INTRO

The toolkit is a ready-to-use digital collection of modules aimed at teenagers to be used by teachers, informal learning organisations, researchers and industry.

The aim is to engage young people and especially girls in STEM and in the discovery of the variety of STEM related careers in a gender inclusive way. The toolkit includes a wide range of hands-on activities: workshops with a scientific content, informal discussions and meetings with STEM professionals.

Each module is composed of three guidelines:

- Explanatory guidelines specific for each activity
- Guidelines dedicated to the theme of gender inclusion
- Guidelines with suggestions for the facilitation

The guidelines give practical support and guidance for the users, recommendations on how to debate gender approaches and differences with young people, support and guidance for facilitators on how to overcome their own stereotypes and suggestions on how to manage the group dynamics by implementing different facilitation strategies.

The toolkit is produced in the context of the Hypatia project by five science centres and museums (NEMO Science Museum, Museo Nazionale della Scienza e della Tecnologia “Leonardo da Vinci”, Bloomfield Science Museum Jerusalem, Experimentarium, Universcience) in collaboration with gender experts, teachers, research industry institutions and teenagers.

The Vision of Hypatia is of a European society that communicates science to youth in a gender inclusive way in order to realise the full potential of girls and boys around Europe to follow STEM related careers.

Below is the complete list of modules that compose the Toolkit,divided into the three contexts.

Schools

Find Gender Stereotypes in STEM Representations

- Gender Inclusiveness in your Science Teaching
- Inquiry: Shape and Action
- Play Decide Game & Debate
- Science Ambassadors and Ambassadresses
- STEM Women Cooperative Card Game
- Test Yourself
- What's your Opinion?

Science Centres & Museums

- Find gender stereotypes in STEM Representations
- Science Café or Café Scientifique
- STEM Women Cooperative Card Game
- Test Yourself
- Wearable Technology
- Your Role in Research: Inquiry into Chemical Reactions

Industry & Research Institutions

Gender optimizing software programming

Science Ambassadors and Ambassadresses

Skill Game

Speed Dating

Your Role in Research: Inquiry into Chemical Reactions

GENDER INCLUSIVENESS IN YOUR SCIENCE TEACHING

AT A GLANCE

Age Group	Adults
Format	Workshop for STEM educators
Duration	2 times 2 hours

OVERVIEW

This is a teacher professional development workshop focusing on gender awareness in science teaching. In the UK this module is being used for STEM educators throughout formal and informal science education settings and will form the basis of CPD events for teachers, head teachers, teacher trainers, science communicators, STEM ambassadors and STEM professionals working with young people within the fields of industry and research.

It is about setting the scene of gender where it is important to, for example, introduce the definitions between biological sex and gender and reflect on how and whether girls and boys are approached and perhaps put into boxes in the classroom. To do this requires some preparation and studying the literature, such as the Hypatia theoretical framework.

It is important to organise a training course on gender for teachers, because, more than they think, teachers subconsciously interact with students based on gender stereotypes. And students themselves often have more gender stereotypes than we think. For example, boys can believe that they are better than girls at mathematics or computing. By raising awareness of these situations through training, we can try to counter such stereotypes in education.

OBJECTIVES

The objective is to enhance gender awareness in science teaching and give participants an opportunity to make their teaching practice more inclusive in the future.

SUGGESTED SCENARIO

This workshop has connections to the science curriculum for all science subjects and helps the teacher/educator become aware of gender in their teaching and in the classrooms. During the workshop participants (teachers, teacher trainers, student teachers) reflect on what role gender plays in their own teaching practice.

TARGET AUDIENCE

Age	Adults
N. participants	20 – 30
N. facilitators	2
Type of audience	Teachers, teacher trainers and in-training teachers.

FORMAT

Workshop with group and plenary discussions.

TOPICS COVERED BY THE ACTIVITY

This workshop focuses on enhancing gender awareness in all science content and background understanding as well as overall in science teaching.

DURATION OF THE ACTIVITY

Suggested duration: 2 times 2 hours would be ideal, but less is also possible. These 2 sessions could also be divided over 2 different days.

RESOURCES

This workshop uses a mix of individual reflection, group and plenum discussions and presentations. The following table with recommended materials will cover any needs for running the workshop:

MATERIALS

Photocopy of student assignments, curriculum maps for gender analysis, tasks taken from science books in the school context, lesson plans, aspects from the physical environment (e.g. timeline displays that are not gender balanced etc)		One for each participant
Post-its and pens/pencils		Enough for all participants
Video projector and screen		1
Coffee/tea and cake for break		Enough for all participants
Poster post-its or flipcharts		2 – 4

USEFUL LINKS, VIDEOS, ARTICLES

The list below was agreed by the UK Hypatia Hub as illustrations of evidence based good practice within the field of gender inclusion.

- Institute of Physics 10 Tips for inclusive Science Teaching
- Institute of Physics Improving Gender Balance Recommendations
- The Royal Society Unconscious Bias Briefing
- Improving Gender Balance Scotland Resources
- Tips to Improve Gender Awareness (Twist)
- Science Capital Engagement Reflection Tool
- Gender Inclusion: Suggestions for STEM engagement professionals from the Hypatia Theoretical Framework
- Challenging Gender Stereotypes Google Image Search
- One Size fits all? A teacher training development programme developed in the framework of the TWIST project (Towards Women In Science and Technology – EU funded FP7 project).
- Video Redraw the Balance (The Education and Employers Taskforce & MullenLowe London)
- Video Science Capital: An Introduction (Kings College London, Professor Louise Archer and her team
- Video Understanding Unconscious Bias (The Royal Society)

SETTING

The settings of the workshop can be a staff room or classroom or indeed any room where there is a possibility to make a presentation (i.e. use a projector and have a white screen). It could even be in a café kind of setting and/or a homely atmosphere that might give a more inviting atmosphere and thereby engage the participant to take part in reflection and group discussions.

The room needs to enable participants to break up into smaller groups for group discussions and group tasks.

DESCRIPTION AND TIME SCALE

GROUP MANAGEMENT

Workshop participants will work in a mix of groups (from pairs to small groups of 5 – 8 people) as well as a set-up in plenum.

INTRODUCTION

The workshop starts with an introduction to the workshop explaining the objective and introducing gender and gender inclusiveness as the overall theme. Participants will be encouraged to ask questions, participate in discussions and contribute with insights from the very beginning.

DEVELOPMENT OF THE ACTIVITY

It is important here to mention that each workshop facilitator and presenter will have his or her way of presenting and conducting the different parts of the workshop. The following is an example of what can be included and how the workshop can be facilitated. The different parts included in for example the introduction will also vary from country to country and from institution to institution. This is in itself worthwhile reflecting on.

Introduce gender and why it would be important to reflect on and even challenge gender stereotypes in science teaching. This can be done using a combined PowerPoint-presentation and video statements (see YouTube link to videos below under “Useful

links, videos, articles"). In preparation it is important to read and study the literature and find national or even local examples of gender inclusiveness and possibly even gender exclusiveness. These can be statistics or other examples taken from a regional or national context. Furthermore, it can be a good idea to find gender statistics on different educations. Examples of these could be statistics divided between male and female on how many of each are studying to be for example a doctor, engineer, technician or teacher.

Setting up a workshop as this involves studying the literature and finding concrete examples, but at the same time it is worthwhile doing, as these kind of workshops can have a huge impact and even change the way teachers teach.

Suggested program and time schedule:

- **10 minutes welcome and introduction** to workshop and presentation of objective (see above for objective).
- **30 minutes presentation** (PowerPoint or other presentation and/or video) covering the following topics: *What is gender? – How do we understand gender? – Why should we spend time on gender in the classroom and in our teaching? – Why is this important? – Gender in science statistics*. Try and create an open atmosphere where participants feel free to pose questions 'Plenum discussion on for example the following; *If they don't want to study science – they can just study art!* and then the question for discussion could be: *Is it a problem that fewer girls than boys choose to follow a career in science and technology?*
- **60 minutes reflection exercises:** Present and play video statements (there are 4 short videos you can use for this exercise that also are texted in English – see YouTube link to videos below under "Useful links, videos, articles") on different (sometimes provocative) gender issues. These are presented by leading Danish researchers in the field of gender and education. The videos can also be 'live statements' that are presented during the workshop. Invite participants to discuss the statements in small groups following each video and invite them to share their thoughts in plenum. Following all 4 video statements you can take a discussion in plenum and ask *Have these statements, research results and discussions changed some of your thoughts about how you teach?*
- **20 minutes Coffee break.**
- **45 minutes discussion:** A variety of max 4 – 5 science assignments/tasks for school pupils taken from science compendiums or science books in your school context are shared with participants, who then are invited to divide into (mixed gender) groups to discuss if they found them gender inclusive or gender exclusive and why. Participants are asked to discuss what the strengths and weaknesses are of the different assignments and discuss in what ways the assignments could be improved (in relation to making them more 'gender inclusive').
- **Perspective to other 'best practices', 30 – 45 minutes:** If possible, find an example in a commonly used science book for science subjects where you find a science assignment that you find to be especially 'gender inclusive'. Present why you found this assignment or topic successful in being 'gender inclusive and invite participants to share their thoughts on this. Another option is to share out different science assignments and invite participants to discuss how and where they find them to be either gender inclusive or gender exclusive.

Their findings can be shared in plenum at the end of the discussions. You can also share the gender guidelines for teaching from TWIST and discuss with participants whether or not they could see themselves using such 'recommendations'.

CONCLUSION

To conclude the workshop, you can end with an evaluation and reflective feedback.
Participants can be asked – again in groups – to reflect on and respond to the following 4 questions:

- *What did you like about the workshop?*
- *What did you miss during the workshop?*
- *What made you reflect most on your own teaching practice? And why?*
- *Do you think the workshop will change your teaching practice? And if so – how?*

At the very end you can invite participants to write a postcard to themselves or a pledge that can be shared with the group. Participants write down what specific things they aim to change in their own teaching practice. These pledges or postcards can be used as follow up.

GENDER INCLUSION CRITERIA

It is important to organise a training course on gender for teachers, because, more than they think, teachers subconsciously interact with students based on gender stereotypes. And students themselves often have more gender stereotypes than we think. For example, boys often believe that they are better than girls at mathematics or computing. By raising awareness of these situations through training, we can try to counter such stereotypes in education.

The "gender inclusion criteria" developed in the Hypatia project are relevant for raising such an awareness and should be reflected on and discussed with the people who are offering such a class or activity. The following are some examples of how this teacher training workshop can address gender inclusivity on the different criteria levels.

INDIVIDUAL LEVEL

- Should include an alternation of individual reflection followed by group discussions and/or other forms of discussion formats.
- Should alternate between different formats of presentations: i.e. Video presentations, presentations or talks by researchers working on gender or education and other.

INTERACTIONAL LEVEL

- Should include a variation of different interaction forms; group discussion and debate, discussion and presentations in plenum as well as group tasks in pairs or in small groups of up to 5 people.
- Should aim for participants taking different roles, different people presenting in plenum, etc.

INSTITUTIONAL LEVEL

- Should be supported by the physical learning environment and allow participants to split up into groups and come together in plenum. Perhaps the environment can be supportive to the discussions; maybe the area can be set

up in a homely manner that invites participants to discuss openly.
- Should invite participants to reflect on and discuss in what way the institutional level can have an influence on their own teaching, and whether this might influence gender inclusiveness or the opposite. (note: the institutional level is important to discuss in relation to any planned teaching activities.)

SOCIETAL/ CULTURAL LEVEL

- Will incorporate considering the way gender is implicitly or explicitly conceptualized in society in general and what implications this might have on teaching and in the classroom.
- Will invite participants to reflect on how different stakeholders (ministries, politicians, funding organizations, interest groups etc.) Might also have potential effects on teaching activities in schools in regards to gender.
- Will allow participants to discuss how they might balance some effects of gender exclusiveness that might be seen or noticed in society and discuss how this could be addressed in the classroom and move towards supporting gender inclusiveness.

LEARNING OUTCOMES

- At the end of the workshop participants should be able to:
  - Reflect on how their own teaching is influenced by their gender understandings
  - Reflect on how their own teaching can be more gender inclusive
- At the end of the workshop participants should have acquired:
  - General knowledge on gender and gender inclusion that will help them to identify challenges related to gender in their own teaching practice.
  - Knowledge and ideas as to how they can engage and motivate a broad group of learners with their teaching.

PARTNER DETAILS

This module was developed by the Danish Science Center Experimentarium, Hellerup, Denmark.

Contact: Sheena Laursen, sheenal@experimentarium.dk and Christoffer Muusmann, christofferm@experimentarium.dk

Cover image: the Danish Science Center Experimentarium, Hellerup, Denmark.

GUIDELINES ON GENDER BALANCE

WHY IS IT IMPORTANT FOR PEOPLE OF ALL GENDERS TO STUDY AND WORK IN STEM AREAS?

In the coming years, with Europe's knowledge economy developing and new technologies on the rise, skills in science, technology, engineering and mathematics (STEM) are becoming increasingly necessary in order to guarantee an adequate & professional workforce in a broad range of careers. It is therefore imperative to attract and recruit more youth to STEM study programs and ensure the diversity of STEM-trained professionals. The Vision of Hypatia is of a European society that communicates science to youth in a gender inclusive way in order to realize the full potential of girls and boys around Europe to follow STEM related careers.

Institutions and facilitators responsible for implementing science education activities, such as schools, museums and industries have a key role in this. They may influence the ways in which learners construct and negotiate their gender and their attitude towards STEM. This is why it is important to reflect on the gender and science biases we have, to acknowledge the stereotypes and make sure we do not perpetuate them in our interactions with the participants.

FACILITATING GENDER INCLUSION

In facilitating gender inclusive activities it is important to be aware of a few significant concepts.

GENDER AND SEX

Sex refers to biological characteristics and functions which distinguish between males and females: chromosomal sex, gonadal sex, morphological sex.

Gender refers to the social construction of men and women, of masculinity and femininity, which differs across time and space, and across cultures. It is a hierarchical and hierarchizing system of masculine and feminine norms.

GENDER STEREOTYPES AND SKILLS

A gender stereotype is our social perception regarding the attributes of males and females (character, abilities, tendencies, preferences, external appearance, types of behavior, roles, career paths etc.) and our tendency to relate such attributes to individuals of each sex, prior to meeting them (example of stereotype: male are more rational and female more emotional).

When we talk about gender stereotypes and science we refer to roles and abilities that are supposed to be "suitable" for males and for females in science (for example engineering and building are associated more with males than with females).

GENDER AND SCIENCE

STEM are fields of inquiry and knowledge. Like other forms of knowledge, they may include gendered dimensions. When the gender variable is not taken into account by researchers, this can influence the results: for example when medicines are not tested on both male and female. Furthermore, there is a persistent gender gap in the production system of scientific and technological knowledge and in many European countries women are over represented in biology and medical sciences while they are

under-represented in mathematics or informatics. Besides, women are less likely to reach a high level of responsibilities in sciences.

They are depicted as rational, intellectual and independent, and these characteristics are often associated with masculinity. This means that boys or girls who do not identify with such characteristics will think that STEM studies and occupations are "not for them" and avoid STEM completely. This is why it is important to present a complex and diverse image of science.

SUGGESTIONS FOR THE IMPLEMENTATION OF THE ACTIVITY

Defining, recognizing and implementing gender inclusive activities is complex and challenging and requires a constant auto reflexivity of the facilitator about his/her own gender stereotype and bias. Here are some practical indications and reflection questions to assist the facilitator in being inclusive.

INTERACTING WITH THE GROUP

- **Neutrality in assigning tasks and roles**

  How will I assign tasks? What responsibilities will I assign and to whom?

  Avoid assigning stereotypical gendered roles to participants that may contribute to the internalization of 'female' or 'male' identities, for example asking boys to build things and girls to take notes. Ensure that the different roles required by the activity are rotated between participants.

- **Attribution of success and failure, overcoming stereotypical responses**

  Do male students who have failed link their failure to themselves or to external factors?

  Do female students who have succeeded link their success to themselves or to external factors?

  Set a high level of expectations for both sexes. Avoid over indulging with the girls (this leads to dependency rather than independence). Encourage both girls and boys to take risks.

- **Adopt a "Wait Time" to encourage girls to speak in an environment of risk-taking boys who might respond faster than they do**

  How attentive was I to the students' responses? How long did I let them speak for?

  Wait 4–5 second before calling on a student to answer a question. Delaying the answer enables all the students to respond, thus giving everyone the opportunity to come up with it.

- **Interaction with the sexes to overcome the tendency to engage with male students more than with females:**

  Did I direct questions to boys more than to girls?

  Be aware whether the questions are directed more to boys or to girls.

- **Unaware expression of stereotypes**

  Did I pay attention to the students' behaviour in relation to their expression of gender stereotypes?

FACILITATING AN EXPERIMENTAL SITUATION

While dealing with a specific scientific content participants might not see clearly how this is related with gender balance in STEM. Hypatia activities aim to propose unexpected ways to approach science and scientific content (like chemistry, robotics or making), breaking the stereotypical perception of STEM. This serves to introduce and disseminate a different view of the world of science, unveiling different aspects with which more people – girls and boys – can identify. You can emphasize this aspect while facilitating an activity focused on scientific content rather than on gender.

- For example, an activity framing technology such as the one on wearable technologies could attract more girls than one on transport or missiles.
- Many girls feel more comfortable in a situation based on cooperation, and others even avoid competitive activities. The facilitator could present a challenge with a “story” behind and not just as a competition, or pay attention in balancing competition and cooperation in the same activity.
- Many studies show that girls learn better in an environment that is esthetically pleasing. This is why it is important to create a pleasant and esthetic environment for the activities.

USEFUL LINKS ABOUT GENDER INCLUSION IN THE CLASSROOM

HYPATIA’S THEORETICAL FRAMEWORK

The present document proposes a framework to address gender inclusion in STEM activities. It gives rise to a set of criteria for the analysis of the gender inclusiveness of existing STEM education activities, or for the design of new, gender-inclusive activities.

Theoretical Framework

GENDER EQUALITY IN THE CLASSROOM

We are frequently unaware of the manner in which we relate to boys and girls. School classrooms are no exceptions. Here is a list of points of attention and suggestions aimed at improving the degree of equality in the class in order to encourage girls and boys to pursue the fields of STEM.

Gender Equality in the Classroom

GUIDELINES ON FACILITATION

A BIT OF ADVICE FOR GOOD FACILITATION

A key element for good facilitation is the active involvement of the participants every time a concept or content is presented. Involvement means for example:

- Considering participants' personal experience as a starting point of the engagement.
- Building on their own point of view or prior knowledge.
- Embedding continuously the contributions of the participants in the process.

Facilitation is not easy; it takes practice, time and reflection! In order to transfer these concepts into practical situations – and thus to foster engagement, interaction and discussion – you can find a brief list of suggestions below. They can be helpful in developing good facilitation.

INTERACTING WITH THE GROUP

- Prepare the environment where the activity will take place in advance, organize the space according to the needs of the activity, even changing its usual structure if needed (i.e. you can move tables and chairs around).
- Make sure that all participants can see and hear well.
- Keep eye contact with the participants.
- Address participants as peers rather than as passive spectators or ignorant individuals.
- Listen to people and use their own terms.
- Use questions as much as possible – they can be a useful tool to encourage interaction among the group.
- Stimulate reflections among participants.
- If possible, ask and build on information or elements that can be discovered through direct observation.
- Engage people by linking to their personal experience.
- Encourage participants to express their opinion and elaborate their own considerations.
- During an activity, you might want to organise different group settings – work in smaller groups or in pairs, create plenary moments – to help engagement and better interaction with the experience.
- Before interacting with the participants in plenary, you might want to ask participants to discuss in small groups as a "warm up". This helps involving the shiest people or helps everybody to feel more comfortable about the topic before sharing any consideration in plenary.
- When the discussion is set in small groups, move around the groups checking on work and discussion, and intervene – only in case of difficulties!
- In plenary, try to address everyone as much as possible, encouraging everybody to participate and engage.

FACILITATING AN EXPERIMENTAL SITUATION

- Try to make the activity as participatory as possible: every participant should have the possibility to engage directly with the experiment; avoid demonstrations.
- Do not reveal the results of the experience before the participants' own discoveries and considerations.
- Encourage participants to make initial hypotheses/descriptions/comments about what they think would happen.
- Keep the experiment at the centre of attention and of the discussion.

- Engage learners through an alternation of manual activity, questions and discussion.

DURING A DISCUSSION

- Engage learners through a balance of open-ended questions, closed questions, discussion and exchange of opinions, etc.
- You might want to use provocative dilemmas as tools for debate. Disagreements can be valuable for analysing notions and negotiating views, use them constructively.
- Stimulate and build not only on participants' already-acquired knowledge but also on emotions and imagination.
- Challenge the participants at a suitable level.
- Avoid:
    - A didactic approach and the assessment of participants' knowledge.
    - Monologue.
    - Specialized terms with no reference to real objects.
    - Seeking and dealing only with the correct answers or, even worse, with the correct questions.
    - Not listening.

HOSTING A STEM PROFESSIONAL

- You might suggest to the speaker to alternate between questions and speech allowing participants to take up a more active role and prevent long talks.
- Before introducing a STEM professional, you can ask participants to share their perception about the particular profession, and then discuss it with the speaker.
- Young participants, when they have the possibility to ask free questions, often seem to be interested in the speaker's daily personal lives, in their career path and about what they were like when they were students. You can suggest that speakers use these topics as "hooks" during speeches and conversations.

It helps if speakers bring tools or objects from their daily work with them as examples from their daily practice.

QUESTIONS: A FUNDAMENTAL TOOL FOR LEARNING

Building a relationship with an object is like 'getting to know a new person'. Indeed, this kind of comparison can help understand a possible way of developing questions to be used in learning experiences. In the process of getting to know a person or starting a conversation we move from the basic and concrete to the abstract and more complex. Using questions in a learning situation involves similar steps: starting from basic information (usually elements that could be discovered through observation) working at levels where there is compatibility (i.e. levels where the pupils can become involved and engage through their knowledge, experiences and views), in order to proceed to the discovery of more complex information and concepts. Such an approach invites learners to search within their own repertoire of knowledge and experience for the necessary elements that would help them discover new insights, while at the same time it can operate as the foundation for the development of questions by the learners themselves.

In fact, we are not arguing here for a linear process of 'facilitator-asks – learners-answer'; rather, we argue for a two-way-contribution process, in which both facilitator and

learners are in the position to ask and answer questions. In this sense, questions are the stimulus for initiating dialogue, the tool and *not* the objective. They help new knowledge to be elicited and information to be added within a free flow of ideas, leading to the broadening of understanding.

What are the types of questions that would operate as the method for eliciting information and interpretation, for initiating constructive dialogue, for developing skills and self-confidence in learners – and facilitators themselves?

First of all the basic categories:

- Closed questions – the ones that have only one correct answer.
- Open questions – those that accept more than one correct answer.

Closed questions are usually used when we seek specific information about the phenomenon/topic/exhibit/object etc. and can be further divided to:

- Questions for examination: Answering those questions requires careful examination. The answers offer the first information on the basis of which we construct more detailed knowledge.
- Questions for explanation: The answers offer an explanation – how something works, how it was created, etc. and are closely related to the information derived from the examination questions.
- Questions for comparison: These stimulate comparisons with other situations of the same type, materials, dimensions, etc. and encourage the identification of similarities, differences and connections with the learners' personal knowledge and experience.

On the other hand, open questions encourage the expression of personal views, the employment of pre-existing knowledge of the learners, and the search for personal meanings. Discussion and open-ended questions offer learners the opportunity to pool ideas and share insights in the group followed by opportunities to develop understandings further through deploying and defending insights and opinions.

Open questions can be divided into the following categories:

- Questions for problem-solving: Those demand the use of critical thinking, imaginative thinking, hypothesis and analysis skills and ability for using knowledge for problem solving.
- Questions for prediction: The answers to those questions offer predictions in instances of changes of parameters.
- Judgement questions: Answers to those can be very personal and unique. They demand choices, evaluation of a situation, justification, etc.

You should be seeking a balance between closed and open questions. Asking only closed questions might create a feeling of ignorance among those learners who find it difficult to answer them, since they require relatively minor use of skills and more of specialised knowledge. Closed questions should be used for exploring the object and the new knowledge around it, and, in addition, offer the basis on which to ask the open questions. For any learner, answering open questions implies using their personal context to find the new information. It also enables them to use their own personal experiences, emotion, imagination and skills for meaning-making and personal interpretations.

In the philosophy of an interactive, constructivist approach to learning, the asking-answering of questions means not only the acceptance of more than one correct answer (through open questions), but also ‘allowing learners to get things wrong’, that is, not allowing a learning situation to be limited by seeking only ‘correct’ answers, or by the expectation of pre-determined outcomes. It is important that the facilitator does not jump in too quickly to correct learners, but rather uses the conflicts that arise between their different perspectives helping them to see that there are standards and that their own interpretations are not necessarily the same or as good as those held by other learners. Learning results from reference to, and drawing from, learners’ own understanding of situations, and opportunities for exploration through trial and error.

Hypatia PROJECT

Hypatia is an EU Horizon 2020 funded project that addresses the challenge of gathering different societal actors around bringing more teenagers, especially girls, into STEM careers both in school and as a choice of learning and career in the future. It aims at changing the ways sciences are communicated to young people in and out of school to make them more gender inclusive.

This project has received funding from the European Union's Horizon 2020 Framework Programme for Research and Innovation (H2020-GERI-2014-1) under the grant agreement No. 665566.