

# How to solve environmental problems: Propositions from children of the 6th grade

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## INVESTIGATION QUESTIONS

How do children, after six years of schooling, understand great environmental problems?  
How do children embrace environmental issues?

## METHODS

This study considers a standardized Portuguese literacy test (PASE LINGUA PORTUGUESA) that all children in the Azorean Archipelago (Portugal) complete once they finish sixth grade. The 2007 test included a composition focused on their perspectives on the environment, global warming and other major problems and potential solutions.

From 3400 tests, 203 were analysed, including those from two classrooms for each of the nine Islands of the Azores Archipelago (110 girls & 93 boys; age: 12 years old, average). The texts produced by the children were submitted to descriptive-interpretative content analyses that explored the identified problems and the scope of the proposed solutions.

## RESULTS

Many environmental problems were described by the children and a variety of ideas for solutions was advanced.

The referred problems and solutions were then analysed by us and classified in different categories.

### issues

Dimension	Sub-dimension	Category	%
Facing Environmental Problems	Climatic Changes	Garbage production	41
		Garbage management	7
	Unsustainability	Vanishing resources	2
		Waste	2
Ensure the Maintenance of the Systems	Natural systems	10	
	Sustainability	1	
Improve the Systems	Environment	15	
	Environment at school	11	
Did not refer		2	

All the children identified problems and solutions.

Two thirds of the children focused on existing problems, the rest on prevention and maintenance of systems.

Almost two thirds of the referred problems are connected with global warming.

Children from Faial, Pico and Terceira Islands, identified more problems connected with their near environment (school).

There was large redundancy around elementary solutions.

There was a naive assumption that behavioural changes are easily attained.

Almost two thirds of the children did not refer likely causes or identified a responsible for the environmental problems stated.

Many proposed measures show a clear disarticulation between the ways and the ends which suggests an indiscriminate incorporation, mediated or not, of the pro-environmental rhetoric.

## CONCLUSIONS

A reflection of these results may be useful in order to help define the purposes and the ways to incorporate environment education in schools.

We believe that environmental education needs to focus on a higher awareness of the environment including the development of critical thinking and fuller inclusion of diverse perspectives, especially those of children.

## REFERENCES

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## CREDITS AND ACKNOWLEDGEMENTS

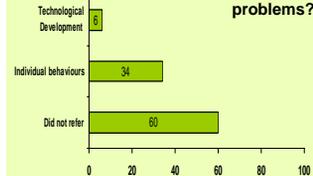
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### solutions

Dimension	Sub-dimension	%
Prevention	Not pollute	12.6
	Protection	9.6
	Conservation	0.2
Minimization of the problem	Reduce consumerism	29.7
	Produce alternative resources	7.9
	Treat resources	0.2
	Separate and recycle	15.9
Minimization of the impacts	Reduce garbage	5.7
	Improve infrastructures	3.4
	Clean the garbage	1.9
	Reuse materials	1.9
Knowledge	Learn more about the problems	9.0
	Enjoy environment more	0.7
Fruition	Keep contact with nature	0.2
	Did not refer	0.9

### What causes environmental problems?



### Who is responsible for the existing problems?

