



# Mind the STEM Gap Manifesto



MIND THE STEM GAP IS A  
PARTICIPATORY PROJECT,  
AND IT NEEDS YOU!

## 1 Language: be aware of words.

Phrases like “Don't be a sissy” contain toxic connotations, which solidify and strengthen stereotypes. It should be remembered that, in general, words give form to thoughts.

## 2 Combat stereotypes.

The belief that science is more suitable for men is a stereotype. Stereotypes are self-fulfilling prophecies that steer individual perceptions and decisions. This is why they need to be seen and discarded.

## 3 Behavioural models.

There are no men's jobs and women's jobs. We should avoid using roles and models based on gender stereotypes.

## 4 Play and cognitive development.

Games help us learn about ourselves. It is important that girls have access to construction sets, meccano and logic blocks, which are still regarded as typically for boys

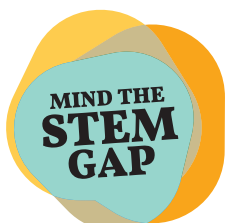
## 5 Access to knowledge.

Science and maths can be as fascinating as drawing and music. Let's help girls and boys freely discover and cultivate their interests, without any limits.

## 6 Full engagement!

Overcoming stereotypes is a tough challenge we need to work on together, engaging the whole community involved in bringing up our children.

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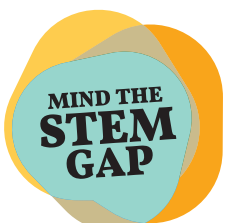
# Mind the STEM Gap at home



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- 1 Be aware of words.**  
Phrases like “Don’t be a sissy” or “This is a man’s job” have toxic connotations, which solidify and strengthen stereotypes. We should avoid these phrases and talk about them if they do emerge: words give form to thoughts.
- 2 Be aware of cultural stereotypes.**  
Stereotypes are insidious and powerful: they condition our worldview. So they should be highlighted, analysed and discarded.
- 3 At home, avoid behavioural roles and models based on gender stereotypes.**  
Housework is not a natural female vocation. When everyone is involved in day-to-day tasks, this frees up energy and conveys competence.
- 4 There are no men’s jobs and women’s jobs.**  
Let’s adopt a gender-neutral pedagogic approach, where roles and responsibilities are assigned on the basis of personality rather than gender.
- 5 Help girls test their abilities with confidence.**  
Let’s leave girls free to explore all fields, including those traditionally reserved for boys. This will help eliminate a disparity, since girls tend to consider themselves less skilled than boys in maths and science.
- 6 Games help us learn about ourselves.**  
This is why it’s important that girls have access to science-related games still viewed as typical boys’ games, such as building sets, meccano and logic blocks.
- 7 Science and maths can be as fascinating as drawing or music.**  
Let’s offer our sons and daughters the chance to explore all branches of knowledge and tell them “science stories” with female protagonists.
- 8 Stimulate curiosity through experience.**  
Even just changing a light bulb with a parent can open up interesting new worlds for boys and girls.
- 9 Challenge and discussion.**  
Overcoming stereotypes is a difficult challenge. To win it, we need an educating community where the various people involved in children’s education and upbringing are in constant contact with one another.

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# Mind the STEM Gap at school



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## 1 Language.

Educators can do a great deal in the classroom, by choosing inclusive words that make the female presence visible (the masculine form is not neutral). They can underline the discrimination and stereotypes hidden in proverbs and traditional expressions, which may also appear in textbooks: "Daddy works and reads", "Mummy cooks and irons".

## 2 Stereotypes are powerful cultural constructs.

They are transmitted from generation to generation and work at an unconscious level. This is why schoolchildren should be helped to recognise, discuss and discard them.

## 3 Develop critical thought.

Building the ability to analyse the logical and empirical fundamentals of a statement combats the activation of stereotypes, one of which holds that boys are more able than girls in the study of maths and technology.

## 4 Promote heterogeneous work teams.

Assigning roles on a rotating basis helps everyone build up self-confidence and belief in the group: leadership is based on competence, not gender.

## 5 Encourage girls to test their abilities.

Logical and maths tests (through apps or digital games) help girls develop their self-esteem, their confidence about their abilities. It also re-establishes a balance, given that from a very young age boys are perceived as having greater competence than girls in maths and sciences.

## 6 The power of knowledge.

Agronomist, chemist, immunologist, neuroscientist, geologist, marine biologist, aerospace engineer, computer programmer, naval architect: the scientific world offers many exciting professions, including some of the most in demand on the jobs market. By offering a broad range of careers and training paths, STEM helps girls imagine their professional future freely, without the constraints of conventions and stereotypes.

## 7 Enhance female models.

A good approach is to promote involvement in the laboratories and experimental work of experts in the various STEM fields, and to give visibility to the lives and contributions of female scientists and researchers by rediscovering women innovators from the past who too often have been forgotten by the textbooks and learning about contemporary female professionals who are sometimes overlooked by the media.

## 8 Plan educational activities that help to bring out differences.

And that give them value by focusing on the success of the group: competition but also discussion and cooperation.

## 9 Continuous training!

Overcoming stereotypes and planning a more inclusive educational approach that introduces girls to science is a difficult task, on which discussions among the members of collegiate bodies is useful.

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