How to bring the paradoxon ICE & LIFE into the classroom?

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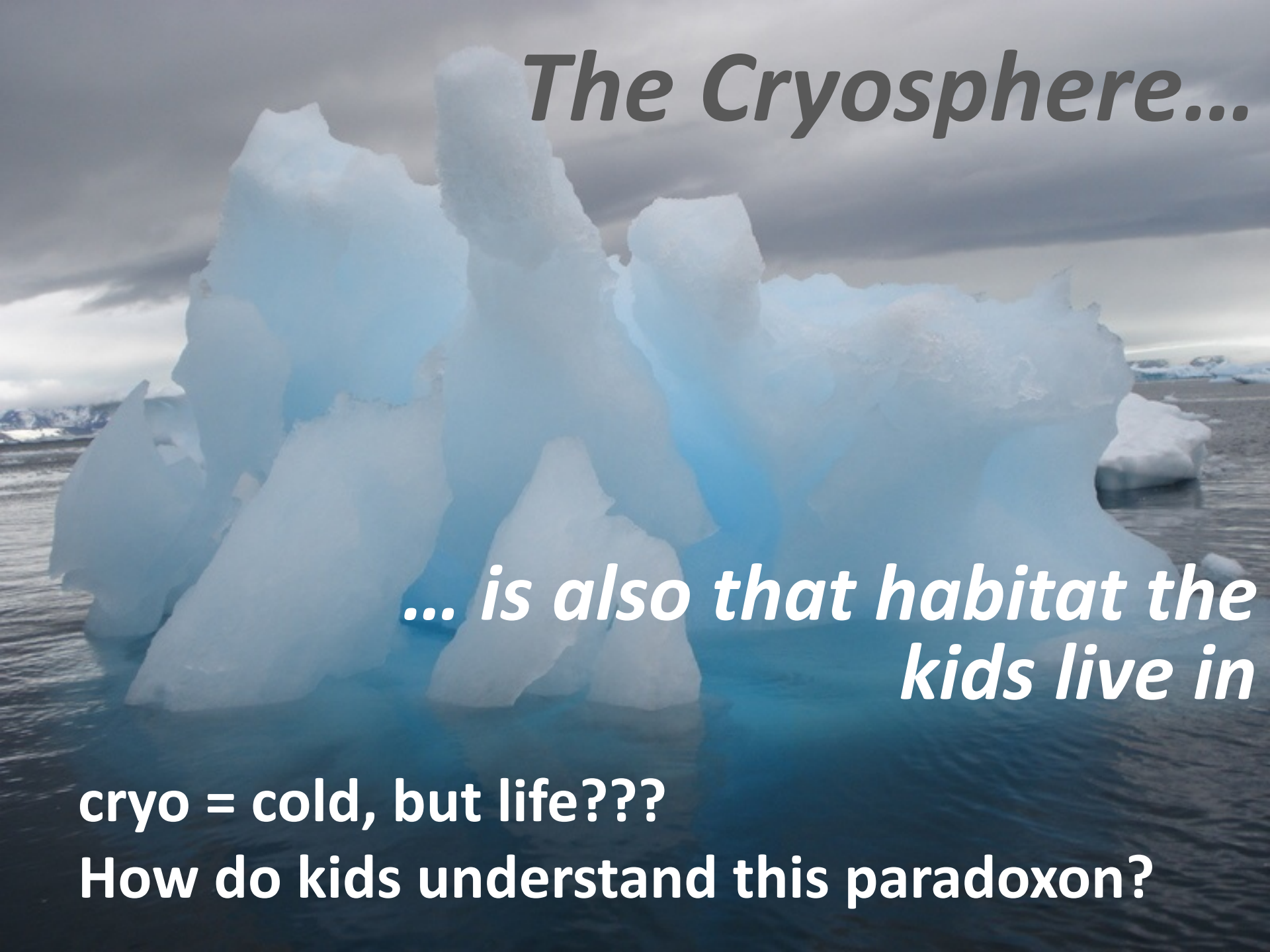


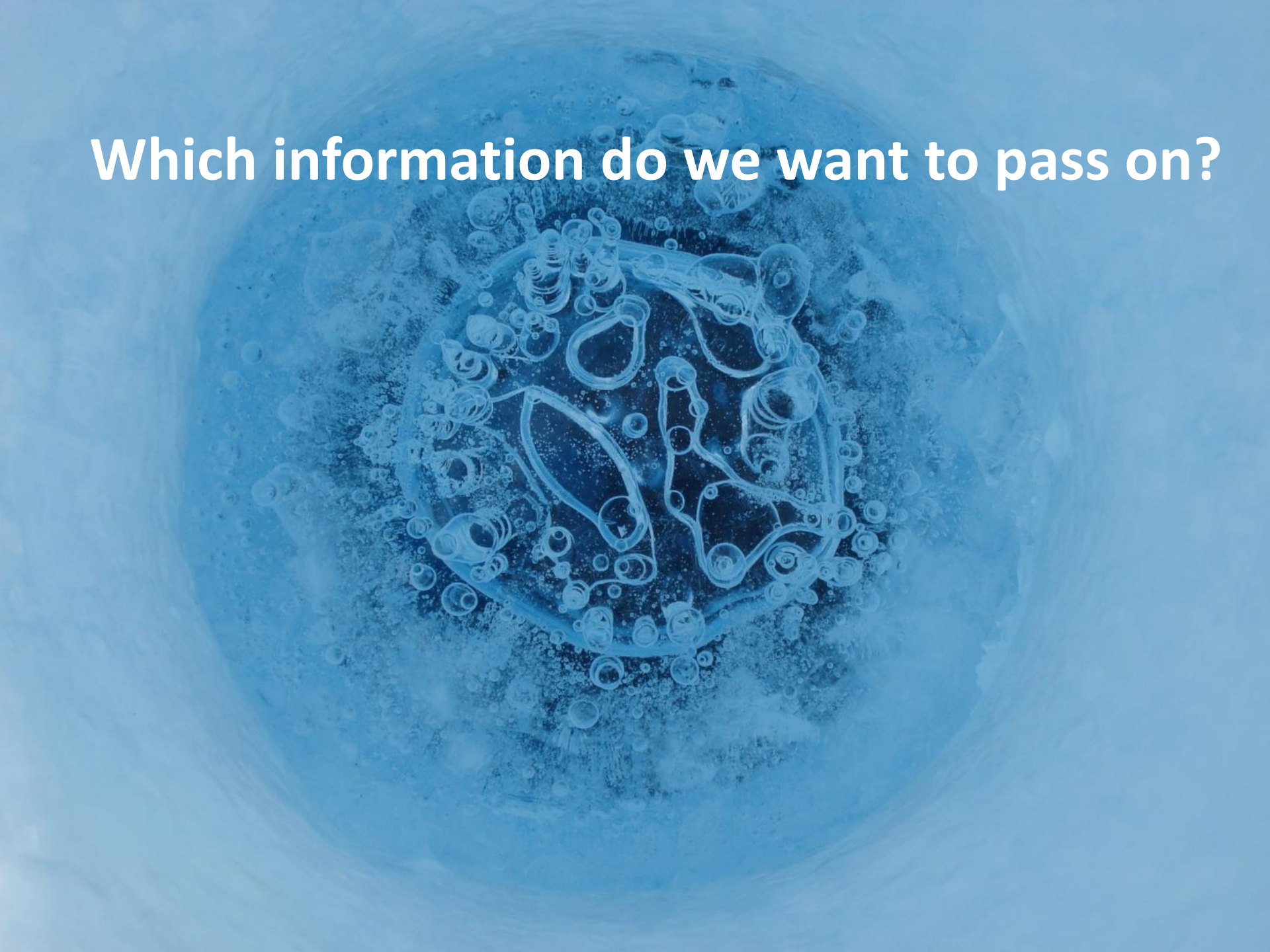
The Cryosphere…

… is also that habitat the kids live in

cryo = cold, but life???

How do kids understand this paradoxon?

Which information do we want to pass on?



Ice and Snow

Connotation of Being Devoid of Life

…Desert…

However:

Cryo*BIO*sphere:

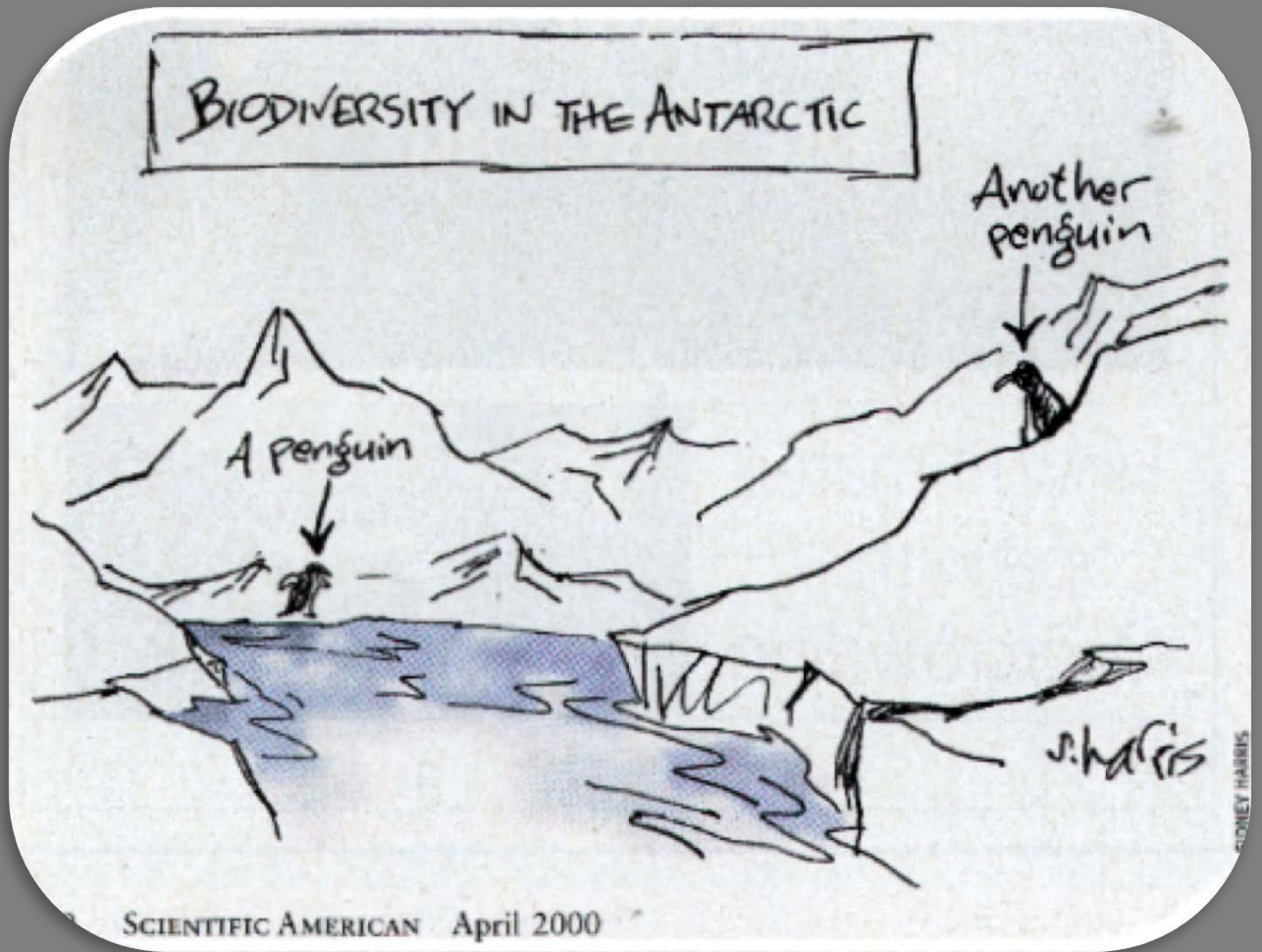
Area where life can subsist, evolve and interact with its environment

biodiversity?

“The biology of Antarctica is almost wholly a marine biology. Other than a few cryoalgae, who colonize melting snowfields, no organisms live on land ice exclusively;

there is no terrestrial cryo-ecosphere”.

In: “The Ice: A Journey to Antarctica”; S.J. Pyne, **1986**



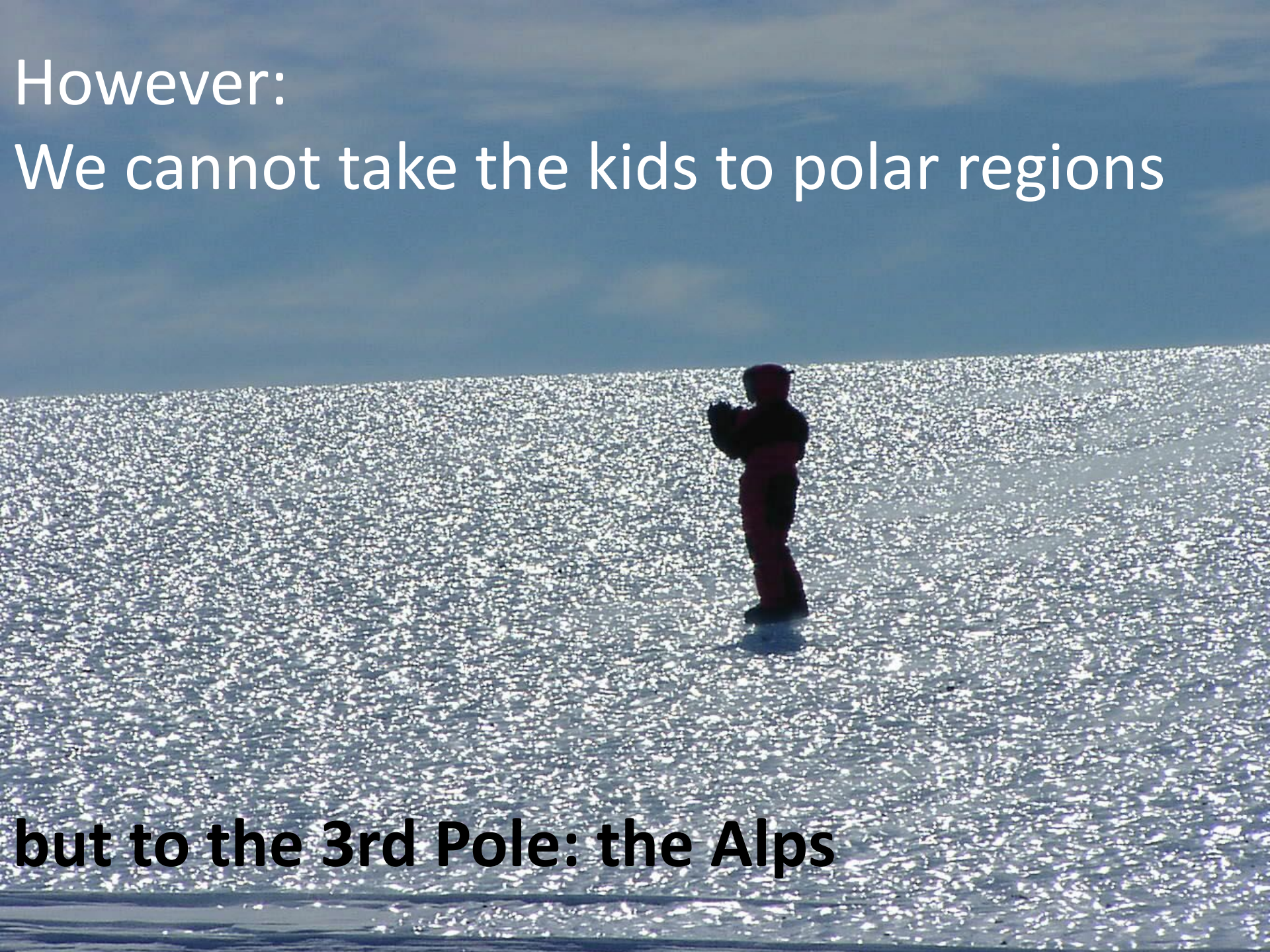
(Microbial) Life in Extreme Habitats:

However… anthropocentric perspectives

LIFE IN SLOW MOTION…sensitive!!

with climate change: glaciers are becoming greener

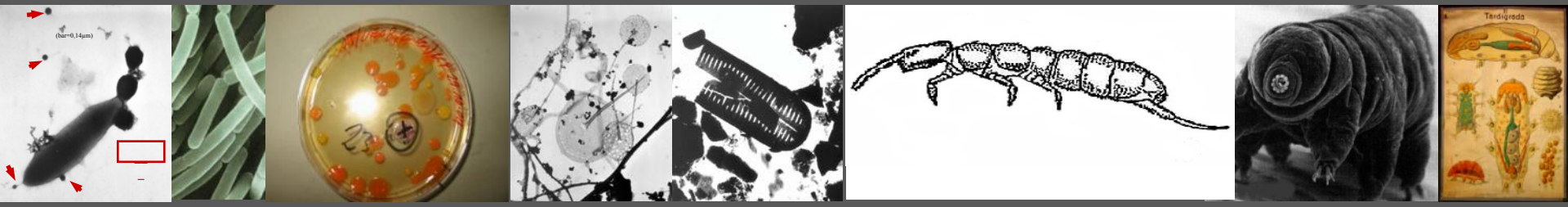
extremely sensitive ecosystems


However:
We cannot take the kids to polar regions
but to the 3rd Pole: the Alps


drag the kids to the cryosphere in the Alps

Cryoconite Holes:
Living Communities

viruses, bacteria, protozoa, algae and metazoa

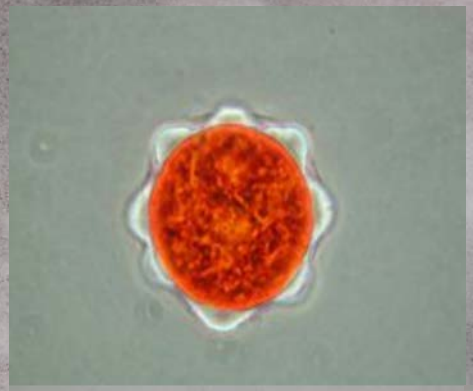


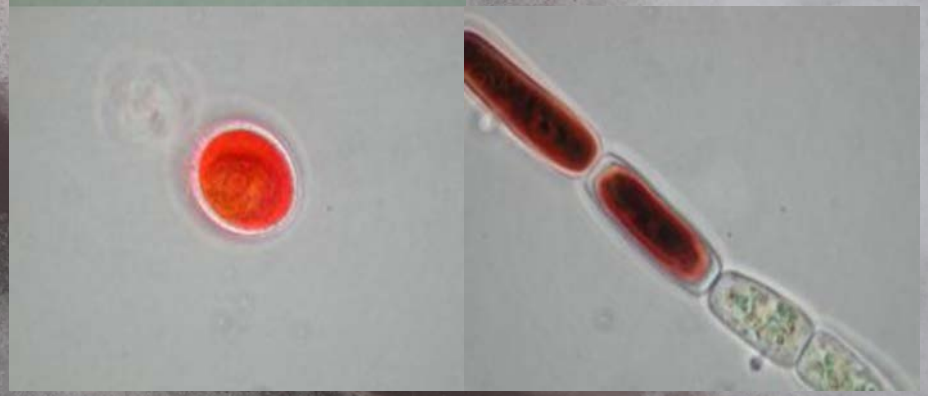
- Organic debris (living communities, pollen, plant an animal litter)
- Inorganic dust (mostly of local or regional origin)

→ relevant contribution to carbon budget

kids must see life

Snow is alive: Blood Snow





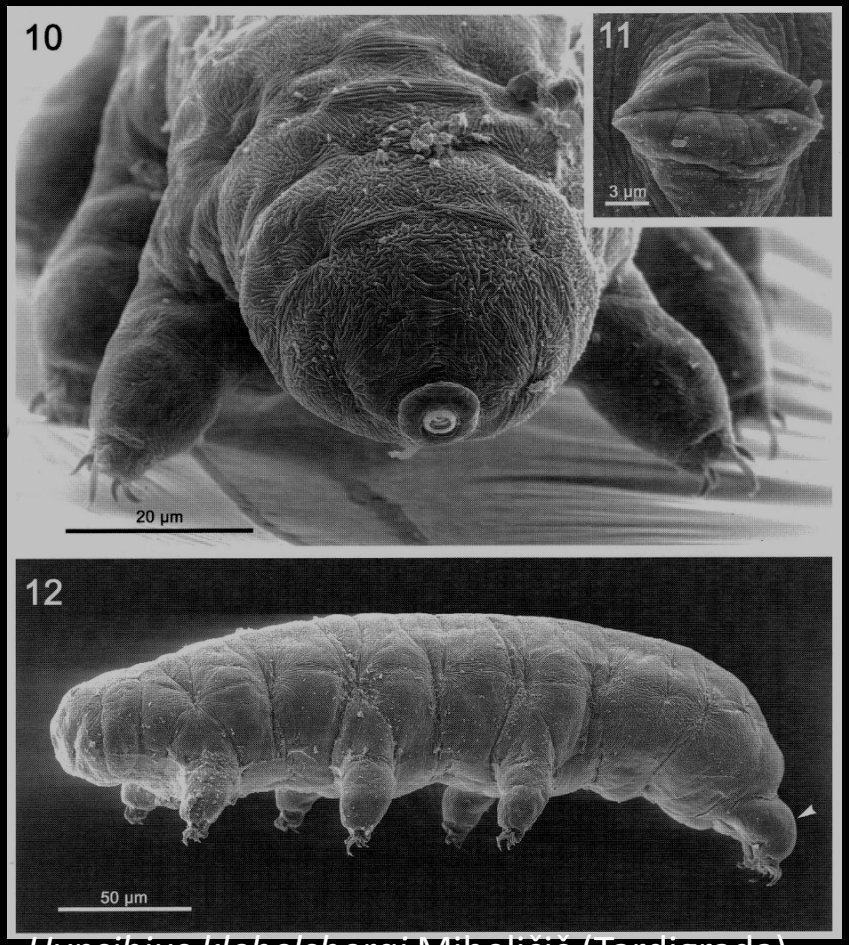
CLIMATE CHANGE….
what happens in the Ant-/Arctic can be seen even better in the Alps

Sept. 2010 - Juli 2011

Ice cores harbour information
You can read it like a book

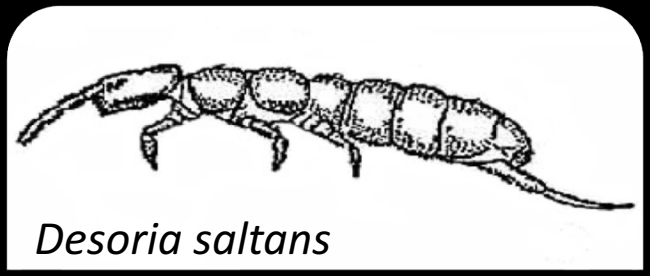
But how to read all those pages?
What does it mean?

What works to fascinate kids in this topic?



Hypsibius klebelsbergi Miheličič (Tardigrada).

Dastych et al. 2003



Give LIFE IN ICE a face

Tardigrades…king of survival

Hands-on activities

let them do it yourself
pass on REPONSIBILITY

Sonnblick Observatory 3.100m

Laboratory experiments

let them have impact

Logo competition for
TAWANI ANTARCTIC EXPEDITION 2008


face the kids with local issues

laboratory in ice for university and children

Hintertuxer Natur Eis Palast

Focus on problems the kids are faced with: SKIING

Glacial Melt in Touristic Areas
„Active Glacier Protection“

Rettenbachferner, Ötztal Alps

What does not work?

too little involvement

- DNA stuff – „anonymous“
- things they cannot see, grasp
- too big groups
- experiments just done by adults

Organisations helping to translate

Young University (Silvia Prock)

Sparkling Science – Bridging Schools and Universities

DIGITAL EXPLORER

www.digitalexplorer.com

Wings World Quest (USA)


Or: How to Fall in Love with Ice