



IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Student-led inquiries as a platform for action

Adriana Santacruz
Rodrigo González

Escuela Lomas Altas





IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Who we are Why we are here

- Adriana Santacruz
- Rodrigo González
- Share two successful **experiences doing inquiry** that resulted in action as the ultimate form of assessment.
- Sharing **a model** that proved to be useful in guiding the inquiry process to **empower students** and make them owners of their own process.



IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Questions

- Who is a homeroom teacher?
- Who feels like he/she masters the art of inquiry?
- Who feels comfortable doing inquiry in classrooms?
- Who struggles doing inquiry in the classroom?
- Which obstacles do you face?



IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

What we will cover

- Escuela Lomas Altas
- What inquiry means to us.
- 4th grade.
- Building on inquiry.
- Backward design
- Multiple forms of action.
- Reaching out.
- Results and feedback.
- 6th grade. PYP Exhibition 2015.
- Goals
- Getting there / Obstacles
- The inquiry cycle redesigned
- The Rhizome as model
- Recipe for inquiry
- (Scaffolding) Lines of inquiry
- Action outcomes
- Aspects in common



IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Escuela Lomas Altas





IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Inquiry at Escuela Lomas Altas

“We can best help children learn, not by deciding what we think they should learn and thinking of ingenious ways to teach it to them, but by making the world, as far as we can, accessible to them, paying serious attention to what they do, answering their questions and helping them explore the things they are most interested in.” — John Holt





IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

4th grade. Backward Design

1. Summative assessment task (Performance Task)
2. Be an active listener. Respond to student ideas.
3. Be a facilitator.
4. Develop thinking skills.
5. Help students make decisions. Guide them through questions.
6. Go public. Thinking about impact in the community, the country, and the world.
7. Outcome and assessment.
8. Feedback.



IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Sharing the planet – 2014

- **Summative assessment**
- You are scientists giving a talk to explain what biodiversity means and the interdependence between ecosystems and ecological networks. Mention a problem caused by these interactions. Propose a solution.
- **Central idea**
 - Biodiversity relies on the interdependence of living beings coexisting in their environments.
- **Key Concepts.**
 - Reflection, Connection and Causation.
- **Related concepts.**
 - Biodiversity and Interdependence
- **Lines of inquiry.**
 - The roles of organisms as a part of a system.
 - How the characteristics of biomes help us understand diversity.
 - Factors that cause change in their ecosystems and their consequences.



IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23-26 July

Be an active listener





IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Be a facilitator

- Final assessment. Ecosystems, species.
- How fourth graders raised money to help endangered species.
- This led to a contribution of \$165 USD to the WWF (World Wildlife Fund) to adopt a crocodile, a dolphin and a red fox.





IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

GREENPEACE

Be a facilitator

- Let's save the *Vaquita Marina* - The Desert Porpoise.
- According to Greenpeace there are only 97 desert porpoises left.
- Mexican crowd funding page *Fondeadora*.
- Greenpeace needs money to have a ship monitor the reserved area.
- A video was recorded with four children representing the class.
- Rewards for donors included made clay sculptures, drawings, and posters.



IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Develop thinking skills

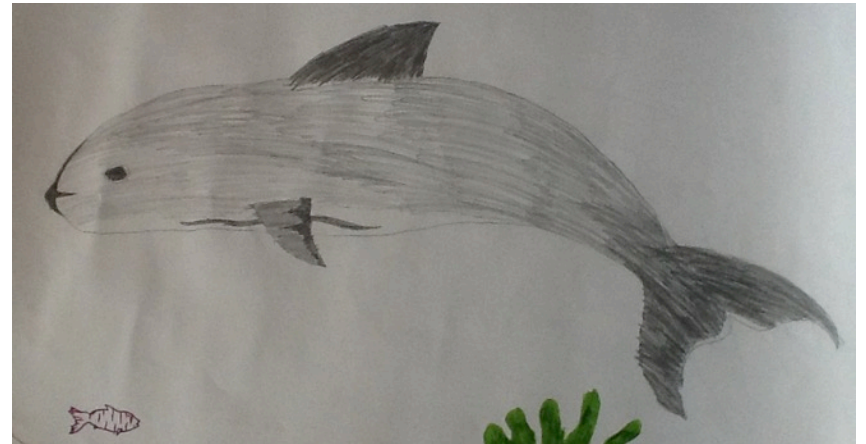


“If there were only a hundred of us left, would the desert porpoise help us?” – Sage McKim



IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23-26 July

Develop thinking skills





IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23-26 July

Develop thinking skills





IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23-26 July

Develop thinking skills





IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Help students make decisions



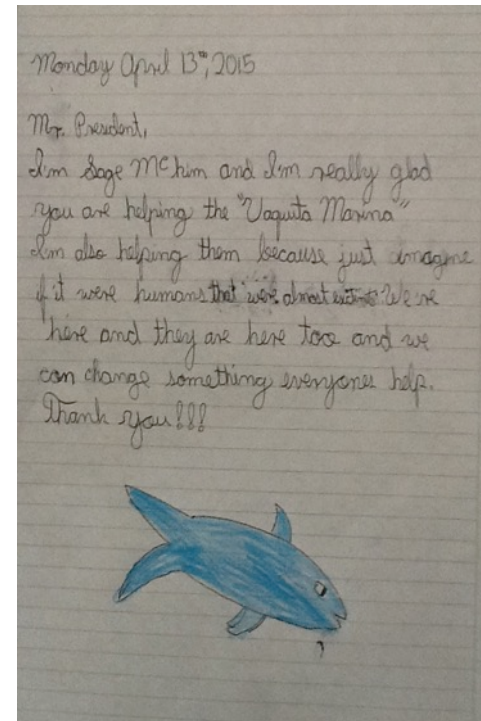
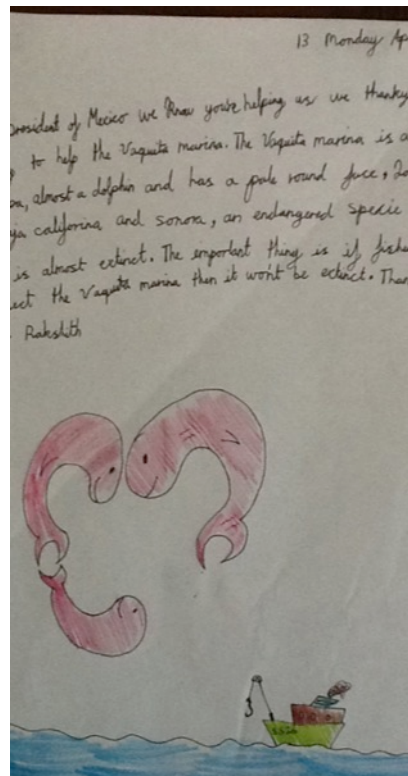
VIDEO



IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23-26 July

Going public

- We found out that Mexican president Enrique Peña Nieto was planning a trip to Baja California.





IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Going public

- UC radio (*Universidad de la Comunicación*).
- *La Entrevista Verde* on REDAM radio.
- Green T.V. program called Women and Ecology.
- Our World Magazine, edited in Berlin and published in 3 languages (English, Spanish and German).





IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

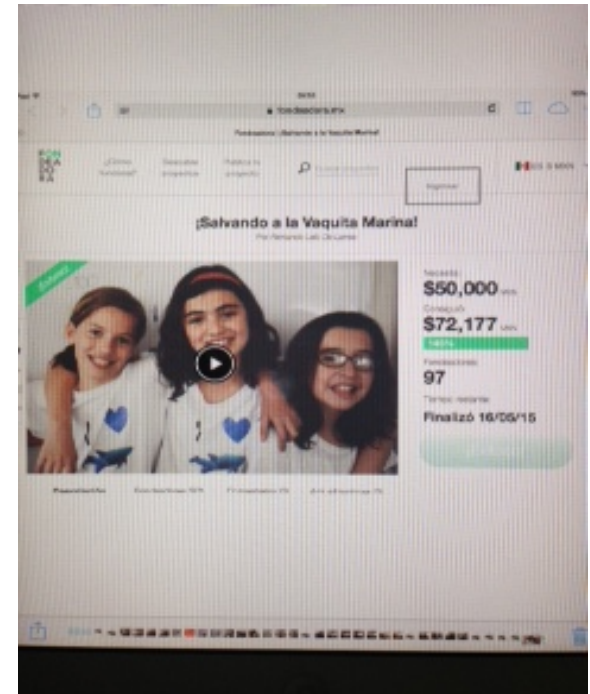




IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Outcome and assessment

- 4th graders reached their funding goal in 5 days.
- Involved parents in modelling the children's attributes and attitudes.
- Positive energy, commitment and enthusiasm transcended into the community.
- Working together towards a common goal made every single aspect of this project important.
- Greenpeace thanked the children in a ceremony at school.
- On Ocean's Day, Greenpeace published an article using the children's project to inspire more people to help.





IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Feedback

- Parents were thankful and excited about being able to participate with their 10 year olds in such a significant and enduring experience.
- Greenpeace was impressed and talked about the world's hope with these new generations of children.
- UCradio started a campaign of its own to promote awareness and action among its university students.
- Green TV and Green Interview saw in Ana Luz a great leader and were happy to be part of the promotion of the project.
- Our World Magazine mentioned that if at least one teacher from each school carried out a project like this one, our world would be different.



IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

PYP Exhibition Goals

- Video
- Give the students more **agency and ownership** of their learning process.
- In-depth, collaborative **student-led inquiry**.
- Explore **multiplicities**. (**Rhizome**)
- Assess student **understanding** of the concepts.
- Demonstrate how students take **action** as a result of their learning.
- Involve the whole community.
- Incorporate the essential elements of the PYP.



IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

How we got there - Backward design.

- **Summative Assessment:**
 - 20 minute talks. Share learning process. Prove conceptual understanding, explain any action undertaken as well as a variety of skills and the right attitudes they put into practice.
- **Planning the Exhibition:**
 - **Agency.** Shifting control. Letting them pick a transdisciplinary theme. (Sharing the planet)
 - **COEP.** Organizing committee for the PYP Exhibition. Teachers, specialists, administration, anyone who wants to participate. Mentors.
 - **Diagnostic assessment.** Questionnaire and observation made us realize the necessity to make the students more sensible to other realities.



IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

PYP Exhibition Planner 2015

- **Central Idea:** Humankind creates tools and strategies to make peace and coexistence sustainable in a diverse society.
- **Related concepts:** Diversity, Equity, Peace.
- **Key concepts:** Responsibility, Perspective, Reflection.
- **(Scaffolding) Lines of inquiry:**
 - 1. The benefits and challenges of living in a diverse world.
 - 2. The historical roots and contemporary causes of conflict between peoples and nations.
 - 3. The impact of the tools and strategies used to promote peace and resolve conflict around the world.
 - 4. My role in shaping the world I want.



IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

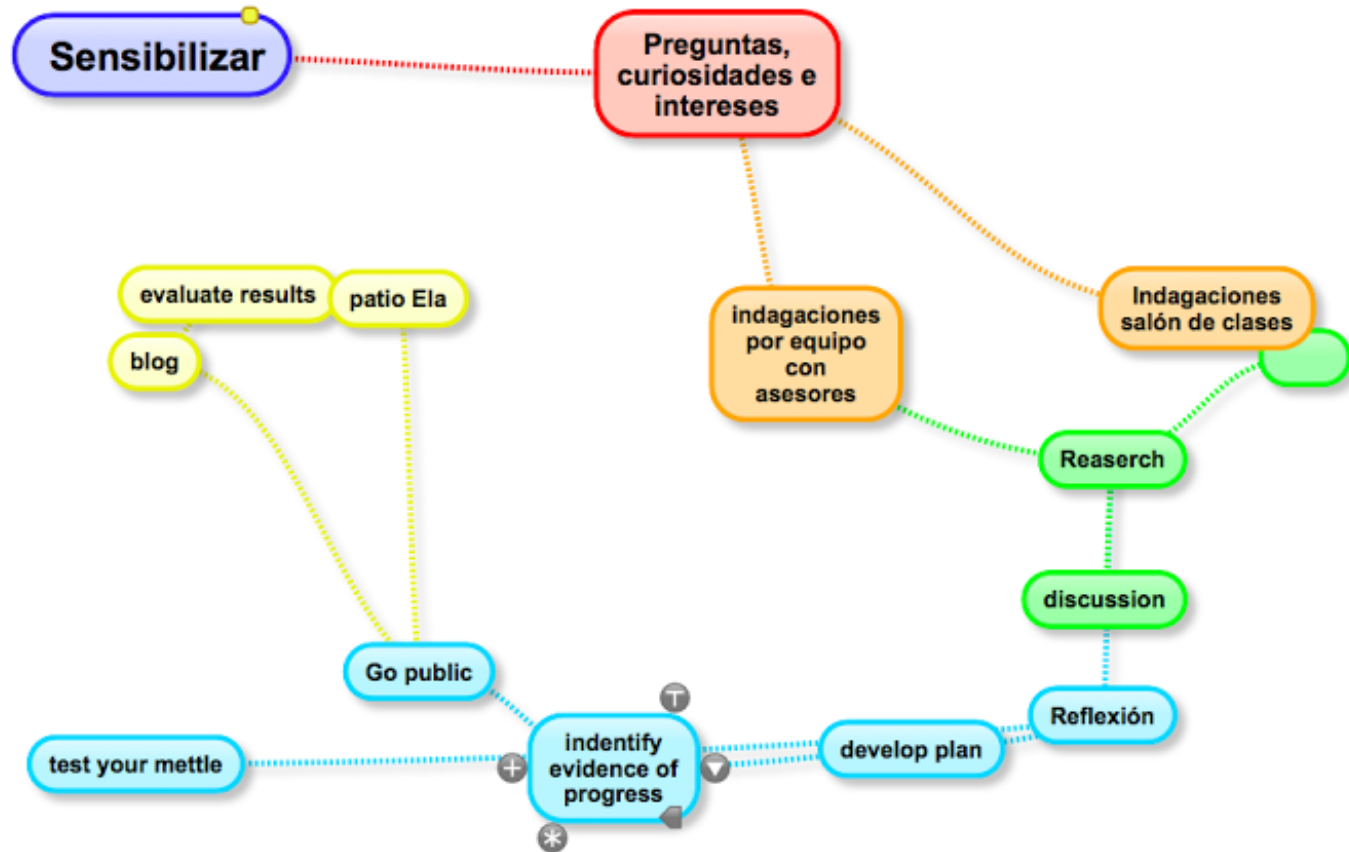
Making the students sensible





IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23-26 July

First inquiry cycle design





IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Recipe for inquiry

Li1: the historical and contemporary roots of conflict between **peoples** and nations.
the roots of conflict: historical and contemporary (discuss).

Li2: *the impact of the tools and strategies used to promote peace and resolve conflict around the world.*
el impacto de las herramientas y estrategias utilizadas para resolver conflictos y promover la paz en el mundo.

Li3: *the benefits and challenges of living in a diverse world.*
los beneficios y retos de vivir en un mundo diverso.

Li4: my role in shaping the world I want.
mi rol en construir el mundo que yo quiero.

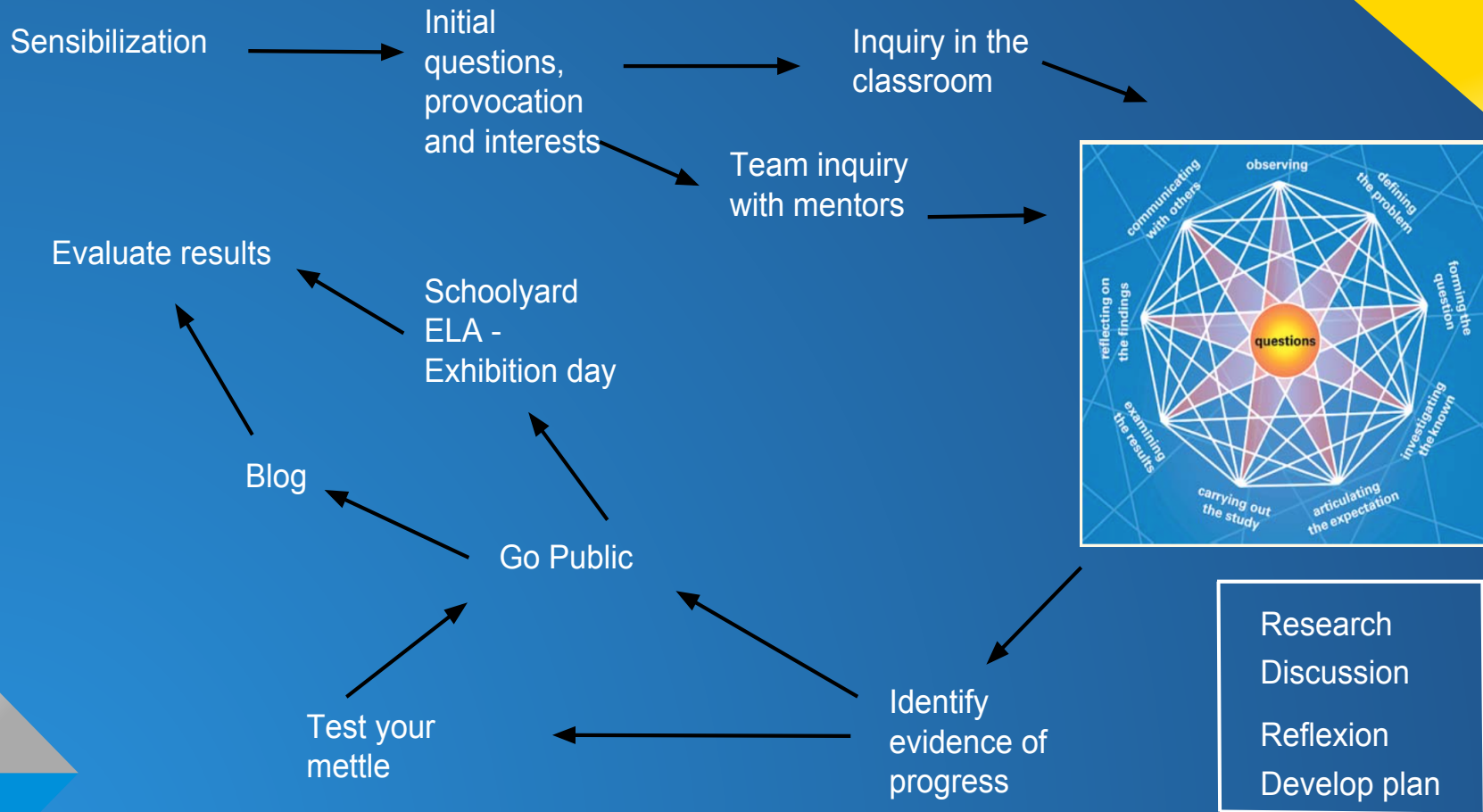
Stages of Inquiry	Sensibilizar - Sensitize	Questionar - Question	Reflexionar - Reflection	Discuss/ Investigate/ Perspective	Develop Plan	Go Public	Evaluate Results
Home Room	<p>Forest man. Video y reflexión sobre la <u>reforestación</u> en la India a manos de una sola persona. Ejemplo de alguien que actúa para hacer el cambio que quiere ver. #Eco - https://www.youtube.com/watch?v=HkZDSqyE1dg</p> <p>Video: El gran cambio comienza</p>	<p>¿Qué puedo hacer yo solo? ¿Puedo mantener un compromiso por largo plazo?</p> <p>¿Cómo es el mundo en el que vivo? ¿Qué riquezas tan grandes tiene, quién tiene acceso a ellas y cómo?</p> <p>¿Quiénes no tienen acceso a</p>	<p>Hacer una reflexión al principio sobre sus preocupaciones actuales y al final de la expo hacer otra analizando la perspectiva con lo aprendido.</p> <p>Video Yo soy Malala. ¿ Tú hasta dónde quieres comprometerte por construir un mundo mejor ?</p>	<p>Investigar sobre el apartheid, ¿qué es? ¿qué opinas sobre su artículo principal de su legislación? ¿quién fue Nelson Mandela? qué opinas de que actualmente hay lugares y personas VIP?</p> <p>Indagar sobre la riqueza en la variedad. La agrobiodiversidad</p>	<p>Crear un modelo de organización de sociedad civil- <u>ELA</u>: se formularán los estatutos para que cada equipo de la exposición debe seguir cada para llegar a acciones de alcance externo.</p> <p>Activist Toolbox: Detournement, Direct Action, Leafleting, Banner hanging, Creative petitions,</p>		



IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23-26 July

Redesigning the cycle of inquiry

28

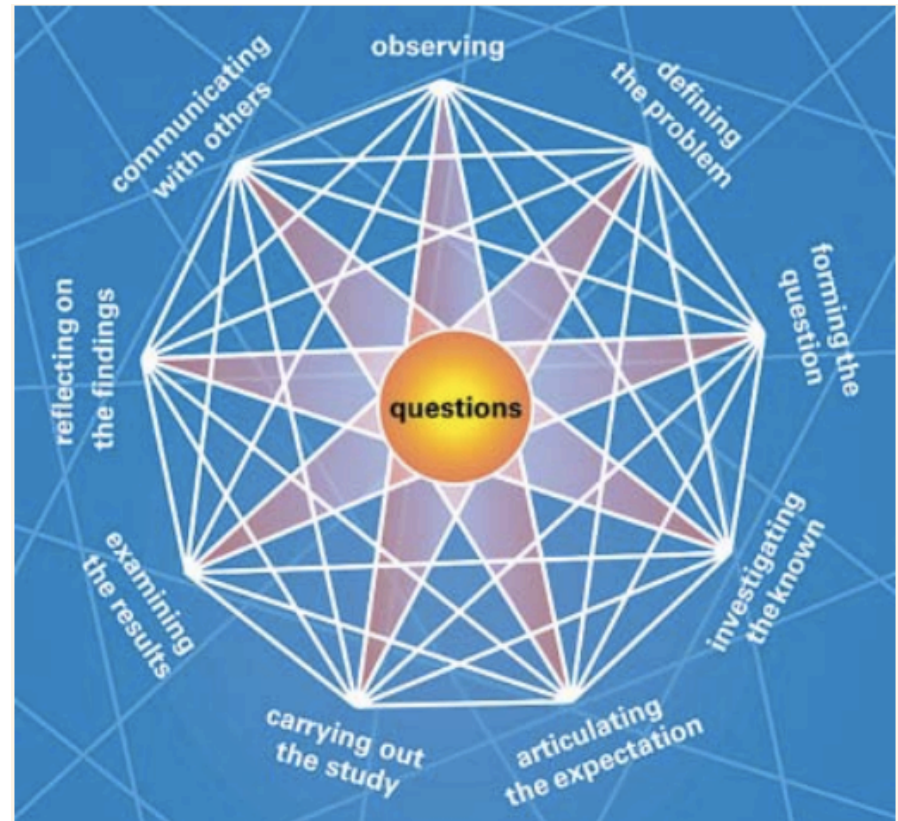




IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Drawing from William S. Harwood's model for scientific inquiry

- Students become owners of their own learning process when **they can choose** the activities they want to do in order to integrate **Research, Discussion, Reflections and Plan Development**.
- Delving deep into content. Documentaries, lectures, visits, texts, presentations, etc.
- Allowing for **multiplicities** as opposed to one single path is more useful for the community of learners.
- A powerful tool for formative assessment.
- <http://btanj.org/demo/2004/harwood1.pdf>

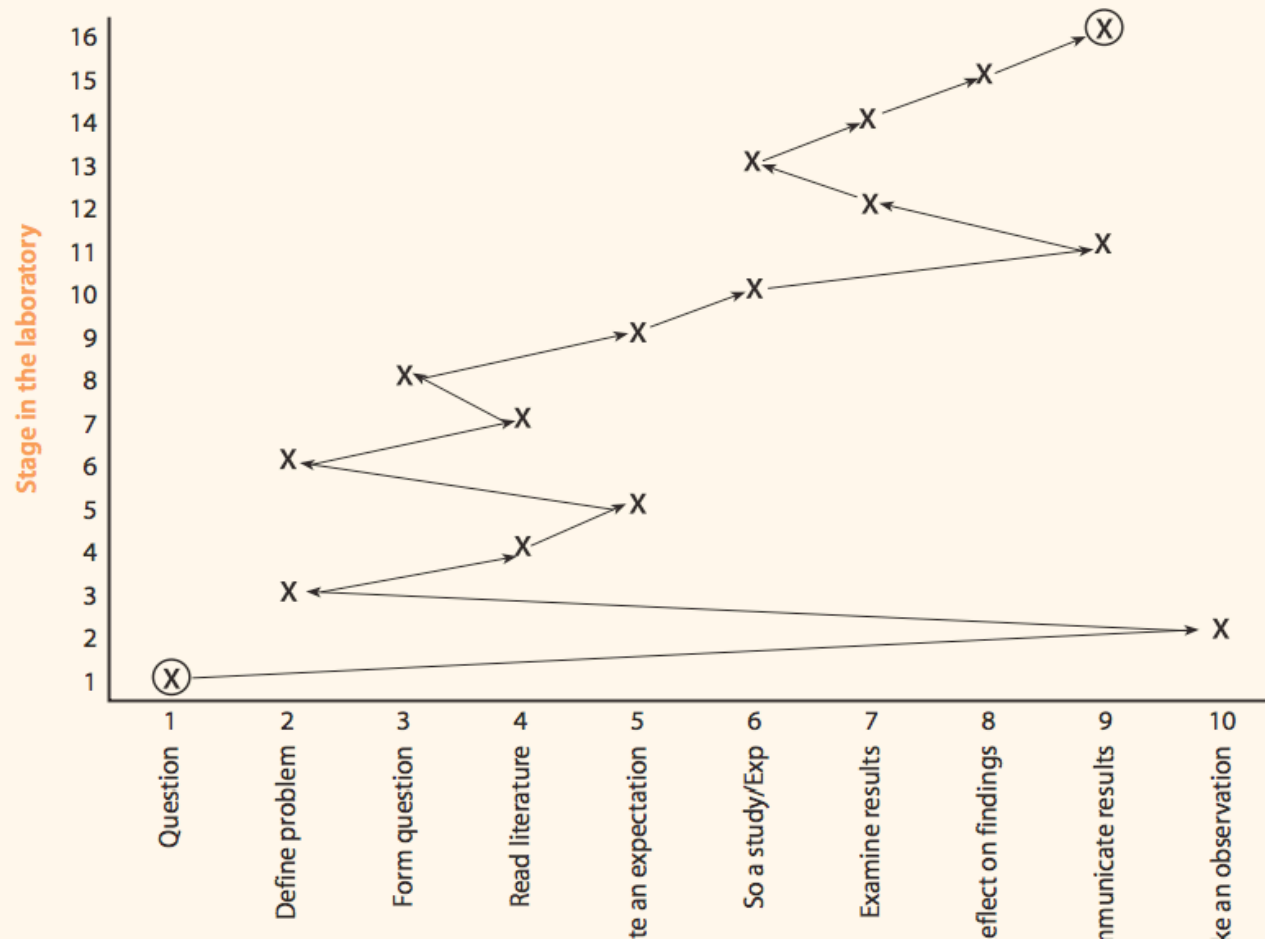




IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Chronological map of activities students engaged in.

Chronological map of activities students engaged in during the lab exercise.



Building a map of content from the student's inquires





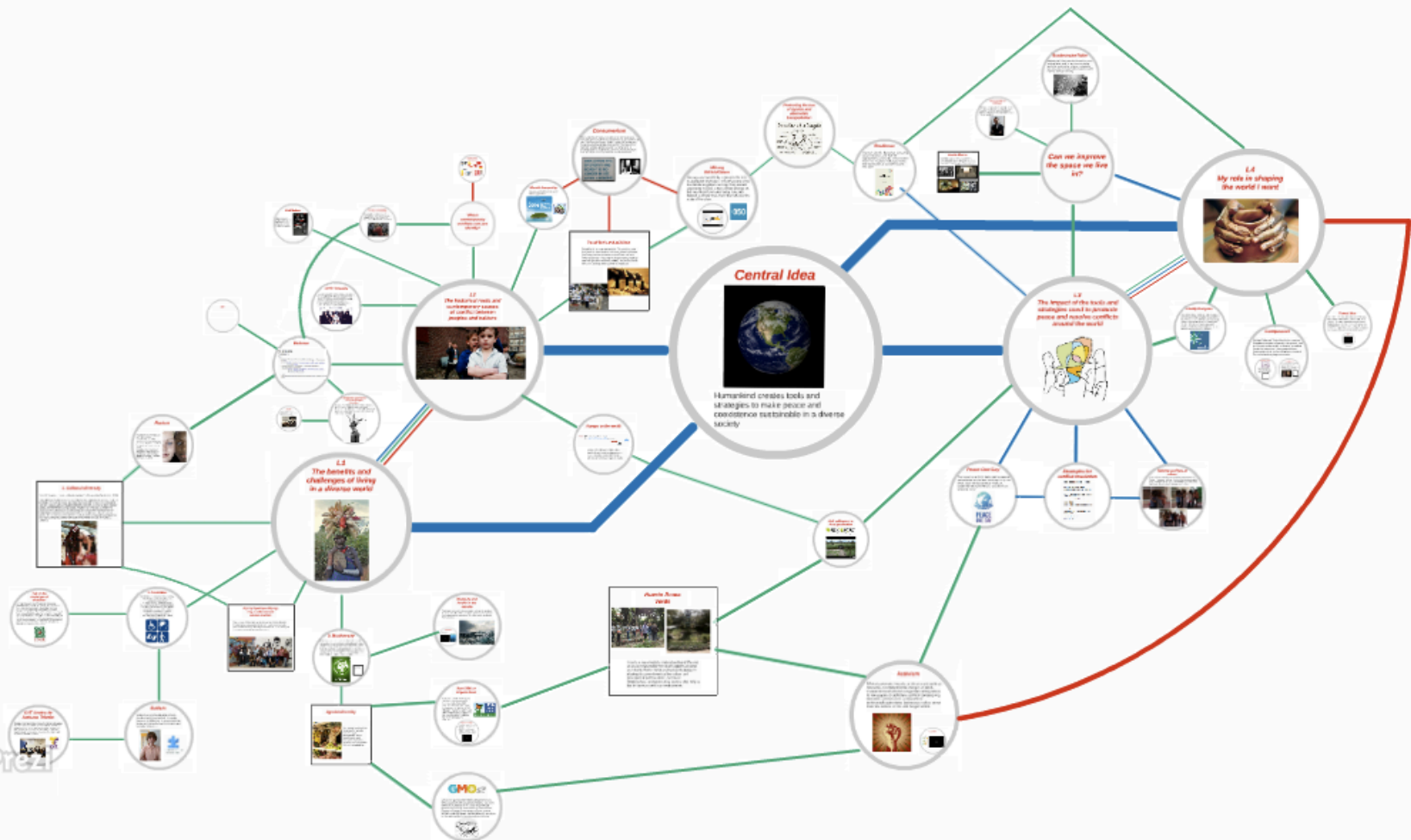
IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Building a map of content from the student's inquires





Rhizomatic map of content related to lines of inquiry. Sharing the planet. PYP Exhibition 2015



<https://prezi.com/w5vzfaep5ljh/rhizomatic-map/>

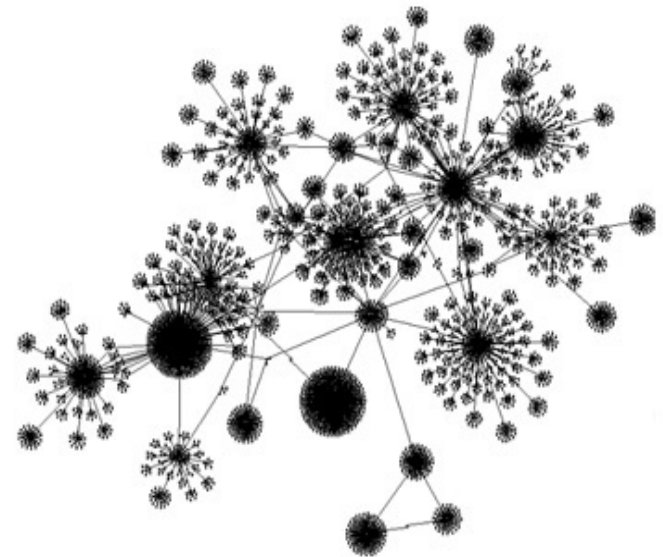


IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Knowledge – Which and how? The rhizome as model for exploration.

the rhizome pertains to a map that must be produced, constructed, a map that is always detachable, connectible, reversible, modifiable, and has multiple entryways and exits and its own lines of flight. (Deleuze and Guattari 1987, 21)

- Students' inquiries lead them to **topics around a concept** and to make **connections** that allow them to move freely tracing their personal route through a network of infinite content.
- Drawing from previous knowledge, the teacher makes **provocations** so they can start off anywhere.
- This model allows students to legitimize their work. They can **judge knowledge** themselves as they recognize what is **useful or important** to them.
- Each member has the power to **create knowledge** and leave it as a new node connected to the rest of the network.

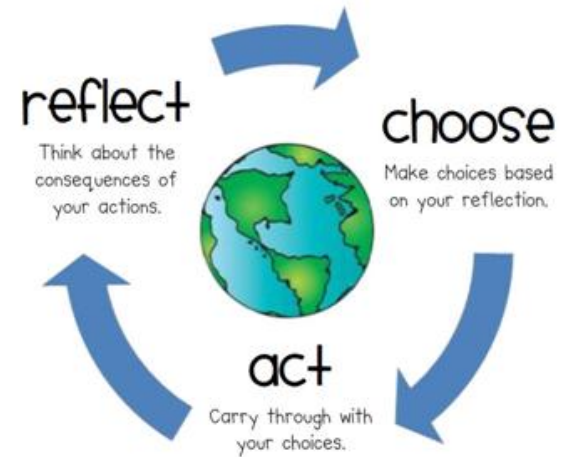




IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

My role in shaping the world I want (Action)

- Provocations:
 - Jadav Payeng - Forest Man
 - Wynona LaDuke
 - Charity Navigator
 - Resilience
 - Compassion





IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

My role in shaping the world I want (Action)

- Teams came up with ideas like exchanging seeds for plastic.
- Giving money and time to help at organizations like *Centro de Autismo Teletón*.
- Raising awareness on subjects like wealth and gender inequality.
- Changing consumption habits. Especially those involving food. Endangered and threatened fish species.
- Taking better care of the environment through consciousness in pollution and energy matters.
- Being compassionate. Helping others any way we can.
- Discussing their own day to day activities and their potential efficiencies.



IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Outcomes

- **4th graders:** The expected action was to collect MXN \$50,000 to donate to Greenpeace through crowd-funding. In the end the children collected MXN \$72,177, they wrote a letter to the President, and went on radio and T.V. programs.
- We wanted the **6th graders** to express themselves through **multiple actions** that involve fairness, justice, consciousness of others, and an ability and willingness to contribute with selfless actions. We know for a fact that several of them were changing their behaviors.
- Blog. www.lomasaltas.edu.mx/Expo2015/
- “I didn’t know that money was related to peace.” – 4th grade student.
- Closure with the community. All day exhibition with stands to share experiences and opinions with parents and teachers from other schools.



IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23-26 July

Aspects in common

- With the right mind framework questions arise continuously for each line of inquiry.
- The teacher as facilitator and active listener.
- Students are led to keep on inquiring and answering their new questions independently.
- Integrated projects in which students go from individual to team work.
- Building on top of the reflections from past inquiries.
- Going beyond fund raising and making other real contributions
- Powerful summative assessment
- School community involvement and impact
- Student initiated actions



IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Tips for teachers



- Know who you are.
- Be an active participant as a guardian of our planet.
- Be an IB model for students, they tend to imitate what you do.
- Be present while inquiring, show enthusiasm and a positive attitude.
- Answer with another question, encourage students to find the answers by themselves.
- Promote action at all times.
- Be an active listener.
- Be a risk-taker and tend to do things “out of the box.”





IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23-26 July





IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Thinking skills

- Acquisition of knowledge: Students learned specific facts and ideas.
- Comprehension: Students were able to show they understood concepts learned.
- Analysis: Looking at the interrelationship of content.
- Dialectical thought: Students were able to understand there are different points of view, realizing the difficulties of conciliation and the complexities of contradictions.
- Metacognition: We had opportunity to analyze how we learn.

- Accepting responsibility: Willing to assume a share of the responsibility, and doing something about it. Raising awareness.
- Acquisition of knowledge: Specific facts and ideas.
- Comprehension: Prove they understand ideas and concepts.
- Analysis: Looking at the interrelationship of content.
- Dialectical thought: Able to understand different points of view, realizing the difficulties of conciliation and the complexities of contradictions.
- Metacognition: Analyze how we learn. Students listened to others, understood about decisions based on equity.
- Cooperating: Working cooperatively in teams, sharing resources and information, taking turns, respecting each other.
- Resolving conflict: Listening carefully to others, reacting reasonably to the situation; accepting responsibility appropriately; being fair.





IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Communication skills

- Listening: Listening to information, listening to others.
- Speaking: Students were able to give oral presentations expressing ideas and stating opinions.
- Reading: Students read a wide variety of sources and understood what they read.
- Writing: The children wrote down ideas and information, took notes, practiced paraphrasing, wrote summaries, and kept a journal.
- Viewing: We looked at several documentaries.
- Presenting: They made multimedia presentations for different audiences in an effective manner.



IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Self-management skills

- Spatial awareness: A sensitivity to the position of objects in relation to oneself or each other.
- Organization Planning and carrying out activities effectively.
- Time management Using time effectively and appropriately.
- Safety: Engaging in personal behavior that avoids placing oneself or others in danger or at risk.
- Healthy lifestyle: Making informed choices to achieve a balance in nutrition, rest, relaxation and exercise; practicing appropriate hygiene and self-care.
- Codes of behavior Knowing and applying appropriate rules or operating procedures of groups of people.
- Informed choices: Selecting an appropriate course of action or behaviour based on fact or opinion.



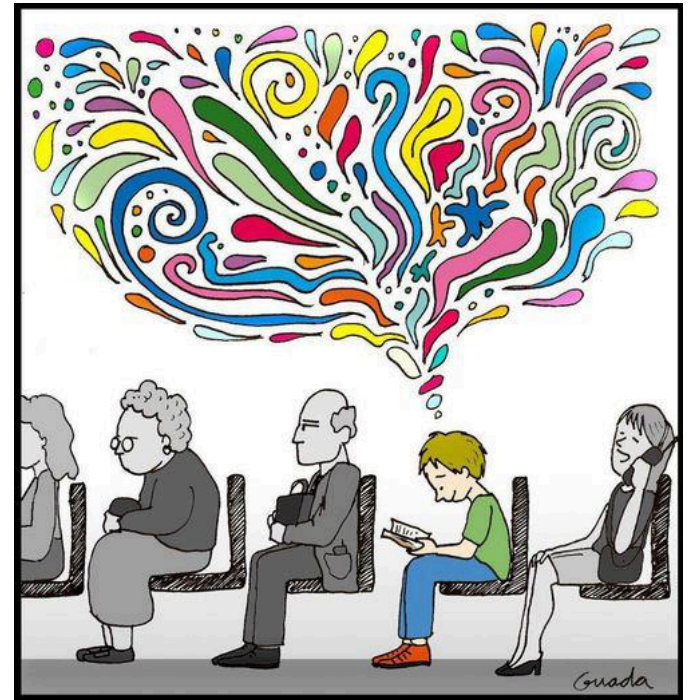


Research Skills

IB CONFERENCE
OF THE AMERICAS 2015

Chicago, IL • 23–26 July

- Formulating questions: They were constantly identifying what they thought they wanted or needed to know asking relevant questions.
- Observing: Using the senses to notice relevant details.
- Planning: Teams developed a course of action; wrote down an outline for their presentations; and in general they designed everything they were going to show.
- Collecting data: Students gathered information from a variety of sources.
- Interpreting data: They were able to draw conclusions from relationships and patterns that emerge from their data.
- Presenting research findings: They were able to effectively communicate what they learned.





IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Attitudes

- **Appreciation:** Children appreciate the wonder and beauty of the world, the biosphere, and its people.
- **Commitment:** They persevered showing discipline and responsibility.
- **Cooperation:** They learned to cooperate and collaborate.
- **Creativity:** They were very creative in terms of their presentation and in coming up with solutions to specific problems.
- **Integrity:** They understood the importance of fairness and honesty. **Respect:** Learned to respect themselves and others.



IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Collaboration

- In order to help endangered species, 4th graders collaborated between them, with their parents, friends, WWF, Fondeadora, Universidad de la Comunicación, Entrevista Verde, Green TV, Our World Magazine, and Greenpeace. Every single aspect of collaboration was important.
- Collaboration began since the COEP met to plan for the exhibition. Teachers, mentors, the PYP coordinator and the school principal met to share ideas and to build a concrete plan. As for the children they were grouped in teams which had to choose specific topics to concentrate on and draw relationships with concepts. Then they had to work together to think of questions to lead their inquiries. Also, they collaborated to think of their stands and presentations.



IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Summative assessments

- With such a broad spectrum of interrelated contents, the best assessment we could think of was to help them plan for presentations a la TED Talks called KID Talks. The children had already seen several of them and were well aware of how powerful and brief they had to be. It proved to be a good activity through which they could show their true concern, the specific knowledge they had acquired, and the comprehension of the concepts.
- Campaign



IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Addressing the IB Philosophy and International-mindedness

- **Inquirers:** Students could exploit their curiosity since every subject and any interrelation was open to study and was encouraged. Inquirers because they enjoyed learning about the desert porpoise and endangered species and will continue to do so.
- **Knowledgeable:** Discussing peace, scarcity of resources, and inequality we made sure students were able to explore concepts, ideas, and issues of both local and global significance.
- **Thinkers:** Creating a program of exchanging seeds for used plastic or glass students proved capable of critical thinking in order to find solutions to difficult problems. Thinkers because they allowed students to recognize and approach a complex problem (Desert porpoises need help urgently).
- **Communicators:** In the assessment activity we called KID talks students express themselves and information in different ways. They were communicators because they worked effectively and willingly in collaboration with others.
- **Principled:** After some issues regarding competition, privacy, and ownership of materials students learned to act honestly and with a



IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Addressing the IB Philosophy and International-mindedness

- Open-minded: Students appreciate their own cultures and personal histories, they showed in class what their families already do consistent with what we were discussing in class. Also they were open to the perspectives, values and traditions of other individuals and communities when we discussed the situation of disadvantaged minorities across the globe.
- Caring: Students showed respect and compassion towards the needs of others, especially disadvantaged communities like the very poor and victims of violence. Caring because they showed compassion and have a personal commitment to service.
- Risk-takers: On stage in front of a very large audience, students faced this unfamiliar situation with courage, and defended their ideas and beliefs. Balanced: Students understand the importance of intellectual, physical and emotional balance to achieve personal well-being. Students were risk takers because they carried out a campaign in a brave way defending their beliefs.
- Reflective: In the final written reflections students gave thoughtful consideration to their own learning and experience.



IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

ACTIONS students took or we hope they will take in the future

- Children carried out a campaign and will continue helping endangered species. They will also know the importance of teamwork and positive attitudes have outstanding results.
- I truly hope the children will take care of others, of animals and the planet in a much more conscious and clear way. I hope they will become more conscious of the impact of what they buy and will make more conscious choices. I hope they will act with fairness and equity towards all others caring specially for anyone who is in a disadvantaged position. I hope they will stop polluting as much as they can and that they will actively engage in learning more about all of these pressing issues.



IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Impact of students ACTIONS in the school, the community, the country, and the world

- Children inspired others, adults got involved and many people in Mexico learned about their project through the local radio show “Entrevista Verde” and “Green TV.” Also, they inspired the world through UCradio, Our World Magazine, and Greenpeace.
- Parents, other children, and teachers in the community were touched by the work of the 6th graders. All comments were positive and expressed admiration for the quality of the work they presented. During the presentation some children made great questions that reflected their conceptual comprehension and a high level of inquiry. Throughout the exhibition process we could see that the community was sensible to why sharing the planet was such an urgent and pressing theme.



¡VIVE DE TUS IDEAS!





IB CONFERENCE
OF THE AMERICAS 2015
Chicago, IL • 23–26 July

Gonzalez.rodrico@lomasaltas.edu.mx
santacruz.adriana@lomasaltas.edu.mx