



<http://careers2030.cst.org/jobs/>



The world is changing quickly, and we will need bright and creative teachers to make sure young people have the skills and knowledge to become flexible, lifelong learners.

Teachers in 2030 will go beyond their classrooms, taking lessons out into the world.

They will use technology to enhance learning by connecting students with remote communities across the globe and simulated experiences, from scuba diving in the Indian Ocean to exploring Egypt's Pyramids. These technologies won't replace teachers. Instead, they will help to better guide students and develop their unique skills and knowledge.

They will build personalized learning programs to help students succeed. And as schools are transformed into community hubs and think tanks, teachers will take on more entrepreneurial, management, and thought leadership roles in the broader society.

JOB REQUIREMENTS / SKILLS

In addition to the skills that make teachers great—including communication, active listening, creativity, leadership and patience—teachers of 2030 will also require skills in entrepreneurship, community organization, technology and the ability to understand and manage data to design personalized learning programs.

“Goats and Humans, resources and sustainability: what’s the story’s end?”



Teresa Isabel Loureiro



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IN A WORLD OF

EXCESSIVE CONSUMPTION

DIGITAL INFORMATION



THAT LEADS TO

LOSS OF NATURAL RESOURCES



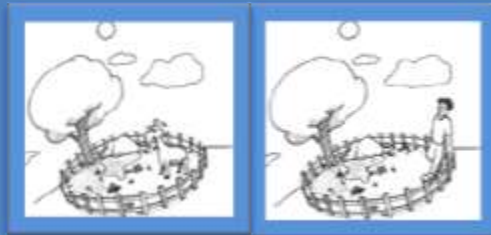
THAT
COMPROMISES

FUTURE SUSTAINABILITY



HOW CAN INQUIRY ACTIVITY

"Goats and Humans, resources and sustainability: what's the story's end?"



CONTRIBUTE TO THE DEVELOPMENT OF



HOW TO SELECT?



WHAT TO SELECT?



SKILLS, ATTITUDES AND VALUES CAPABLE OF PROVIDING ON STUDENTS AN ACTIVE ROLE IN DECISION-MAKING ABOUT SOCIAL AND ENVIRONMENTAL CONCERNS

SEARCHING FOR INFORMATION SKILLS

METODOLOGY

WHERE ?

NATURAL SCIENCES CLASS

WITH WHO ?

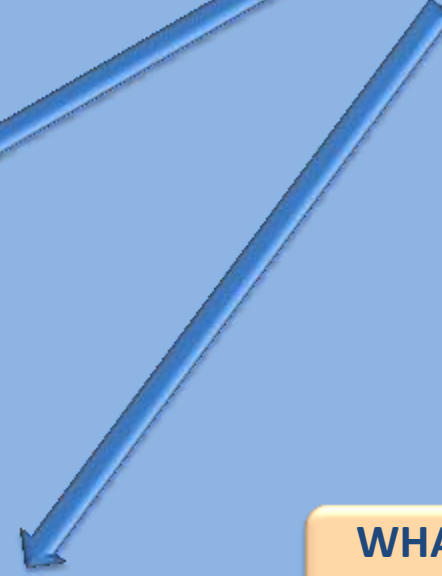
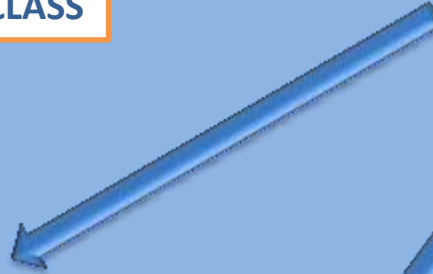
LOWER SECONDARY STUDENTS

HOW IS THE ACTIVITY
STRUCTURED ?

SUBDIVIDED IN TWO PARTS, EACH ONE GUIDED FROM THE EXPLORATION OF TWO ILLUSTRATIVE CARTOONS OF A CLOSED ECOSYSTEM, ONE WITH A GOAT AND ANOTHER ONE WITH A MAN.

WHAT INQUIRY SKILLS
WERE ASSESSED ?

SYSTEMATIC THINKING
SEARCHING FOR INFORMATION
ARGUMENTATION
REASONING.



METODOLOGY

HOW WAS IT ASSESSED ?

OBSERVATION AND TEACHER WRITTEN RECORDS OF STUDENTS BEHAVIOR AND ATTITUDE.

DEVELOPMENT AND APPLICATION OF ASSESSMENT GRIDS WITH FOUR LEVELS FOR EACH COMPETENCE.

ASSESSMENT CRITERIA WAS RELEASED, DISCUSSED AND WORKED WITH STUDENTS AT THE BEGINNING OF THE ACTIVITY.

AT THE END A SEMANTIC DIFFERENTIAL WAS APPLIED.

HOW WAS IMPLEMENTED ?

IN GROUPS OF 4-5, STUDENTS ANALYZED THE RELATIONSHIPS BETWEEN ELEMENTS OF THE ECOSYSTEM REPRESENTED IN EACH THE CARTOONS.

EACH GROUP WROTE A STORY AND DREW AN ILLUSTRATION TO FINISH THE PLOT OF THE INICIAL CARTOON.

CONSTANT FEEDBACK WAS GIVEN TO STUDENTS.

THE TASK ENDED WITH A DEBATE BETWEEN GROUPS.

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ACTIVITY PART I

...and there was a goat, well installed in the fence! She looked around, felt the breeze and the blue sky ... evaluated all that it had in the small space available ... at first glance it seemed to be in heaven!

The early story...

Once upon a time there was a goat that lived in a paradise, its fence ... and it stayed there, and the time passed, and passed and passed...

ACTIVITY PART II

...and there was a man, well installed in the fence! He looked around, felt the breeze and the blue sky ... evaluated all that it had in the small space available ... at first glance it seemed to be in heaven!

The early story...

Once upon a time there was a man who lived in a paradise, his fence ... and he stayed there, and the time passed, and passed and passed...



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RESULTS

SYSTEMIC THINKING ABILITY

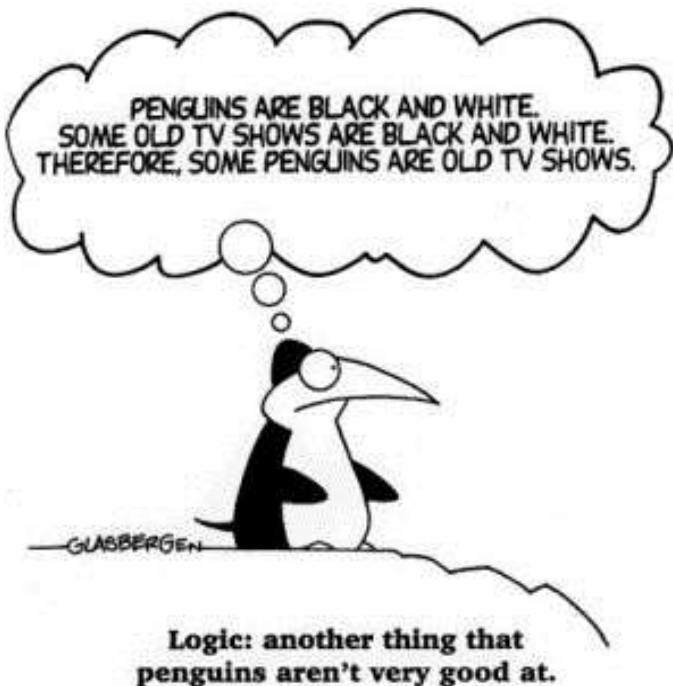
MOST STUDENTS SHOWED DIFFICULTIES IN THINK SYSTEMICALLY. THEY CAN'T UNDERSTAND THE RELATIONSHIPS OF INTERDEPENDENCE THAT ARE ESTABLISHED BETWEEN THE DIFFERENT SUBSYSTEMS OF A NATURAL SYSTEM.



RESULTS

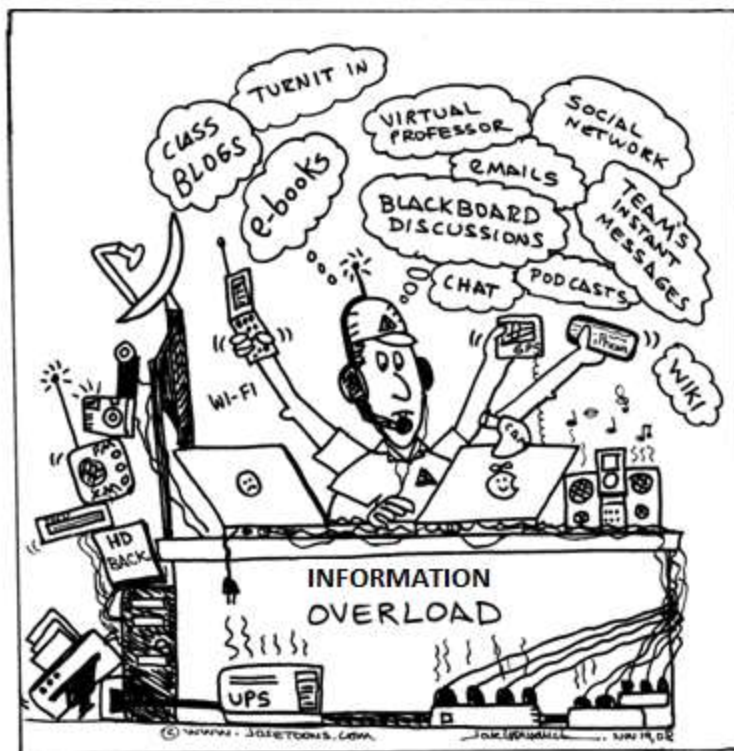
REASONING

MOST GRAPHIC CARTOONS AND NARRATIVES ARE SIMPLE AND INCOMPLETE.





"Humm...Nice essay Tom, your cut and paste skills are incredible..."



CONCLUSIONS

POTENTIAL

INQUIRY ACTIVITIES HAVE LOTS OF POTENTIAL DEVELOPING THE ESSENCIAL LEARNING, SOCIAL AND ENVIRONMENTAL SKILLS THAT STUDENTS NEED TO IMPROVE IN THEIR FUTURE PERFORMANCE.

A word cloud centered around the word "INQUIRY". The word "INQUIRY" is the largest and most prominent, rendered in a bold, orange font. Surrounding it are various related terms in different colors and sizes, including "CREATIVITY" (red), "DECISION-MAKING" (red), "LIFE-LONG-LEARNING" (blue), "LEARNING-ATTITUDES" (red), "AMBIENTAL-ATTITUDES" (blue), "SOCIAL-ATTITUDES" (blue), "INVESTIGATING" (orange), "roles" (small, black), "ownweship-action" (small, black), "issues" (small, orange), "processes" (small, blue), "gathering-information" (small, red), "RESEARCH" (small, red), "REFLECTING" (small, red), "ASKING-QUESTIONS" (small, red), "engaged" (small, black), and "ACTIVE" (small, black).

CREATIVITY
INQUIRY
roles INVESTIGATING
DECISION-MAKING
ownweship-action LIFE-LONG-LEARNING
issues processes ACTIVE
LEARNING-ATTITUDES gathering-information
AMBIENTAL-ATTITUDES RESEARCH REFLECTING
SOCIAL-ATTITUDES
ASKING-QUESTIONS engaged

THEY WERE ABLE TO MAKE THE CONNECTIONS...

"I have to drastically reduce the amount of stuff that I buy."



"I started to pay more attention to the details of everything that surrounds me."

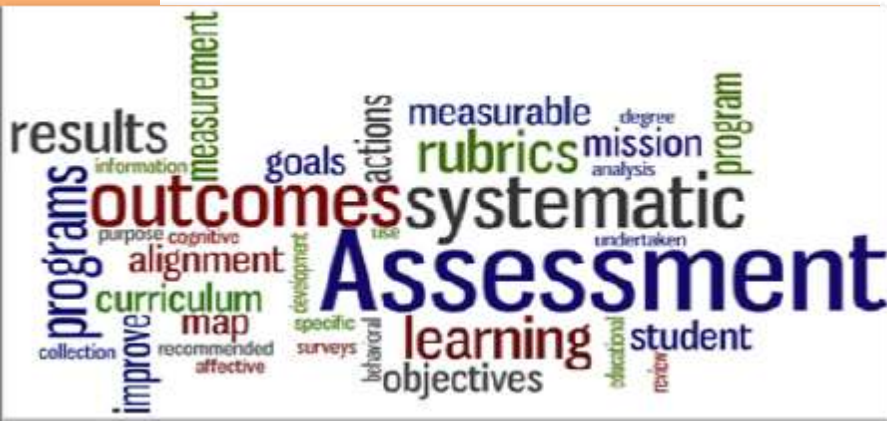
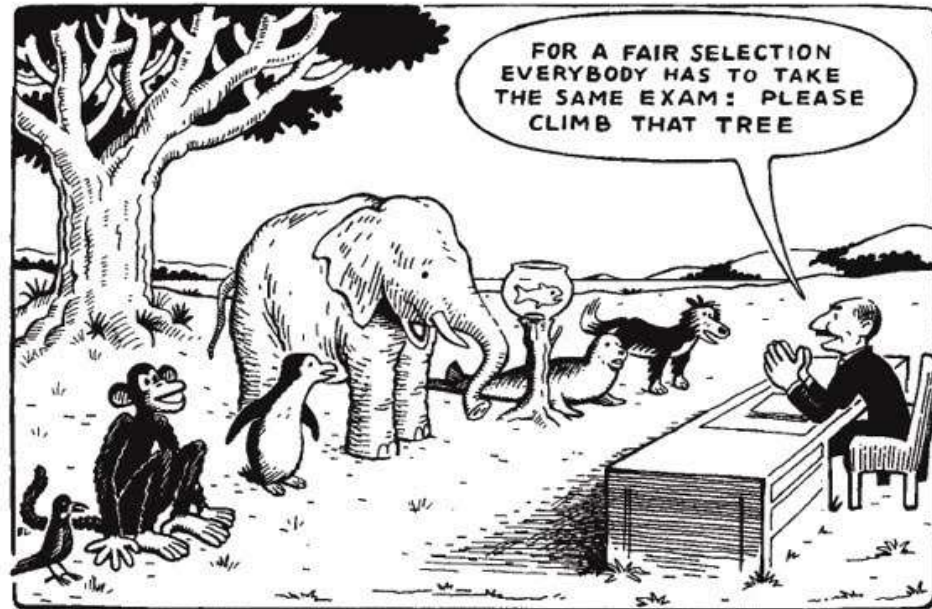
"With this activity made sense to me what we are doing to our planet's resources. Now I will start to sensitize my family for this."

"It was an interesting way to understand how everything is interconnected, and how the current lifestyle of each of us takes natural resources to exhaustion."

CONCLUSIONS

LIMITATIONS

ASSESSMENT – BUILDING A RUBRIC AND APPLYING IT WAS A VERY DIFFICULT TASK THAT NEEDS IMPROVEMENT



“

Everybody is a genius. But, if you judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid.



Albert Einstein

LIMITATIONS

TIME – THERE WASN'T ENOUGH TIME TO DEVELOP THE ACTIVITY AND TAKE PROFIT OF IT DUE TO THE CURRICULUM COMPROMISES.



"I was just using a program to help me manage my teaching tasks..."

CONCLUSIONS

