Slide 1 small talk

T Hello again. Do you remember last sessions' topic? Can you sum it up?
S answer(s)
Do you remember what slide we ended the discussion on? What did it show or illustrate.
S answer(s) we’ve been discussing climate changes and the problems the planet is facing/ ???
T OK, I'm going to show you the title of today's topic. It might help you anticipate on what we will be discussing.

Slide 2 Reminder

Click to show title and subtitle.

T Tell me what is symbolical in these three pictures? Can we really say that the earth is "sinking"?
S answer(s)
So what does the first picture mean? And what about that of the statue?
S answer(s)
The earth is not actually sinking, the picture simply shows that lower regions are at risk of being flooded.
As for the statue, it shows that sea levels may rise to unimaginable heights.
And what about that of the drying land?
S answer(s)
That’s the paradox we talked about last time: rising sea levels might be a problem along the coasts but inland it’s (a) drought that seems to menace/threaten the lives of people. Too much salt water on one hand, and not enough fresh water on the other.
And what is this due to in your opinion?
S answer(s)
Global warming.
Now, before we move on to the next slide, memorize these words.

Click to show words.
Can you explain the phrase "struggling plant"?
S answer(s)
In spite of the lack of water / the drought a tiny plant is fighting for survival.
Now, I'll show you a graph and I want you to describe what it represents. Take a good look at it and at all the numbers before you start.

Click to show graph.

Let's start with the bottom line (the abscissa) what does it show?

S answer(s)

*The years when people started to keep records of temperatures.*

What about the vertical line (the ordinate)?

S answer(s)

*It shows a scale of Celsius degrees.*

What is your conclusion when you study the doted black line?

S answer(s)

*Within a decade temperatures go up and down.*

What about the red line?

S answer(s)

*It shows that over a period of some 120 years the average temperature has gone up.*

What about the last decade? Has it been soaring or plummeting?

S answer(s)

*It seems the rise is accelerating and might even be soaring in the years to come.*

Soaring? By how much?

S answer(s)

*By something like one degree.*

Celsius or Fahrenheit?

S answer(s)

*Celsius.*

How much would that be on a Fahrenheit scale?

That's a tricky one, isn't it? Well, let me show you, I know you just love math, so you won't be disappointed...

Click to show first formula

Can you explain how things work?

If students stuck, take over:

T Suppose you have a Fahrenheit temperature of 100 degrees and you want to convert it into Celsius degrees. First subtract 32 from the Fahrenheit temperature and get 68 as a result. Then multiply 68 by five-ninths and get the converted value of 37.77 degrees Celsius.

Piece of cake, no?

Can you do the opposite conversion now?

S answer(s) … or don't…

If students stuck, click for second formula and take over:
Now suppose you have a Celsius temperature of 100 degrees and you want to convert it into Fahrenheit degrees. First multiply the Celsius temperature by nine-fifths and get a result of 180. Then add 32 to 180 and get the final converted value of 212 Fahrenheit degrees.

Another piece of cake?
A real cinch!
Why add or subtract 32? Because $32^\circ F = 0^\circ C$, that's the freezing temperature in the two systems.

Now if you have forgotten your pocket calculator, you can always access the web and find a conversion site ... ! Even easier... What do you think? Is that a good idea?

S answer(s)
One last thing about this slide: remember the words showing now.

Click for phrase to appear.

Slide 4  Phrasing the facts
T All right, I'm going to show the same graph again. And we shall try to phrase simple mathematical results. Ready? Get your calculator if you are slow at computing. (:).

Click to show graph.
Who wants to win a million? Question: By how much Fahrenheit degrees have temperatures evolved since 1880? Start with the Celsius count.

S answer(s)
It seems that within 120 years the average annual temperature has risen by 1.2 °C (one point two degrees Celsius) and the 5-year average by 0.5°C (O point five degree Celsius).

T Great! Now for the conversion: you must be able to make your English-speaking friends able to visualise the situation, especially if they are American. You don't have to worry if they are Canadian. Do you know why?

S answer(s)
Canadians use the metric system. And nowadays official temperatures in the UK are given according to the Celsius scale.

T Don't try to fudge the issue! Let's hear what this is in Fahrenheit.

S answer(s)
If they don't, click to show results.
It seems that within 120 years the average annual temperature has risen by 2.16 °F (two point sixteen degrees Fahrenheit) and the 5-year average by 0.9°C (O point nine degree Fahrenheit).

If they do, click now to show results.
Then Click for final question. Is this increase good news or bad news?
So? Good news or bad news?

The rise in temperature may seem minimal, but to some scientists it is having tremendous, maybe catastrophic consequences on the planet, its fauna and flora. And what is more worrying is the acceleration of the process over the last 25 years.

Does everybody agree with this?

(If they do, play the devil’s advocate)

Now, what if I told you 1.2°C over 120 years is not such a big deal? Do you prefer to live in a warmer or colder climate?

Now it's your turn to fudge the issue, because what is at stake is not whether we want to live in a warmer or colder climate.

End of teasing!

Let's imagine what those who don't think this is really happening might say or what they may say to question the validity of the graph.

There must be more meteorological stations today than there were 120 years back and they may be placed in very different places which were not accessible a century ago. Maybe if we had had the same number of stations then the result would be different.

Our measuring instruments may be more accurate than old ones.

All right, but a thermometer is a thermometer. It doesn't run amok like a machine, it's a very simple device that can be trusted. What do you have to say if I show you this?

Can you describe what is happening in this picture?

The deserts seem to be gaining ground over the savanna.

Where would you place this picture? (On which continent?).

What do you call the type of landscape in the middle ground of the picture?

Would you say it looks like the dune is receding or advancing? That the vegetation is gaining ground or losing ground?

How would you describe the vegetation?

What do you think this is due to?
Click for fourth phrase.
Can you think of other causes of drought? Remember what we may have said before. *(deforestation)*
And what about stopping the advance of the desert? Any idea?

S answer(s)
What do you think of Architect Larsson's idea to build a trans-Saharan wall to stop the dunes from advancing?

S answer(s)
*Utopian, ridiculous, impossible, can't be possibly done, etc…*
Well, he argues that a certain bacteria found in wetlands can sort of melt or bind the sand grains together and create a natural wall. Isn't this worth considering when we know that the expanding deserts threaten one-third of the world's population?

S answer(s)
Others propose to build a natural barrier by planting thousands and thousands of trees to stop the sand. What do you think of this idea? Sounds very **environment-friendly** to me.

S answer(s)
Can you imagine what the reason for not doing that is?

S answer(s) *(using modals …)*
Well, people in charge think this is impractical because the inhabitants in these arid regions would cut down the trees for firewood!
So let's move on and see if we can find other, more practical solutions, shall we?

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**Slide 6  The fresh water problem**

Now, I want you to describe the picture.
Who’s this child? Where was the picture taken?
What’s he/she carrying? Why the smile on his/her face?

S answer(s)
Who in most African countries is in charge of fetching water? Men or women?
Is it always easy to do? Why / not?
Does that help explain the way the child behaves? How would you describe him/her?

S answer(s)
Does the next picture help understand why the child looks so proud?

*Click to show the two sentences under the picture of the child.*

**Click to show picture of African cattle breeders.**

What question(s) do you ask yourself when you see this situation?
Describe the environment.

S answer(s)
*How can these people just survive, let alone what we would call "make a living"?*
I wonder what those goats have to eat, etc…
What could one do to help these people have access to water?

Click to show the well with captions
How would you qualify the installation? (rudimentary).
What about the landscape?
What seems to be missing from this well to draw water from?
(Rope, pulley, pail)
What does that suggest?

S answer(s)
The well has dried-up.

Click to show phrase.
Right. What should we do to help these people?

S answer(s)
Help them dig more wells.
Help bring water to where they live.

Click to next slide.

Slide 7  Sharing responsibilities (1)  3'
T  Now, I'm going to show you a few more pictures and I'd like you to say what comments they inspire you with, regarding the water problem of … course.

Click to first picture.
Tell me where this picture was taken and what it represents.
For whom is this watering/spraying done? What for?
How does such a sprinkling system work?

S answer(s)

Click to show words to memorise in the blue box
Do you consider this a fair use of the water reserves? Why / not?
If you take a close look at the background, can you tell whether this place is located in a wet country or a rather dry one.

S answer(s)
If you hesitate, here is another clue to help you.

Click to second picture of Arizona golf course
What kind of people do you think live there?

S answer(s)

Click for phrase/caption
Click for tap and last question.
T:  So, what happens when the tap runs dry?

Click for next slide.

Slide 8  Sharing responsibilities (2)  3'
T  Let's go back to our last question.
What happens when the tap/faucet runs dry?

S answer(s)
Someone will have to pay the bill.
It will be too late to cry.
What do you think of the people living in rich countries when you compare these two pictures?

Click to show both pictures and text in picture 2.
Can you describe the first one?

S answer(s)
The man seems to be somewhat successful at getting some water as we can see some has spilled/spilt over the well's edge.
How is he going about it?
He apparently uses a rope and we may assume that he has a pail/bucket tied up to the end.

Click to show pail and arrow+ caption.
Camels and dromedaries are famous for their resilience to drought. Where do they store "their" water reserves? (hump).

Click for caption touareg
What comments do you feel like making when you look at the second picture?

Click to show bottom list.

Slide 9  More questions (1) 3'

Click to show first picture, text and arrow
T What do you think is happening here?
What is being watered?

Click to show text line 1.
Do you think this is also a waste of water? Why/not?
How should it be done?

S answer(s)
It seems difficult to grow plants needed to feed the world population without irrigation or watering. But it should be done sparingly.

T What would happen if we didn't water the plants we grow?
S answer(s)
They would either not grow or have a very low yield, they might even dry up and die.

T Quite!

Click to show second arrow and dried-up sunflowers.
Click for text line 2.
T: Can you recap and read the text aloud (mind pronunciation)
S read(s)

Click to show last question.
T Well, this question is asked to liven up our debate. We haven't had too much of a controversy today have we?
Time for debate

What if I said the solution is GMOs?
Can you see what I mean?
Let me help you. Look at this and tell me what you see.

Click for picture of corn field.
See what I mean? There seems to be a big debate in your country over this issue.

S answer(s)
You must be talking about genetically modified organisms.

T Right. Look at this perfect ear of corn.

Click for second picture.
Doesn't it look incredibly perfect?

S answer(s)
Too perfect to be trusted?
I'd rather say it looks suspect, not perfect.

T Can you summarize the arguments brought forward by GMOs' advocates?

S answer(s)
They are said to:
1. be pest-resistant
2. require much less water
3. give a higher yield
4. require less or no polluting pesticides / chemicals

T Which of these arguments is the most relevant to what we are discussing today?

S answer(s)
Number 2, but number 3 might also help solve the problem of hunger in the world.

T But what about the possible drawbacks mentioned by opponents?

S answer(s)
Some say they are harmful to our health.
Although we have no real proof of that and neither do we of the contrary. That's why I'd rather be careful for the time being.

T Are you willing to take the risk and eat GMOs?

S answer(s) ad lib.
Not for the world!
No way!
I'll buy a life insurance first.
Well, why not, it can't be more dangerous than smoking or drinking.

T Thank you for all these answers.
I'm sure we will find a solution one day…. Hopefully.
Let's recapitulate.

Click twice for texts to appear.
Who among you has/have a swimming pool at home?
How big is it?
I heard that in your country about 50,000 new pools were built every year. And the average cost is £15,000. And the average volume of water goes from 50 cubic meters to a hundred. Some of these hundreds of thousands of pools now are being emptied for the winter and filled up again in the spring.
What I mean is this:

*Click for picture of pool and planet.*
Can you describe what it shows and what the symbol is?
Do you think it's an apt metaphor or ridiculously exaggerated?
Does that make you feel ill-at-ease? Guilty? Unconcerned? Be honest!

S answer(s) *ad lib.*
Well, I must say the question makes me a bit uneasy even though I don't have a pool nor do I play golf in the Arizona desert.
The last time we had those huge fires in the neighbourhood, the firefighters were happy to be able to pump tons of water from our much decried pools.
That's all I have to say.

Etc…

All right, granted. But what do you have to say when you see this?
*Click for arrow and phrase.*
*Click for next picture with caption and arrow*
Explain the message and say whether or not you agree with it.

*Click till brown box appears.*
S answer(s)
The picture represents Africa as a caked piece of land while the northern hemisphere seems to be … floating in money. I guess the message is clear: those who have the money should pay for what they use or help those who don't to have access to a minimum of comfort.

We will now be working on finding solutions to the problem. The question is: what should we do to help people have access to fresh water?
*Click to show first picture.*
What do you call this? It should help you answer the previous question.

S answer(s)
*Click to show possible answer.*
*Click to show second picture.*
S answer(s) *Click to show last caption.*
We should help them dig wells and build pumping stations. And where should the money come from? Remember the previous slide.
S answer(s)
Slide 13  More serious problems

T  This wouldn't be a regular session without a little geography, would it? Look at this and tell me what you see.

Click to show map of Africa.

S answer(s)

T  Now I would like you to identify the thirteen countries I'm going to show. Don't worry if you don't know all the names. I'm sure you wouldn't be the only ones…

Click for the numbers and give the students a few seconds to answer.

S answer(s)

T  Well, we didn't do too badly, did we? Let's check all the answers.

Click to show box with answers.

S repeat the names after teacher.

T  Don't you have a question to ask me?
   Well, why are the names of three countries written in a different colour?
   What do they have in common?
   Remember, we're talking about access to fresh water!

S answer(s)

If students stuck, tell them not to worry and click to open next slide.

Slide 14  The Nile Basin

Click to show map.

T  Look, I've drawn this map just for you. (No, no, don't congratulate me, I know I'm very good at that.) Just tell me what it represents.

S answer(s)

T  Now I'm going to click and I want you to tell me the names of the places where the numbers fall.

Click to show numbers 1 to 4

S answer(s)

T  Good, let's check your answers.

Click to show first box.

T  Why is one name written in black letters?

S answer(s): lake = fresh water

T  And what is the name of the two rivers whose numbers will appear?

Click twice for numbers 5 & 6.

S answer(s)

T  And what do the four little red bars represent?
   And what about the dotted line toward the bottom of the map?

S answer(s)

T  Well done!

Click to show second series of answers.

T  Can you now imagine what might happen if one of these three countries built more dams on its territory?

Click for third box with question.
S answer(s)

It would certainly deprive those downstream of the water their people need, and that is what is called the risk of "water wars".

T Very well done! And besides causing wars between countries who share the same rivers, what other problems can you think of when dams are built?

S answer(s)

Click to show last picture.

S answer(s)

Well, like in Egypt historical sites might be totally lost for ever.

T So, what would you do if faced with this dilemma?

S answer(s)

Like they did in Egypt, I would save the sites by rebuilding them on higher ground.

T Very interesting answers.
Well, I think we did well today, discussed lots of different subjects and raised quite a number of issues. I'll see you next week. Don't forget to get a look at your worksheets…
Thank you very much. Bye…