

How you can use
INTEGRATIVE THINKING
For an end-of-unit activity
SNC2D “Climate Change”

Download .ZIP file with
everything I’m gonna talk about:
utschools.ca/physics

Big Picture Idea

“Integrative Thinking”

- Part of “I-Think”

**(cool thing “invented” at
Rotman School of Management at
the University of Toronto)**

****Bringing things together
that seem way too irreconcilable.**

Your Task – right now

Our Culminating Activity

Day 1	Day 2
Define the Models	Brainstorm Solutions
Identify the Stakeholders	Cluster Ideas
Specify the Benefits (<i>Pro-Pro Chart</i>)	Select a Cluster
Select the Benefits	Prototype a Solution
Reframe the Question	Share the Prototype

Interested in I–Think?

Helpful (nice person) to contact:

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www.rotman.utoronto.ca/I-Think

Workshop in August

How you can use **WATER BOTTLES** to show:

- “CO₂ is only a trace gas”
- Surface and Cloud Albedo

**“CO₂ at 400 ppm is only
a trace gas!”**

- An airborne concentration of cyanide at 270 ppm is sufficient to cause death within minutes.**

Food Colouring in Water

One drop = 0.05 mL

In a 500ml water bottle, how many drops of food colouring would you need to get concentrations of:

300 ppm, 400 ppm, 900 ppm ?

Food Colouring in Water

(one drop ~ 100 ppm in a
500ml water bottle)

300 ppm – the year ~1900

400 ppm – Today

900 ppm – the year ~2100

300 ppm



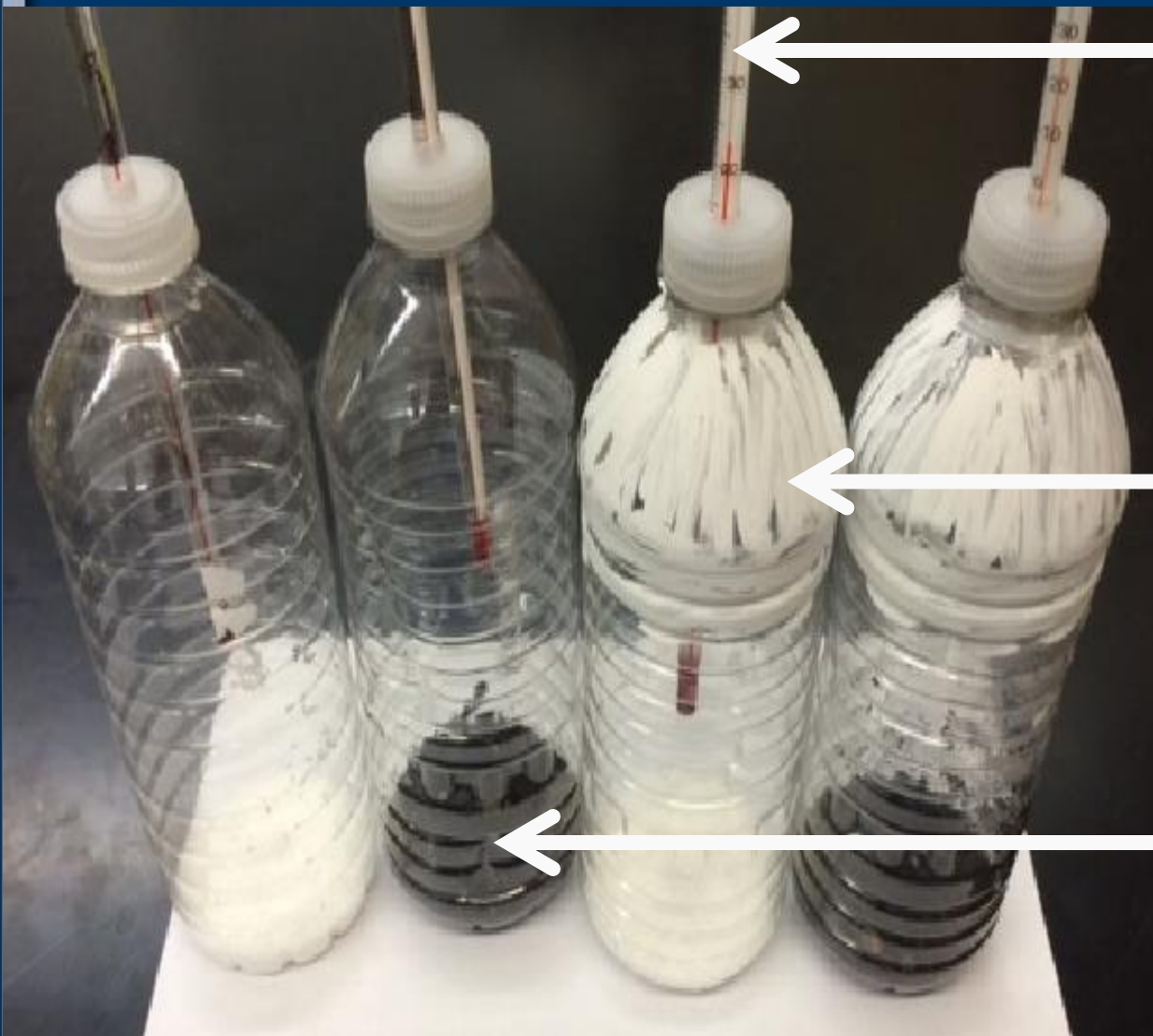
400 ppm



900 ppm



Clouds and Albedo









Thermometers

Clouds

Planet surface

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-  !!OAPT Conference 2014 May 09 - Shawn Brooks.pptx
-  !Exemplar of Reflection assignment.pdf
-  !Integrative Thinking for Educators - Aug 2014 Workshop.pdf
-  7 Models compared to BAU.pdf
-  Climate Change Summative 2013.pdf
-  Climate Change Summative 2014.pdf
-  Day 1 -Teacher lesson plan.pdf
-  Day 2 Teacher lesson plan.pdf
-  Greenhouse_Activity - Birch Aquarium.pdf
-  Rotman Presentation May 15, 2013.pdf

These slides

**Student
Exemplar**

**Step by Step
Explanation**

Albedo Activity