1940-1949



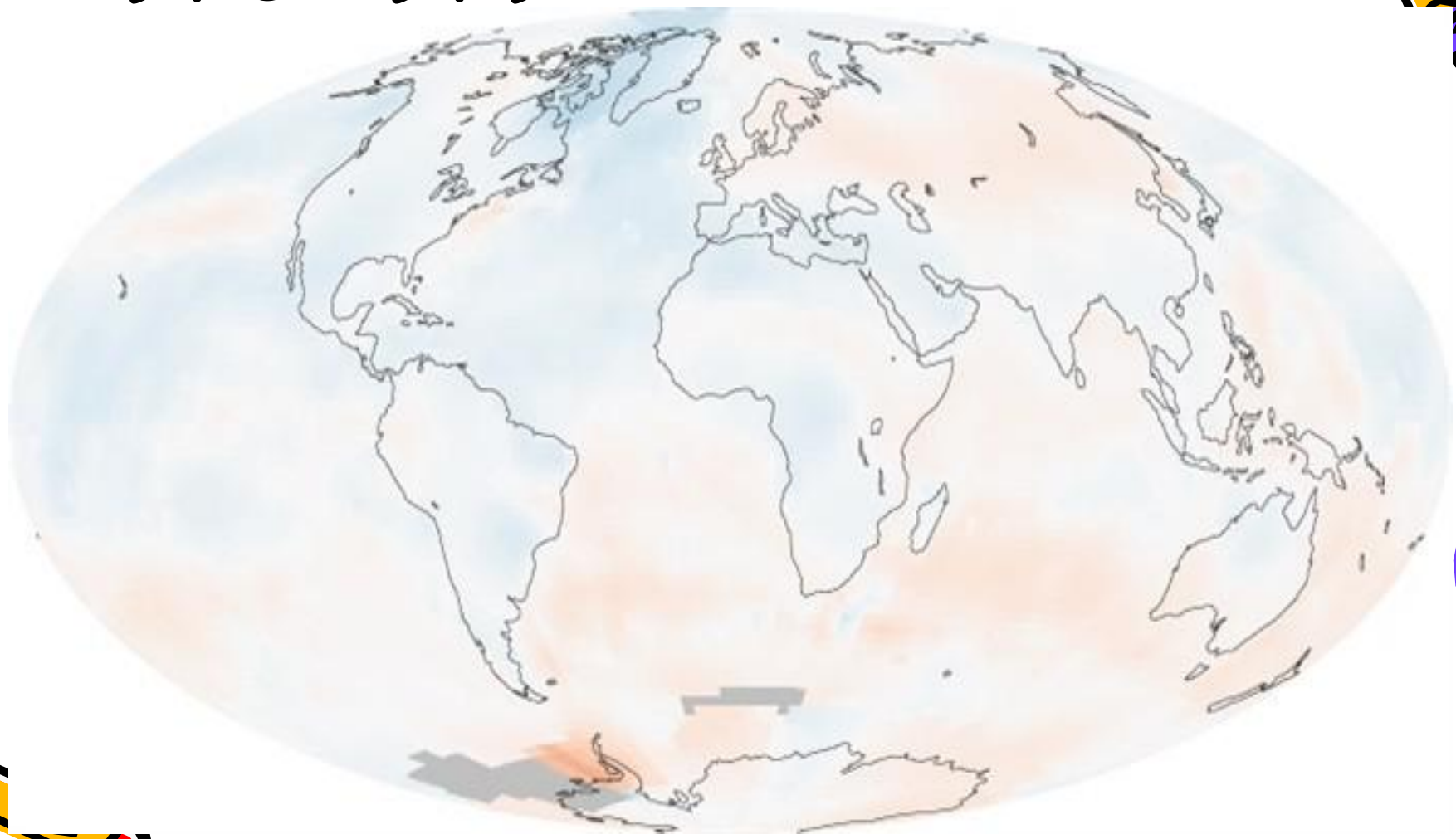
1950-1959



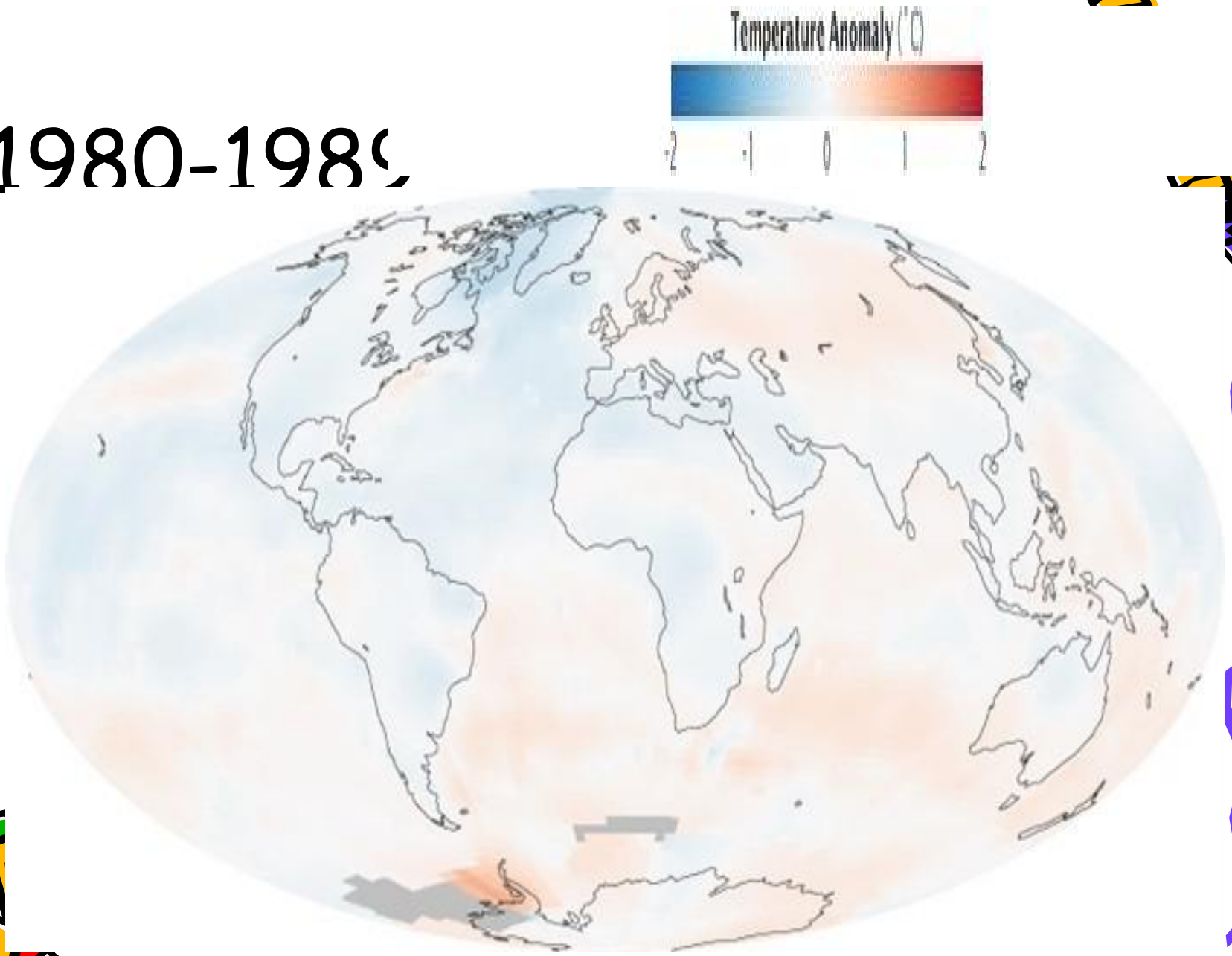
1960-1969



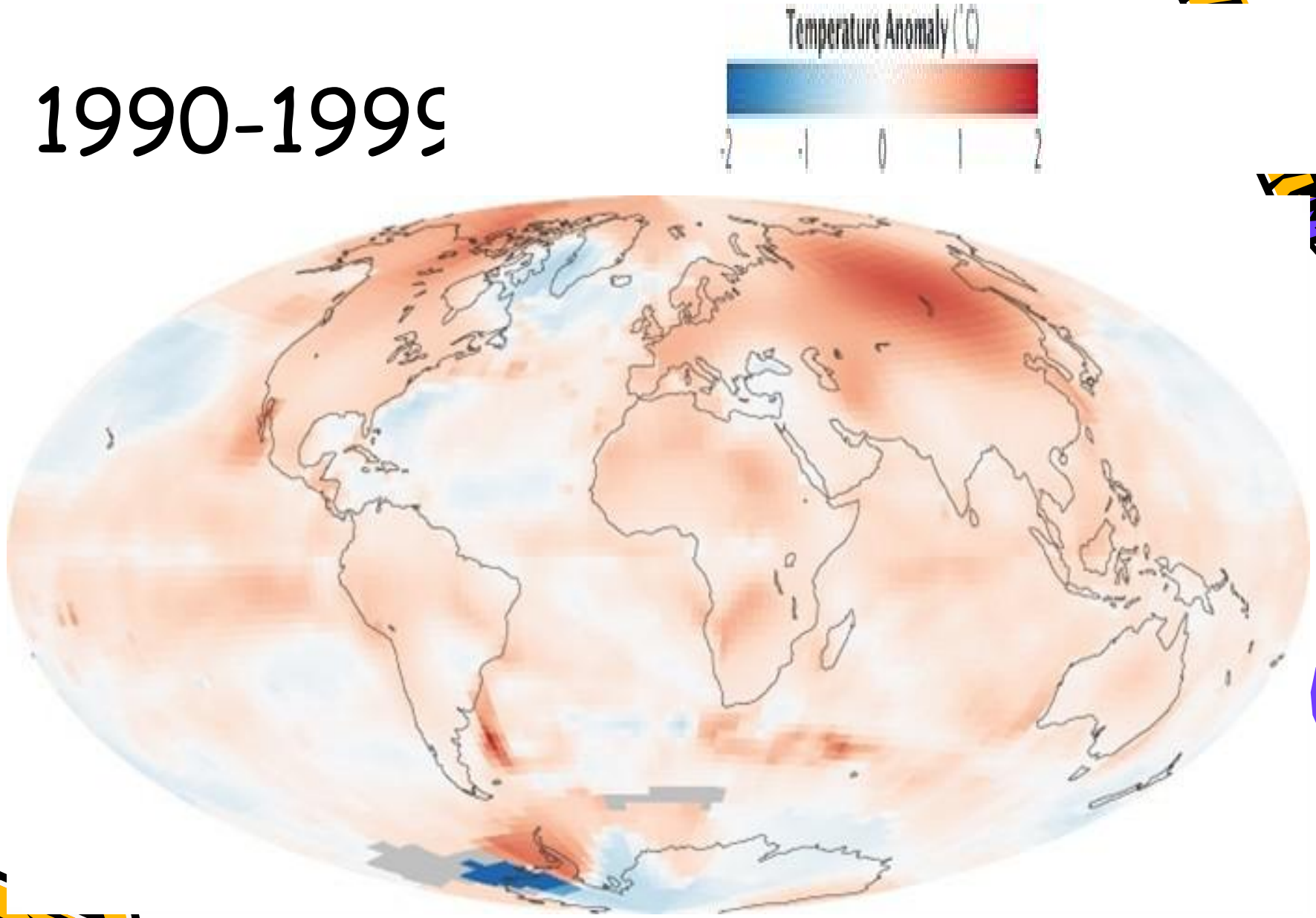
1970-1979



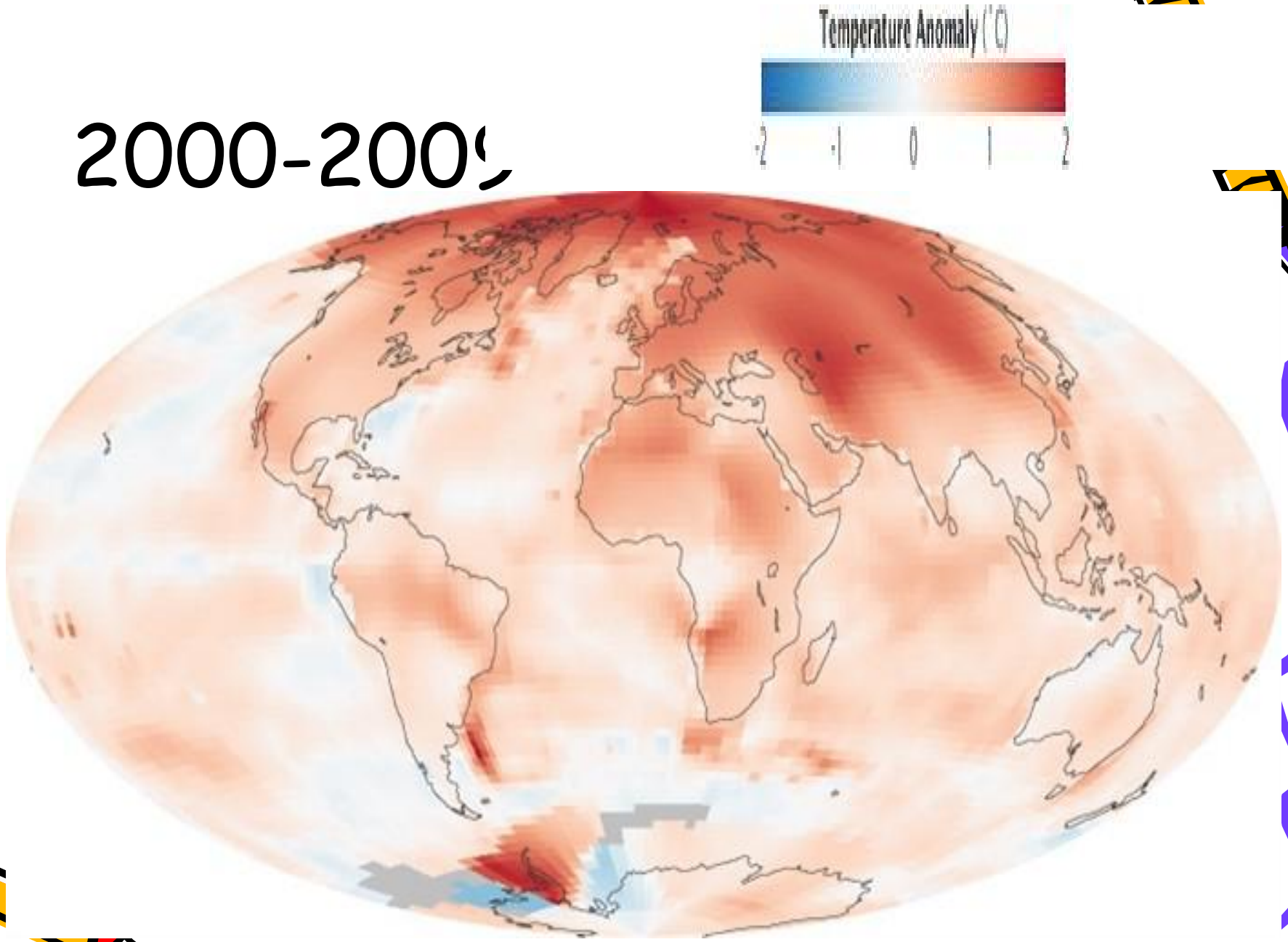
1980-198



1990-1999



2000-2009

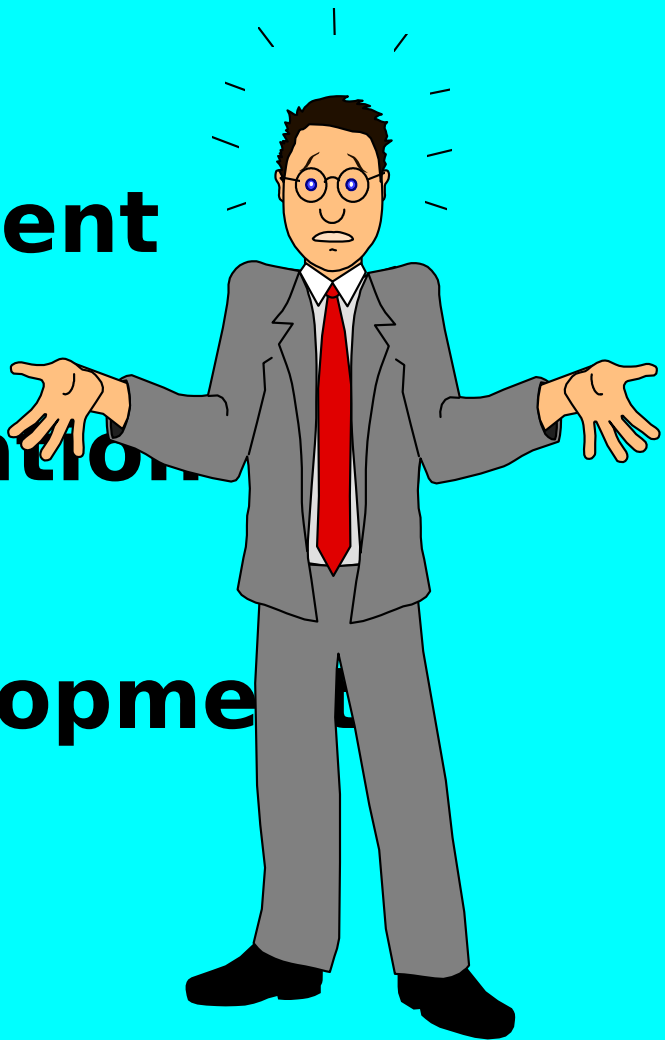


Discussion

- 1 What are conclusion from the information ? why ?
- 2 What is Climate Change ? CC ?
- 3 What are the results because of CC
- 4 What are the effect of CC in insect pest?
- 5 What are relationship between the CC and Entomological Studies
- 6 What is the scientific category of CC? and relationship between CC and Entomology?
- 7 Relationships with insect ecology?

First subject

- **Object:**
- **1 What's Environment Entomology?**
- **2 What's its significatio**
- **in entomology ?**
- **3 Sustainable developme**
- **and Approaches**



History of Environmental Changes

- **Ecology origin from natural history**
- **Nearly is old as human history.**
- **Why? The need for production and livelihood**
- **After 16 Century, initiate modern Ecosystem.**

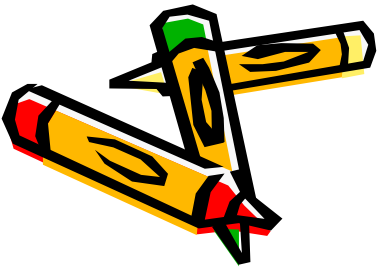
History on Environment

- 1749, Buffon （ France), <live law> ,first systematism
- 1803 Malthus < An essay on the principle of population>, the relationship between the population and other organisms
- 1859 Darwin' book and the theory of evolution,
- 1865 Reiter （ Greek ） Logos and Oikos =Oikologie
- 1866 Haeckel （ German ） definition

History and Definition

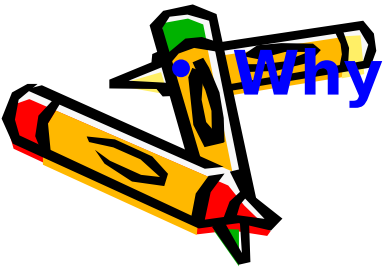
?

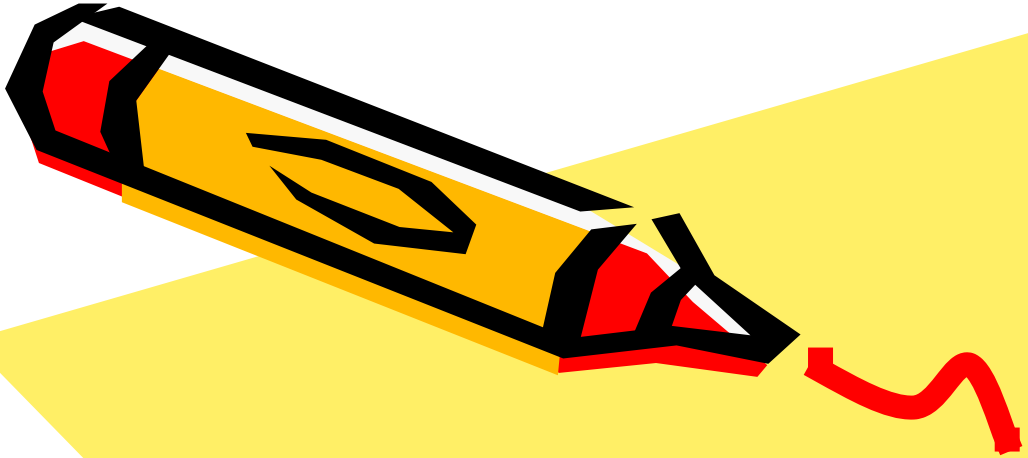
- **Ernst Haeckel (16 February 1834 – 9 August 1919): Relationship between the animal,plant and environment**
- **Elton(1927):**
- **Natural history of science**
- **Andrewartha(1961): On distribution of organism and quantity**



Definition ?

- **Price(1975): On environment in the process of bio-evolution**
- **Odum （1963）：On natural structure and function**
- **Ma Shijun （1981）：Mechanism and disciplinary about biological survival condition and community and environmental system.**
- **Why are there so many** definitions?

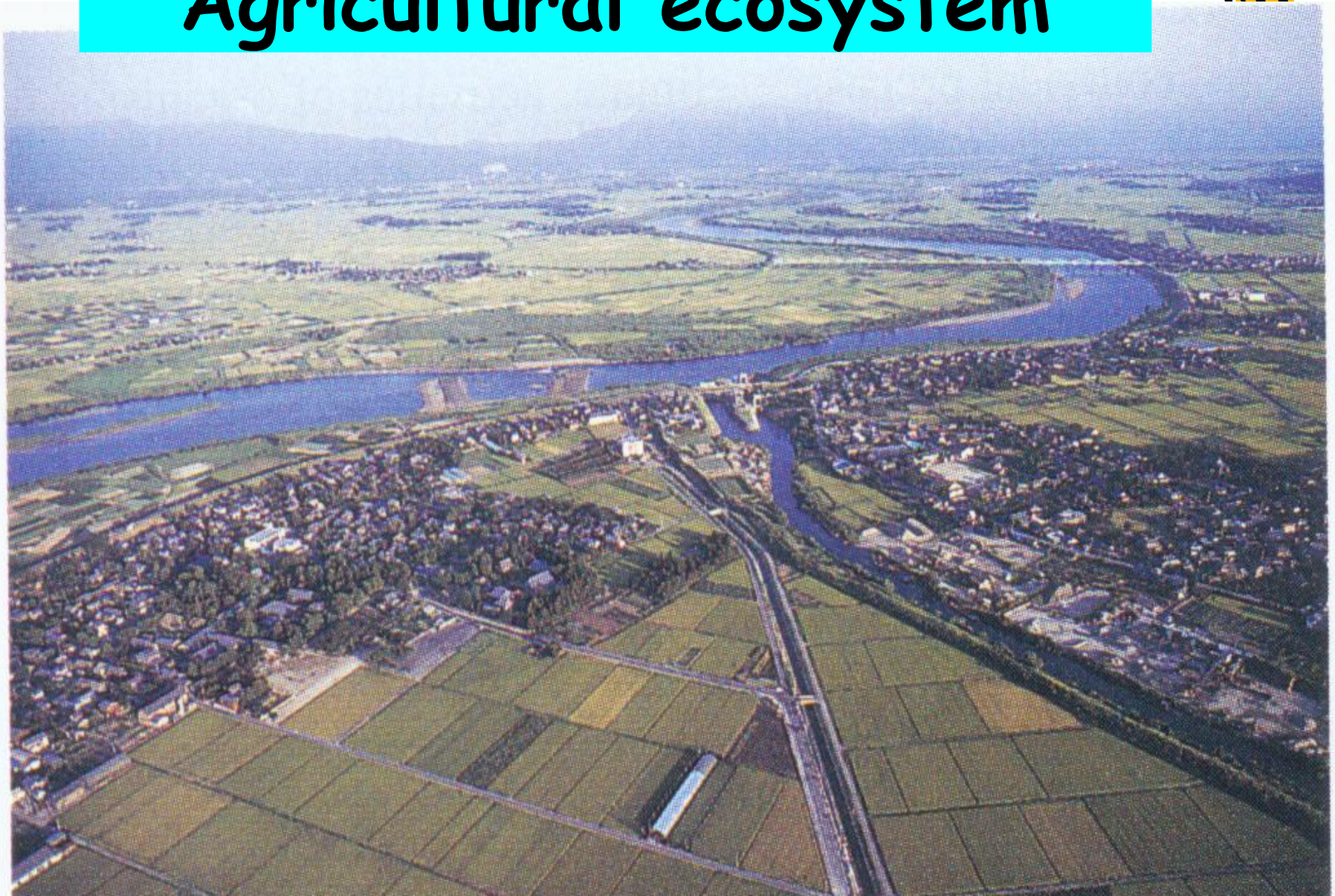




First home work

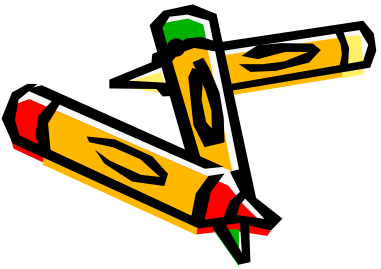
Diversity of insects in different Ecosystems ?

Divided ecology
Agricultural ecosystem



Signification in environmental research

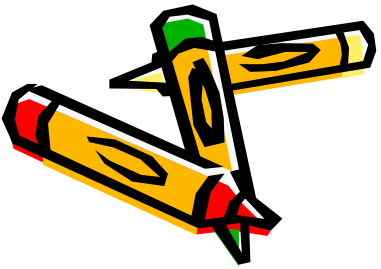
- Nature calamity （Take pests as a case）
- -------- From FAO
- Losses due to pests 14%. If no control, wheat 52%,ripe 83%,corn 59%,potato 74%,cotton 84%
- Loss due to disease 10% ,
- Loss due to weeds 11%.



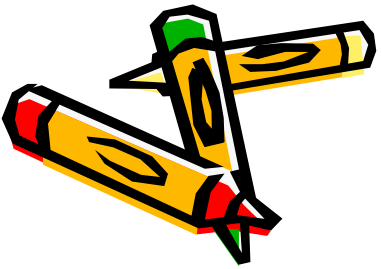
Signification in environmental research

(1)Humankind harvest from changing nature ,

(2)At the same time human change nature, must be punished by nature

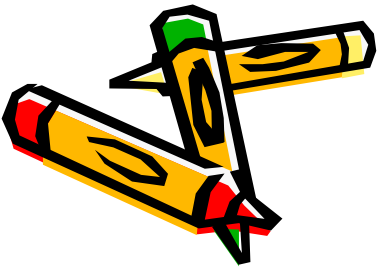


- (1) the benefits of development
- Chemical fertilizer were used more than 4100 million tons (pure)/year
- Pesticide usage 2.6 billion kg/year
- Effectively promote the crop yield:
- Grain output by 1.13 tons in 1949, increased to 5.12 tons now
- Of which, the contribution of fertilizers more than 40%, the loss reduces to 3/4.



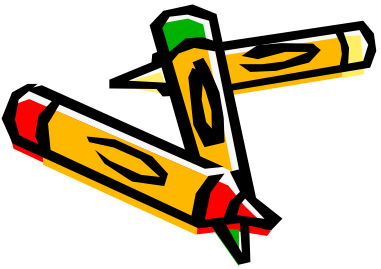
(1)Humankind harvest from changing nature

- In 1993, the situation of pests control and the grain loss
- Occur:2395000 times, Control: 2515000 times
- Loss (no control): 3375000 T, 10.48% in total output
- Actual loss loss:1057000 T
- Conclusion: control times are more than the actual times
- To recover(save) loss 3/4.



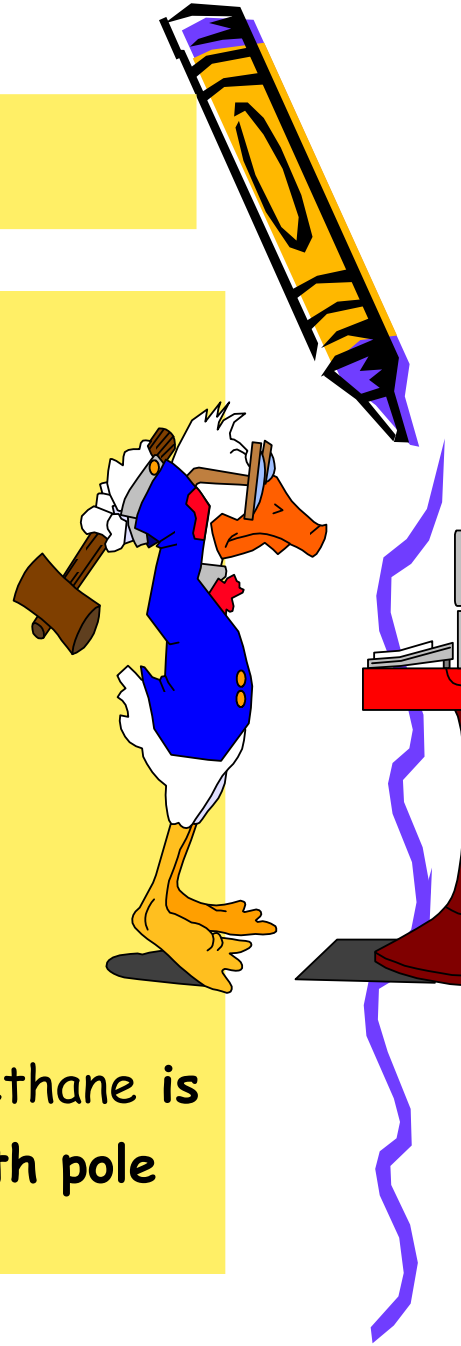
（2）punished A.

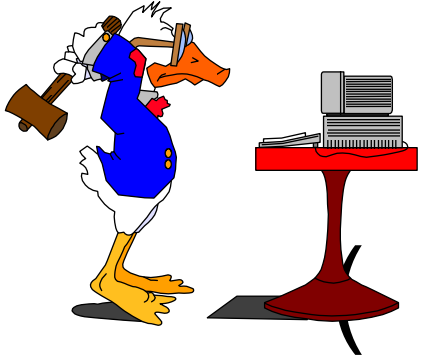
- **Environment pollution**
- a. Environment pollution in produce process
- Waste water 252M T, in total drain 42%
- Waste gas 25B m^3 in 36%
- Rubbish 20B T in 58%



A、 Environment pollution

- b. Environment pollution in using process
- Pesticide dosage 2Kg/mu , 2times as 1950
- 1 hectare = 15 mu
- 14Kg/mu , 7times as 1985
- efficiency 1%
- Chemical fertilizer dosage 15Kg , 30-35% ;
- 103Kg, as 1-10times
- efficiency 65-70%
- Utilization area of DDT(Dichloro-Diphenyl-Trichloroethane is 2% in the world, but be found in penguin in the south pole





（2） Punished A.

c **Greenhouse effect**

- **CO^2 : 20 century increase 25% than 19century**
- **—— Sea level rise**
- **Tuvalu is second smallest country in the Pacific**
- **Because of it, 11000 population will be parted from themselves country.**
- **20century UV increase 25% than 19 century.**

（2）Punished B

·a、 Process of Ecological concentration （DDT)

- 0.000003 ppm in atmosphere
- 0.04 ppm in Plankton,
- 0.5 ppm fingerling
- 2.0 ppm Big fish,
- 25 ppm Seabird

31 ppm India ,

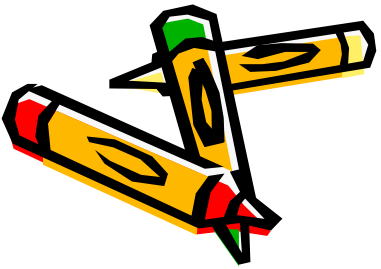
11 ppm American ,

2.2 ppm British

5.3 ppm Canadian

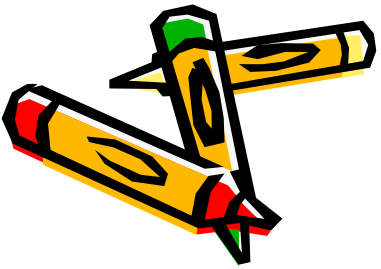
5.2 ppm French

What conclusion ?



（2） Punished B

- **Positive and negative function of process of <u>ecological concentration</u>**
- **Gold : soil 0.2g/Ton , corn 10g/Ton , dorbeetle25g/kg**
- **Tantalum :40h alfalfa to get 200g ,**
- **and honey700kg from alfalfa to get 200g**
- **Reduce cost !**

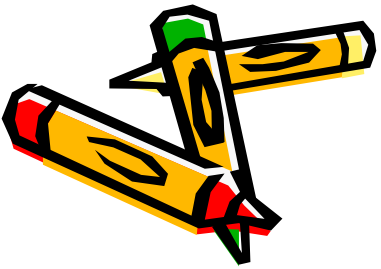


Punished C.

- **The effect of pesticide were reduced, and pest'resistance on PPP* were enhanced**
- For **Pyrethroids pesticide**
- **Cotton aphid resistant on it to 12576.8 times**
- **Cabbage aphid 2123**
- **peanut aphid 12.1**
- **green peach aphid 834**
- **bollworm 108**
- **504 pest or acarid have resistance**
- *** Plant Protection Product**

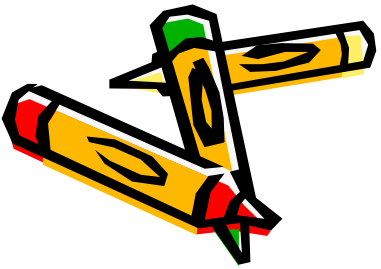
Punishment D

- E.Society problem by PPP on and use
- Poisoning events in the world ： 500,000 /y Dead 70,500
- 1992 in China 70,000 8562
- Pollute accident 3332P/times
- Compensation 90,690,000 ￥
- Overall cost of society environment
  8,100,000,000$ ， 50% equal to PPP benefit ！ ！ ！



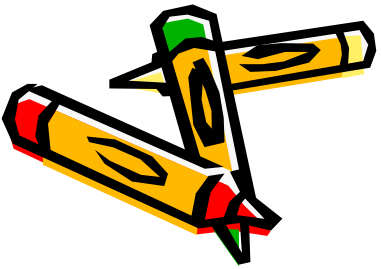
Punishment E

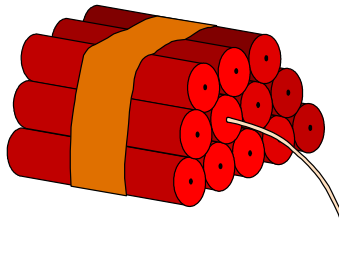
- **Human’ Survivorship quality fall dawn**
- **After 1950 Cancer sufferer rise with hundredfold**
- **The number of Cancer sufferer of children and abnormality baby rise fast**
- **Pollution by industrialization are more than severities**
- **Trail gas by auto**
- **Ash by steel**
- **Smoke and dust by mining…..**



Human in face of crisis !

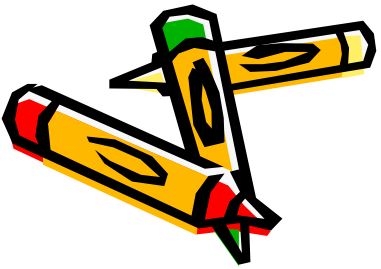
- **Take the deleterious substance directly or indirectly in every day**
- **Respiration polluted air in every minute**
- **Greenhouse effect will lead to some of country non-exist**
- **Energy resource crisis by excessive cut down**
- **Explosive population could not supported by scanty arable land in the world**

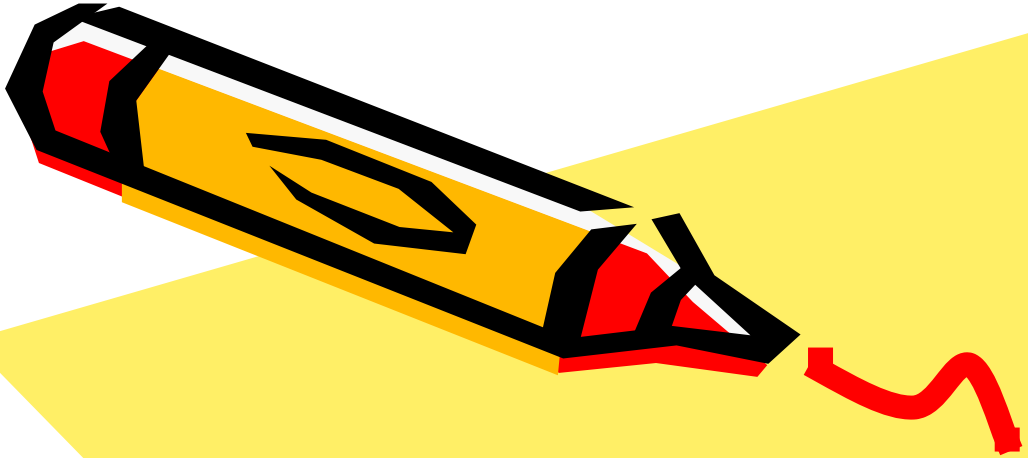




Conclusion again

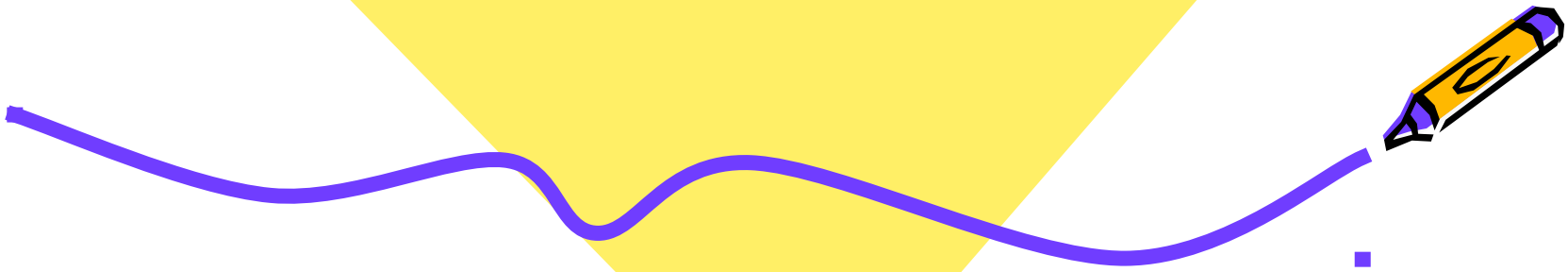
- **At the same time human change nature, must be punished by nature!**
- **So:**
- **Friendly circumstance**
- **Awe nature**





- **Assignment 2:**

Problem and Causes of Environmental Disruption



The earth is groaning

The earth is thinking

- To help the earth ! ! !