



**FACULTAD DE EDUCACIÓN DE PALENCIA  
UNIVERSIDAD DE VALLADOLID**

**LANGUAGE, GENDER, AND  
EMPOWERMENT:  
A BILINGUAL PROJECT ON WOMEN'S  
CONTRIBUTIONS THROUGH HISTORY**

**IDIOMA, GÉNERO Y EMPODERAMIENTO: UN PROYECTO BILINGÜE SOBRE  
LAS CONTRIBUCIONES DE LA MUJER EN LA HISTORIA**

**BACHELOR'S DEGREE IN PRIMARY EDUCATION- ENGLISH MAJOR**

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## Abstract

This Final Degree Project presents a didactic unit designed and implemented in a bilingual and multicultural classroom of Primary School 5<sup>th</sup> graders, intending to integrate feminist pedagogy and coeducation in the learning of a foreign language, in this case, English. The unit "*Women's Month: Great Women in History*" was created considering CLIL methodologies, UDL and reflective learning, fostering inclusivity and equity. Through teaching adapted to students, it has been differentiated considering the linguistic and cognitive level, from female role models throughout history and cooperative activities with roles, seeking to question stereotypes related to gender, develop critical thinking, and strengthen the multilingual competence of students. The results denote an improvement in involvement, language production, metacognitive awareness and knowledge and activism towards gender equality.

**Keywords:** feminist pedagogy, coeducation, bilingual education, CLIL, gender equality, primary education, critical thinking

## Resumen

Este Trabajo de Fin de Grado presenta una unidad didáctica diseñada e implementada en un aula bilingüe y multicultural de 5º de Primaria, con el objetivo de integrar la pedagogía feminista y la coeducación en el aprendizaje de un idioma extranjero, en este caso, el inglés. La unidad "*Women's Month: Great Women in History*", se creó teniendo en cuenta metodologías CLIL, UDL y el aprendizaje reflexivo, fomentando la inclusividad y la equidad. A través de una enseñanza adaptada al alumnado, se ha diferenciado teniendo en cuenta el nivel lingüístico y cognitivo, de modelos femeninos a lo largo de la historia y actividades cooperativas con roles, se buscó de cuestionar los estereotipos relacionados al género, desarrollar el pensamiento crítico y fortalecer la competencia plurilingüe del alumnado. Los resultados denotan una mejora en la implicación, la producción lingüística, la conciencia metacognitiva y el conocimiento y activismo hacia la igualdad de género.

**Palabras clave:** pedagogía feminista, coeducación, educación bilingüe, CLIL, igualdad de género, educación primaria, pensamiento crítico

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# 1. INTRODUCTION

In recent years, education has increasingly realised the importance of fostering an inclusive and equitable approach in the classroom. Schools play a crucial role not only in knowledge transmission but also in promoting social values from early stages. In bilingual education, this promotion is highly required as this teaching-learning process intersects diverse languages and cultures, which have their values and stereotypes; that's why it offers an opportunity to teach to question stereotypes and learn about values that are not that integrated in some cultures.

This Final Degree was carried out during an internship at a multicultural public school, where over 20 nationalities coexist. In this context, the unit's implementation was focused on making visible women in history serving linguistic and social competencies by using English as a tool of communication and reflection. The unit "Women's Month: Great Women in History" helped student to get to know women's contributions throughout history to understand that privileges and rights that they have nowadays is thanks to the prior fight upon these from these women, and from that to think critically about gender roles and stereotypes and express their ideas in a foreign language (FL), in this case English.

This project's objective was not only to strengthen students' bilingual skills, but also to foster a reflection upon gender roles, stereotypes, and their representation in society. The specific objectives guiding this unit are detailed in Section 2.

## 2. OBJECTIVES

The present Final Degree project emerges from both a personal and professional journey during my teaching internship in a multicultural and inclusive public school in Palencia. This school context allowed me to witness firsthand the obstacles and possibilities that teachers face in bilingual education. During the internship, the unit “Women’s Month: great women in history” was implemented, which is the core of this document.

This project responds to the need for creating a safe, analytical, reflective, and equitable space for all students. Therefore, the following objectives are proposed:

The general objectives are:

- To design and implement a bilingual unit using English as a vehicular language (EFL) to promote gender equality, critical thinking, and inclusive practices by integrating coeducational and feminist pedagogy.
- To demonstrate my knowledge of pedagogical principles and curriculum design by applying teaching methods that respond to the school’s and students’ context.
- To plan, conduct and evaluate didactic learning situations and reflect upon them based on outcomes and the changes made during the learning-teaching process.
- To observe and assess student performance through data collection through a competency-based approach aligned with students' ZPD levels is used
- To promote democratic practices and values in the classroom (e.g., voting to make decisions as a group)
- To analyse the Spanish curriculum (LOMLOE), CEFR and other frameworks as a reference for planning lessons
- To plan lessons that integrate the development of students’ four language skills, cognitive reasoning, self-awareness, and active citizenship.

Specific objectives of this final degree project are:

- To apply theoretical and legislative foundations that support the integration of coeducational and feminist approaches in a bilingual context
- To design and implement a didactic unit in English that brings to light women in STEM and other fields, using content and language integrated learning (CLIL) strategies.

- To adapt teaching practices and the resources or materials to the students' needs as a multilingual and multicultural classroom, through scaffolding and UDL principles
- To foster thinking skills and key LOMLOE competencies through reflective tasks and cooperative learning structures
- To evaluate students' linguistic, cognitive, and emotional development through formative and competency-based assessment tools adjusted to their ZPD
- To integrate ICT tools such as Canva, PowerPoint and other Office 365 resources in the design of the unit to support language learning
- To reflect my own teaching and learning development during the internship at a multicultural school by identifying key lessons and aspects learned about inclusive and equitable techniques.

### 3. JUSTIFICATION

The implementation of the unit “Women’s Month: Great Women in History” This phrase reflects the importance of addressing specific behaviours and comments from students to foster a positive environment. showed a rooted misogynist practice by addressing gender inequalities and the lack of female representation in different fields. Even though nowadays there have been advances worldwide in legislation and discourse, many educational practices still reproduce gender stereotypes, whether it is in the student’s book, books recommended in the reading plan or in other teachers’ discourse. This project seeks to minimise the gap by integrating feminist pedagogy and teaching about women in the past who fought for the rights we have in the present, thus promoting coeducation and critical literacy through English.

During the internship, students made comments and showed situations that made it clear gender bias was present in their discourse. For example, before implementing the unit I realized that students tended to group by gender and when I asked them if there was any reason behind that, they would say things like “*No, I don’t want to go with the girls/boys*”, “

*Women can’t do that*”, “*No, I don’t want pink paper*” and so on. These types of comments revealed how deeply internalised gender stereotypes are and the persistent invisibility of female figures in science, normalising male-dominated narratives within the school context.

There are obstacles in data, like the article presented by Fundación CYD, 2025). In which we can conclude that even though women represent a majority in university degrees (59,6% of the alumni), their presence in studies with better indicators of labour insertion is a minority (31.5%).

Among the careers that are grouped with the best indicators, like *Electrical Engineering, Software and Application Development, Computer Science, Industrial Organisation Engineering, Sound and Image Engineering, Telecommunications Engineering, Medicine, Industrial Technologies Engineering*, among others, women are a minority in all of them except for Medicine (65.7%). If this degree is excluded and the presence of women in degrees related to Engineering and Technology is considered, their presence is reduced to 18.3%, while in Computer Science it is less than 12% (See Figure 1 in Appendix G).

Moreover, research shows that the interest in science begins to blossom during adolescence. According to FECYT (2023), only an 8,3% of women show an interest in Science and Technology, as opposed to men who represent a 16,7%. (p.12)

Through this data collection, the conclusion is that the low percentage of female students and workers in STEM positions is closely linked to the lack of visibility of women in scientific and technologic fields, and therefore to the perpetuation of social conditioning of gender roles and stereotypes, particularly reinforced through the Infant and Primary education stages. These biases are often perpetuated in education through school materials, textbooks, media, and even classroom discourse.

This trend is further reinforced by the enrolment in universities data, where male students are more drawn to scientific careers and female students show more interest in “humanitarian” degrees such as foreign languages (77.5%), Art History, Fine Arts and Social and Cultural Anthropology (all exceeding 69%) (Fundación CYD, 2025). These statistics reflect a clear gender-based academic segregation and the long-term impact of how the expectations for students depending on their gender affect their academic aspirations as girls and boys.

This context reveals the urgent need for early educational interventions that challenge the traditional gender roles and perspectives among children, to promote female role models and apply coeducational pedagogy, especially in science and technology subjects. As studies have shown, the stereotypes related to gender continue to diminish women’s full participation in STEM fields, with barriers such as work-life imbalance, gender pay gaps, and the absence of institutional recognition and promotion (Fundación CYD, 2025). These obstacles not only affect students’ present career possibilities or aspirations but also limit their future personal and professional development.

In addition to responding to this social and educational necessity, this unit was designed with the objectives of promoting inclusivity, equity, and feminist values. It aligns with the competences required during early education stages in the Spanish curriculum and supports attention to diversity and coeducation, while encouraging the critical thinking and social awareness skills of the students. This unit has emphasised the importance of exploring ways to implement the English language as a vehicle for social transformation. It highlights the need to create a classroom environment that is safe and inclusive for all students, regardless of their background, race, age, or other characteristics, to support their academic and ethical development.

## 4. THEORETICAL FRAMEWORK

Nowadays, the worldwide context brings plenty of challenges to education teaching. These challenges like shifting pedagogical approaches; fostering social and emotional skills, include sustainable approach, transform the curricula to be intercultural and interdisciplinary to address challenges like climate change and social inequality; the lack of recognition of teachers as central figures to transform society; promoting equity and inclusion by addressing systems biases in education and work to close the gap while ensuring that schools serve as safe places which main objectives work toward inclusion, equity and collective well-being. The importance of technology and digital devices should not be overlooked, including challenges associated with artificial intelligence, limited student concentration due to screen time, and the necessity of aligning teaching practices with globalisation and European Union guidelines.

<<According to UNESCO, the new social contract for the education of the future must be based on the principles of inclusion, equity, cooperation, solidarity, collective responsibility, and interconnectedness, and actively seek a more just, peaceful, sustainable, and innovative society.>> (Villalba Gómez & Losada Sierra, 2021)

As highlighted in the justification, the persistent gender stereotypes and unequal representation of women in educational resources, materials and teachers' discourse continue to shape the students' perceptions, values, and foresight of their future. This reality demands the importance of educating through pedagogies that promote equity, visibility, and reflection. Teachers must be prepared to not only transmit the content from the curriculum but also challenge social inequalities and foster coeducational values from their very first steps into the school.

This theoretical framework aims to support the design and implementation of the unit "Women's Month: Great Women in History" by exploring key concepts specified in the following sections. These include feminist and coeducational pedagogy, the relationship between gender and its representation in language learning, theories of language acquisition in bilingual contexts, the development of thinking skills and critical literacy and the value of cooperative learning. This literature review seeks to justify and demonstrate how these concepts align with the LOMLOE's framework and the competencies that students have to develop during their Primary education studies.

In the following sections, a comprehensive review of the theories and foundations used as a guide will be provided:

### **A. FEMINIST AND COEDUCATIONAL PEDAGOGY**

In the 21st century, adopting a feminist pedagogy and integrating coeducation into classroom dynamics is fundamental to achieve an inclusive, critical and an education to transform and prepare students for the challenges they could face in this era. In an early stage like primary school, they make a huge impact as in this stage students build their values and perspectives upon life and society so by implementing these pedagogies, traditional gender stereotypes and norms are challenged and also helps students to identify, analyse and evaluate their own and their surroundings' context and discourse.

On one hand, according to the *Instituto de la Mujer* (2007), **Coeducation**, also known as Educating for equality, is “the current pedagogical approach that responds to the demands for equality raised by feminist theory that proposes a redefinition of the model of knowledge and the transmission of ideas from a gender perspective within the spaces of socialization dedicated to learning and growing professionally” (p.17). Similarly, Pallarès-Piquer (2019), defines coeducation as “a system that is committed to education without sexist biases, that is aware of the processes that underlie the construction of female and male identities, that observes and denounces discrimination, that seeks to do away with the limitations reflected by gender stereotypes and that promotes education in knowledge, attitudes, values and behaviours in the full development of individuals”.

On the other hand, Feminist Pedagogy can be understood as a teaching methodology deeply rooted in the feminist movement, aiming to dismantle traditional hierarchies' stereotypes and norms in the classroom and school, give voice to marginalised and minority students and foster literacy and critical thinking among students. As Shrewsbury (1993) explains, Feminist pedagogy is an approach “engaged with self in a continuing reflective process, engaged actively with the material being studied, engaged with others in a struggle to get beyond our sexism and racism and classism and homophobia and other destructive hatreds and to work together to enhance our knowledge, engaged with the community, with traditional organizations, and with movements for social change” (pg.8).

To fully implement feminist pedagogy and coeducation in the classroom, it is crucial to ground essential teaching practices. Both approaches share these values: challenge traditional power structures (patriarchy, racism, capitalism), promote equity, and invite

teachers and students to be critically reflective on their decisions. They also have common ground about their commitment to dismantling sexism and promoting an engaging and transforming education. Scholars such as bell hooks and Paulo Freire offer essential objectives for teachers to fulfil to manage these approaches and know how to make the classroom a safe space that fosters liberation, empathy, and social justice. These ideas and foundations have served to design and plan the methodology and text discourse of the unit “Women's Month: Great Women in history”.

This vision of feminist pedagogy as a transformative and reflective practice aligns perfectly with the principles outlined by the Instituto de la Mujer (2007), which emphasise that coeducational proposals should be rooted in feminist theory, recognise the structural sexism in schools, and promote values like equality, tolerance, and peaceful conflict resolution. It insists on coeducating students and teachers, acknowledging that the curriculum, classroom discourse, and even school spaces are not neutral but gendered in nature.

## **B. GENDER AND REPRESENTATION IN LANGUAGE LEARNING**

School materials have a significant impact on students' learning experience, shaping how students understand and engage with their studies, and on how they understand gender identity. Multiple studies have shown a clear underrepresentation of women models across history, and that textbooks used in educational contexts still reinforce gender stereotypes.

For instance, Crawford et al. (2024) in their research analysed over 1255 textbooks from 34 countries and found that in 28 of them, women and girls were barely mentioned compared to men. When women appeared, they were portrayed in occupations that fed into the traditional stereotypes, like nurses, teachers, or housekeepers. Men were portrayed with appearances related to achievement and work.

In Spain, recent research where Andújar and Monforte García (2024) analysed primary education textbooks, and they found that women and girls are significantly underrepresented in illustration. Their study shows that male figures overwhelmingly occupied any STEM representation, whereas women are portrayed as sewing, calm, nurturing, and portraying domestic or care-related roles. In the illustrations, there were also the typical associations of colour to gender (e.g., pink is for girls), and if the books treated

any historical data, only male figures appeared, while if there were some women data, it was treated as an anecdote. This again reinforces the traditional gender stereotypes and limits the children's possible futures.

These examples confirm the need to integrate female role models in classrooms. Following up with the Markus and Nurius (1986) "Possible selves" concept, as a representation of themselves in the past and future. When students have examples or role models in which women have jobs that differ from the traditional norms, such as scientific, police officer or in leadership roles, this way they can envision themselves in these types of jobs as by this there is a representation of possible opportunities or as in the theory, a *possible self*. They provide what they can become, fostering an academic motivation.

### C. LANGUAGE ACQUISITION IN A BILINGUAL CONTEXT

According to the *Cambridge dictionary*:

<<**Bilingual education** is an education that is given in two languages for students who grow up speaking a different language from the one which is spoken at their school.>> (*BILINGUAL EDUCATION | English Meaning - Cambridge Dictionary*, n.d.) In the Spanish curriculum, this education has been integrated as a program, the Bilingual Educational Program (PEB). This program was created in 1996 as a collaboration between the British Council and the Spanish Ministry of Education. Its main objective is to make students competent in multiple languages and cultures while developing their key competencies, teaching through text types and developing the four language skills and basic skills. This one comes from the idea that students already have a native language, and they learn the new language after mastering the first.

This new language (FL) in the PEB curriculum is introduced progressively from an early age (from 3 years old) and through integrated content areas, rather than isolated instruction (e.g., English subject). English is integrated from the second cycle of Infant Education until the fourth year of Secondary Education, using English and Spanish as vehicular languages across different subjects. In Primary education, in 5<sup>th</sup> grade, the following subjects are part of the program: English (or Literacy), Natural Science, Social Science and Arts & Crafts. These are taught through content and language integrated learning (CLIL) strategies that allow students to learn the content while developing linguistic and

communicative competence in English. Its pedagogical methodology also favours active, reflective, and student-centred learning as teachers in the program collaborate and plan lessons which are interactive, dynamic, and adapted to the realities of the school context. This model supports students' autonomy and promotes their role as active participants in their learning process, while aligning with the LOMLOE principles and current research on foreign language acquisition and bilingual development. (*Currículo Integrado - | Ministerio de Educación, Formación Profesional y Deportes*, n.d.)

Bilingual education offers plenty of benefits for students. Studies strengthen that some of the positive impacts of bilingualism are that it develops and supports executive functioning, problem-solving, memory, attention control and cognitive flexibility, which are key for success across any academic area. According to Hutaeruk and Damanik (2025), bilingual students show superior working memory and attentional control, they perform better in problem-solving tasks and have a high metalinguistic awareness. They are also more proficient in complex sentence interpretation and use analytical reasoning more than their monolingual peers.

Additionally, FL learners tend to achieve better academic performance. These students demonstrate better reading comprehension, writing, speaking, and listening abilities, and an enhanced awareness of grammar. Learning a language also implies learning a new culture, which exposes them to be culturally empathetic and to gain intercultural sensitivity, fostering respect for diversity and promoting an inclusive classroom environment. All these advantages directly support the LOMLOE's competences that have to be promoted during this stage of studies, such as learning how to learn, social and civic competence, and cultural awareness and expression.

In this project, the unit "Women's Month: Great Women in History" English is used as a linguistic and reflective tool, allowing students to gain consciousness on gender equality and learning women's figures while simultaneously developing the four language skills and their critical thinking.

Beyond its benefits, understanding how students acquire a foreign language is essential to planning and designing an effective and inclusive bilingual unit. From a sociocultural perspective, learners learn by interaction, mediating and using language in real contexts. According to Vygotsky's sociocultural theory, students learn best when they have

a task that requires problem-solving supported by an adult or peers, which lies beyond their current level of competence. This level of competence is known as the Zone of Proximal Development (ZPD). (Vygotsky, 2012) In the context of language learning, the support given by adults, who are teachers or peers, is gradually removed as the learner gains independence. This support is called *scaffolding*.

By using scaffolding instruction as a teaching strategy, learners use their prior knowledge and internalise new concepts by modelling language, using sentence frames, providing visual aids, and pairing students strategically. Vygotsky found that students perform better when someone helps them become more capable; this way, they can accomplish tasks that they could not do by themselves, as the expertise is taught to others. As Wood, Bruner & Ross (1976) originally defined, scaffolding involves a dynamic and responsive support that has to be attuned to the learner's current level of understanding. This means that the helper helps the student to <<advance from their present development level to their prospective developmental level>> (Sarmiento-Campos et al., 2022). Peer mediation also reduces language-speaking anxiety, which improves their oral skills and was proven in their speaking tests, as confirmed by Sarmiento et al. (2022). It enables more proficient students to support peers with less capability to reach their ZPD.

Also, Rezaei and Shokrpour (2011) highlight that when students can rely on a visual prompt (image or a graph), the task becomes more concrete, and students can focus on language and structure learning rather than producing ideas. This advocates with the scaffolding principles to help bridge the gap between what learners can do by themselves and what they can achieve with proper guidance.

Moreover, this approach also aligns with Bruner's Language Acquisition Support System (LASS) as it emphasises that children acquire language most effectively within meaningful social interactions where adults support the children's language learning process (scaffolding). According to Bruner, if there is a device for language acquisition, then there is a support system as well, which is the social environment where the adult adapts the language to talk with children and support their process of language acquisition (Bruner, 1983; cited in Lalremruati, 2022).

All these theories are materialised in the Content and Language Integrated Learning (CLIL) pedagogy, also known as AICLE in Spain. CLIL is an educational approach that revolves around teaching and studying subjects through a non-native language, which serves as the vehicle to communicate. In CLIL settings, learners are exposed to a new language (FL)

while simultaneously acquiring subject knowledge and developing cognitive and academic skills across the curriculum. This dual focus on content and language fosters a deeper understanding and learning, it encourages a useful and significant use of language and provides a holistic educational experience. (Coyle, Hood, & Marsh, 2010)

CLIL directly draws from sociocultural theory and scaffolding models, as it proposes that learners acquire a foreign language more naturally when they are exposed to it through learning content, using the language as a way to think critically and to communicate. In this context, the language becomes functional as it helps students to develop not only linguistic knowledge but also conceptual and structural understanding.

Overall, combining CLIL, scaffolded instruction and the UDL allowed for to design of an inclusive and effective unit for bilingual teaching and learning experience that reflects the theoretical framework, the CEFR and the LOMLOE's standards.

#### **D. THINKING SKILLS AND CRITICAL LITERACY**

Furthermore, CLIL is not only a dual-focused pedagogical approach, but it also incorporates inquiry-based techniques as a means to foster critical thinking (CT) and higher-order cognitive skills. According to Vescio (2022), CLIL promotes learners' cognitive development, especially in their *analysis* and *evaluation* categories. His study revealed that students in CLIL programs gained higher-order thinking skills after the program's implementation, particularly using the category of analysis in Bloom's taxonomy. Moreover, the methodology was able to make learners reflect on connections between content and language, rather than just memorising.

This statement is also supported by Ortiz-García and Navarrete-Villarraga (2024). They found that learners under CLIL methodology frequently engaged with complex thinking processes like applying and analysing, often leaving aside lower-order skills like memorising. The subjects of their study focused on *how to act* rather than *what to say*, which highlighted their ability to regulate their own learning process of concepts and reflection. This study reinforces the fact that CLIL also strengthens transversal learning habits as it helps students to connect with real-world contexts and empowers them to be autonomous learners.

The design of the unit ensured that every student, regardless of their level, engaged with the content and the language through inquiry and reflection.

## E. COOPERATIVE LEARNING AND SOCIAL-EMOTIONAL DEVELOPMENT

In addition to linguistic and cognitive development, social-emotional learning (SEL) plays a pivotal role in bilingual education and child development. As defined by the Collaborative for Academic, Social and Emotional Learning (CASEL), SEL is “*the process through which all young people and adults acquire and apply the knowledge, skills, and attitudes to develop healthy identities, manage emotions and achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions*” (*What Is SEL?* - Casel School guide, 2020)

These competencies are essential to foster an inclusive learning environment while supporting diversity and cultivating 21st-century skills. CASEL also addresses the CASEL 5, which are core competencies that form the foundation of the SEL: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. These are not isolated from the academic content; they are worked with as transversal contents and competencies integrated in the classroom practice and curriculum design.

## 5. UNIT

### A. CONTEXT

The unit “Women's Month: Great Women in History” was implemented during my internship at a public infant and primary education school. The school has approximately 180 students from 2 to 12 years old, representing over 20 nationalities (e.g., South American, Moroccan, Ukrainian). The school is equipped with diverse facilities, from the PT and AL rooms to the gym and the library. It follows an inclusive, UDL-based and CLIL-based approach to foreign language learning, in line with the regional educational plan from the LOMLOE’s framework. The class’s diversity and students' linguistic needs were carefully considered, as they come from various backgrounds and cultures, with all of them having different proficiency levels.

The unit was carried out with 5<sup>th</sup> grade students during March and April, aligning with International Women’s Day (8M). The class consisted of 14 students (7 boys and 7 girls) from diverse cultural backgrounds. Among them:

- **6 students** were of Spanish origin, with no immigrant background.
- **8 students** were first-generation immigrants, including 3 Venezuelan, 2 Colombian, 1 Ukrainian, 1 Moroccan and 1 Paraguayan student.

4 students of the first-generation immigrants had joined the school, either during the previous or the current course, which required an individualized support and classroom adaptations, such as *bilingual glossaries*, *illustrated instructions*, *gestures to back the discourse* and *peer modelling strategies*, as they had never received any English lessons or have been in touch with the language.

English proficiency level varied considerably as I had:

- 4 students, mentioned before, with no prior exposure to English
- The other 4 students who demonstrated B1-level actively participated and often took the lead role during the teamwork task
- The rest of the students (6 students) were ranged between A1 and A2 levels, with little confidence in spontaneous speech production

So, there were 4 B1 learners and 10 students between the A1 and A2 levels. From those 10 students, some of them showed strong comprehension but hesitated to speak

without any support (visual aids, gestures, sentence frames). All students were particularly responsive to interactive and teamwork tasks, so the unit design focused on that.

## **B. METHODOLOGY**

### **Pedagogical foundations**

Because of this diversity in the class, it presented pedagogical challenges and exceptional opportunities, like peer and group learning.

The unit was based on **three pedagogical pillars**:

- Content and Language Integrated Learning (CLIL): to teach content, through English as the vehicular language, from social sciences and Civic Values, integrating language and scientific knowledge.
- Project-based Learning (PBL) to develop inquiry skills and to connect the content with real-world situations (e.g., gender equality).
- Universal design for Learning (UDL) to ensure all learners' accessibility through varied materials, flexible tasks and differentiated expectations (attainment targets in each lesson).

These pillars were chosen not only to meet the curricular goals (as outlined in the LOMLOE and the CEFR A2-level objectives), but also to respond to the group's diverse learning profiles.

### **Classroom methodologies**

To meet the students' varied needs, the unit employed the following **methodological strategies**:

- Task-based learning: Students had a main objective in each lesson, which was related to the final task. This final task could be making the timeline or writing a letter.
- Teamwork with defined roles: During the unit, students were given the choice to assign determined roles to each other, such as Researcher, Leader, Designer and Scribe. They had to vote on which person should have each role, taking into account their abilities. I would suggest some roles for some students so B1 learners would support and guide the A1 learners, and A1 students could have roles like Designer, Resource Keeper, or Scribe with the help of the Leader or the Speaker. Each group

was intentionally put together, already thinking about the possible roles each student could have.

- Scaffolding: As the students had different proficiency levels, extensive scaffolding was implemented. This included: bilingual glossaries made on the whiteboard (during warm-ups), sentence frames and question banks, visual aids, peer-modelling (pairing beginners with advanced students) and gesture-based teaching.
- Gamification: All of the lessons included game-like components, but some were specifically games to learn or revise in the process, such as the Science Charades in Lesson 2, which allowed A1 students to act out terms nonverbally. In lesson 6, students conducted historical role-plays, which helped them get comfortable and practice their public speech in a collaborative format. Finally, in lesson 9, the “Who is she” deduction game provided students with visual cues and question banks, which supported their oral interaction while playing to guess which woman their partner was referring to.
- Formative and Inclusive assessment: The assessment is formative. The assessment included: teacher observation guides with a 1-5 rating scale for different sections such as participation, language use and attitude; self and peer-evaluation tools like the Bullseye rubric (see a Student’s sample in Appendix H.6), and rubrics and checklists which were aligned to the LOMLOE’s framework. Rubrics were shown before each task to clarify expectations, so they could know how to perform better or organise the production of the task to obtain the maximum grade.

The entire unit was carefully designed to align with LOMLOE’s framework and to adapt to the cultural diversity of the class. It focused on empowering their voices by creating a safe space for them to express in English, overcoming the fear of failing at speaking or making mistakes. Furthermore, it fostered dialogue to compare gender roles, historical contexts, experience, and social realities.

To achieve this, the planning of the lessons based on UDL principles, emphasised differentiation (attainment targets), flexible groupings and multimodal design that allowed every student to be able to contribute, participate and gain confidence during this learning-teaching process rooted in language, equity, and empowerment.

This unit precisely seeks to fulfil these ideals and make visible some of the contributions of women across fields, which were historically silenced and minimised in the curriculum. In doing so, the project directly confronts internalised chauvinist beliefs like “this

scientific job is for men” or “women haven’t done anything related to science”, phrases which were observed in spontaneous students’ comments before the unit’s implementation.

The lesson plan of the unit included women from diverse backgrounds and fields: Marie Curie, Ada Lovelace, Rosalind Franklin, Margarita Salas, May Billinghurst, and Hedy Lamarr, among others. These women and their stories were worked on progressively, starting with biography reading, debates, timeline of their life key facts, mind-maps, letters, and Venn diagrams. This development not only developed their linguistic competence but also promoted their reflection and critical engagement on feminist values of rights, representation, and equality.

Through cooperative work and assigning defined roles (e.g., Designer, researcher), students got practice in cooperative learning in mixed-gender groups and mixed-level groups, reinforcing respect, equity, and equal opportunities of participation for all. This organisation was intentionally designed to promote certain SEL principles like social interaction, responsibility, and leadership in students. These encouraged every child’s participation during lessons. One aim was to turn the classroom into a safe space for exponential academic achievement and a valuable personal transformation, and to overcome traditional stereotypes.

As defined by CASEL (2020), SEL competencies such as self-awareness, empathy and responsible decision-making were transversally worked with through the unit by applying CLIL methodologies, reflective routines, and teamwork dynamics. methodology, structured collaborative tasks, reflective routines, and role-based dynamics. These competencies were also aligned with LOMLOE’s key competencies: Personal, Social and Learning to Learn competence (CPSAA), Linguistic Communication (CCL), Social and Civic competence (CSC), Cultural Awareness (CCEC), and Scientific competence (STEM).

In summary, the methodology of the unit is an amalgam of feminist pedagogy, SEL, CLIL, UDL and inclusive bilingual education to ensure that students turn out to be critical thinkers capable of reflecting on social issues and realities and questioning inequalities. This approach not only promoted their academic growth and increased their English proficiency level but also nurtured students’ emotional intelligence, empathy, and sense of justice. All these qualities are essential for a holistic development as active, conscious citizens respectful of diversity.

### **C. LESSON OVERVIEW**

The unit is composed of nine lessons (see Appendix B), which were delivered over five weeks. Each lesson lasted from 30 to 60 minutes. The unit was thematically and pedagogically designed in three phases:

1. Exploration (Lesson 1- 4)
2. Creation (Lessons 5-7)
3. Reflection (Lesson 8-9)

This structure was planned following CLIL and UDL's principles to allow students to connect previous knowledge and build new knowledge about historical women figures, then create their productions and finally revise and reflect on gender issues and media portrayed stereotypes, ensuring inclusive participation and differentiated access to the project's knowledge. The unit is interdisciplinary as it includes Social Science, Ethics and Arts & Crafts contents while developing the A1-A2 level English language skills, critical thinking, and cooperative competence.

The formative assessment tools, such as rubrics, checklists, and peer/self-evaluation routines, were embedded in every lesson to support foreign language (FL) production, self-awareness and their autonomy.

A brief outline of each lesson's purpose, learning outcomes, and key activities is found in Table 1.

**Table 1.***Lesson Plan's outline*

| <b>Lesson</b>                         | <b>Learning goal</b>  | <b>Learning outcomes</b>  | <b>Main activity</b>   |
|---------------------------------------|---|---|--|
| 1. Female Scientists                  | Identify key contributions of female scientists   | Students can name 2+ women in science and describe one achievement using simple present or past     | Class discussion, vocabulary matching, video + poster sentence             |
| 2. Timeline of Women in History       | Use the past simple to describe historical events; collaborate in groups                | Students complete a visual timeline and give a short oral presentation using past tense structures. | Group research + creation of timeline + oral report (team roles assigned). |
| 3. Activist mind-map                  | Summarise the life of an activist and represent it visually.                            | Students complete a structured mind map and share their summary                                     | Biography reading + collaborative mind map.                                |
| 4. Marie Curie's story                | Deepen reading comprehension and critical discussion skills.                            | Students answer comprehension questions and express opinions orally.                                | Reading + Q&A + debate (Was she treated fairly?).                          |
| 5. Letter to a woman in the past      | Write a creative, structured letter using the past simple.                              | Students produce a personal letter showing admiration and understanding of a woman's contribution.  | Drafting and decorating a letter.  |
| 6. Interview with a woman in the past | Develop fluency in question/answer structures; use drama to embody historical identity. | Students perform a role-play with appropriate questions and accurate use of the past tense.         | Script preparation + partner role-play performance.                        |
| 7. Fill-in-the-gap activity           | Practice past simple verbs and review unit vocabulary.                                  | Students complete gap-fill sentences and pronounce completed sentences.                             | Worksheet activity + oral sharing.   |
| 8. Disney vs. Ghibli Venn diagram     | Compare female character roles and reflect critically on the media.                     | Students fill out a diagram and express one similarity and one difference orally.                   | Watch clips + complete Venn + small-group discussion.                      |
| 9. "Who is who?" deduction game       | Reinforce oral question forms and biographies learned.                                  | Students ask structured questions to identify a mystery woman.                                      | Dedication game with character cards and visual cues.                      |

## D. UNIT DESIGN

This unit was designed to connect the English language with values and historical awareness from a feminist pedagogy. Its foundation lies in teaching role models to help students develop knowledge of the past to gain consciousness of the present, to make them reflect critically on gender and equity while developing their communicative competence.

To select the women featured in the unit, I used as a reference illustrated non-fiction books like:

- *Fantastically Great Women Who Changed the World* by Kate Pankhurst (Pankhurst, 2018)
- *Great Women Who Worked Wonders* by Kate Pankhurst (Pankhurst, 2019)
- *Little People, Big Dreams* collection by María Isabel Sánchez Vergara. The following books: Marie Curie (Sánchez Vergara, 2018), Hedy Lamarr (Sánchez Vergara, 2021) and Ada Lovelace (Sánchez Vergara, 2018).

These books were chosen for their accessible language, concise biographies and very engaging designs with their drawings and typographies, and their ability to present women from different periods, fields, and cultural backgrounds. This matched with the objectives of the topic that the unit surfaces: Women from the past who helped us build the present and promoted the inclusive values of the school and the curriculum itself.

The feminist and educational pedagogy are not ideals gathering dust on a shelf; they can and should be applied to real classroom programs, particularly in bilingual and CLIL program schools. In primary education, the ideals to implement are:

- Challenging gender stereotypes often present in textbooks, media and adults' discourse.
- Providing role models from diverse cultural backgrounds, stories and fields, especially women who made an impact and have a legacy in STEM.
- Encouraging critical thinking about inequality, discrimination, and lack of representation.

Students acquired grammar and terms in English through content-based activities such as biographies, writing letters or performing discussions in groups. These diverse and dynamic practices supported subject content learning and developed their communicative and plurilingual competence, as stated in CLIL principles.

The unit was also carefully structured to align with the Common European Framework of Reference for Languages (CEFR), particularly targeting the A2 level, which is the expected proficiency for the 5th-grade students. Tasks were designed to ensure that students in the A2 level should be able to communicate in everyday situations, like routine interactions which involve familiar topics, with commonly used words and elementary vocabulary. According to the Common European Framework of Reference (CEFR) (2020), an A-2 level speaker can understand sentences and frequently used expressions, use language without requiring complex language structures, and describe in simple terms aspects of their past experiences, their environment and needs, which enables them to participate in basic social interactions. Because of these standards, tasks required short written texts, asking and answering questions, and writing brief descriptions related to everyday topics and familiar people. Each lesson supported one or more CEFR descriptors, ensuring that the four language skills were progressively developed. For instance, in lesson 2, students had as a final task to draft a timeline and fill it using short sentences such as “In [year], she \_\_\_\_”. This type of sentence supports grammatical control and narrative cohesion, which are some of the indicators of A2 level performance (Council of Europe, 2020).

To guarantee accessibility and inclusivity, the unit incorporated the **Universal Design for Learning (UDL)** principles (CAST, 2024). These were reflected in the unit on multiple ways by adding diverse materials (visual, written and oral), multiple types of activities regarding the four language skills like collaborative, oral games and written production; and attending to individual needs of the students with sentence frames for emergent learners and ACNEE, challenge for early finishers). UDL allowed every student to fulfil their tasks and feel accomplished and proud of the process of learning after every lesson. This method proved essential in a classroom where different linguistic backgrounds and academic needs met; it also reinforced the LOMLOE’s key competences, such as learning to learn, social and civic competence and cultural awareness and expression.

These UDL adaptations can also be seen in the Attainment targets developed for every lesson. These were structured progressively so that all students could participate according to their developmental stage (ZPD), with and without guidance, and their linguistic skills. These attainment targets are “All children must be able to...”, “Most children will be able to...” and “Some children could...”, these differentiated expectations scaffold the students learning and allow students to engage with the same tasks through different levels of complexity as it sets the basic knowledge that students should get and from there depending on students’ abilities they can or cannot accomplish higher levels expectations.

This means that the design ensured that each student's learning was tailored to their **Zone of Proximal Development (ZPD)**, making the curriculum challenging and achievable.

For instance, in lesson 5 (see Appendix B.5), students had to write a letter to a historical female scientist that we studied during the unit. This task involved several levels of written production, allowing to have different expectations according to each learner's ZPD. All children had to write sentences using sentence starters (e.g., "Thank you for..." or "I admire you because..."), while most were encouraged to make full paragraphs combining the biographical knowledge they got with personal reflection. The most advanced students were invited to write more creatively and analytically, like addressing the challenges this woman faced in her life or what her legacy is.

Similarly, in Lesson 6 (see Appendix B.6), students draw an interview draft to perform it later as a role-play. It consisted of a role-play interview with a woman from the past; it was an oral task with differentiated speaking goals. All students were supported to memorise or read short questions from the draft and answer using visual prompts, sentence frames and gestures. Most students were able to improvise or adapt their questions based on the sentence frames or ideas of the teacher or their partner, while more confident students developed and performed the interview without support, integrating intonation and body language even. This completely aligns with Vygotsky's view (see section 4.C) of learning as it is socially mediated by peer collaboration and rehearsals of the interview to scaffold the task, making it inclusive, motivating and linguistically enriching.

The design of the unit also followed principles of inquiry-based learning through CLIL and the development of thinking skills as outlined in Bloom's taxonomy (Anderson & Krathwohl, 2001). Each lesson builds from lower-order thinking skills (remembering, understanding) to higher-order skills (analysing, evaluating and creating). For instance, at the beginning of each lesson (warm-up), students were asked to recall what they learned in the previous lesson and predict what we were going to work with that day, to activate their evaluation category of their memory's knowledge and formulate a hypothesis. At the end of every lesson, they reflected upon what they learned to foster an *evaluation* of their learning process and knowledge of that day, in Bloom's taxonomy.

This progression is clearly visible in the attainment targets outlined in the lesson plan of the unit (see Appendix B), where each lesson is designed with objectives to accommodate to the ZPD (Zone of Proximal Development) of the students. For example, while some

students were expected to recall facts (*remember*), more advanced students had to compare biographies and justify ethical decisions taken by these women (*evaluate*).

Group dynamics enrooted in the unit also served as a key for critical thinking. Students were asked to discuss together who would fit in each role and justify the decision (e.g., Designer, Speaker, Researcher, Leader). This acquisition made them evaluate their own and their classmates' strengths and weaknesses to choose wisely. This not only promoted self-awareness and social-emotional learning but also made them understand their learning process, which is an essential element of applied metacognition, as they plan, monitor and evaluate their thoughts.

Some specific lessons with the objective to develop the CT skills of students were Lesson 3 and Lesson 8. In Lesson 3, students had to create mind maps of certain women by synthesising their biographies, identifying cause-effect relationships, and expressing their opinions upon the women's lives, skills closely tied to *analysis* and *evaluation* categories. Then, in Lesson 8, students developed a Venn diagram to compare gender portrayals in Disney and Studio Ghibli films, followed by a discussion. These lessons, along with the routines (warm-ups and end of lessons) and role-based collaborative work, make a coherent CLIL-based design focused on critical thinking and inclusive participation.

### **Figures of the unit**

The selection of the women and men featured in the unit was based on their significant contributions to science, politics, medicine, and social justice. We have women who were doctors, politicians, activists, and mathematicians. The process of selection was based on my will to have diverse professions that were usually pointed out for men, to include global and national role models, to be curriculum-relevant relevant and to generate critical thinking skills.

Featured figures include:

- Marie Curie: She discovered radioactivity and obtained the Nobel prize in Physics and Chemistry (Sánchez Vegara, 2018; Pankhurst, 2018).
- Rosalind Franklin: She discovered the double helix of DNA. (Pankhurst, 2019)
- Katherine Johnson: a mathematician who made calculations for the NASA spaceflight like the Apollo (Pankhurst, 2019).

- Ada Lovelace: She was the first computer programmer in history (Sánchez Vegara, 2018).
- Dr. James Barry: A woman who lived as a man to study medicine and was a surgeon in the British army (Pankhurst, 2019).
- Clara Campoamor: Spanish politician and activist who advocated for women's suffrage (Sánchez Vegara, 2021a).
- Rosa May Billinghurst: suffragette famous for attempting against police in riots with her wheelchair (Pankhurst, 2019).
- Margarita Salas: Pioneering Spanish biochemist in molecular biology, she discovered that genetic information is read in the 5' to 3' direction and developed the most profitable patent in the history of the CSIC (Spanish National Research Council) (*Margarita Salas* | #CientificasCASIO, 2020).
- Trinidad Arroyo: first woman ophthalmologist in Spain (Stadler, 2021; (Proyectos, n.d.).
- Hedy Lamarr: Inventor and actress who created the first model of Wi-Fi and Bluetooth (Sánchez Vegara, 2021).

#### **Adaptation to the school's book**

Besides, the unit had to be anchored in the school's existing textbook: *All about us now 5<sup>o</sup> grade of Oxford University Press* ((Reilly, Bazo, & Peñate, 2022). The unit was specifically adapted to complement and also expand one of the units from the book (Appendix A), which in this case is Unit 4: At the job fair. As seen in Appendix A, this unit of the student's book introduces terms related to jobs and professions (e.g., engineer, scientist, doctor, artist, etc); Past simple structures like “*She was born in 1978. I went to Paris*”; Biographies and descriptive sentences (e.g., *She was a woman and studied at the University of Paris in the 19<sup>th</sup> century. She is famous because...*); Civic values; and Biography of Marie Curie.

My unit complements the book by:

- Illustrating with real-world role models
- Embedding oral and written production activities that use the textbook's sentence structures (e.g., *She worked as a doctor. She discovered...*)
- Expanding the learning of their biographies with interactive activities like interviews and collaborative tasks

- Aligning grammar targets with the CEFR A2 descriptors through multimodal learning (CANVA presentations, timeline booklets and role-plays).
- Incorporating feminist values into the core reflection of these two questions: “*Why was it harder for women to have a job in the past?*” and “*What has changed today?*”.

## **E. MATERIALS**

A wide range of materials was created or adapted according to UDL principles to suit learners’ needs and promote engagement:

- Student Booklet (Appendix H)
- Visual displays and sentence frames to support structured output (Appendices C.2, C.3, C.4, C.5, C.7)
- Canva slides and videos to introduce vocabulary and biographies (Appendix C.1)
- Role cards and collaborative task instructions (Appendix C.6)
- Grammar aids (Appendix C.1, C.4 and C.7)
- Rubrics and checklists (Appendix D)
- Games and manipulatives (Appendices C.6, C.9)
- Self-peer-assessment tools (Appendix H.6)

## **F. ASSESSMENT AND KEY COMPETENCES**

Assessment was done using a variety of tools, aligned with the LOMLOE evaluation criteria from the 5th-grade English subject. Table 2 shows the alignment between each lesson, its assessment criteria (expectations for all students), curriculum criteria and assessment tools.

**Table 2.***Alignment of Lessons with Assessment criteria, LOMLOE's evaluation criteria and Assessment Tools*

| <b>Lesson</b>                         | <b>Assessment criteria</b>  | <b>LOMLOE's criteria</b> | <b>Assessment tools</b>  |
|---------------------------------------|---|--------------------------|--|
| 1. Female Scientist                   | <ul style="list-style-type: none"> <li>- Read a sentence from the biography aloud</li> <li>- Recognise the name of a female scientist and say one fact about her</li> </ul>   | 1.1, 1.2, 6.1            | <ul style="list-style-type: none"> <li>- Observation guide</li> </ul>  |
| 2. Timeline of Women in History       | <ul style="list-style-type: none"> <li>- Point to the correct scientist when named ("Show me Ada Lovelace").</li> <li>- Repeat key terms after the teacher ("algorithm," "discovery," "equality").</li> <li>- Make a timeline with at least 4 key moments</li> <li>- Understand their role and fulfil their responsibilities</li> </ul> | 1.1, 1.2, 2.1, 2.3, 5.2  | <ul style="list-style-type: none"> <li>- Timeline rubric (portfolio)</li> <li>- Observation</li> <li>- Oral presentation rubric</li> </ul> |
| 3. Activist mind-map                  | <ul style="list-style-type: none"> <li>- Identify the image of the woman with their name</li> <li>- State one fact from biographies</li> <li>- Name more than one STEM job</li> <li>- Make a mind map with at least 4 facts</li> </ul>  | 1.1, 1.2, 2.3, 6.1, 6.2  | <ul style="list-style-type: none"> <li>- Observation guide</li> <li>- Portfolio</li> </ul>   |
| 4. Marie Curie's story                | <ul style="list-style-type: none"> <li>- Answer questions 1 – 2 using the text</li> </ul>   | 1.1, 2.1, 6.1            | <ul style="list-style-type: none"> <li>- Observation notes</li> <li>- Oral participation</li> </ul>  |
| 5. Letter to a woman in the past      | <ul style="list-style-type: none"> <li>- Write a letter with the friendly letter format (date, greeting, 1 fact)</li> </ul>   | 2.2, 1.1, 6.2            | <ul style="list-style-type: none"> <li>- Letter rubric</li> </ul>  |
| 6. Interview with a woman in the past | <ul style="list-style-type: none"> <li>- Design a 4-question interview using the provided sentence frames</li> <li>- Role-play their scientist</li> <li>- Use 1-2 key vocabulary words</li> </ul>   | 2.1, 2.3, 5.2            | <ul style="list-style-type: none"> <li>- Oral rubric (role-play)</li> </ul>  |
| 7. Fill-in-the-gap activity           | <ul style="list-style-type: none"> <li>- Complete 3+ gaps with role collaboration</li> <li>- Present three sentences</li> </ul>   | 1.1, 5.4.1               | <ul style="list-style-type: none"> <li>- Written task</li> <li>- Checklist</li> </ul>  |
| 8. Disney vs. Ghibli Venn diagram     | <ul style="list-style-type: none"> <li>- Identify 1-2 comparisons between Ghibli and Disney films</li> <li>- Share one opinion during debates using frames</li> </ul>   | 1.1, 2.3, 6.1, 6.2       | <ul style="list-style-type: none"> <li>- Portfolio</li> <li>- Oral presentation observation</li> </ul>                                     |
| 9. "Who is who?" deduction game       | <ul style="list-style-type: none"> <li>- Ask 3+ yes/no questions using provided frames</li> </ul>   | 1.2, 2.1, 5.3            | <ul style="list-style-type: none"> <li>- Observation guide</li> <li>- Self-assessment</li> </ul>   |

Each evaluation instrument is used in a specific lesson or moment; it depends on the learning objectives of the session and the curricular evaluation criteria from the LOMLOE. For example:

- **Observation guides** are used in Lessons 1, 3, 4, and 9 to assess oral participation, comprehension, and respectful attitudes in intercultural contexts (1.1, 1.2, 6.1).
- **Rubrics** are applied in Lessons 2, 5, and 6 to evaluate written and oral productions such as timelines, letters, and interviews (2.1, 2.2, 2.3)
- **Checklists** are used in Lessons 7, 8, and 9 for tasks like gap-fill grammar exercises, comparative diagrams, and deduction games (1.1, 2.1, 5.3)
- **Self- and peer-evaluations** are included in Lessons 2, 6, and 9 to foster reflection and collaborative feedback between students (5.2, 5.3).

This structured approach allows for triangulation of data across **hetero-evaluation, self-evaluation, and co-evaluation**, ensuring that student learning is measured in a comprehensive, inclusive, and competency-based manner.

#### Development of LOMLOE's Key Competencies

This unit also supported the development of the key competencies, including Linguistic Communication Competence (CCL); Multilingual competence (CP), Mathematical and STEM competence (STEM); Digital Competence (CD); Personal, social and Learning to Learn Competence (CPSAA); Citizenship Competence (CC); Entrepreneurship Competence (CE); and Cultural Awareness and Expression Competence (CCEC).

In relation, SEL is primarily supported in the Personal, Social and Learning to Learn competence (CPSAA), as it encourages students to reflect on their emotions, collaborate within each other and be responsible of their learning process; it also aligns with other key competencies developed in the unit like the CCL, CCEC, CSC and STEM. For instance, SEL practices like debates, reflections and peer evaluations foster the Linguistic Communication competence (CCL). Additionally, as we study several biographies of women from different cultural backgrounds, students develop their Cultural Awareness and Expression competence (CCEC). It also develops their Social and Civic competence (CSC) by addressing themes like gender equality, activism through history and justice, to prompt their critical thinking (CT) about their outcome and role in society. Finally, in activities like the timelines or analysing cause-effects while studying biographies, students had to reason logically which contributed to their Mathematical, Scientific and Technological Competence (STEM).

Overall, SEL is embedded throughout the design and methodology of the unit, creating a holistic overview of the environment to nurture their academic development and emotional intelligence.

Table 3 provides a breakdown of how each lesson develops each key competence, indicating the evaluation instruments used to gather evidence of the learning process.

**Table 3.**

*Overview of Lessons, Assessment Instruments and their development of Key Competences*

| LESSON   | ASSESSMENT INSTRUMENTS  | KEY COMPETENCES |    |      |    |       |    |      |
|--|---|-----------------|----|------|----|-------|----|------|
|  |   | CCL             | CP | STEM | CD | CPSAA | CE | CCEC |
| Lesson 1.<br>Female Scientists Intro           | Observation guide<br>Teacher notes  | ✓               | ✓  |      |    | ✓     |    | ✓    |
| Lesson 2.<br>Timeline Creation & Presentation  | Timeline rubric<br>Presentation rubric<br>Observation notes<br>Self-assessment (Bullseye) | ✓               | ✓  | ✓    | ✓  | ✓     | ✓  |      |
| Lesson 3.<br>Activist Mind Map                 | Observation guide<br>Portfolio sample   | ✓               | ✓  | ✓    |    |       | ✓  | ✓    |
| Lesson 4.<br>Marie Curie Review                | Observation notes<br>Oral Q&A   | ✓               |    |      |    | ✓     |    | ✓    |
| Lesson 5.<br>Letter to a Scientist             | Letter rubric<br>Notebook review<br>Peer sharing  | ✓               |    |      | ✓  | ✓     | ✓  |      |
| Lesson 6.<br>Interview Role-play               | Oral performance rubric<br>Observation notes<br>Self and peer assessment                  | ✓               | ✓  | ✓    |    | ✓     | ✓  |      |
| Lesson 7. Fill the Gaps                        | Checklist<br>Student worksheet  | ✓               |    | ✓    |    | ✓     |    |      |
| Lesson 8.<br>Venn Diagram: Disney vs. Ghibli   | Portfolio<br>Oral reflection<br>Observation guide   | ✓               | ✓  |      |    |       | ✓  | ✓    |
| Lesson 9.<br><i>Who Is She?</i><br><i>Game</i> | Game checklist<br>Observation<br>Peer evaluation  | ✓               | ✓  |      |    | ✓     |    | ✓    |

**Qualification criteria**

Regarding the qualification criteria:

- The qualification criteria for each evaluation criterion of the English subject. Table 4 shows the weight of each evaluation criterion in the mark of the unit.

**Table 4.**

*Qualification criteria of the Evaluation criteria*

| <b>Evaluation Criteria (LOMLOE)</b> | <b>Qualification Criteria (%)</b> |
|-------------------------------------|-----------------------------------|
| 1.1                                 | 20%                               |
| 1.2                                 | 5%                                |
| 2.1                                 | 15%                               |
| 2.2                                 | 10%                               |
| 2.3                                 | 10%                               |
| 5.2                                 | 10%                               |
| 5.3                                 | 5%                                |
| 6.1                                 | 10%                               |
| 6.2                                 | 15%                               |
| <i>TOTAL</i>                        | <i>100%</i>                       |

- The qualification criteria of the different assessment instruments used throughout the unit (see Table 5). The percentage depends on the criteria of each instrument.

**Table 5.**

*Assessment instrument's Qualification criteria*

| <b>Assessment Instrument</b>                                | <b>Qualification Criteria (%)</b> |
|---|-----------------------------------|
| <i>Timeline + Oral Presentation rubrics (Lesson 2)</i>      | 20%                               |
| <i>Portfolio</i>  | 20%                               |
| <i>Letter writing rubric (Lesson 5)</i>                     | 15%                               |
| <i>Oral rubric + Self-assessment (Interview – Lesson 6)</i> | 15%                               |
| <i>Fill-in-the-gap grammar checklist (Lesson 7)</i>         | 10%                               |
| <i>Peer-assessment + Game checklist (Lesson 9)</i>          | 5%                                |
| <i>Q&amp;A/Quiz rubric or checklist (Lesson 4)</i>          | 5%                                |
| <i>TOTAL</i>  | <i>100%</i>                       |

- The weight of each lesson is based on how many instruments and key criteria are assessed in each one (see Table 6).

**Table 6.**

*Assessment weight per Lesson based on Key instruments and Curriculum criteria*

| <b>Lesson</b>                              | <b>Key Instruments/Criteria</b>                       | <b>Qualification Criteria (%)</b> |
|--|---|-----------------------------------|
| <i>Lesson 1 – Female scientists’ intro</i> | <i>Observation / 1.1, 6.1</i>                         | -                                 |
| <i>Lesson 2 – Timeline + presentation</i>  | <i>Timeline rubric + Oral rubric / 1.1, 2.1, 5.2</i>  | 10%                               |
| <i>Lesson 3 – Mind map</i>                 | <i>Mind-map rubric / 6.1, 2.3</i>                     | 10%                               |
| <i>Lesson 4 – Marie Curie oral Q&amp;A</i> | <i>Observation and Q&amp;A checklist / 1.1, 2.1</i>   | 5%                                |
| <i>Lesson 5 – Letter to a scientist</i>    | <i>Letter rubric / 2.2, 1.1</i>                       | 15%                               |
| <i>Lesson 6 – Interview role-play</i>      | <i>Oral rubric + Self-assessment / 2.1, 5.2, 5.3</i>  | 15%                               |
| <i>Lesson 7 – Fill-in-the-gap grammar</i>  | <i>Grammar Checklist / 1.1, 5.2</i>                   | 10%                               |
| <i>Lesson 8 – Venn diagram</i>             | <i>Venn diagram rubric / 1.1, 6.2</i>                 | 10%                               |
| <i>Lesson 9 – Game</i>                     | <i>Game checklist + Peer feedback / 1.2, 2.1, 5.3</i> | 5%                                |
|  | <i>Portfolio</i>                                      | 20%                               |
| <i>TOTAL</i>                               |   | <i>100%</i>                       |

Note. Lesson 1 is now excluded or noted as formative only, not part of qualification grading.

## 6. RESULTS

The implementation of the unit “Women's Month: Great Women in History” had a visible impact on students’ behaviour, attitudes, speech, participation, group arrangement and linguistic development. At the beginning of the unit, students showed clear internalised biases and gender roles and little knowledge about gender equality. For example, during group activities and pairings, students naturally paired with same-gender peers. Moreover, boys often refuse to work with girls, and comments like “No teacher, I don’t believe in feminism, I believe in equality” or “No, I don’t want to work with the girls” were heard before the first day.

Observations in the recess were also important; they revealed traditional gendered behaviour like girls tending to play with the infant education students, showing a maternal or caring role, while boys played football with physical intensity, often excluding girls. There was once a girl who attempted to join the game, but she was allowed to join but remained on the sidelines; they didn’t really pass her the ball, and she even got hit with the ball in the face as she was trying to take the ball. Although it was not intentional, the girls distanced themselves even more from the boys and refrained from joining any mixed activities during free time. This reflected a reinforcement of traditional roles, with girls being nurturing and passive roles and boys dominating the physical and public space, discussed in the theoretical framework. All these situations reinforced the urgency of implementing coeducational and feminist pedagogical to transform this classroom.

As the lessons progressed, however, a gradual shift in attitudes happened. Through exposure to diverse figures of women in history till nowadays, and discussion prompts, students began to reflect more and gain more critical skills overall on topics related to gender roles and inequalities. Some quotes from their end-of-lesson were: “I didn’t know women couldn’t study before. That’s not fair”, “She had to fight to have a job? Wow, I admire that” or “I would like to study medicine just like Trinidad Arroyo!”.

The comments reflect their progress of thinking on curiosity, empathy and consciousness about the past. Students began questioning everything they heard about social constructs, fulfilling a key objective of this unit.

This inquiry-based structure, rooted in the unit, along with group tasks and scaffolding, helped develop students’ higher-order thinking skills. Students began connecting ideas. For instance, the link between gender and access to education; the historical invisibility

that women and their contributions have suffered from, as some of them were even stolen or they had to adopt pseudonyms to fit “male names” and the relevance of the feminist movement not only in the past but also in the present.

Linguistically, students showed clear improvements. They improved in terms of recall, sentence structure and oral fluency, especially in oral tasks like the interview, because of the scaffolding. Peer support also played a big role as emergent learners, with the help of their more advanced peers, became more confident and participated actively. Self-assessment tools helped them to realise their own and their team’s output, which revealed growth in self-perception, and which were their strengths and their areas of improvement.

### **A. STUDENTS’ SAMPLES**

For a better understanding of the students’ development and improvement throughout the unit, I selected three students based on their attainment levels:

- Student A fits in the category of basic level of attainment (“All children must be able to...”). This student came this year to the school and had no prior exposure to English and required constant scaffolding.
- Student B corresponds to the intermediate level of attainment (“Most children will be able to...”). This student participated regularly and could express ideas with some support.
- Student C represents the advanced level (“Some children could...”). They showed autonomy, critical thinking and barely needed scaffolding.

The scores presented in Table 7 reflect the students’ progression across each lesson of the unit. Assessment tools included rubrics, observation checklists, peer/self-assessments, and portfolios. These tools were designed using the UDL principles and the student’s Zone of Proximal Development (ZPD), as described in the unit’s methodology section.

**Table 7.***Assessment per lesson*

| <b>Lesson</b>        | <b>Assessment tools and LOMLOE's Criteria</b>         | <b>Student A</b> | <b>Student B</b> | <b>Student C</b> |
|----------------------|---|------------------|------------------|------------------|
| Lesson 1 (Obs.)      | <i>Observation / 1.1, 6.1</i>                         | 5/10             | 7/10             | 9/10             |
| Lesson 2 (Timeline)  | <i>Timeline rubric + Oral rubric / 1.1, 2.1, 5.2</i>  | 2/4<br>(5/10)    | 3/4<br>(7.5/10)  | 4/4              |
| Lesson 3 (Mind-map)  | <i>Mind-map rubric / 6.1, 2.3</i>                     | 3/4<br>(7.5/10)  | 4/4<br>(10/10)   | 4/4<br>(10/10)   |
| Lesson 4 (Q&A)       | <i>Observation and Q&amp;A checklist / 1.1, 2.1</i>   | 6/10             | 8/10             | 10/10            |
| Lesson 5 (Letter)    | <i>Letter rubric / 2.2, 1.1</i>                       | 2/4<br>(5/10)    | 3/4<br>(7.5/10)  | 4 (10/10)        |
| Lesson 6 (Role-play) | <i>Oral rubric + Self-assessment / 2.1, 5.2, 5.3</i>  | 3/4<br>(7.5/10)  | 4/4<br>(10/10)   | 4/4<br>(10/10)   |
| Lesson 7 (Grammar)   | <i>Grammar Checklist / 1.1, 5.2</i>                   | 7/10             | 9/10             | 10/10            |
| Lesson 8 (Portfolio) | <i>Venn diagram rubric / 1.1, 6.2</i>                 | 3/4<br>(7.5/10)  | 4/4<br>(10/10)   | 4/4<br>(10/10)   |
| Lesson 9 (Game)      | <i>Game checklist + Peer feedback / 1.2, 2.1, 5.3</i> | 8/10             | 9/10             | 10/10            |

To calculate the final marks, each lesson was linked to specific LOMLOE's evaluation criteria. The rubric's level was converted to a 0-10 scale and checklist scores. These criteria were weighted according to their significance, the objectives and distribution across the unit. The final individual grade of each lesson is an average of the marks obtained in each assessment tool.

As shown in Table 7, every student showed clear progress from the initial stages and lessons of the unit until the last lesson. This growth reflects the pedagogical mentioned in CLIL and ZPD, as students performed tasks that challenged their current skills while receiving guidance. It also confirms the application of Bloom's revised taxonomy, as learners moved from recalling information to applying, analysing, and even evaluating gender roles. Moreover, social-emotional learning (SEL) was embedded in every lesson through teamwork, students become more empathetic, responsible and confident.

The students' final marks are reflected in Table 8. These were calculated by determining which lessons are evaluated by certain criteria (e.g., "1.1. is in Lesson 1,2,4,5,7,8,9) and from there consider qualification criteria in Table 4 to make the average

and get the mark of each evaluation criteria and from there make the average and get the students' final mark of the unit.

**Table 8.**

*Final Evaluation Grades by LOMLOE Criteria*

|           | EVALUATION CRITERIA |     |     |     |     |     |      |     |     | Average |
|-----------|---------------------|-----|-----|-----|-----|-----|------|-----|-----|---------|
|           | 1.1                 | 1.2 | 2.1 | 2.2 | 2.3 | 5.2 | 5.3. | 6.1 | 6.2 |         |
| Student A | 6.1                 | 5.0 | 6.5 | 5.5 | 6.0 | 7.0 | 6.5  | 7.5 | 6.0 | 6.3     |
| Student B | 8.3                 | 7.5 | 9.0 | 8.0 | 8.5 | 8.0 | 8.5  | 9.0 | 8.0 | 8.4     |
| Student C | 9.8                 | 9.0 | 10  | 9.5 | 10  | 10  | 10   | 10  | 10  | 9.8     |

Then, in Table 8, every student met all basic expectations. Student A achieved a 6.3, which demonstrated that they gained confidence, particularly in group activities and gamified tasks. Although this student needed more structured support, their progress in criteria like 5.2 (task execution) and 6.1 (participation in collaborative settings) reflects the impact of CLIL and UDL principles applied through the unit.

Student B obtained a final mark of 8.4, showing an increasing fluency in English (oral tasks) and reflective skills in writing. Their development is evident in criteria like 2.1 and 6.2, indicating a good performance in language and in comprehending the content. This shows the success of Bloom's taxonomy-based scaffolding and the integration of critical literacy in the project.

Student C reached 9.8; these students excelled in their skills and acted as peer models, embodying social-emotional competencies like empathy and leadership, while showing critical thinking in debates and every kind of situation. They demonstrated autonomy and creativity in their written and oral outputs (criteria 1.1, 2.2 and 6.2), and their ability to synthesise and evaluate illustrates the impact of SEL-based and coeducational pedagogies in fostering critical thinking and civic engagement.

These results confirm the effectiveness of using differentiated instruction, the use of attainment targets, and inclusive, formative assessment strategies. This approach allowed every learner to grow in each lesson by also reflecting upon what they learned in each lesson. Overall, the unit promoted meaningful learning experiences, critical engagement with the topics worked on in the unit and linguistic development.

## 7. CONCLUSION AND RECOMMENDATIONS

Findings from this final degree project indicate that integrating feminist and coeducational pedagogies within bilingual education, framed by CLIL methodology and LOMLOE's curriculum are successful, demonstrated in the develop of communicative skills, increase of use of English, challenge gender stereotypes, promote inclusive values and build critical thinking skills in students from early stages (5<sup>th</sup> grade in this case).

The unit shows that feminist approaches are not only compatible with bilingual education, but they also enrich it. Students learned to challenge inequities in history and society while also learning language in a meaningful way by including critical literacy, real-world female role models, and inclusive dynamics in a CLIL-based course. This way, English becomes a tool for thinking and speaking that empowers the students and see themselves as agents of change to 21st-century challenges. When children in early education stages learn that women have changed history as scientists, mathematicians, activists, and inventors, they start to question their knowledge and think of new ways for themselves and others to do things. This process supports both language development and gender equity.

Despite the positive outcomes, the project faced some *limitations*. The most noticeable one was the **age-appropriate complexity**. The topics related to feminism and inequalities required a simplification of the content to suit the cognitive and linguistic level of the students. Also, the time constraints and unrealistic pacing, although the unit was planned for 9 9-lesson sequence, some activities like the timeline required more time than expected. These tasks extended from one session to two or three, like in Lesson 2, due to the implementation of teamwork with role-assignment.

Furthermore, because the unit was implemented mid-year, I didn't know the students when planning the unit. This made it challenging to estimate their cognitive level, group dynamics and language proficiency when designing lessons, that's the reason why I had to later adapt the unit when I met the students which led me to work throughout the unit, so I could improve the following one as I got to know them better. Also, it was difficult to assess timing or predict the students' actual working rhythm during the planning of the unit, as I barely knew them.

Some of the students showed internalised stereotypes or biases about feminism. Others rejected the idea of people working together or women being in leadership roles. These views revealed the social context students are immersed in, and while the unit aimed to challenge them, change takes time and repetition. Some stereotypes could not be fully deconstructed in just a few weeks. These perspectives showed the social environment that students are in, and even though the unit was meant to challenge them, transformation takes time and practice. Some of these stereotypes could not be fully deconstructed in just a few weeks, and the coeducational pedagogy should be implemented from the beginning of the course and practised throughout the entire course.

Finally, the 5<sup>th</sup> graders had a wide range of English proficiency levels, from students with no prior exposure to English to confident B1 speakers. This differentiation needed scaffolding for all students (visual aids, gestures, sentence frames, glossaries), and often limited the spontaneous expression of the students, especially if the topic was complex or emotionally sensitive.

Based on the Theoretical framework and the results, the following **recommendations** can assist other bilingual or foreign language schools willing or thinking about implementing feminist pedagogy:

1. Embed feminist topics across subjects: feminism as a movement should not be restricted to a unit, as a subject or just worked with in isolated days like the 8<sup>th</sup> of March. It should be treated as a transversal content worked on interdisciplinary across subjects with role models, critical thinking, and inclusive language throughout the year.
2. Diversify representation in materials: schools should analyse the students' materials, like textbooks or visual materials, and books for the library and choose the resources so they have equal gender representation and marginalised groups.
3. Encourage reflective and cooperative dynamics: Techniques such as warm-ups, group discussions, democratic decision-making, and role-based teamwork can all help build the students' critical thinking skills and learning awareness.
4. Train teachers in coeducation and inclusive methodologies: For meaningful impact, feminist and inclusive pedagogy must be integrated into teacher education and ongoing training so that educators can implement these confidently and consistently.

5. Uses assessment techniques that focus on progress, not only on outcomes: The use of achievement targets and personalised rubrics enabled students to advance from their starting points while maintaining a sense of value, regardless of their language skills.

Last but not least, as a future teacher, this project has made an impact on my vision of education. Designing and implementing this unit at my internship school allowed me to learn how to teach certain content, in this case, social issues and values, through teaching language as a vehicle and a way to reach knowledge. It was impressive to see that 10-year-old students can reflect upon these topics and challenge inequality when given tools and space to do so, while fostering their empathy, curiosity and giving them a voice in the classroom. This experience has taught me that feminist and coeducational practices are necessary to create a school that prepares students for the social challenges students will face in this century. I aspire to continue building a safe space for my students and fostering their thought and citizenship. I want to make sure they feel represented, heard, seen, and empowered to question, create, imagine, and act.

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# 9. APPENDIXES

## APPENDIX A: STUDENT'S BOOK

|   | Vocabulary   | Grammar  | Culture   | Story  | Project  |
|---|--|--|---|--|--|
| <b>S</b><br>All about me and my family  | age, activities, food, animals, school subjects, physical descriptions, personality<br>assembly, break, Cookery Club, Craft Club, Geography, ICT, registration, Spanish  | <b>Review:</b><br>this / these; possessive 's<br>I've got (short, brown hair).<br>I'm (friendly).<br>always, usually, sometimes, never, every day  |   |  |  |
| <b>1</b><br>My activities party   | do archery, do gymnastics, go abseiling, go climbing, go diving, go swimming, go trampolining, play badminton, play hockey, play table tennis<br>goal, matches, player, stadium, team, wins                                  | I play ( table tennis on Mondays).<br>I'm playing (table tennis now).<br>Why (are you happy)?<br>Because (I'm playing tennis).   | <b>Sports</b><br>How often do you play football?<br>I play football every Sunday.   | <b>Mad about football</b><br>Value: Why do we say thank you when somebody does something kind? | <b>Article</b><br>A famous sportsperson                      |
| <b>All about our world 1: Honey bees</b> <b>Project:</b> Describe a day in the life of a worker bee.  |  |  |   |  |  |
| <b>2</b><br>At the safari park  | a bear, a camel, a crocodile, an elephant, a giraffe, a kangaroo, a lion, a monkey, a snake, a zebra<br>best, cleverest, happiest, strongest, tallest, worst   | (The savannah is) hotter than (the jungle).<br>(The African elephant is) better/worse than (the Asian elephant).<br>The shortest (person in my class is...)<br>The best / worst (day of the week is...)                                | <b>Hobbies</b><br>What kind of music do you like?<br>I like (pop music). My favourite singer is (Katy Perry).<br>I like (pop music), too, but I prefer (classical music).<br>I play (the piano).                | <b>Closing time</b><br>Value: What are your (or your friends') hidden talents?                 | <b>Presentation</b><br>A wild animal                         |
| <b>Children of the world 1: Make a difference</b> <b>Learning situation / Project:</b> Write a profile of a climate activist.                         |  |  |   |  |  |
| <b>3</b><br>Getting around town   | a bus station, a hospital, a hotel, a museum, a post office, a shopping centre, a square, a supermarket, a theatre, a town hall<br>bored, excited, friendly, happy, scared, worried  | There was (a school).<br>There wasn't (a sports centre).<br>There were (some squares)<br>There weren't (any shopping centres).<br>He / She was (bored).<br>He / She wasn't (scared).<br>You were (worried).<br>You weren't (friendly). | <b>Famous buildings</b><br>Excuse me, can you tell me the way to (Buckingham Palace)?<br>Yes, of course! Turn left / right.<br>Go straight on.<br>Go past the (hotel).<br>The (palace) is on your left.         | <b>The destruction of Pompeii</b><br>Value: How can animals help us?                           | <b>Report</b><br>The history of places in your town or city  |
| <b>All about our world 2: Directions</b> <b>Project:</b> Make a key and map of your area.   |  |  |   |  |  |
| <b>4</b><br>At the job fair   | an artist, a computer programmer, a cook, an engineer, a firefighter, a gardener, a journalist, a musician, a police officer, a scientist<br>daughter, husband, prize, professor, university, war                            | He / She talked (to an engineer).<br>He / She didn't talk (to an engineer).<br>I went (to Paris).<br>I didn't go (to Paris).   | <b>Great bridges</b><br>This is...<br>He / She was (a scientist) and lived in (the 19th century).<br>Why is he / she (famous)?<br>He's / She's famous for (designing...)  | <b>Marie Curie: A life in Science</b><br>Value: Why is it good to work hard?                   | <b>Biography</b><br>An interesting person's job              |
| <b>Children of the world 2: Helping others</b> <b>Learning situation / Project:</b> Make a presentation about a young person who helped other people. |  |  |   |  |  |
| <b>5</b><br>At the department store   | a cotton T-shirt, a glass bottle, a leather belt, a metal bracelet, a paper plane, a plastic car, rubber boots, a silk scarf, a wooden train, a wool jumper<br>blanket, fire, map, rucksack, torch, whistle                  | I have to (learn to juggle).<br>I don't have to (learn to juggle).<br>He / She has to (buy a present).<br>He / She doesn't have to (buy a present).<br>Did you see (a river)?<br>Yes, I did. No, I didn't.                             | <b>Special clothes</b><br>I can (wear bracelets at the weekend), but I can't (wear them to school).<br>I can (wear a swim hat for swimming, but I don't have to).   | <b>The mountain</b><br>Value: How can you solve problems by being creative?                    | <b>Report</b><br>Special clothes made from special materials |
| <b>All about our world 3: A Roman town</b> <b>Project:</b> Make a leaflet about a Roman place in your country.  |  |  |   |  |  |
| <b>6</b><br>At the summer camp  | climb a mountain, cook on the campfire, go caving, go fishing, go kitesurfing, go to the beach, play volleyball, swim in the lake, take photos, visit a castle<br>barbecue, customer(s), main course, menu, waiter, waitress | I'm / You're going to (go caving).<br>I'm not / You aren't going to (visit a castle).<br>Are you going to (cook pizza)?<br>Yes, I am. No, I'm not.   | <b>At the seaside</b><br>Excuse me, could you tell me (what time the swimming pool opens)?<br>Yes, of course. (It opens at ten o'clock.)<br>Thank you. Could you give me (a map)?<br>Yes, here you are. Thanks. | <b>Don't burn the fish!</b><br>Value: Why is a thoughtful present a good present?              | <b>Email</b><br>Summer plans                                 |
| <b>Children of the world 3: Going to school</b> <b>Learning situation / Project:</b> Design a classroom in a school for refugees.                     |  |  |   |  |  |
| <b>Festivals</b><br>Diwali  | sweets, decorate, light (lamps), fireworks   | What do you like (about Diwali)?<br>I like (sweets).   |   |  |  |
| <b>Festivals</b><br>Christmas   | a carol, Christmas lights, a market, fancy dress, a pantomime, a present   | A (carol) is (a funny play).<br>No, it isn't!  |   |  |  |
| <b>Festivals</b><br>World Water Day   | fresh, garden, ocean, shower, turn off   | What can you do? Can you use less water? I can turn off taps.  |   |  |  |

## APPENDIX B

### Appendix B.1: Lesson 1

| LESSON 1: Let's Talk about Female Scientists & Doctors!  |  |  |
|--|--|--|
| <b>Topic:</b> How female scientists/doctor overcame societal limits of their times and or their achievements (past vs. present)  |  | <b>Week/Date:</b> 10th of March<br><b>Time:</b> 30 min   |
| <b>Outline of leading activities</b>   |  |  |
| <b>MAIN OBJECTIVE:</b> <i>Students will explore Marie Curie's scientific contributions and analyze the societal challenges she faced as a woman in STEM, connecting her struggles to modern advancements in gender equality.</i>   |  |  |
| <p>The students will:</p> <ul style="list-style-type: none"> <li>- Define key terms: <i>suffrage, radiation, equality</i> and use them in context.</li> <li>- Compare the obstacles faced by female scientists/doctors in the past vs. present through guided discussions.</li> <li>- Read aloud simplified biographies of Rosalind Franklin, Marie Curie, Dr. James Barry, and Margarita Salas with accurate pronunciation.</li> <li>- Analyze primary sources (photos, quotes) to identify societal barriers.</li> <li>- Debate ethical questions: <i>"Was hiding her gender Dr. Barry's only option?"</i></li> </ul> <p>The lesson concludes by:</p> <ul style="list-style-type: none"> <li>- Understanding how gender roles and stereotypes limited women's access to STEM careers in the past</li> <li>- Recognizing modern advancements in equality through real-world examples.</li> <li>- Creating a tribute poster or sentence honoring one woman's legacy.</li> <li>- Reflecting on personal connections: <i>"Which woman inspired me most? Why?"</i></li> </ul> |  |  |
| <b>Key concepts:</b>   | <b>Prior knowledge</b>   | <b>ATL skills</b>  |
| <ul style="list-style-type: none"> <li>• STEM</li> <li>• Women's roles</li> <li>• Career terms<br/>(radiation, DNA, surgeon, etc)</li> <li>• Feminist terms<br/>(equality, rights, barriers, stereotypes)</li> </ul>   | <ul style="list-style-type: none"> <li>• Present simple</li> <li>• Basic understanding of science careers</li> <li>• Job terms (e.g. doctor, scientist)</li> </ul> | <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Social Skills</li> <li><input checked="" type="checkbox"/> Thinking skills (compare past and present tenses)</li> <li><input checked="" type="checkbox"/> Communication skills (speaking and pronunciation)</li> <li><input type="checkbox"/> Self-management</li> <li><input type="checkbox"/> Research skills</li> <li><input checked="" type="checkbox"/> Literacy skills (read biographies, Q&amp;A)</li> </ul> |
| <b>Learning objectives:</b>  | <b>Learning outcomes:</b>  | <b>Evidence for Assessment</b>   |

|   |  |   |   |                           |
|---|--|---|---|---------------------------|
| <ol style="list-style-type: none"> <li>1. Identify 4+ key contributions of female scientists/doctors in history</li> <li>2. Practice speaking and pronunciation</li> <li>3. Answer questions</li> </ol>   | <ul style="list-style-type: none"> <li>- Read and summarize biographies aloud</li> <li>- Participate in guided discussions about gender equality and the progression of the fight for gender equality using compare/contrast language (“<i>In the past... but now...</i>”)</li> <li>- Create a sentence about one woman</li> </ul> | <ul style="list-style-type: none"> <li>- Observation during discussions</li> <li>- Oral responses during the lesson</li> <li>- Teacher notes</li> </ul>   |   |                           |
| <p><b>Discourse/Text targeted</b></p>   |  | <p><b>Language targeted – Nonverbal L Targeted</b></p>  |   |                           |
| <p><u>TEXT LEVEL:</u></p> <ul style="list-style-type: none"> <li>- Expository text: biographies of women scientists/doctors (A2 CEFR).</li> </ul> <p><u>SENTENCE LEVEL:</u></p> <ul style="list-style-type: none"> <li>- Simple grammar (past/present tense)</li> <li>- Short sentences (e.g. “She discovered DNA. She was born in 1984).</li> <li>- Compound sentences with <i>and/because</i> (“<i>She hid her gender and became a doctor</i>”).</li> <li>- Compare/contrast questions (“Do you think Dr. Barry could study today?”)</li> <li>- Questions: Wh- questions (“<i>Why did...? How could...?</i>”).</li> </ul> <p><u>WORD LEVEL:</u></p> <ul style="list-style-type: none"> <li>- Word Bank: <i>scientist, doctor, rights, discover, vote, hospital, radiation, equality.</i></li> <li>- Spelling/Pronunciation: focus on tricky terms like <i>Nobel</i>.</li> </ul> |  | <ul style="list-style-type: none"> <li>- PUBLIC SPEECH: Group summaries (“<i>Marie Curie won two Nobel prizes because...</i>”)</li> <li>- INNER SPEECH: Silent ranking (<i>Which women have inspired you more? Which job do you prefer?</i>)</li> <li>- VERBAL THOUGHT: Debate (<i>Why do you think Dr. Barry hid her gender?</i>)</li> </ul>   |   |                           |
| <p><b>Duration</b></p>  | <p><b>Time</b></p>   | <p><b>Procedure</b></p>   | <p><b>Text discourse/ Sentence frames</b></p>   | <p><b>Resources</b></p>   |
| <p><b>Intro</b></p>   | <p>5min</p>  | <p><u>1.HOOK/ Warm-up:</u> Show Canva title slide and ask students: <i>Which jobs do you think were hardest for women in the past? Why?</i></p>   | <p>→ <i>Which jobs do you think were hardest for women in the past? Why?</i><br/>                 → I think _____ was hard because _____.<br/>                 → I think _____</p>  | <p>- Canva slide 1</p>    |
| <p><b>Desarrollo</b></p>  | <p>7 min</p>   | <p>We follow up the Canva and read and discuss about each woman. Display the Canva slides. Students take turns to read each women biographs; while reading, teacher asks questions to engage student’s attention and start conversations to make them think about women’s jobs and rights in the past and in the present.<br/>                 ✓ <i>Teacher corrects pronunciation (e.g. radiation, made)</i></p> | <ul style="list-style-type: none"> <li>- <i>Why was her photo important?</i> <ul style="list-style-type: none"> <li>o Her photo showed _____</li> </ul> </li> <li>- Is it easier for women today?                             <ul style="list-style-type: none"> <li>o Today, women can _____ (e.g. study at universities, can vote)</li> </ul> </li> </ul> | <p>- Canva slides 3-6</p> |

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|---|-------|--|---|---|
|   |       | <p>1. <u>Rosalind Franklin</u>:<br/>Students read her bio. Teacher asks questions.</p> <p>2. <u>Marie Curie</u>:<br/>Students read her bio. Teacher asks questions.</p>  | <ul style="list-style-type: none"> <li>- How did her discovery help people?</li> <li>o Her discovery helped people because</li> </ul>   |   |
|   | 7 min | <p>3. <u>Dr. James Barry</u>:<br/>Students read her bio. Teacher asks questions.</p> <p>4. <u>Margarita Salas</u>:<br/>Students read her bio. Teacher asks questions.</p>  | <ul style="list-style-type: none"> <li>- <i>Why did she dress as a man?</i></li> <li>o She had to _____ because _____.</li> <li>- Where do you think she lived?</li> </ul>  | <ul style="list-style-type: none"> <li>- Canva slides 6-12</li> <li>- Whiteboard (write jobs and new terms on it)</li> </ul>  |
| <b>End</b>  | 5 min | <p>5. <u>WRAP- UP</u>:<br/>Teacher asks students questions to check what they learned and write the key sentences and terms on the board.</p> <ul style="list-style-type: none"> <li>- <i>Which women have inspired you more?</i></li> <li>- <i>Which job do you prefer?</i></li> <li>- <i>What did Rosalind Franklin took a picture of? Who dressed as a man to study?</i></li> </ul> | <ul style="list-style-type: none"> <li>- <i>Which new term have you learned?</i></li> <li>- <i>Today, I learned</i></li> <li>- <i>I learned that (woman did this).</i></li> <li>- <i>I admire _____ because</i></li> <li>-</li> </ul> | <ul style="list-style-type: none"> <li>- Whiteboard</li> </ul>  |
| <b>ATTAINMENT TARGETS</b>   |       |  |   |   |
| <i>All children must be able to...</i>  |       | <i>Most children will be able to...</i>  |   | <i>Some of the children could...</i>  |
| <ul style="list-style-type: none"> <li>- Read a sentence from the biography aloud</li> <li>- Recognize the name of female scientist and say one fact about her</li> </ul> |       | <ul style="list-style-type: none"> <li>- Compare two women’s challenges with support (e.g., “Rosalind had to _____. Today women can _____.”).</li> <li>- Participate in a guided debate (e.g., “Was hiding her gender Dr. Barry’s only option?”).</li> </ul>   |   | <ul style="list-style-type: none"> <li>- Reflect about the difference of women’s lives in the past and in the present</li> <li>- Draw personal connections to gender challenges today</li> <li>- Suggest how gender roles have changed using examples from society or family</li> </ul> |

**Appendix B.2: Lesson 2**

| <b>LESSON 2: Hedy Lamarr and Ada Lovelace</b>  |   |  |
|--|---|--|
| <b>Topic:</b> Creating timelines of trailblazing women in STEM (Hedy Lamar and Ada Lovelace)   | <b>Week/Date:</b> 11th – 12th and 17th of March<br><b>Time:</b> 30' (11 March) and 1'30" (12 March)   |  |
| <b>Outline of leading activities:</b>  |   |  |
| Esta sesión se realizará el día 11 y 12 de marzo. El día 11 es una sesión de 30 min, el siguiente día es de 1 hora y 30 min.   |   |  |
| <b>DAY 1: INTRODUCTION &amp; REVIEW</b>  |   |  |
| <ol style="list-style-type: none"> <li>1. Kahoot: to revise the women we saw the previous lesson.</li> <li>2. Presentation</li> </ol>  |   |  |
| <b>DAY 2: SCIENCE CHARADES &amp; RESEARCH</b>  |   |  |
| <ol style="list-style-type: none"> <li>3. Science charades game</li> <li>4. Guided Investigation: students use sources facilitated by the teachers to note key life events.</li> <li>5. Timeline Sketch: The team scribes have to make a draft on paper of the info, the designer has to design the timeline, etc. The Scribe has to use sentence frames: <i>"In [year], [name] [discovered/studied] ."</i></li> </ol> |   |  |
| (HOMEWORK) FINISH THE TIMELINE AT HOME using the draft.  |   |  |
| <ol style="list-style-type: none"> <li>6. Hands-On Creation: Transfer drafts to booklets with colored paper/images. Grammar Focus: Past simple verbs (born, discovered, died).</li> </ol>  |   |  |
| <b>DAY 3: TIMELINE FINALIZATION</b>  |   |  |
| <ol style="list-style-type: none"> <li>7. Group Presentation: The Speaker of the team presents one of the timelines of the group.</li> </ol>   |   |  |
| <b>DAY 4: SELF-EVALUATION</b>  |   |  |
| <ol style="list-style-type: none"> <li>8. Bullseye Self-Assessment: each student makes their own to evaluate their output in their role, their creativity, etc (using the rubric as a reference).</li> </ol>   |   |  |
| <b>Learning objectives:</b>  | <b>Learning outcomes:</b>   | <b>Evidence for Assessment</b>   |
| <ul style="list-style-type: none"> <li>• Identify key biographical facts about assigned female STEM pioneers.</li> <li>• Compare historical challenges faced by women in different STEM fields.</li> <li>• Construct a timeline using simple past tense and sequencing language.</li> <li>• Present findings collaboratively using target</li> </ul>   | <ul style="list-style-type: none"> <li>• Identify 3+ key facts about their assigned STEM pioneer (e.g., <i>"Ada Lovelace wrote the first computer code"</i>).</li> <li>• Compare historical vs. modern STEM challenges using a T-chart or timeline.</li> <li>• Use <b>past tense</b> accurately in timeline sentences (<i>"She discovered... in [year]"</i>).</li> <li>• Present 1-2 "fun facts" orally using target vocabulary (<i>algorithm, radiation, equality</i>).</li> <li>• Make personal connections (<i>"Like [scientist], I want to..."</i>).</li> </ul> | <ul style="list-style-type: none"> <li>- Observation notes</li> <li>- Timeline drafts</li> <li>Booklet timelines</li> <li>- Fallor/Aciertos del Kahoot</li> <li>- Timeline Rubric (Appendix 2)</li> <li>- Presentation rubric</li> <li>- Bullseye Self-Assessment</li> </ul> |

|  |             |   |  |  |
|--|-------------|---|--|--|
| vocabulary (scientist, discovery, equality).   |             | <ul style="list-style-type: none"> <li>• Debate ethical questions ("Was hiding her gender fair?") in small groups.</li> <li>• Extract key details from simplified biographies (CEFR A1).</li> <li>• Sequence events chronologically in booklets.</li> </ul> |  |  |
| <b>Discourse/Text targeted</b>   |             |   | <b>Language Targeted</b>   |  |
| <ul style="list-style-type: none"> <li>• <b>Text Level:</b> Biographical timelines (chronological order).</li> <li>• <b>Sentence Level:</b> <ul style="list-style-type: none"> <li>○ Past simple: "She was born in...", "She discovered..."</li> <li>○ Sequencing: "First, then, finally"</li> </ul> </li> <li>• <b>Word Level:</b> <ul style="list-style-type: none"> <li>○ Tier 2: <i>programmer, invention, inequality</i></li> <li>○ Tier 3: <i>algorithm, polymerase</i></li> </ul> </li> </ul> |             |   | <ul style="list-style-type: none"> <li>- <b>PUBLIC SPEECH (A2)</b> <ul style="list-style-type: none"> <li>○ Group presentation phrases ("Ada Lovelace wrote the first computer program in 1843!").</li> <li>○ Sequencing words (<i>First, Next, Finally</i>)</li> </ul> </li> <li>- <b>PRIVATE SPEECH (A1)</b> <ul style="list-style-type: none"> <li>○ Self-talk during research ("Where was she born?")</li> <li>○ Drafting timeline notes ("<i>Born → Discovered...</i>")</li> </ul> </li> <li>- <b>INNER SPEECH (Pre-A1 and A1)</b> <ul style="list-style-type: none"> <li>○ Mental comparisons ("<i>Then vs. now</i>")</li> <li>○ Personal connections ("<i>Like Ada, I like...</i>")</li> </ul> </li> <li>- <b>VERBAL THOUGHT (A1+)</b> <ul style="list-style-type: none"> <li>○ <i>Problem-solving</i> ("How to organize timeline?")</li> <li>○ <i>Hypothesis formation</i> ("She probably felt...")</li> </ul> </li> </ul> |  |
| <b>Duration</b>  | <b>Time</b> | <b>Procedure</b>  | <b>Sentence frames</b>   | <b>Resources</b>   |
| <b>DAY 1: 11th March</b>   |             |   |  |  |
| <b>Intro</b>   | 15 min      | <ol style="list-style-type: none"> <li>1. Repartir ordenadores y colocar alumnos en grupos (4 grupos de 3 y un grupo de 2)</li> <li>2. Repaso de las mujeres que vimos el otro día (Lesson 1) con el <a href="#">Kahoot</a></li> </ol>                      | <ul style="list-style-type: none"> <li>▪ First, make groups of three</li> <li>▪ Let's remember the women we saw the previous week!</li> <li>▪ Which women were scientist/doctors?</li> <li>▪ 1, 2, 3, All eyes on me -&gt; 1, 2, All eyes on you</li> </ul>  | → Kahoot:<br><a href="https://create.kahoot.it/details/a0077e84-1575-4023-a35a-6d0f7f101ff1">https://create.kahoot.it/details/a0077e84-1575-4023-a35a-6d0f7f101ff1</a> |

|                            |        |  |   |   |
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| <b>Desarrollo</b>          | 10 min | 3. Presentación mujeres  | <ul style="list-style-type: none"> <li>▪ Do you know her?</li> <li>▪ Why is she famous?</li> <li>▪ She was important</li> </ul>   | → Primeras diapositivas del Canva   |
| <b>End</b>                 | 5 min  | Apagar y recoger ordenadores   | <ul style="list-style-type: none"> <li>▪ <i>Tidy up!</i></li> <li>▪ Pick the laptops and put them in the cupboard</li> </ul>  |   |
| <b>DAY 2: 12th March</b>   |        |  |   |   |
| <b>Previously prepared</b> | 8 min  | <ul style="list-style-type: none"> <li>▪ Poner en el carrito los booklets →</li> <li>▪ Encender los ordenadores y poner el canva con las fuentes secundarias para que investiguen los niños y puedan</li> <li>▪ Colocar en mesa material para usar</li> <li>▪ Colocar mesas para dos grupos</li> </ul> |   | <ul style="list-style-type: none"> <li>→ Papel de colores</li> <li>→ Imágenes impresas de Hedy Lamarr y Ada Lovelace (9 de cada una)</li> </ul> |
| <b>Intro</b>               | 25 min | <p><b><u>Activity 1: SCIENCE CHARADES</u></b></p> <ol style="list-style-type: none"> <li>1. Poner alumnos en dos grupos.</li> <li>2. Explicar normas y decir que son de jobs and people que hemos visto</li> <li>3. Ejemplificar una tarjeta y gesto</li> </ol>  | <ul style="list-style-type: none"> <li>- Okay, let's get in two groups!</li> <li>- This game is about jobs and people we studied</li> <li>- These are the rules of the game:                             <ul style="list-style-type: none"> <li>o <i>First, one student picks a card</i></li> <li>o <i>Then, uses gestures. No speaking</i></li> <li>o <i>Your team have to say the answer</i></li> </ul> </li> </ul> | → Science Charades Cards  |

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|                   |        |   | <ul style="list-style-type: none"> <li>○ They have one minute to guess and earn a point</li> <li>○ If they don't know, the other team can guess</li> <li>- I read the card in silence and make the gesture! Then my team has to guess.</li> <li>- Understood?</li> </ul>                 |   |
|                   | 10 min | <ol style="list-style-type: none"> <li>1. Repartir 2 ordenadores a cada grupo. Designar roles. (Designer, 2 Researchers, Leader, Speaker, Resource keeper, 2 Scribe)</li> <li>2. Señalar dónde están los materiales que pueden utilizar para realizar la tarea del booklet</li> </ol> |  | <ul style="list-style-type: none"> <li>- Laptops</li> <li>- Roles cards</li> </ul>  |
| <b>Desarrollo</b> | 25 min | <p><b><u>Activity 2: Investigación de cada mujer.</u></b></p> <ol style="list-style-type: none"> <li>1. Enseñar ejemplos de Timeline</li> <li>2. Les facilito las fuentes de investigación (Canva)</li> </ol>   | <p>Present simple (is famous...), Present continuous, Past simple (was), etc.</p> <ul style="list-style-type: none"> <li>- We are making a Timeline about one of the women we studied.</li> <li>- For this, you have to investigate their life, their biography (<i>Write</i></li> </ul> | <ul style="list-style-type: none"> <li>→ <a href="#">CANVA</a></li> <li>→ Laptops</li> <li>→ Cuaderno/Hoja en sucio para apuntar los datos que les es importante</li> </ul> |

|                                   |        |  |   |  |
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|                                   |        | → Cada grupo de una mujer. Apuntan los datos más importantes para colocar en el timeline después.  | <i>biography in the board).</i><br>- First, do a sketch in a paper. This is the Scribe's job.   |  |
|                                   | 20 min | <b>Hacer Timeline en Booklet</b><br>1. Repartir booklets por alumno<br>2. Cada alumno hace el Timeline de la historia de la mujer que escojan, sea Ada Lovelace o Hendy Lamarr.  | - <i>Let's write about them in the past! (Show structure in the whiteboard)</i><br>- <i>Let's see page 48 of the book to see how a Timeline is!</i> | → Student's book (Page 48)<br>→ Booklet<br>→ Hojas de colores<br>→ Imágenes impresas de mujeres (Appendix 1) |
| <b>DAY 3: 17th March (Monday)</b> |        |  |   |  |
| <b>End</b>                        | 30 min | <b>Presentation:</b><br>Cada grupo expone la mujer científica que tiene, mostrando uno de los booklets → cada alumno del grupo dice una curiosidad de ella (teniendo en cuenta las estructuras que estamos estudiando) | - <i>Let's Tidy up!</i><br>- Put the laptops in the cupboard.   | - Their timeline<br>- <a href="#">CANVA</a> slide 9  |
| <b>DAY 4: 18th March</b>          |        |  |   |  |

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| <p><b>End</b></p>   | <p>30 min</p> | <p><b>Bullseye</b>      <b>Self-</b><br/><b>Assessment:</b><br/>Teacher shows them a rubric to base their “Self-assessment Target” and an example of it.</p> <p>Teacher draws the template on the whiteboard so students can make them in a piece of paper.</p>  | <p>-</p> | <ul style="list-style-type: none"> <li>- Rubric 2 (<a href="#">Attainment 2</a>)</li> <li>- Piece of paper</li> <li>- <a href="#">CANVA</a> slide 6</li> </ul>  |
| <p><b>ATTAINMENT TARGETS</b></p>  |               |  |          |   |
| <p><i>All children must be able to...</i></p>   |               | <p><i>Most children will be able to...</i></p>   |          | <p><i>Some of the children could...</i></p>   |
| <ul style="list-style-type: none"> <li>- Point to correct scientist when named ("Show me Ada Lovelace").</li> <li>- Repeat key terms after the teacher ("algorithm," "discovery," "equality").</li> <li>- Make a timeline with at least 4 key moments</li> <li>- Understand their role and fulfil their responsibilities</li> </ul>   |               | <ul style="list-style-type: none"> <li>- Read 1- 3 sentences aloud</li> <li>- Answer simple questions (“What did Marie Curie discover?”)</li> <li>- Draft notes using sentence frames ("In [year], she ____").</li> <li>- Reflect silently: "I admire her because ____".</li> <li>- Make basic hypotheses ("She probably felt ____ when...").</li> </ul> |          | <ul style="list-style-type: none"> <li>- Summarize contributions in their own words ("Ada paved the way for modern computers").</li> <li>- Compare challenges across eras ("Then vs. now").</li> <li>- Debate ethical dilemmas</li> <li>- Mentally connect to personal experiences</li> </ul> |
| <p>Páginas de referencia/ Recursos utilizados</p>   |               |  |          |   |
| <ul style="list-style-type: none"> <li>▪ Libro de <a href="#">Ada Lovelace Pequeñas y Grandes</a></li> <li>▪ <a href="https://www.natgeokids.com/uk/primary-resource/ada-lovelace-primary-resource/">https://www.natgeokids.com/uk/primary-resource/ada-lovelace-primary-resource/</a></li> <li>▪ PDF explicatorio de Hedy Lamarr: <a href="https://www.tenerifevioleta.es/wp-content/uploads/2019/04/Hedy-Lamarr-min.pdf">https://www.tenerifevioleta.es/wp-content/uploads/2019/04/Hedy-Lamarr-min.pdf</a></li> <li>▪ <a href="https://kids.britannica.com/students/article/Hedy-Lamarr/626817">https://kids.britannica.com/students/article/Hedy-Lamarr/626817</a></li> <li>▪ <a href="https://www.canva.com/design/DAGg2FAa-A0/OIM4-iGqVMEAEolttNrXxA/view?utm_content=DAGg2FAa-A0&amp;utm_campaign=designshare&amp;utm_medium=link2&amp;utm_source=uniquelinks&amp;utlId=h8db4634f2b">https://www.canva.com/design/DAGg2FAa-A0/OIM4-iGqVMEAEolttNrXxA/view?utm_content=DAGg2FAa-A0&amp;utm_campaign=designshare&amp;utm_medium=link2&amp;utm_source=uniquelinks&amp;utlId=h8db4634f2b</a></li> </ul> |               |  |          |   |

**Links de edición:**

- Canva Lesson: [https://www.canva.com/design/DAGhdEPCMtw/nlDzlSVSrG6b9-VPIWJxeQ/edit?utm\\_content=DAGhdEPCMtw&utm\\_campaign=designshare&utm\\_medium=link2&utm\\_source=sharebutton](https://www.canva.com/design/DAGhdEPCMtw/nlDzlSVSrG6b9-VPIWJxeQ/edit?utm_content=DAGhdEPCMtw&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton)
- Woman in the Past (Canva): [https://www.canva.com/design/DAGg2FAa-A0/PFBB0YdE6QdobbDYlc2nSA/edit?utm\\_content=DAGg2FAa-A0&utm\\_campaign=designshare&utm\\_medium=link2&utm\\_source=sharebutton](https://www.canva.com/design/DAGg2FAa-A0/PFBB0YdE6QdobbDYlc2nSA/edit?utm_content=DAGg2FAa-A0&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton)

**RESULTS**

- Ha tomado mucho más tiempo del esperado porque los niños no están acostumbrados a trabajar en equipo y cada uno con sus roles establecidos<sup>1</sup>
- Les cuesta discernir la información importante cuando leen el texto de la biografía de las mujeres para poder hacer la timeline
- Hemos estado dos sesiones de 1h y todavía no dio tiempo a que cada uno hiciera la timeline en su cuaderno ni a la presentación de la timeline

18th March: tuvimos 30 min para hacer su Bullseye Self-Assessment (Mirar Appendix , para ver ejemplos).

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<sup>1</sup> Estudio para mejorar la eficiencia y rendimiento del trabajo en equipo mediante roles: <https://uwaterloo.ca/centre-for-teaching-excellence/catalogs/tip-sheets/teamwork-skills-being-effective-group-member#:~:text=Outline%20with%20them%20a%20list,them%20to%20expand%20their%20skillset.>

**Appendix B.3: Lesson 3**

| <b>LESSON 3: Activist women</b>  |   |  |
|--|---|--|
| <b>Topic:</b> Activist that shaped our present (Clara Campoamor and Rosa May Billinghurst)   |   | <b>Week/Date:</b> 19 <sup>th</sup> of March<br><b>Time:</b> 1h   |
| <b>Outline of leading activities</b>   |   |  |
| <b>MAIN OJECTIVE:</b> <i>Explore how women in STEM broke barriers and how these roles have evolved.</i>  |   |  |
| <p>The Students Will:</p> <ol style="list-style-type: none"> <li>1. Define &amp; Contextualize Key Terms</li> <li>2. Compare Past vs. Present Obstacles</li> <li>3. Read &amp; Analyze Biographies</li> <li>4. Analyze Primary Sources</li> </ol> <p>The lesson concludes by:</p> <ul style="list-style-type: none"> <li>- Synthesizing Understanding</li> <li>- Creating</li> <li>- Personal Reflection</li> </ul>  |   |  |
| <b>Learning objectives:</b>  | <b>Learning outcomes:</b>   | <b>Evidence for Assessment</b>   |
| <ul style="list-style-type: none"> <li>• Identify key struggles and achievements of pioneering women in STEM (e.g., exclusion from labs, groundbreaking discoveries).</li> <li>• Compare historical and modern barriers for women in STEM using evidence from biographies and primary sources.</li> <li>• Use domain-specific vocabulary (suffrage, radiation, inequality) accurately in discussions and written work.</li> <li>• Evaluate ethical dilemmas faced by women in STEM (e.g., Dr. Barry’s disguise) through debate.</li> </ul> | <ul style="list-style-type: none"> <li>- Define and pronounce key terms (radiation, suffrage).</li> <li>- Name one barrier and one achievement from the biographies.</li> </ul> | <ul style="list-style-type: none"> <li>- Observation during discussions</li> <li>- Oral responses during the lessson</li> <li>- Teacher notes</li> </ul>   |
| <b>Discourse/Text targeted</b>   |   | <b>Language targeted – Nonverbal L Targeted</b>  |
| <p><b>TEXT LEVEL:</b></p> <ul style="list-style-type: none"> <li>- Expository text: biographies of women scientists/doctors (A2 CEFR).</li> </ul> <p><b>SENTENCE LEVEL:</b></p>  |   | <ul style="list-style-type: none"> <li>- PUBLIC SPEECH: Group mind map discussions, gestures to guide peerd, nodding to affirm group ideas.</li> <li>- PRIVATE SPEECH: whispered self-talk while writing.</li> </ul> |

| <ul style="list-style-type: none"> <li>- Simple grammar (past/present tense)</li> <li>- Short sentences (e.g. "She discovered DNA. She was born in 1984).</li> <li>- Compound sentences with <i>and/because</i> ("She hid her gender and became a doctor").</li> <li>- Compare/contrast questions ("Do you think Dr. Barry could study today?")</li> <li>- Questions: Wh- questions ("Why did...? How could...?").</li> </ul> <p><b>WORD LEVEL:</b></p> <ul style="list-style-type: none"> <li>- Word Bank: <i>scientist, doctor, rights, discover, vote, hospital, radiation, equality.</i></li> <li>- Spelling/Pronunciation: focus on tricky terms like <i>Nobel.</i></li> </ul> |        | <ul style="list-style-type: none"> <li>- INNER SPEECH: Drawing personal connections in their mind-map.</li> </ul> <p><b>NON-VERBAL:</b></p> <ul style="list-style-type: none"> <li>- <i>Gestures:</i> Teacher makes gestures to accompany the discourse of the lesson. (e.g. movement to understand the term wheelchair, voting, in "fight" teacher rise her fist)</li> <li>- <i>Modeling:</i> Teacher model emotions like Shock or pride when injustices or vicctories are mentiones to guide emotional connection.</li> </ul> |   |  |
|---|--------|---|---|--|
| Duration  | Time   | Procedure   | Text discourse/ Sentence frames   | Resources  |
| <b>Intro</b>  | 13 min | <p>1. <b>WORD SEARCH:</b><br/>We start by playing a WORD SEARCH to see terms we will use in this lesson and its helpful for the teacher to check if they already know them and discuss these terms together to find the meaning. Students have to find terms like suffrage, politics, rights, equality, first lady, voting, constitution, activist, and women.</p> <p><i>Brainstorming:</i> Could women be...? Mention different jobs.</p>  | <ul style="list-style-type: none"> <li>- <i>I found _____!</i></li> <li>- <i>This word is a _____ horizontal/vertigal/diagonal line</i></li> <li>- <i>This word means _____.</i></li> </ul>   | <ul style="list-style-type: none"> <li>- Canva slide 1</li> <li>- 18 WORD SEARCH paper (<a href="#">Attainment 5</a>)</li> </ul> |
| <b>Desarrollo</b>   | 12min  | <p>2. <b>PRESENTATION:</b> students read the speech bubbles of the biographies on CANVA and conversate with the teacher answering</p>   | <ul style="list-style-type: none"> <li>- <i>Who wants to read?</i></li> <li>- <i>Raise your hand if you want to participate!</i></li> <li>- <i>She fought for _____ by _____."</i></li> <li>- <i>"Her biggest challenge was _____.</i></li> </ul> | <ul style="list-style-type: none"> <li>- Canva</li> </ul>  |

|  |        |   |  |  |
|--|--------|---|--|--|
|  | 17 min | 3. <u>MIND MAP</u> Creation:<br>Students separate in same groups from lesson 2, but this time they change the roles   | - <i>You are the _____ because you have these skills.</i>                            | - Booklets<br>- Material to paint, draw, etc (e.g. markers, coloured pencils)  |
| <b>End</b>   | 8 min  | 4. <u>Mind map</u> Presentation:<br>Students have to present the group's mind map of the woman they got assigned.   | - <i>I learned ____ from ____."</i><br>- <i>"This fact surprised me because ____</i> | -  |
| <b>ATTAINMENT TARGETS</b>  |        |   |  |  |
| <i>All children must be able to...</i>   |        | <i>Most children will be able to...</i>   |  | <i>Some of the children could...</i>   |
| <ul style="list-style-type: none"> <li>- Identify the image of the woman with their name</li> <li>- State one fact from biographies</li> <li>- Name more than one STEM job</li> <li>- Make a mind map with at least 4 facts</li> </ul> |        | <ul style="list-style-type: none"> <li>- Identify 3+ barriers/achievements</li> <li>- Read aloud 1- 2 biography sentences with fluency</li> <li>- Participate in debates</li> <li>- Make an organised mind map</li> </ul> |  | <ul style="list-style-type: none"> <li>- Compare two women's struggles</li> <li>- Teach peers one fun fact about their assigned woman</li> <li>- Make a creative mind map</li> </ul> |

**Appendix B.4: Lesson 4**

| <b>LESSON 4: Marie Curie’s story</b>   |   |  |
|--|---|--|
| <b>Topic:</b> Marie Curie’s story. This lesson focuses on how she broke barriers in STEM (Science, Technology, Engineering, and Mathematics) and comparing her struggles to modern challenges faced by women in science.   |   | <b>Week/Date:</b> 24 <sup>th</sup> of March<br><b>Time:</b> 30 min   |
| <b>Outline of leading activities</b>   |   |  |
| <b>MAIN OJECTIVE:</b> <i>Explore how Marie Curie broke barriers in STEM and how her struggles compare to modern challenges for women in science.</i>   |   |  |
| <p>The students will:</p> <ul style="list-style-type: none"> <li>- Review what we saw in previous lessons</li> <li>- Respond to teacher prompts using sentence frames:<br/> <i>“Last _____ lesson, _____ we _____ learned _____ that _____ Marie _____ Curie _____.”</i><br/> <i>“One word I remember is _____.”</i></li> <li>- Use the whiteboard to collaboratively reconstruct prior knowledge.</li> <li>- Take turns reading aloud the Marie Curie story (1-2 sentences per student).</li> <li>- Partner work to answer Canva slide questions (e.g., <i>“She discovered _____.”</i>).</li> <li>- Share answers using frames:<br/> <i>“I learned that _____.”</i><br/> <i>“A challenge she faced was _____.”</i></li> </ul> <p>The lesson concludes by:</p> <ul style="list-style-type: none"> <li>- Students verbally summarize today’s lesson</li> <li>- Synthesize in the whiteboard what students learned (key facts, vocabulary words, etc)</li> </ul> |   |  |
| <b>Learning objectives:</b>  | <b>Learning outcomes:</b>   | <b>Evidence for Assessment</b>   |
| <ul style="list-style-type: none"> <li>• Recall key facts about Marie Curie’s life, education, and scientific contributions.</li> <li>• Describe at least two barriers she faced as a woman in STEM during her time.</li> <li>• Use domain-specific vocabulary (radiation, Nobel Prize, polonium) accurately in discussions.</li> </ul>  | <ul style="list-style-type: none"> <li>• Identify Marie Curie’s major discoveries (polonium, radium) when prompted.</li> <li>• Repeat key terms (radiation, university) using correct pronunciation.</li> <li>• Contribute one fact to class discussions with sentence support</li> </ul> | <ul style="list-style-type: none"> <li>- Observation during discussions</li> <li>- Oral responses during the lessson</li> <li>- Teacher notes</li> </ul> |

|   |             |  |   |
|---|-------------|--|---|
| <ul style="list-style-type: none"> <li>Connect Curie’s struggles to broader themes of gender equality in science.</li> </ul>  |             |  |   |
| <p><b>Discourse/Text targeted</b></p> <p><u>TEXT LEVEL:</u></p> <ul style="list-style-type: none"> <li>Expository text: biographies of women scientists/doctors (A2 CEFR).</li> </ul> <p><u>SENTENCE LEVEL:</u></p> <ul style="list-style-type: none"> <li>Simple grammar (past/present tense)</li> <li>Short sentences (e.g. “She discovered DNA. She was born in 1984).</li> <li>Compound sentences with <i>and/because</i> (“<i>She hid her gender and became a doctor</i>”).</li> <li>Compare/contrast questions (“Do you think Dr. Barry could study today?”)</li> <li>Questions: Wh- questions (“<i>Why did...? How could...?</i>”).</li> </ul> <p><u>WORD LEVEL:</u></p> <ul style="list-style-type: none"> <li>Word Bank: <i>scientist, doctor, rights, discover, vote, hospital, radiation, equality.</i></li> <li>Spelling/Pronunciation: focus on tricky terms like <i>Nobel</i>.</li> </ul> |             | <p><b>Language targeted – Nonverbal L Targeted</b></p> <p><u>PUBLIC SPEECH:</u></p> <ul style="list-style-type: none"> <li>Group discussions answering Canva questions (“<i>She discovered because</i>”).</li> </ul> <p><u>PRIVATE SPEECH:</u></p> <ul style="list-style-type: none"> <li>Whispered self-correction while reading (“<i>Po-lo-ni-um... no, po-lo-nee-um</i>”).</li> <li>Soft counting of Nobel Prizes while writing timelines.</li> </ul> <p><u>INNER SPEECH:</u></p> <ul style="list-style-type: none"> <li>Mental comparisons (“Her lab was small... ours is ___”).</li> <li>Silent reflection during exit tickets (“Which fact surprised me?”).</li> </ul> <p><b>NON-VERBAL COMMUNICATION:</b></p> <ul style="list-style-type: none"> <li><u>Gestures:</u> <ul style="list-style-type: none"> <li>Discovery: pretend I have a magnifying glass.</li> </ul> </li> <li>Model emotions: Teacher show angry face when the word Injustice comes up and a shocking face when hearing something impressive.</li> <li><u>Visual Anchors/Mediators:</u> using drawings to support the lesson and the understanding of the words.</li> </ul> |   |
| <b>Duration</b>   | <b>Time</b> | <b>Procedure</b>   | <p><b>Text discourse/ Sentence frames</b></p> <p><b>Resources</b></p> |

|  |        |   |  |  |
|--|--------|---|--|--|
| <b>Intro</b>   | 10 min | 1. WORD WARM-UP: Teacher ask students what they remember from last lesson to review. Guides them with sentences frames and questions.   | <ul style="list-style-type: none"> <li>- <i>I see ____ . It means ____ .</i></li> <li>- <i>"Marie Curie studied ____ .</i></li> </ul>              | <ul style="list-style-type: none"> <li>- Canva</li> <li>- Whiteboard</li> <li>- Markers</li> </ul> |
| <b>Desarrollo</b>  | 25min  | <u>2.GUIDED READING:</u><br>Students take turns to read the story.<br>Then, answer the Canva questions in pairs.  | <ul style="list-style-type: none"> <li>- <i>She was born in ____ . She studied ____ .</i></li> <li>- <i>She won ____ because ____ .</i></li> </ul> | <ul style="list-style-type: none"> <li>- Canva</li> <li>- English book</li> </ul>                  |
| <b>End</b>   | 5 min  | Teacher asks:<br><ul style="list-style-type: none"> <li>- What did you learn today?</li> </ul> Conduct the students' answers with questions and sentence frames. Teacher supports them with the whiteboard and writes them on it. | <ul style="list-style-type: none"> <li>- <i>I learned ____ from ____ ."</i></li> <li>- <i>"This fact surprised me because ____"</i></li> </ul>     |  |
| <b>ATTAINMENT TARGETS</b>  |        |   |  |  |
| <i>All children must be able to...</i>   |        | <i>Most children will be able to...</i>   |  | <i>Some of the children could...</i>   |
| <ul style="list-style-type: none"> <li>- Answer Q1 – 2 using the text</li> </ul> |        | <ul style="list-style-type: none"> <li>- Explain one discovery (Q3-5) and its impact (“Radium helps treat cancer”)</li> </ul>   |  | <ul style="list-style-type: none"> <li>- Connect Curie’s struggles to modern STEM</li> </ul>       |

**Appendix B.5: Lesson 5**

| <b>LESSON 5: Let's write a letter to...</b>  |   |   |
|--|---|---|
| <b>Topic:</b> Writing a letter to a historical female in STEM fields (e.g., Rosalind Franklin, Marie Curie)  |   | <b>Week/Date:</b> 25 <sup>th</sup> of March<br><b>Time:</b> 30 min  |
| <b>Outline of leading activities</b>   |   |   |
| <b>MAIN OJECTIVE:</b> <i>Write a structured letter to a woman in STEM, expressing appreciation for their contributions and connecting their struggles to modern challenges.</i>  |   |   |
| The students will: <ul style="list-style-type: none"> <li>- Brainstorm names and contributions of female scientists (Marie Curie, Rosalind Franklin, etc.) using visual anchors (Canva slides/whiteboard).</li> <li>- Respond to teacher prompts with sentence frames</li> <li>- Review the friendly letter template (date, greeting, body, closing) using the Canva example.</li> <li>- Draft letter individually</li> </ul> The lesson concludes by: <ul style="list-style-type: none"> <li>- Teacher synthesizing key aspect on the whiteboard</li> </ul> |   |   |
| <b>Learning objectives:</b>  | <b>Learning outcomes:</b>   | <b>Evidence for Assessment</b>  |
| <ul style="list-style-type: none"> <li>• Take out key facts about a chosen scientist.</li> <li>• Use letter-writing conventions (date, greeting, body, closing).</li> <li>• Express gratitude/reflection using sentence frames.</li> <li>• Connect historical impact to personal inspiration.</li> </ul>   | <ul style="list-style-type: none"> <li>• Write a letter with 3+ structured parts (e.g., introduction, body).</li> <li>• Use domain-specific vocabulary (e.g., "discovery," "research").</li> <li>• Share one fact about the scientist's barriers/achievements.</li> </ul> | <ul style="list-style-type: none"> <li>- Observation during letter drafting</li> <li>- Oral responses when sharing letter excerpts</li> <li>- Teacher notes</li> </ul>  |
| <b>Discourse/Text targeted</b>   |   | <b>Language targeted – Nonverbal L Targeted</b>   |
| <u>TEXT LEVEL:</u> <ul style="list-style-type: none"> <li>- Expository text (biographies)</li> <li>- Friendly letter format</li> </ul> <u>SENTENCE LEVEL:</u> <ul style="list-style-type: none"> <li>- Past/present tense ("She discovered..." / "I admire you because...").</li> <li>- Compound sentences ("You overcame ___ and ___").</li> <li>- Wh- questions</li> </ul>   |   | <u>PUBLIC SPEECH:</u> <ul style="list-style-type: none"> <li>- Group discussions answering Canva questions</li> </ul> <u>PRIVATE SPEECH:</u> <ul style="list-style-type: none"> <li>- Whispered self-correction while reading</li> </ul> <u>INNER SPEECH:</u> <ul style="list-style-type: none"> <li>- Mental comparisons</li> </ul> <u>NON-VERBAL COMMUNICATION:</u> <ul style="list-style-type: none"> <li>- <u>Gestures:</u> Pretend to write/think (e.g., tapping chin).</li> </ul> |

| <b>WORD LEVEL:</b><br>- STEM terms<br>- Character traits<br>- Letter phrases  |        | - <u>Visual Anchors/Mediators:</u> Letter template on Canva/whiteboard.   |   |  |
|---|--------|---|---|--|
| Duration  | Time   | Procedure   | Text discourse/ Sentence frames   | Resources  |
| <b>Intro</b>  | 10 min | 1. <u>WARM-UP:</u> Brainstorm woman scientists' names and contributions   | <ul style="list-style-type: none"> <li>- Look at the scientists on the board. Which name do you recognize? What do you know about them?</li> <li>- Let's review she discovered .</li> <li>- Why should we thank these women for?</li> <li>- X, who can you think of if I tell you Polonium?</li> <li>- What did she study?</li> <li>- I remember _ because _</li> <li>- I want to write to because .</li> </ul> | <ul style="list-style-type: none"> <li>- Canva</li> <li>- Whiteboard</li> <li>- Markers</li> </ul>   |
| <b>Desarrollo</b>   | 15 min | 2. <u>DRAFT LETTERS:</u> Students have to take the templates shown in the CANVA as an example to write it and to know the structure and the sentence frames to use in it.<br>3. <u>Paint/decorate your letter:</u> they have to decorate it a little and paste it in the Booklet. | <ul style="list-style-type: none"> <li>- Dear , I appreciate you because your work .</li> <li>- The body of your letter has to explain why they were important. Use facts!</li> <li>- "You were important because ___."</li> <li>- "I feel ___ about your work."</li> <li>- What did your scientist discover? Use this sentence *show in smartboard*</li> <li>- How does their work help us today?</li> </ul>   | <ul style="list-style-type: none"> <li>- Canva</li> <li>- English book</li> <li>- Booklets</li> <li>- Materials to write</li> <li>- Colourful paper</li> </ul> |
| <b>End</b>  | 5 min  | <u>WRAP-UP:</u> teacher ask what they've learned today and writes it on the whiteboard.<br><br>TIDY UP.   | <ul style="list-style-type: none"> <li>- Who wants to share their letter?</li> <li>- What did you learn today?</li> <li>- What did you learn from Group 2's interview? Use: 'I learned that ___.'</li> </ul>  | <ul style="list-style-type: none"> <li>- Whiteboard</li> <li>- Whiteboard markers</li> </ul>   |
| ATTAINMENT TARGETS  |        |   |   |  |
| <i>All children must be able to...</i>  |        | <i>Most children will be able to...</i>   |   | <i>Some of the children could...</i>   |
| <ul style="list-style-type: none"> <li>- Write a letter with the friendly letter format (date, greeting, 1 fact)</li> </ul> |        | <ul style="list-style-type: none"> <li>- Write a letter with date, greeting, body, conclusion and 2 or more facts.</li> </ul>   |   | <ul style="list-style-type: none"> <li>- Connect scientist's work to modern STEM (e.g., "Because of you, women can " or "I want to ")</li> </ul>               |

**Appendix B.6: Lesson 6**

| <b>LESSON 6: Interview the woman in the past!</b>   |  |  |
|---|--|--|
| <b>Topic:</b> Conducting an interview with a historical female working in STEM fields (Marie Curie, Rosalind Franklin, etc.) through role-play.   |  | <b>Week/Date:</b> 3 <sup>rd</sup> April<br><b>Time:</b> 1 hour – 60 min  |
| <b>Outline of leading activities</b>  |  |  |
| <b>MAIN OJECTIVE:</b> <i>Act out an interview to demonstrate knowledge about your scientist’s contributions and challenges.</i>   |  |  |
| <p>The students will:</p> <ul style="list-style-type: none"> <li>- Brainstorm facts about the studied scientists using the CANVA</li> <li>- Review interview structure (greeting, questions, closing) using a Canva template.</li> <li>- Show the role-play in front of the class</li> </ul> <p>The lesson concludes by:</p> <ul style="list-style-type: none"> <li>- Students reflect and share one thing they learned today</li> <li>- Highlight 2-3 key aspects on the whiteboard</li> </ul> |  |  |
| <b>Learning objectives:</b>   | <b>Learning outcomes:</b>  | <b>Evidence for Assessment</b>   |
| <ul style="list-style-type: none"> <li>• Ask and answer questions about a scientist’s life/work using interview format.</li> <li>• Use past tense for historical facts ("What did you discover?").</li> <li>• Practice active listening and turn-taking.</li> </ul>   | <ul style="list-style-type: none"> <li>• Students will complete a 4-question interview in pairs.</li> <li>• Use at least 3 key vocabulary words (e.g., "radiation," "research").</li> <li>• Connect the scientist’s struggles to modern STEM (extension).</li> </ul> | <ul style="list-style-type: none"> <li>- Observation of role-play accuracy/vocabulary use.</li> <li>- Peer feedback on clarity/questions.</li> <li>- Teacher notes on fluency/pronunciation.</li> </ul>  |
| <b>Discourse/Text targeted</b>  |  | <b>Language targeted – Non-verbal L Targeted</b>   |
| <p><b>TEXT LEVEL:</b></p> <ul style="list-style-type: none"> <li>- Interview scripts (Q&amp;A format)</li> <li>- Biographical notes (from prior lessons)</li> </ul> <p><b>SENTENCE LEVEL:</b></p> <ul style="list-style-type: none"> <li>- Questions: <i>"How did you discover ___?"</i></li> <li>- Responses: <i>"I worked on ___ because ___."</i></li> </ul> <p><b>WORD LEVEL:</b></p>   |  | <p><b>PUBLIC SPEECH:</b></p> <ul style="list-style-type: none"> <li>- Group discussions answering Canva questions (<i>"She discovered ___ because ___"</i>).</li> </ul> <p><b>PRIVATE SPEECH:</b></p> <ul style="list-style-type: none"> <li>- Whispered self-correction while reading (<i>"Po-lo-ni-um..., po-lo-nee-um"</i>).</li> <li>- Soft counting of Nobel Prizes while writing timelines.</li> </ul> |

| <ul style="list-style-type: none"> <li>- Word Bank: <i>scientist, doctor, rights, discover, vote, hospital, radiation, equality.</i></li> <li>- Spelling/Pronunciation</li> </ul> |        | <b>INNER SPEECH:</b> <ul style="list-style-type: none"> <li>- Mental comparisons ("Her lab was small... ours is ___").</li> <li>- Silent reflection during exit tickets ("Which fact surprised me?").</li> </ul> <b>NON-VERBAL COMMUNICATION:</b> <ul style="list-style-type: none"> <li>- <u>Gestures:</u> Pretend microphone for "interviewer,</li> <li>- <u>Facial expressions:</u> show surprise/empathy for challenges.</li> </ul> |  |  |  |
|---|--------|---|--|--|--|
| Duration  | Time   | Procedure   | Text discourse/ Sentence frames  | Resources  |  |
| <b>Intro</b>  | 8 min  | <ol style="list-style-type: none"> <li>1. <u>Introduction:</u> first, we activate the prior knowledge of the previous lessons to produce the questions for the interview and to choose which women we want to interview.</li> <li>2. Teachers model the activity</li> </ol>   | <ul style="list-style-type: none"> <li>- <i>Today, you'll become interviewers and scientists! Interviewers will ask questions, and scientists will answer as if they're Marie Curie or Rosalind Franklin.</i></li> <li>- <i>Let's remember the women we've studied! Who can name one? Dr. Curie? What did you study? Where did you study?</i></li> </ul> | <ul style="list-style-type: none"> <li>- Canva</li> <li>- Whiteboard</li> <li>- Markers</li> </ul>   |  |
| <b>Desarrollo</b>   | 15 min | <ol style="list-style-type: none"> <li>3. <u>Let's make the interview draft:</u> teacher guides the pair work with scaffolding questions.</li> </ol>  | <ul style="list-style-type: none"> <li>- <i>Start with easy questions: 'Where were you born?'</i></li> <li>- <i>Use Wh- questions like: Who, Where, When, etc.</i></li> <li>- <i>Use gestures! Pretend to write equations if you're a scientist or hold a microphone if you're the interviewer.</i></li> </ul>   | <ul style="list-style-type: none"> <li>- Canva</li> <li>- English book</li> <li>- Interview sentence frames (written in whiteboard)</li> </ul> |  |
|   | 32 min | <ol style="list-style-type: none"> <li>4. <u>Perform the Interview:</u> students have to perform the interview. One of them is the interviewer and the other is the woman.</li> </ol>   |  |  |  |
| <b>End</b>  | 5 min  | <ol style="list-style-type: none"> <li>5. <u>WRAP-UP:</u> teacher ask what they've learned today and writes it on the whiteboard.</li> </ol>  | <ul style="list-style-type: none"> <li>- <i>What did you learn today?</i></li> <li>- <i>What did you learn from Group 2's interview? Use: 'I learned that ___.'</i></li> </ul>   | <ul style="list-style-type: none"> <li>- Whiteboard</li> <li>- Whiteboard markers</li> </ul>   |  |
| ATTAINMENT TARGETS  |        |   |  |  |  |
| <i>All children must be able to...</i>  |        | <i>Most children will be able to...</i>   |  |  | <i>Some of the children could...</i>   |
| <ul style="list-style-type: none"> <li>- Design a 4-question interview</li> </ul>   |        | <ul style="list-style-type: none"> <li>- Conduct a 6-question interview with minimal prompts, using past tense and more than 2 STEM terms</li> <li>- Act out the interview</li> <li>- Use compound sentences</li> </ul>   |  |  | <ul style="list-style-type: none"> <li>- <i>Improvise follow-up questions and connect</i></li> </ul> |

|   |  |  |
|---|--|--|
| using provided sentence frames<br>- Role-play their scientist<br>- Use 1-2 key vocabulary words |  | <i>struggles to modern STEM barriers.</i><br>- Use advanced terms like "double helix"(Rosalind Franklin) |
|---|--|--|

**Appendix B.7: Lesson 7**

| LESSON 7: Fill the gaps, Honor their legacy  |  |  |
|--|--|--|
| <b>Topic:</b> Complete sentences about women’s achievements in STEM/social rights.   |  | <b>Week/Date:</b> 7th April<br><b>Time:</b> 30 min   |
| <b>Outline of leading activities</b>   |  |  |
| <b>MAIN OJECTIVE:</b> <i>Complete sentence gaps, using domain-specific vocabulary and verbs in past tense.</i><br><br>The students will: <ul style="list-style-type: none"> <li>- Complete missing verbs on worksheets in groups (e.g., "Marie Curie radium" → "discovered").</li> <li>- Researchers whisper facts to scribes</li> <li>- Pair-share answers with peer feedback:</li> <li>- Share completed sentences aloud with the class</li> </ul> The lesson concludes by: <ul style="list-style-type: none"> <li>- Highlighting 2-3 challenges they had to face</li> </ul> |  |  |
| <b>Learning objectives:</b>  | <b>Learning outcomes:</b>  | <b>Evidence for Assessment</b>   |
| <ul style="list-style-type: none"> <li>• Recall 1–2 facts about each woman</li> <li>• Use correct verbs (discovered, fought, calculated) in past tense.</li> <li>• Practice pronunciation of names/terms (e.g., "ophthalmologist").</li> </ul>   | <ul style="list-style-type: none"> <li>• Complete 5+ sentence gaps accurately.</li> <li>• Verbally share one fact using the frame: "___ [verb] ___."</li> <li>• Pronounce 3+ key terms correctly.</li> </ul> | <ul style="list-style-type: none"> <li>- Completed worksheets with filled gaps</li> <li>- Oral responses during sharing.</li> <li>- Teacher notes on pronunciation/verb tense accuracy.</li> </ul> |
| <b>Discourse/Text targeted</b>   | <b>Language targeted – Nonverbal L Targeted</b>  |  |
| <b>TEXT LEVEL:</b><br>- Expository text: biographies of women with gaps.<br><br><b>SENTENCE LEVEL:</b><br>- Simple past tense  | <b>PUBLIC SPEECH:</b><br>- Role based discussions<br><br><b>PRIVATE SPEECH:</b>  |  |

| <ul style="list-style-type: none"> <li>- Compound sentences ("She fought for rights and ____").</li> </ul> <p><b>WORD LEVEL:</b></p> <ul style="list-style-type: none"> <li>- Word Bank: <i>scientist, doctor, rights, discover, vote, hospital, radiation, equality.</i></li> <li>- Spelling/Pronunciation: focus on tricky terms like <i>Nobel.</i></li> </ul> |        | <ul style="list-style-type: none"> <li>- Whispered corrections like Verb tense checks and pronunciation practice</li> </ul> <p><b>INNER SPEECH:</b></p> <ul style="list-style-type: none"> <li>- Mental comparisons ("Her lab was small... ours is ____").</li> <li>- Silent reflection</li> </ul> <p><b>NON-VERBAL COMMUNICATION:</b></p> <ul style="list-style-type: none"> <li>- <u>Gestures:</u> Mimic writing for gaps, fist to chest for "honor". Hand to ear when the presenter cues class to listen.</li> <li>- <u>Visual Anchors/Mediators:</u> Images of each woman next to sentences.</li> </ul> |  |   |
|--|--------|---|--|---|
| Duration   | Time   | Procedure   | Text discourse/ Sentence frames  | Resources   |
| <b>Intro</b>   | 5 min  | <p>1. <u>WARM-UP:</u> Teacher show the activity and the images of the women. Teacher introduces the activity by explaining what they have to do and the resources they'll need (scissors and stick glue). They have to take the past and present verbs sheet and cut the verbs to put them in the "Fill the gaps sheet".</p>  | <ul style="list-style-type: none"> <li>- <i>discovered radium. Who was she?</i></li> <li>- <i>Complete the sentence with the verb in the past or in the present.</i></li> <li>- <i>Read carefully! And work in teams!</i></li> </ul> | <ul style="list-style-type: none"> <li>- Printed "Fill the Gaps" worksheet (<a href="#">Appendix 6</a>)</li> <li>- Visual aids (images of scientists).</li> <li>- Scissors</li> <li>- Stick glue</li> <li>- Timer for pace.</li> <li>- Past/Present verbs display (<a href="#">Appendix 7</a>)</li> <li>- Whiteboard</li> <li>- Whiteboard markers</li> </ul> |
| <b>Desarrollo</b>  | 20 min | <p>2. <u>Guided Fill the gap:</u><br/>                 Students have to get in the two teams we've been working with and decide which role they are today. Then, teacher distributes the worksheets.<br/>                 Students have to work in their groups and decide all together what to put, they have to ask the teacher if its correct before sticking the answers in the sentences.<br/>                 Teacher circulates to scaffold during the entire activity: "<i>What action did Marie Curie do? Use the verb 'discovered.'</i>".</p>   | <ul style="list-style-type: none"> <li>- <i>Look at the verb display for help!</i></li> <li>- <i>I think the missing word is _ because _.</i></li> </ul>   |   |

|   |       |   |  |   |
|---|-------|---|--|---|
| <b>End</b>  | 5 min | 3. <u>WRAP-UP</u> : teacher ask what they've learned today and writes it on the whiteboard.                     | <ul style="list-style-type: none"> <li>- <i>What did you learn today?</i></li> <li>- <i>What did you learn from Group 2's interview? Use: 'I learned that . . .'</i></li> <li>- <i>"I learned that . . ."</i></li> </ul> |   |
| <b>ATTAINMENT TARGETS</b>   |       |   |  |   |
| <i>All children must be able to...</i>  |       | <i>Most children will be able to...</i>   |  | <i>Some of the children could...</i>  |
| <ul style="list-style-type: none"> <li>- Complete 3+ gaps with role collaboration</li> <li>- Present three sentences</li> </ul> |       | <ul style="list-style-type: none"> <li>- Debate answers before writing</li> <li>- Use role strengths</li> </ul> |  | <ul style="list-style-type: none"> <li>- <i>Link gaps to prior lessons (e.g., "This matches our letter")</i></li> <li>- <i>Propose a role swap with evidence (e.g., "X should present because he speaks clearly and he's good at presenting!")</i></li> </ul> |

**Appendix B.8: Lesson 8**

| <b>LESSON 8: Feminist man</b>  |   |  |
|--|---|--|
| <b>Topic:</b> Analysing Hayao Miyazaki’s feminist perspectives in Studio Ghibli films.   |   | <b>Week/Date:</b> 8 <sup>th</sup> of April<br><b>Time:</b> 1 hour – 60 min   |
| <b>Outline of leading activities</b>   |   |  |
| <b>MAIN OJECTIVE:</b> <i>Compare traditional Disney stereotypes with Studio Ghibli’s feminist character tropes using a Venn diagram</i>  |   |  |
| <p>The students will:</p> <ul style="list-style-type: none"> <li>- Respond to the hook question by raising hands and sharing opinions (<i>Raise your hand if you’ve seen a Ghibli film! What’s different about their female characters?!</i>)</li> <li>- Watch diverse Ghibli movies’ trailers and Disney movie trailers to observe their characteristics</li> <li>- Read Miyazaki’s biography</li> <li>- Work in pairs to help each other make the Venn diagram to compare Disney/Ghibli characters.</li> <li>- Present one Venn diagram comparison to the class</li> </ul> <p>The lesson concludes by:</p> <ul style="list-style-type: none"> <li>- Teacher summarizes key feminist aspects about Ghibli’s movies</li> </ul> |   |  |
| <b>Learning objectives:</b>  | <b>Learning outcomes:</b>   | <b>Evidence for Assessment</b>   |
| <ul style="list-style-type: none"> <li>• Identify 3+ feminist traits in Ghibli films (e.g., "No damsels in distress")</li> <li>• Compare Ghibli/Disney female characters using a Venn diagram</li> </ul>   | <ul style="list-style-type: none"> <li>• Complete Venn diagrams with 4+ accurate examples.</li> <li>• Use sentence frames to articulate feminist themes.</li> <li>• Present one comparison to the class.</li> </ul> | <ul style="list-style-type: none"> <li>- Completed Venn diagrams.</li> <li>- Participation in debates.</li> </ul>  |
| <b>Discourse/Text targeted</b>   |   | <b>Language targeted – Non-verbal L Targeted</b>   |
| <p><b>TEXT LEVEL:</b></p> <ul style="list-style-type: none"> <li>- Expository text: biographies of women scientists/doctors (A2 CEFR).</li> </ul> <p><b>SENTENCE LEVEL:</b></p> <ul style="list-style-type: none"> <li>- Simple grammar (past/present tense)</li> <li>- Short sentences (e.g. “She discovered DNA. She was born in 1984).</li> <li>- Compound sentences with <i>and/because</i> (“<i>She hid her gender and became a doctor</i>”).</li> <li>- Compare/contrast questions (“Do you think Dr. Barry could study today?”)</li> <li>- Questions: Wh- questions (“<i>Why did...? How could...?</i>”).</li> </ul>  |   | <p><b>PUBLIC SPEECH:</b></p> <ul style="list-style-type: none"> <li>- Group discussions</li> </ul> <p><b>PRIVATE SPEECH:</b></p> <ul style="list-style-type: none"> <li>- Whispered annotations while reading: “<i>This part explains why his women are strong...</i>”</li> <li>- Self-correction during diagram work: “<i>Wait, Moana is Disney but she’s kind of like Ghibli...</i>”</li> </ul> <p><b>INNER SPEECH:</b></p> <ul style="list-style-type: none"> <li>- Mental comparisons</li> </ul> <p><b>NON-VERBAL COMMUNICATION:</b></p> |

| <b>WORD LEVEL:</b>  |        |  |  |  |
|---|--------|--|--|--|
| <ul style="list-style-type: none"> <li>- Word Bank: <i>scientist, doctor, rights, discover, vote, hospital, radiation, equality.</i></li> <li>- Spelling/Pronunciation: focus on tricky terms like <i>Nobel.</i></li> </ul> |        | <ul style="list-style-type: none"> <li>- <u>Visual anchors</u>: show them videos of Ghibli's and Disney's examples.</li> </ul>   |  |  |
| Duration  | Time   | Procedure  | Text discourse/ Sentence frames  | Resources  |
| <b>Intro</b>  | 10 min | <ol style="list-style-type: none"> <li>1. <u>HOOK</u>: Teacher shows Ghibli trailers and characters and ask if they notice something different.</li> <li>2. <u>Think-Pair-share</u>: students have a moment to think and share with a classmate what could be the difference.</li> </ol>   | <ul style="list-style-type: none"> <li>- <i>Raise your hand if you've seen a Ghibli film!</i></li> <li>- <i>What's different about their female characters?"</i></li> <li>-</li> </ul>   | <ul style="list-style-type: none"> <li>- Canva</li> <li>- Whiteboard</li> <li>- Markers</li> </ul>   |
| <b>Desarrollo</b>   | 35 min | <ol style="list-style-type: none"> <li>3. <u>Read Miyasaki's biography</u></li> <li>4. <u>DISNEY VS. GHIBLI</u>: Teacher asks the about Disney characters and foster their thinking to compare Disney vs. Ghibli's characters.</li> <li>5. <u>VENN DIAGRAM</u>: Students get in pairs and make their Venn diagram to compare the values and characters of both studios.</li> </ol> | <ul style="list-style-type: none"> <li>- <i>Ghibli's [character] ___ while Disney's [character] .</i></li> <li>- <i>Disney's [character] is a stereotype because .</i></li> <li>- <i>Ghibli's [character] breaks stereotypes by ____.</i></li> <li>- <i>Both studios ____.</i></li> <li>- <i>I noticed that in Ghibli films, women ____.</i></li> <li>- <i>This is different from Disney because .</i></li> <li>-</li> </ul> | <ul style="list-style-type: none"> <li>- Canva</li> <li>- Venn diagram templates</li> </ul>  |
| <b>End</b>  | 15 min | <ol style="list-style-type: none"> <li>6. <u>Share</u> 1 or 2 comparisons per pair.</li> <li>7. <u>WRAP UP</u>: teacher ask what they've learned today and writes it on the whiteboard.</li> </ol>   | <ul style="list-style-type: none"> <li>- <i>I agree/disagree because</i></li> <li>- <i>What did you learn today?</i></li> <li>- <i>His films teach us that ____</i></li> </ul>   | <ul style="list-style-type: none"> <li>- Venn Diagrams</li> <li>- Whiteboard</li> <li>- Whiteboard marker</li> </ul>   |
| ATTAINMENT TARGETS  |        |  |  |  |
| <i>All children must be able to...</i>  |        | <i>Most children will be able to...</i>  |  | <i>Some of the children could...</i>   |
| <ul style="list-style-type: none"> <li>- Identify 1-2 comparisons between Ghibli and Disney films</li> <li>- Share one opinion during debates using frames</li> </ul>   |        | <ul style="list-style-type: none"> <li>- Compare more than 3 traits between Disney/Ghibli characters with accurate examples</li> </ul>   |  | <ul style="list-style-type: none"> <li>- <i>Argue how Miyazaki's personal life influenced his feminism</i></li> <li>- <i>Add a "Real-World Connection" section (e.g., "Ghibli's women are like modern scientists").</i></li> </ul> |

**Appendix B.9: Lesson 9**

| <b>LESSON 9: GAME TWINKL</b>   |   |   |
|--|---|---|
| <b>Topic:</b> Revising about the influential women from the unit and some from the present through a deductive reasoning game (WHO IS WHO?).   |   | <b>Week/Date:</b> 10 <sup>th</sup> of April<br><b>Time:</b> 60 min  |
| <b>Outline of leading activities</b>   |   |   |
| <b>MAIN OJECTIVE:</b> <i>Ask strategic yes/no questions to identify their opponent's assigned figure.</i>  |   |   |
| <p>The students will:</p> <ul style="list-style-type: none"> <li>- Recall 1-2 facts about influential women from the past (prior lessons) and from the present</li> <li>- Play <b>2 rounds</b> of the guessing game in groups of 3 or 4 person</li> <li>- Share one fact learned</li> </ul> <p>The lesson concludes by:</p> <ul style="list-style-type: none"> <li>- Students verbally summarizing key traits</li> </ul>   |   |   |
| <b>Learning objectives:</b>  | <b>Learning outcomes:</b>   | <b>Evidence for Assessment</b>  |
| <ul style="list-style-type: none"> <li>• Recall 2-3 key facts about each woman.</li> <li>• Formulate yes/no questions using biographical vocabulary.</li> <li>• Practice active listening and logical deduction.</li> </ul>  | <ul style="list-style-type: none"> <li>• Correctly guess the opponent's figure using ≤5 questions.</li> <li>• Use domain-specific terms (e.g., "aviation," "suffragette").</li> <li>• Write one fact about their figure post-game.</li> </ul> | <ul style="list-style-type: none"> <li>- Observation of question quality during gameplay.</li> <li>- Post-game fact sheets.</li> <li>- Peer feedback on clarity of questions.</li> </ul>  |
| <b>Discourse/Text targeted</b>   |   | <b>Language targeted – Non-verbal L Targeted</b>  |
| <p><u>TEXT LEVEL:</u></p> <ul style="list-style-type: none"> <li>- Biographical cards (expository texts)</li> </ul> <p><u>SENTENCE LEVEL:</u></p> <ul style="list-style-type: none"> <li>- Yes/no questions: <i>"Did your woman win a Nobel Prize?"</i></li> <li>- Compound sentences: <i>"She was an astronaut <b>and</b> a doctor."</i></li> </ul> <p><u>WORD LEVEL:</u></p> <ul style="list-style-type: none"> <li>- Word Bank: <i>scientist, doctor, rights, discover, vote, hospital, radiation, equality.</i></li> <li>- Spelling/Pronunciation: focus on tricky terms like <i>Nobel</i>.</li> </ul> |   | <p><u>PUBLIC SPEECH:</u></p> <ul style="list-style-type: none"> <li>- Group interaction questions during the game (e.g., <i>Did your woman ?</i>)</li> </ul> <p><u>PRIVATE SPEECH:</u></p> <ul style="list-style-type: none"> <li>- Whispered elimination while eyes scan the board</li> </ul> <p><u>INNER SPEECH:</u></p> <ul style="list-style-type: none"> <li>- Mental deduction</li> </ul> <p><u>NON-VERBAL COMMUNICATION:</u></p> |

|   |        |  | <ul style="list-style-type: none"> <li>- <u>Gestures</u>: thinking face, head shake and make a cross with fingers to say no. Thumbs up to indicate "Yes!".</li> <li>- <u>Visual Anchors/Mediators</u>: <b>Portrait Pointing</b>: Students point to faces on board game when eliminating options and color-coded fields.</li> </ul> |  |
|---|--------|--|--|--|
| Duration  | Time   | Procedure  | Text discourse/ Sentence frames  | Resources  |
| Intro   | 10 min | 1. <u>WARM-UP</u> : Name one achievement from a woman in the game.   | <ul style="list-style-type: none"> <li>- <i>I think ___ was the first to ___</i></li> <li>- <i>She worked in ___</i></li> </ul>  | <ul style="list-style-type: none"> <li>- Smartboard to display the cards/instructions</li> </ul>                           |
| Desarrollo  | 30 min | 2. <u>PLAY GAME (WHO IS WHO?)</u> : Play in groups of 3 or 4. Play two rounds ( 7min each round max.)            | <ul style="list-style-type: none"> <li>- <i>Ask about her JOB."</i></li> <li>- <i>"Ask about her COUNTRY."</i></li> <li>- <i>"Ask about her TIME PERIOD (past/present).</i></li> <li>- <i>Was your woman ___ ? -&gt; No, but she</i></li> </ul>  | <ul style="list-style-type: none"> <li>- Gameboard</li> <li>- Cards</li> </ul>   |
| End   | 15 min | 3. Share 1 fact and tidy up  |  | <ul style="list-style-type: none"> <li>- Whiteboard</li> <li>- Whiteboard marker</li> </ul>                                |
| ATTAINMENT TARGETS  |        |  |  |  |
| <i>All children must be able to...</i>  |        | <i>Most children will be able to...</i>  |  | <i>Some of the children could...</i>   |
| <ul style="list-style-type: none"> <li>- Ask 3+ yes/no questions using provided frames</li> </ul> |        | <ul style="list-style-type: none"> <li>- Guess correctly in ≤6 questions using strategic elimination.</li> </ul> |  | <ul style="list-style-type: none"> <li>- Debate why their figure was most influential using historical context.</li> </ul> |

## APPENDIX C: TEACHER TEACHING RESOURCES

### Appendix C.1: Canva slides examples

# 1 SCIENCE CHARADES

## RULES

- No Speaking:** You can't speak or make sounds!
- No Writing:** No drawing, no writing in the air or paper.
- Team Collaboration:** Teammates can shout out multiple guesses until they get it right.
- Time Limit:** Your team has 1 min to guess. If they can't, the other team can guess.

GROUP 1:

- 

GROUP 2:

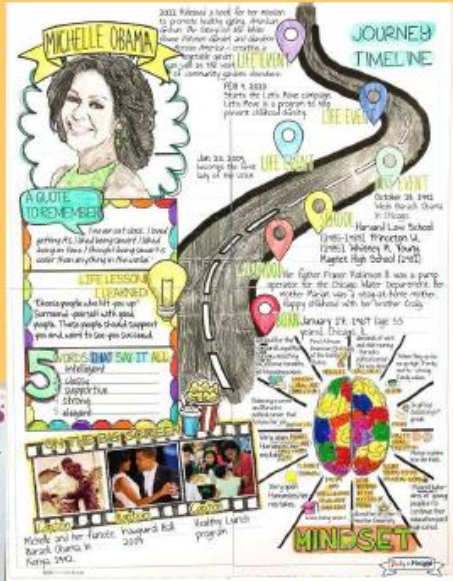
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# 2 RESEARCH TIME!

HEDY LAMARR

ADA LOVELACE

# LET'S MAKE THE TIMELINE!



# TIMELINE



| Criteria               | Excellent (4)   | Good (3)   | Needs Improvement (2)   | Incomplete (1)   | Score |
|------------------------|---|--|---|--|-------|
| <b>Content</b>         | Includes all key events in the woman's life; accurate and detailed information.   | Includes most key events; information is mostly accurate and detailed. | Missing some key events; information is somewhat accurate but lacks detail. | Missing many key events; information is inaccurate or overly simplistic.   |       |
| <b>Organization</b>    | Timeline is logically organized; events are in correct chronological order.       | Timeline is mostly organized; events are mostly in correct order.      | Timeline is somewhat disorganized; some events are out of order.            | Timeline is disorganized; events are not in chronological order.           |       |
| <b>Creativity</b>      | Timeline is visually appealing; uses colours, images, and creative design.        | Timeline is visually neat; uses some colours and images.               | Timeline is plain; lacks creativity or visual appeal.                       | Timeline is incomplete or lacks effort in design.                          |       |
| <b>Language Use</b>    | Uses past simple tense correctly; sentences are clear and grammatically accurate. | Mostly uses past simple tense correctly; sentences are mostly clear.   | Some errors in past simple tense; sentences are somewhat unclear.           | Frequent errors in past simple tense; sentences are unclear or incorrect.  |       |
| <b>Role Fulfilment</b> | All group members fully fulfil their assigned roles and contribute equally.       | Most group members fulfil their roles; some minor imbalances.          | Some group members fulfil their roles; significant imbalances.              | Few group members fulfil their roles; one or two students do all the work. |       |

She was **born** in **London**, United Kingdom in **1875**.

When she was a kid, she suffered from "Polio". This illness made her disabled.

In **1907** Rosa joined the WSPU (Women's Social and Political Union) to make a change. Members of the WSPU were the **SUFRAGETTES**.

The **SUFRAGETTES** wanted to change the law so women could **VOTE**.

Rosa worked **seven years** to get **VOTES FOR WOMEN**...

Law was changed in **1918**. Since then, women over 30 years old voted.

Rosa May Billinghurst

She used her **WHEELCHAIR** to **HIT** police that arrested women in the protests!!!

She was arrested many times for **THIS!**

| WRITING A LETTER | Examples   | ✓/X |
|------------------|--|-----|
| Date             | 03-25-25   |     |
| Greeting         | Dear Ms/Mrs. _____   |     |
| Introduction     | <ul style="list-style-type: none"> <li>- I appreciate you because ...</li> <li>- I chose you because ...</li> <li>- I want to thank you because</li> </ul> |     |
| Body             | You were important because ...   |     |
| Conclusion       | <ul style="list-style-type: none"> <li>- You are important to me because...</li> <li>- I feel...</li> </ul>  |     |
| Closing          | Sincerely, With Love, Kind regards, etc  |     |

**EXAMPLE**

To: ..... Date: .....

From: .....

I appreciate you because...

1. \_\_\_\_\_

2. \_\_\_\_\_


Thank you for \_\_\_\_\_.

Kind regards,  
 \_\_\_\_\_ (name and signature)




**Appendix C.3: Adapted Mind-map**

**She was born...**  
 She \_\_\_\_\_ (born) in  
 London, UK, in 1875




**She had Polio...**  
 When she was a child, she \_\_\_\_\_  
 (have) "Polio."  
 This made it hard for her to walk.  
 She became disabled.




**Law changed and women could vote**  
 The law \_\_\_\_\_ (change) in  
 1918.  
 After that, women over 30 could  
 vote.

**She joined...**  
 In 1907, Rosa \_\_\_\_\_ (join) the  
 WSPU (Women's Social and Political  
 Union) to help women.  
 The WSPU members were called  
**Suffragettes**.



**Suffragettes wanted women to VOTE**  
 The Suffragettes \_\_\_\_\_  
 (want) to change the law.  
 They wanted women to vote.

**She worked for...**  
 Rosa \_\_\_\_\_ (work) for 7 years  
 so women could vote.



**Appendix C.4: Past/Present display**

| PRESENT              | PAST       |
|----------------------|------------|
| do                   | did        |
| die                  | died       |
| born                 | was born   |
| make                 | made       |
| work                 | worked     |
| help                 | helped     |
| meet                 | met        |
| want                 | wanted     |
| change               | changed    |
| get                  | got        |
| know                 | knew       |
| have                 | had        |
| study / studies      | studied    |
| fight / fights       | fought     |
| discover / discovers | discovered |
| write                | wrote      |

Appendix C.5: Mind-map template



Appendix C.6: Teamwork roles (cards)

Leader's back of the card:

- RESPONSIBILITY: Make sure everyone do their role / tasks.
- TASKS:
  - Organize the group
  - set goals ("Let's do this first")
  - Resolve conflicts
  - Check to see everyone is completing their tasks

**Appendix C.7: Sentence frames**

| WRITING A LETTER | Examples  | ✓/X |
|------------------|---|-----|
| Date             | 03-25-25  |     |
| Greeting         | <i>Dear<br/>Ms/Mrs. _____</i>   |     |
| Introduction     | - <i>I appreciate you because ...</i><br>- <i>I chose you because ...</i><br>- <i>I want to thank you because</i> |     |
| Body             | <i>You were important because ...</i>   |     |
| Conclusion       | - <i>You are important to me because...</i><br>- <i>I feel ...</i>  |     |
| Closing          | <i>Sincerely, With Love, Kind regards, etc</i>  |     |

For beginners and ACNEE:

To: .....

Date:.....

From: .....

I appreciate you because...

1. \_\_\_\_\_
2. \_\_\_\_\_

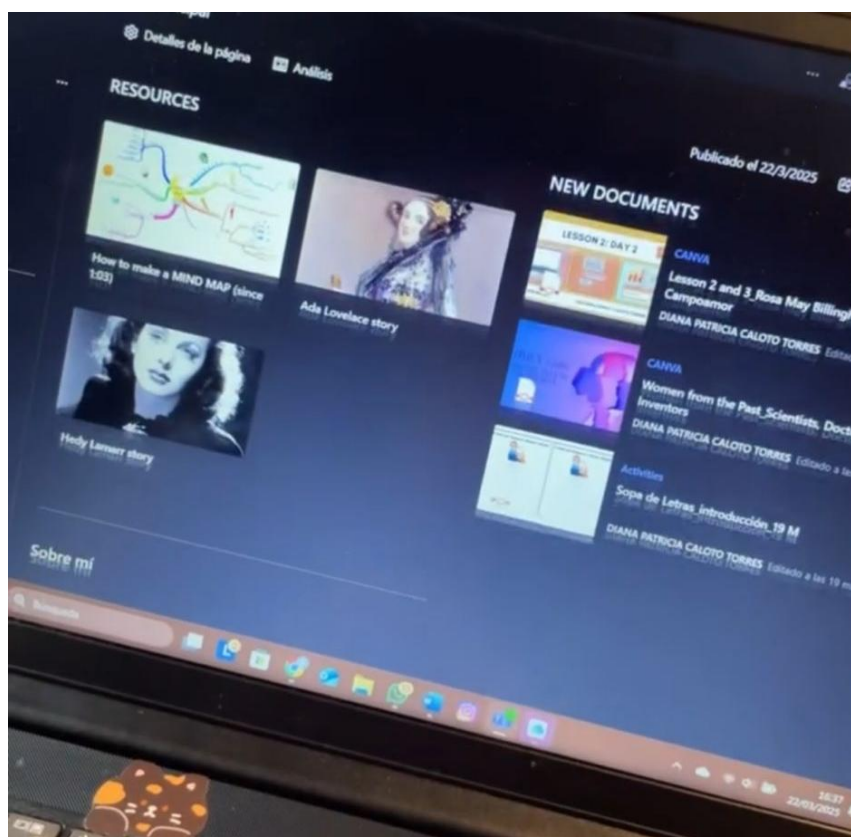
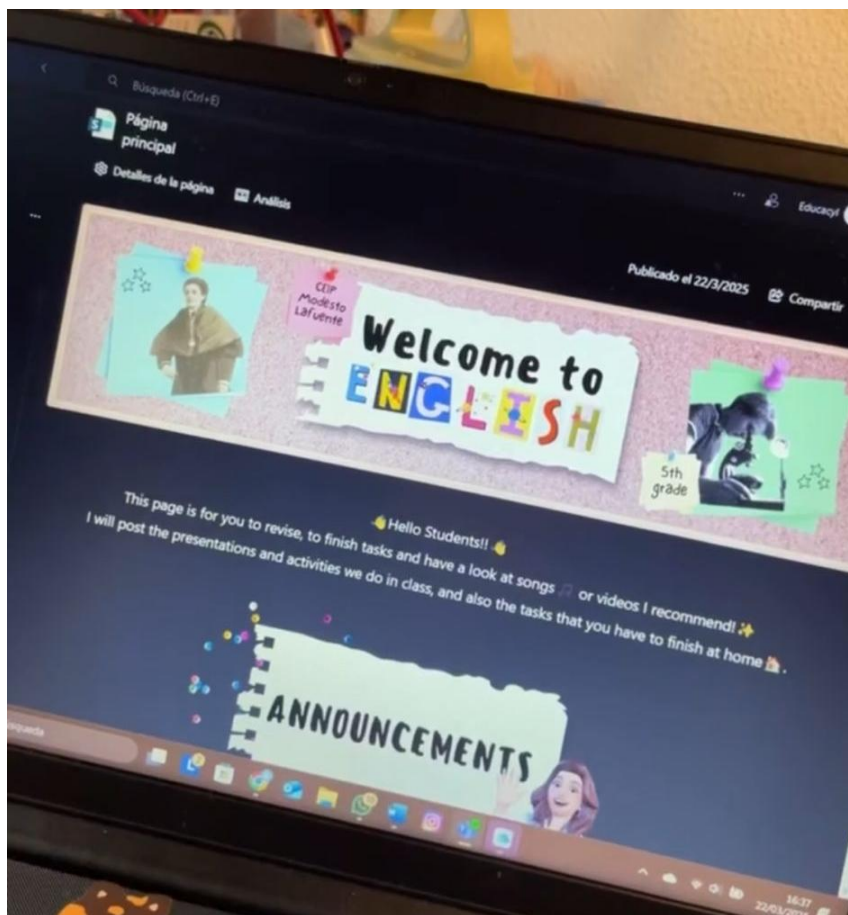
Thank you for \_\_\_\_\_.

Kind regards,

\_\_\_\_\_ (name and signature)

|

Appendix C.8: Teams

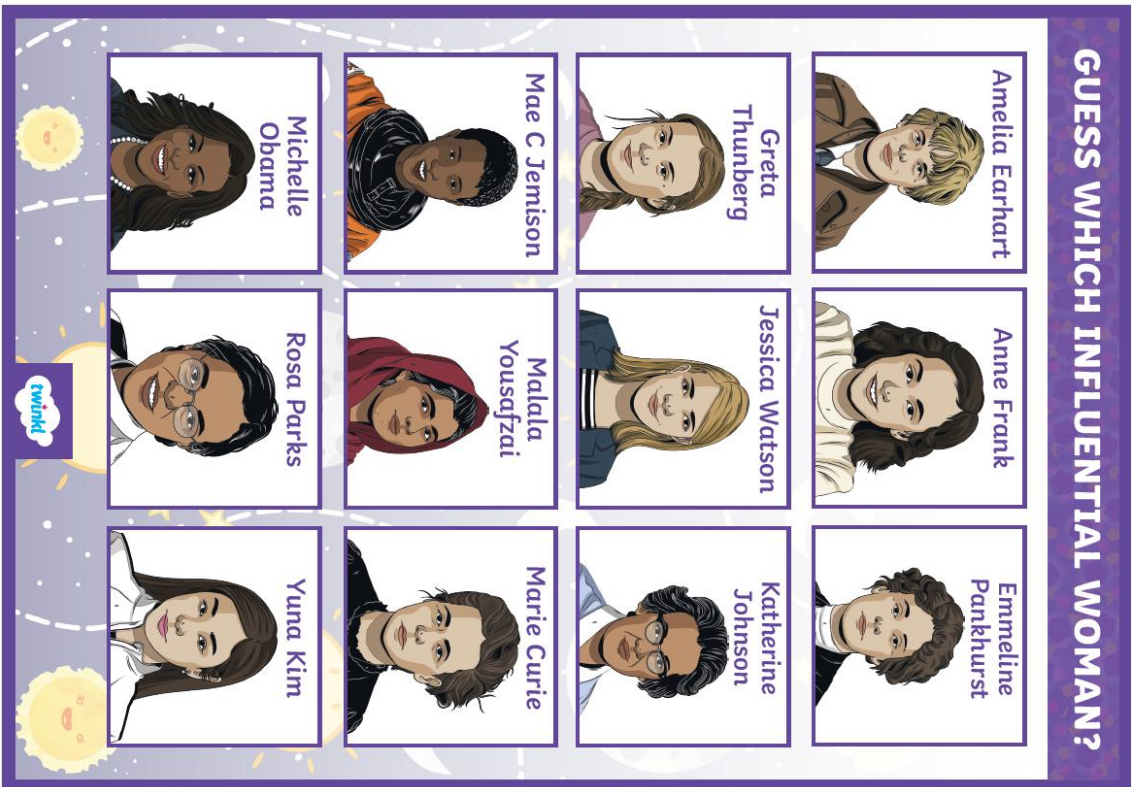


**Appendix C.9: Who is who Game (Retrieved from Twinkl)**

- Cards:

|  |   |   |  |
|--|---|---|--|
| <p><b>Amelia Earhart</b></p> <p>Amelia Earhart was a pioneering American aviator and the first woman to fly solo across the Atlantic Ocean.</p> <p>She clocked up many more firsts in aviation but was lost during a round-the-world flight in 1937.</p>    | <p><b>Anne Frank</b></p> <p>Anne Frank was born in Frankfurt, Germany on 12<sup>th</sup> June 1929. When Anne was young, her parents moved the family to Amsterdam in the hope of finding safety from the rising anti-Semitism in Germany.</p>   | <p><b>Emmeline Pankhurst</b></p> <p>Emmeline Pankhurst was a leading British women's rights activist. She led the British suffragette movement, which eventually won the right for women to vote.</p>   | <p><b>Greta Thunberg</b></p> <p>Born in Sweden in 2003, Greta Thunberg is one of the youngest people to speak on a global stage about the need for climate action. She is an avid and vocal environmentalist.</p>   |
| <p><b>Jessica Watson</b></p> <p>Jessica Watson was born in Gold Coast, Queensland, Australia on 18<sup>th</sup> May 1993. For five years, her family lived on board a 16-metre cabin cruiser. It was during this time that Jessica decided she wanted to become the youngest person to sail, solo and unassisted, around the world.</p>  | <p><b>Katherine Johnson</b></p> <p>Katherine Johnson was born on 26<sup>th</sup> August 1918 in White Sulphur Springs, West Virginia. From a young age, Katherine loved maths. She even started high school early, when she was just 10 years old, and started taking college classes to become a mathematician at 15.</p>  | <p><b>Mae C Jemison</b></p> <p>Mae Jemison was the first African American woman to become an astronaut and she travelled into space on the Endeavour space shuttle on 12<sup>th</sup> September 1992. On the mission, she took part in several research projects, including two bone cell research experiments.</p>  | <p><b>Malala Yousafzai</b></p> <p>Malala was born on 12<sup>th</sup> July 1997, in Mingora, Khyber Pakhtunkhwa, Pakistan. She is a young Pakistani human rights activist who fights for the rights of girls and women to receive an education. She is the youngest ever Nobel Peace Prize winner.</p>  |
| <p><b>Marie Curie</b></p> <p>Marie Curie was the first woman to win a Nobel Prize and the only woman to win the award in two different fields for extracting two previously unknown elements, polonium and radium, both more radioactive than uranium.</p>    | <p><b>Michelle Obama</b></p> <p>Michelle Obama is best known as the former US First Lady and wife of the first African American president of the United States, Barack Obama. She has become a role model to many people by taking practical steps to make social changes, and to empower women.</p>                       | <p><b>Rosa Parks</b></p> <p>Rosa Parks helped to initiate the civil rights movement in the United States when she refused to give up her seat to a white man on a Montgomery, Alabama bus in 1955. This refusal made a significant contribution to big changes in American Law.</p>                                 | <p><b>Yuna Kim</b></p> <p>Yuna Kim was a professional figure skater and one of the most famous female athletes in South Korea. She began skating when she was six years old. At the age of eleven, she became the youngest Korean skater to complete the five different triple jumps.</p>             |

- Game board:









- Instructions page:

# Guess Which Influential Woman Instructions



## How to Play

### You will need:

- Printer 
- Laminator (optional) 
- 2 x A4 game boards (included with this resource) 
- 24 cards (included with this resource) 
- A pencil for each player or white board markers if the game boards are laminated 
- Two players 

### A fun two player game for children aged 7+!

1. Print out the game boards.
2. Print and cut out the cards.
3. Laminate the game boards and cards (optional).
4. Assign each player a game board and one card at random.
5. Ask your opponent questions about their influential woman card. Only ask questions that have yes or no answers.
6. Mark off the women with a whiteboard pen or pencil as you eliminate them.
7. Guess the other player's woman card correctly before they can guess yours to win!



### Looking for more printable board games to play with your children?

Scan this QR code to be taken straight to the landing page of [Twinkl Board Games](https://www.twinkl.com/quality-standard-approved/quality-standard-approved-board-games). Browse our collection of printable board games for kids, a fun way to teach educational topics while helping children to develop logic, reasoning, and social skills. They are great tools to promote family time offline and teacher-student relationships in the classroom.

**APPENDIX D: ASSESSMENT TOOLS****Appendix D.1: Timeline rubric**

| <b>Criteria</b>        | <b>Excellent (4)</b>  | <b>Good (3)</b>  | <b>Needs Improvement (2)</b>  | <b>Incomplete (1)</b>  | <b>Score</b> |
|------------------------|---|--|---|--|--------------|
| <b>Content</b>         | Includes all key events in the woman's life; accurate and detailed information.   | Includes most key events; information is mostly accurate and detailed. | Missing some key events; information is somewhat accurate but lacks detail. | Missing many key events; information is inaccurate or overly simplistic.   |              |
| <b>Organization</b>    | Timeline is logically organized; events are in correct chronological order.       | Timeline is mostly organized; events are mostly in correct order.      | Timeline is disorganized; some events are out of order.                     | Timeline is disorganized; events are not in chronological order.           |              |
| <b>Creativity</b>      | Timeline is visually appealing; uses colours, images, and creative design.        | Timeline is visually neat; uses some colours and images.               | Timeline is plain; lacks creativity or visual appeal.                       | Timeline is incomplete or lacks effort in design.                          |              |
| <b>Language Use</b>    | Uses past simple tense correctly; sentences are clear and grammatically accurate. | Mostly uses past simple tense correctly; sentences are mostly clear.   | Some errors in past simple tense; sentences are unclear.                    | Frequent errors in past simple tense; sentences are unclear or incorrect.  |              |
| <b>Role Fulfilment</b> | All group members fully fulfil their assigned roles and contribute equally.       | Most group members fulfil their roles; some minor imbalances.          | Some group members fulfil their roles; significant imbalances.              | Few group members fulfil their roles; one or two students do all the work. |              |
| <b>TOTAL</b>           |   |  |   |  |              |

**Appendix D.2: Timeline's presentation rubric**

| <b>Criteria</b>     | <b>Excellent (4)</b>  | <b>Good (3)</b>   | <b>Needs Improvement (2)</b>                          | <b>Incomplete (1)</b>                                | <b>Score</b> |
|---------------------|---|---|---|--|--------------|
| <b>Clarity</b>      | Speaks clearly and confidently; easy to understand.           | Speaks clearly; mostly easy to understand.              | Speaks clearly; sometimes hard to understand.         | Speaks unclearly; hard to understand.                |              |
| <b>Content</b>      | Shares accurate and interesting facts about the scientist.    | Shares mostly accurate and interesting facts.           | Shares some accurate facts; lacks detail or interest. | Shares inaccurate or uninteresting facts.            |              |
| <b>Language Use</b> | Uses past simple tense and other structures correctly.        | Mostly uses past simple tense and structures correctly. | Some errors in past simple tense and structures.      | Frequent errors in past simple tense and structures. |              |
| <b>Teamwork</b>     | All group members participate equally and support each other. | Most group members participate; some support.           | Some group members participate; limited support.      | Few group members participate; no support.           |              |
| <b>TOTAL</b>        |   |   |   |  |              |

**Appendix D.3: Letter writing rubric**

| <b>Criteria</b>            | <b>Excellent (4)</b>  | <b>Good (3)</b>  | <b>Needs Improvement (2)</b>                       | <b>Incomplete (1)</b>              | <b>Score</b> |
|----------------------------|---|--|--|------------------------------------|--------------|
| <b>Structure</b>           | Includes <b>all parts</b> (date, greeting, body, closing); paragraphs are clear.  | Missing <b>1 part</b> (e.g., date); paragraphs disorganized. | Missing <b>2 parts</b> ; paragraphs are confusing. | No recognizable structure.         |              |
| <b>Content</b>             | <b>3+ accurate facts</b> about the scientist; clear connection to modern impact.  | <b>2 facts</b> ; simple connection to today.                 | <b>1 fact</b> ; vague or irrelevant connection.    | No facts or incorrect information. |              |
| <b>Language Use</b>        | <b>Flawless grammar</b> ; uses <b>STEM vocabulary</b> and correct verb tenses.    | Minor errors; basic but appropriate vocabulary.              | Frequent errors; confusing sentences.              | Major errors hinder understanding. |              |
| <b>Personal Reflection</b> | <b>Deep expression</b> of gratitude/inspiration ("Because of you, women can..."). | Simple thank-you phrases ("I admire your work").             | Generic mention ("She was important").             | No personal reflection.            |              |
| <b>Creativity</b>          | <b>Decorated letter</b> (drawings/visuals); original message.                     | Basic decoration; straightforward but effective message.     | Minimal creative effort.                           | No decoration or copied message.   |              |
| <b>TOTAL</b>               |   |  |  |                                    |              |

**Appendix D.4: Interview role-play Rubric**

| <b>Criteria</b>            | <b>Excellent (4)</b>   | <b>Good (3)</b>                                | <b>Needs Improvement (2)</b>                     | <b>Incomplete (1)</b>                      | <b>Score</b> |
|----------------------------|--|--|--|--|--------------|
| <b>Content Accuracy</b>    | <b>4+ precise facts</b> about the scientist; clear connection to her challenges.               | <b>3 facts;</b> basic mention of struggles.    | <b>1–2 facts;</b> minimal or inaccurate details. | No factual content or major errors.        |              |
| <b>Language Use</b>        | <b>3+ STEM terms</b> (e.g., <i>radiation, research</i> ); <b>past tense flawless.</b>          | <b>2 STEM terms;</b> minor tense errors.       | <b>1 STEM term;</b> frequent tense errors.       | No STEM terms; incorrect tense throughout. |              |
| <b>Interview Structure</b> | <b>Greeting, 4+ questions, closing;</b> logical flow.  | Missing 1 part (e.g., closing); disjointed.    | Missing 2 parts; unclear structure.              | No recognizable interview format.          |              |
| <b>Performance</b>         | <b>Confident tone, gestures</b> (e.g., "mic" or "writing"); maintains role.                    | Some hesitation; minimal gestures.             | Frequent pauses: breaks character.               | Unprepared; no role adherence.             |              |
| <b>Active Listening</b>    | <b>Asks follow-up questions;</b> connects to modern STEM (" <i>Did you face obstacles?</i> "). | Listens but no follow-ups; simple modern link. | Minimal engagement; no connections.              | No interaction beyond script.              |              |
| <b>TOTAL</b>               |  |  |  |  |              |

**Appendix D.5: Mind-map rubric**

| <b>Criteria</b>         | <b>Excellent (4)</b>   | <b>Good (3)</b>  | <b>Needs Improvement (2)</b>                  | <b>Incomplete (1)</b>               | <b>Score</b> |
|-------------------------|--|--|---|-------------------------------------|--------------|
| <b>Content Accuracy</b> | <b>4+ precise facts</b> (barriers, achievements, dates); no errors.                                    | <b>3 facts;</b> minor inaccuracies.                    | <b>1–2 facts;</b> vague or incorrect details. | No factual content or major errors. |              |
| <b>Organization</b>     | Clear hierarchy (central topic + branches); logical connections between ideas.                         | Organized but lacks connections.                       | Disjointed layout; hard to follow.            | No structure or random placement.   |              |
| <b>Vocabulary Use</b>   | <b>3+ domain terms</b> (e.g., <i>suffrage</i> , <i>radiation</i> , <i>inequality</i> ) used correctly. | <b>2 terms;</b> minor misuse.                          | <b>1 term;</b> incorrect usage.               | No domain-specific vocabulary.      |              |
| <b>Creativity</b>       | <b>Visual appeal</b> (colours, icons, drawings); original design.                                      | Basic visuals (e.g., boxes/lines); minimal creativity. | Plain text; no visuals.                       | Incomplete or copied design.        |              |
| <b>Presentation</b>     | <b>Confident delivery;</b> explains all facts clearly; answers peer questions.                         | Reads directly from mind map; limited elaboration.     | Hesitant; omits key points.                   | No presentation or unprepared.      |              |
| <b>TOTAL</b>            |  |  |   |                                     |              |

**Appendix D.6: Venn diagram**

| <b>Criteria</b>          | <b>Excellent (4)</b>  | <b>Good (3)</b>                                   | <b>Needs Improvement (2)</b>                          | <b>Incomplete (1)</b>    | <b>Score</b> |
|--------------------------|---|---|---|--------------------------|--------------|
| <b>Content Accuracy</b>  | <b>4+ precise comparisons</b> (e.g., " <i>Ghibli's Chihiro is proactive; Disney's Cinderella waits for rescue</i> "). | <b>3 comparisons</b> ; minor inaccuracies.        | <b>1-2 comparisons</b> ; vague or incorrect examples. | No valid comparisons.    |              |
| <b>Feminist Analysis</b> | <b>3+ feminist traits</b> identified (e.g., " <i>No damsels in distress</i> ," " <i>Complex careers</i> ").           | <b>2 traits</b> ; basic analysis.                 | <b>1 trait</b> ; superficial mention.                 | No feminist perspective. |              |
| <b>Organization</b>      | Clear <b>visual separation</b> (Ghibli/Disney/Both); logical grouping of ideas.                                       | Some overlap confusion but mostly organized.      | Disjointed or unclear categories.                     | No structure.            |              |
| <b>Creativity</b>        | <b>Icons, colours, or quotes</b> from films to illustrate points.   | Basic visuals (text-only with labels).            | Minimal effort; messy layout.                         | Incomplete or copied.    |              |
| <b>Presentation</b>      | <b>Confidently explains</b> 2+ comparisons; answers peer questions.   | Reads directly from diagram; limited elaboration. | Hesitant; omits key points.                           | No presentation.         |              |
| <b>TOTAL</b>             |   |   |   |                          |              |

**Appendix D.7: Observation sheet**

| <b>OBSERVATION SHEET</b>                                  |                       |   |   |   |   |         |
|---|-----------------------|---|---|---|---|---------|
| <i>Student's name:</i>                                    |                       |   |   |   |   |         |
| <i>Teacher:</i>   |                       |   |   |   |   |         |
| <i>Course:</i>  |                       |   |   |   |   |         |
| <i>Date and time:</i>                                     |                       |   |   |   |   |         |
| <b>Degree of development achieved:</b>                    |                       |   |   |   |   |         |
| 1 = very low; 5 = excellent                               |                       |   |   |   |   |         |
|   | DEGREE OF DEVELOPMENT |   |   |   |   | REMARKS |
|   | 1                     | 2 | 3 | 4 | 5 |         |
| <b>Attitudes &amp; Values</b>                             |                       |   |   |   |   |         |
| 1. Is punctual when entering the classroom                |                       |   |   |   |   |         |
| 2. Accepts the teacher's corrections and tries to improve |                       |   |   |   |   |         |
| 3. Shows respect for classmates' opinions                 |                       |   |   |   |   |         |
| <b>Classwork</b>  |                       |   |   |   |   |         |
| 4. Stays attentive during explanations                    |                       |   |   |   |   |         |
| 5. Asks questions when in doubt                           |                       |   |   |   |   |         |
| 6. Works independently when required                      |                       |   |   |   |   |         |
| 7. Participates when asked to go to the board             |                       |   |   |   |   |         |
| <b>Cooperation habits</b>                                 |                       |   |   |   |   |         |
| 8. Helps peers during pair or group work                  |                       |   |   |   |   |         |
| 9. Collaborates equally in team tasks                     |                       |   |   |   |   |         |
| 10. Manages conflicts constructively                      |                       |   |   |   |   |         |
| <b>Academic performance</b>                               |                       |   |   |   |   |         |
| 11. Synthesizes information clearly                       |                       |   |   |   |   |         |
| 12. Speaks with accurate pronunciation and structure      |                       |   |   |   |   |         |
| 13. Writes well-structured letters or mind maps           |                       |   |   |   |   |         |
| 14. Correctly completes grammar tasks                     |                       |   |   |   |   |         |
| 15. Identifies relevant comparisons                       |                       |   |   |   |   |         |
| 16. Asks and answers functional questions in English      |                       |   |   |   |   |         |

|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
| 17. Explains the importance of the woman chosen                              |  |  |  |  |  |  |
| 18. Explain their evidence of learning orally                                |  |  |  |  |  |  |
| <b>Autonomy &amp; Responsibility</b>   |  |  |  |  |  |  |
| 19. Manages time efficiently during activities                               |  |  |  |  |  |  |
| 20. Seeks additional information on their own                                |  |  |  |  |  |  |
| 21. Reflects on their own learning (e.g., bullseye/self-assessment)          |  |  |  |  |  |  |
| <b>Learning to Learn / Self-assessment</b>                                   |  |  |  |  |  |  |
| 22. Accepts and applies feedback to improve                                  |  |  |  |  |  |  |
| 23. Identifies strengths and areas to improve during self-reflection         |  |  |  |  |  |  |
| <b>Digital competence</b>  |  |  |  |  |  |  |
| 24. Uses digital tools appropriately (laptop)                                |  |  |  |  |  |  |
| 25. Follows instructions in virtual tools/environments (e.g., Kahoot, teams) |  |  |  |  |  |  |

Appendix D.8: Fill-in-the-gaps

| <b>Fill in the gaps- Checklist</b>   |   |                 |         |
|--|---|-----------------|---------|
| <i>Student's name:</i>   |   |                 |         |
| <i>Teacher:</i>  |   |                 |         |
| <i>Course:</i>   |   |                 |         |
| <i>Date and time:</i>  |   |                 |         |
| <b>Objective:</b> Complete the gaps in each sentence using past simple verbs and key vocabulary while working in groups. |   |                 |         |
| <b>Degree of development achieved:</b>   |   |                 |         |
| 1 Not yet / Did not show this skill  |   |                 |         |
| 2 Emerging / Showed initial attempts, but with frequent errors or little input   |   |                 |         |
| 3 Acceptable / Met expectations with some support  |   |                 |         |
| 4 Almost confident / Mostly accurate and independent, minor errors   |   |                 |         |
| 5 Confident / Clear, correct, and consistent performance   |   |                 |         |
|  |   | ACHIEVED<br>(X) | REMARKS |
| All students must be able to (4 – 6 pt)  | Complete at least <b>3 gaps</b> with peer/role support  |                 |         |
|  | Read aloud <b>3 correct sentences</b> using target structures (e.g., past simple)                                     |                 |         |
| Most of the students will be able to (6-7 pts)   | <b>Collaboratively discuss</b> answers before writing   |                 |         |
|  | <b>Apply their team role</b> actively (e.g., designer, researcher, speaker)   |                 |         |
| Some students could (8-10 pts)   | <b>Make connections</b> to previous lessons (e.g., “This verb appeared in our letter!”)                               |                 |         |
|  | <b>Propose role swaps</b> with justification (e.g., “Let her do it! she speaks clearly and helped with the writing!”) |                 |         |
| TOTAL MARK   |   | /10             |         |

**Appendix D.9: Q&A checklist**

| <b>Q&amp;A Checklist</b>                       |  |                 |         |
|--|--|-----------------|---------|
| <i>Student's name:</i>                         |  |                 |         |
| <i>Teacher:</i>                                |  |                 |         |
| <i>Course:</i>                                 |  |                 |         |
| <i>Date and time:</i>                          |  |                 |         |
| <b>Objective:</b>                              |  |                 |         |
|  |  | ACHIEVED<br>(X) | REMARKS |
| All students must be able to (4 – 6 pt)        | Answer Q1  |                 |         |
|  | Answer Q2  |                 |         |
| Most of the students will be able to (6-7 pts) | Explain one of Curie's discoveries (Q3–Q5)                                     |                 |         |
|  | Describe its impact in simple terms  |                 |         |
| Some students could (8-10 pts)                 | Connect Curie's challenges to the current experiences of women in science/STEM |                 |         |
|  | Reflect on fairness, inclusion, or opportunity                                 |                 |         |
| TOTAL MARK                                     |  | /10             |         |



# KATHERINE JOHNSON

There wasn't a calculation too complicated for the extraordinarily talented mathematician Katherine Johnson. She was a **BRIGHT STAR** but because of segregation laws in the USA at that time stopped black people from having the same opportunities as white people.)

In the 1950s, Katherine got a job as a 'computer' at NASA. Computers as we know them today hadn't been developed yet so NASA employed lots of women to help male scientists with the maths needed for these spacecraft. Women were rarely considered for these top jobs - especially black women like Katherine.

Nobody expected Katherine to play a vital part in the **'THE SPACE RACE'**, but they hadn't done their maths properly!

**THE SPACE RACE:** During the 1950s and 60s, the USA and the Soviet Union (now Russia) competed to be the first to explore space.

**FOLLOW THE ARROWS TO SEE HOW KATHERINE HELPED PUT NASA'S JOURNEY TO THE STARS...**

Lots of the way things worked at NASA didn't **fit** for Katherine, like not being allowed to attend important meetings just because she was a woman...

**By 1960**, Katherine became one of the first women at NASA to have her work and name credited on a research report.

In 1961, Katherine's calculations helped to successfully send the first American into space on the Freedom 7 mission.

**THE FREEDOM 7**

**THE FREEDOM 7**  
If I could have, we'd have AND here

**THE FREEDOM 7**  
I'm sure we'll get these ready, so I can't come!

**THE FREEDOM 7**  
I trust Katherine's maths, LETT 'em GO!

**THE FREEDOM 7**  
KATHERINE says the number's good!

**THE FREEDOM 7**  
John Glenn trusted Katherine over new computer technology to check the numbers that would allow him to launch and land safely on his mission to orbit the Earths.

**THE FREEDOM 7**  
The computer got ready, LETT 'em GO!

**THE FREEDOM 7**  
I trust Katherine's maths, LETT 'em GO!

**THE FREEDOM 7**  
During her 33-year career at NASA, Katherine continued to work on many high profile space missions. The course she set made exciting careers in maths and science possible for countless other women.

APPENDIX F: GREAT WOMEN WHO CHANGED THE WORLD

# Marie Curie

Marie's research wasn't all fizzling and fizzling and exciting experiments. There was lots of watching and waiting until ...

**Questions, questions.**  
Marie had 50 many questions about science.

Marie came from a poor family in Poland. She saved and struggled to study science at university in Paris, France - and dedicated her life to finding answers that gave the world treatments for serious illnesses.

It was in Paris that Marie became intrigued by a recent mind-boggling scientific discovery - **K-ROGZ!**

**K-ROGZ** were first studied in 1895, by German physicist Wilhelm Röntgen. They are invisible rays that pass through solid objects, like our bodies. X-rays are a type of radiation.

Exciting! I wonder: there are any other substances that give off radiation?

**WOMIT!** I have discovered two brand new elements - polonium and radium! Both glow and give off a strange invisible radiation. They are **RADIOACTIVE!** Hmm, I wonder if either of them is useful?

**Element:** The metals, minerals, liquids and gases that the world is made up of. Finding a new one is BIG news!

**RADIOACTIVE:** Marie said that substances that gave off radiation were radioactive (like uranium was the first person to use this term).

**RISKY RADIATOR**  
Marie liked to sleep beside a gemmy glowing jar of radium but didn't realise this was dangerous! Marie fell ill a lot of the time. We now know she was suffering from radiation poisoning.

In 1903 and 1911 Marie was given the world's top award for science - the Nobel Prize. She is the only woman to have won the prize twice.

Further experiments revealed that radium was a wonder element - it could be used to treat people with cancer.

**Po** **Ra**

## APPENDIX G: FIGURES

Figure 1.

*Percentage of graduates by gender in the degrees with the highest job placement*



APPENDIX H: STUDENT WORK SAMPLES

Appendix H.1: Timeline samples

**Hedy**

The first movie of Hedy Lamarr was in 1938.

1914 She was born in Vienna, Austria. She was born the 9th of November 1914.

1938

1939 The Second World War was starting in 1939.

1941 Hedy Lamarr created with Anthonio and GPS in 1941.

1945 The Second World War was finished in 1945.

1981 She went to America in 1981.

2000 She was die in Coral Gables, Florida. RIP

**Lamarr**

Hedy Lamarr

**Mary Shelley**

1815 She was born

1816 Her father left England

1819 She began study

1824 In already had tutors

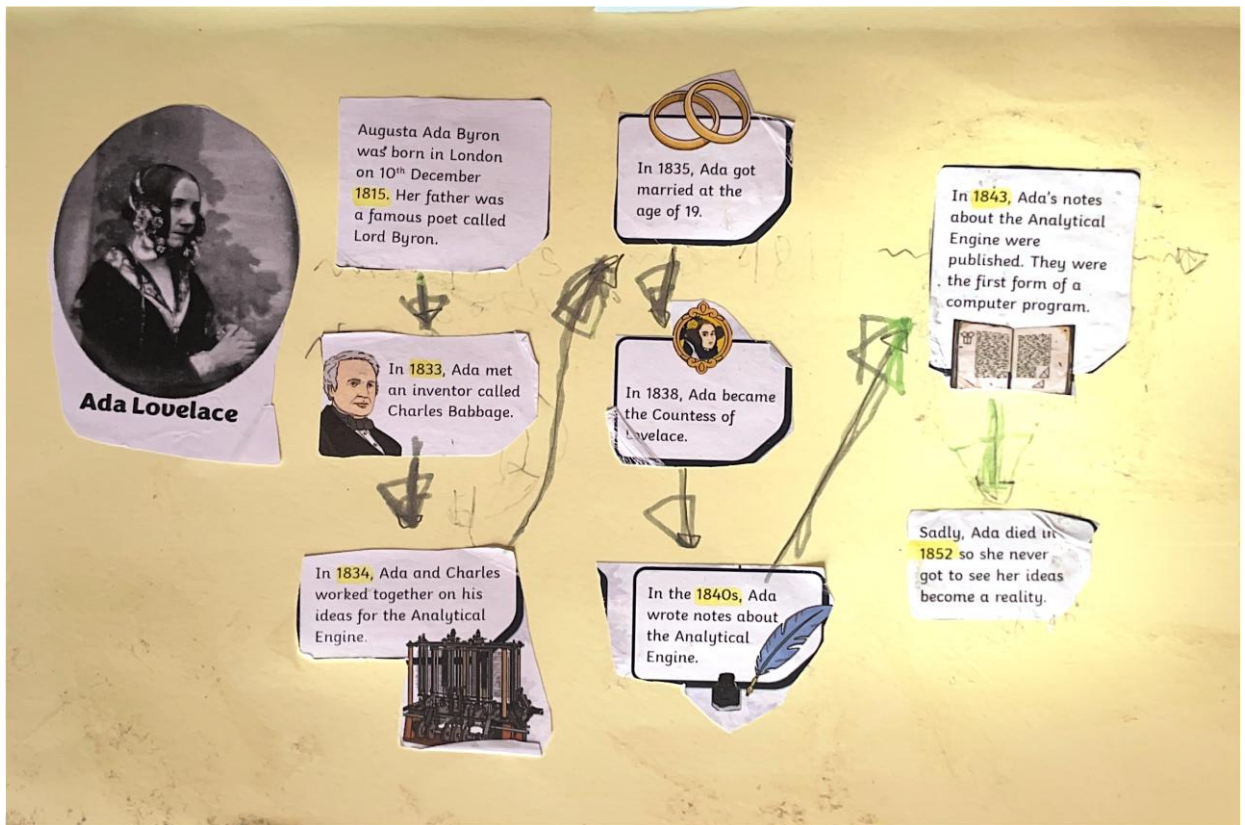
1826 She wrote a letter of his cousin

1842 Did a job for a scientific magazine

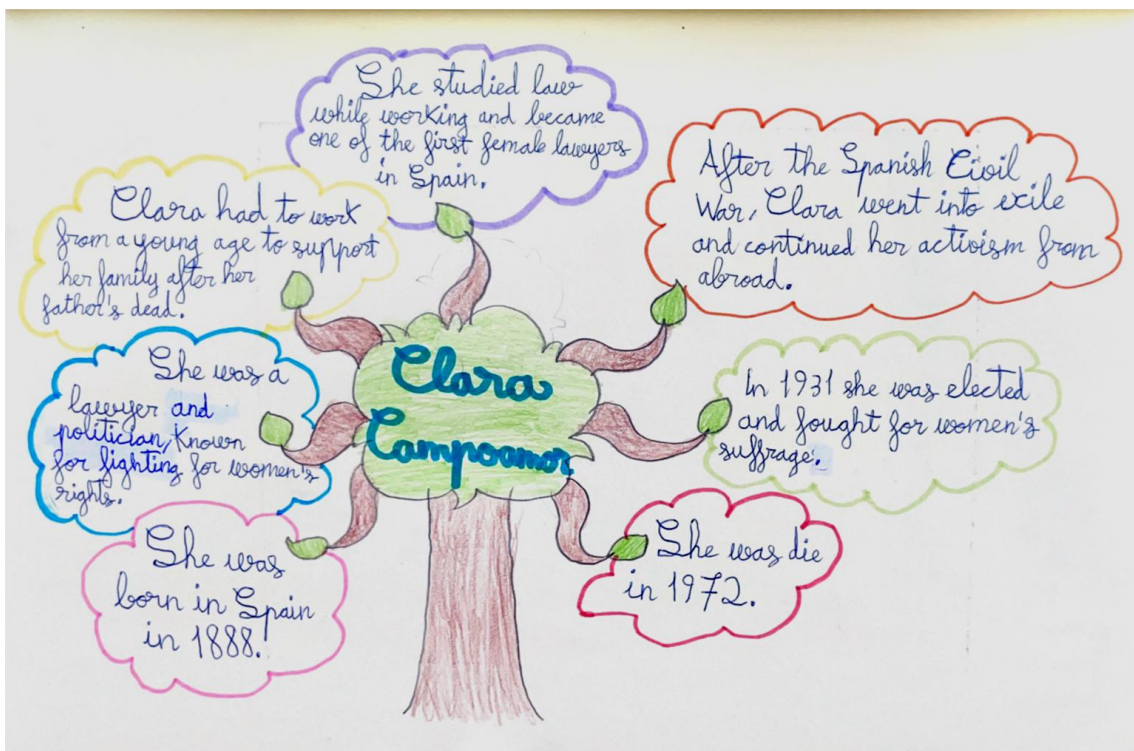
1843 His notes were published in a scientific journal

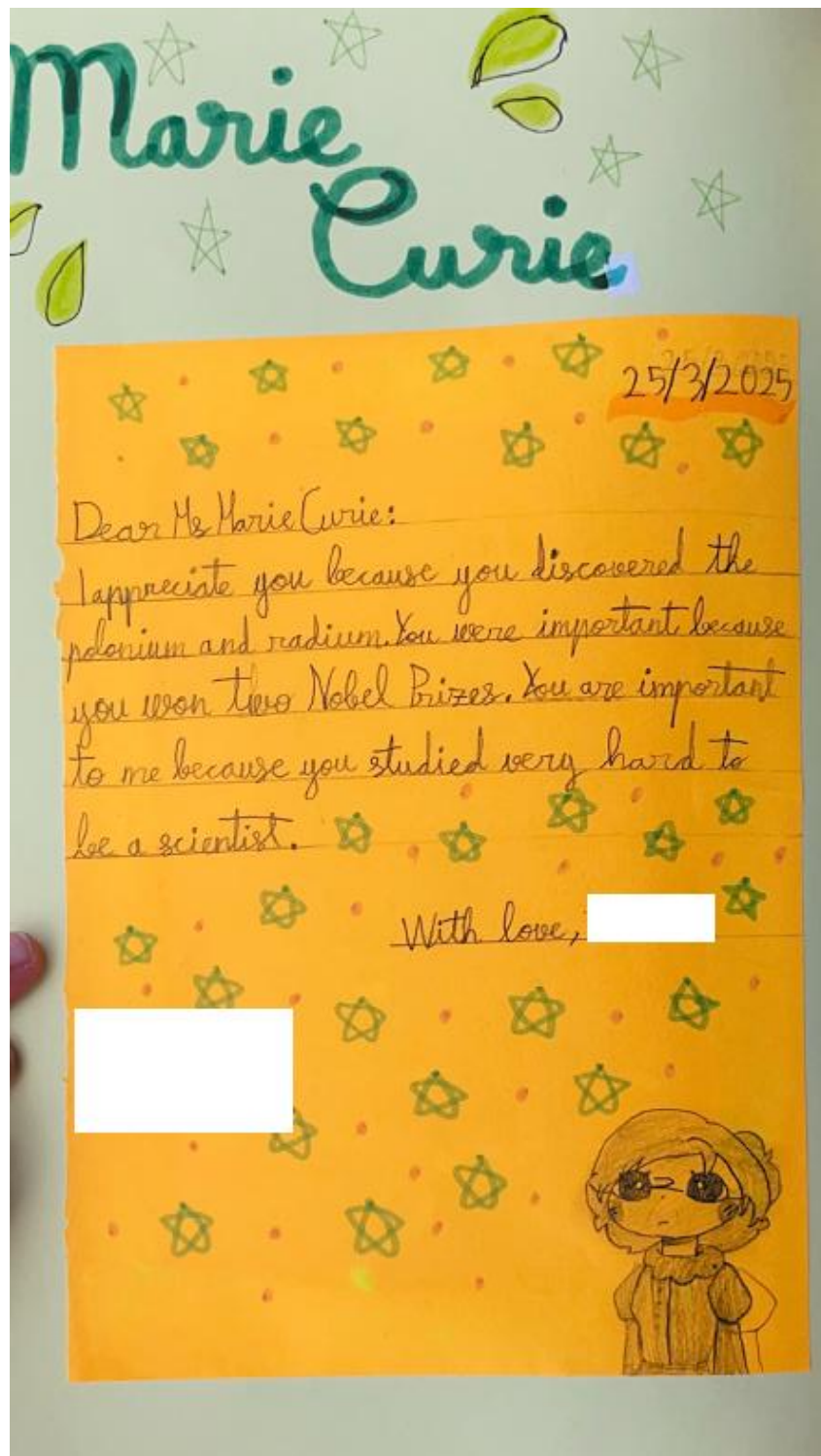
1852 FINISH she DIED

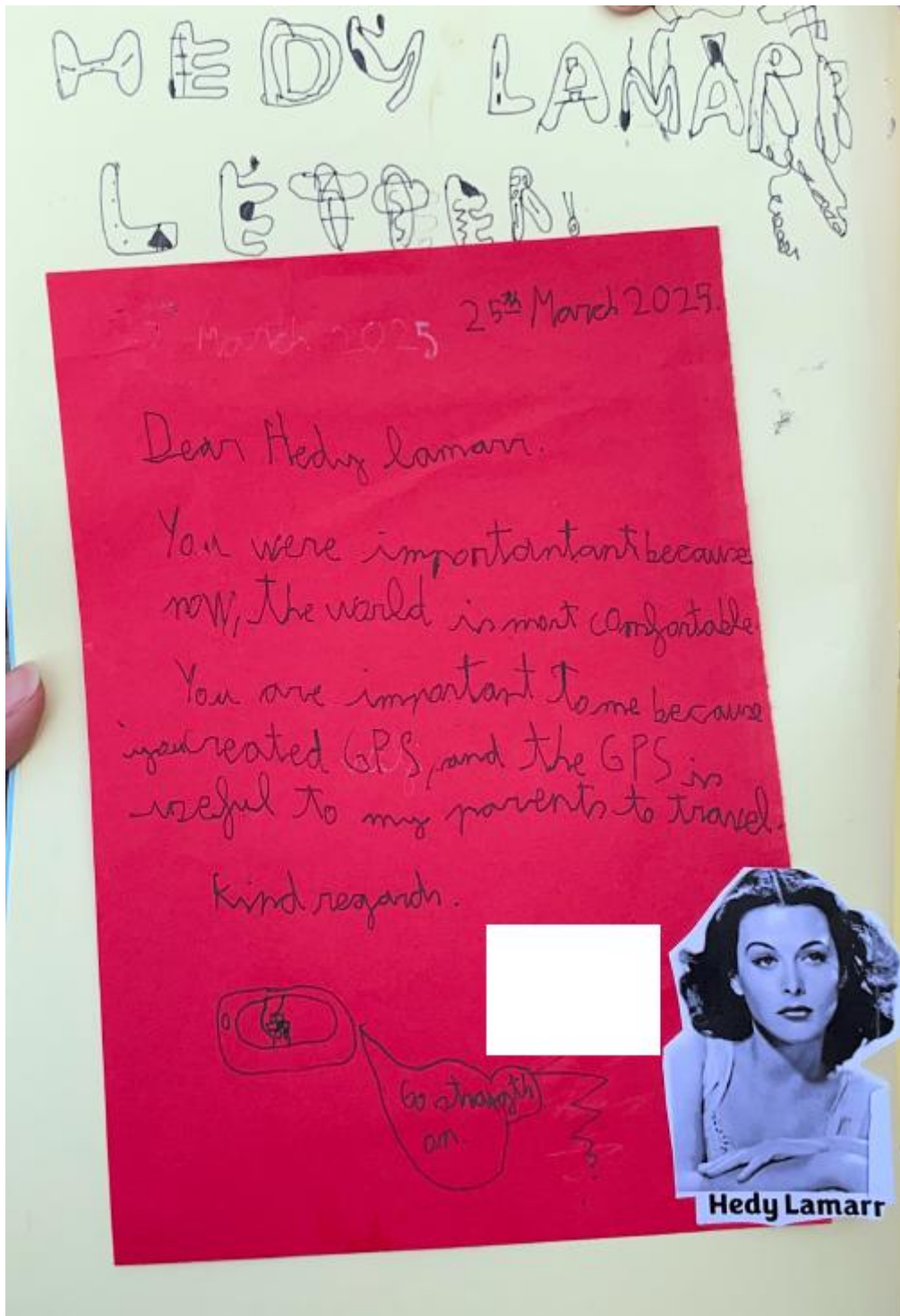
Appendix H.2: Adapted Timeline sample



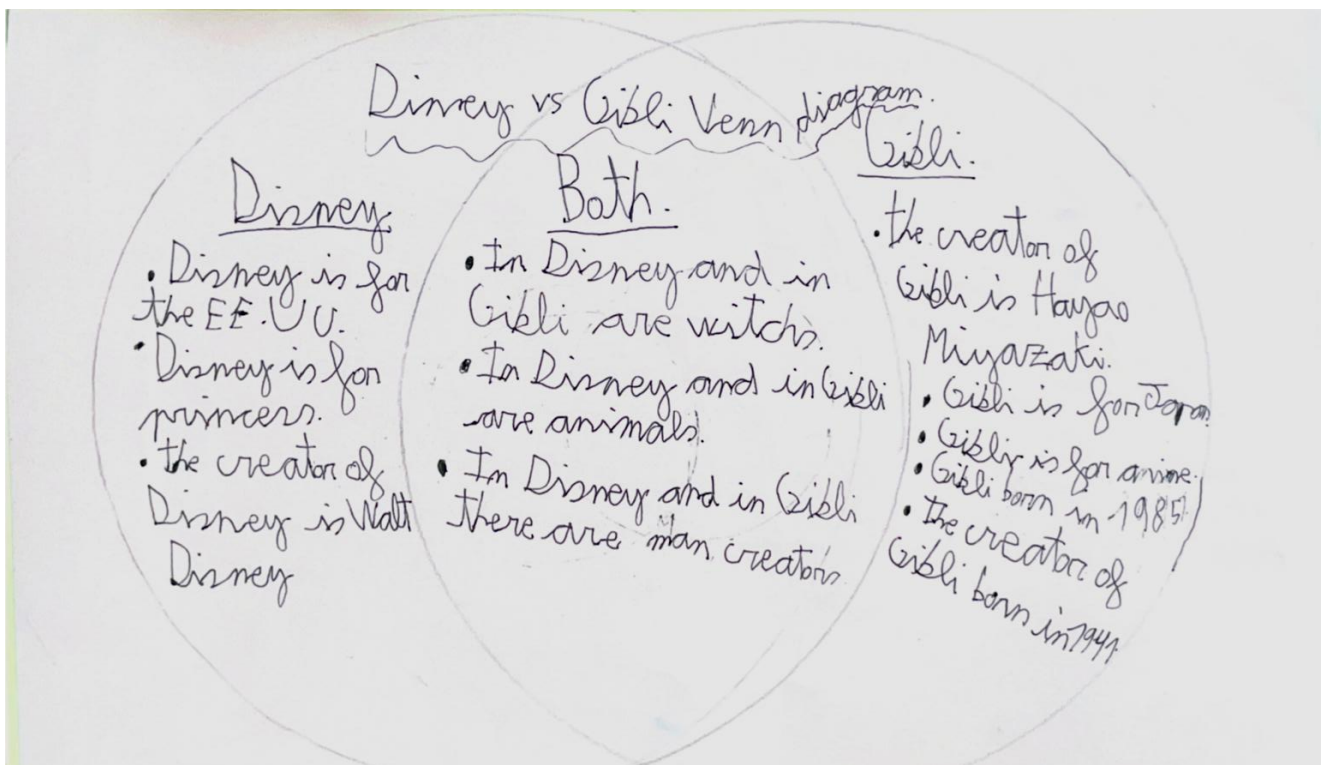
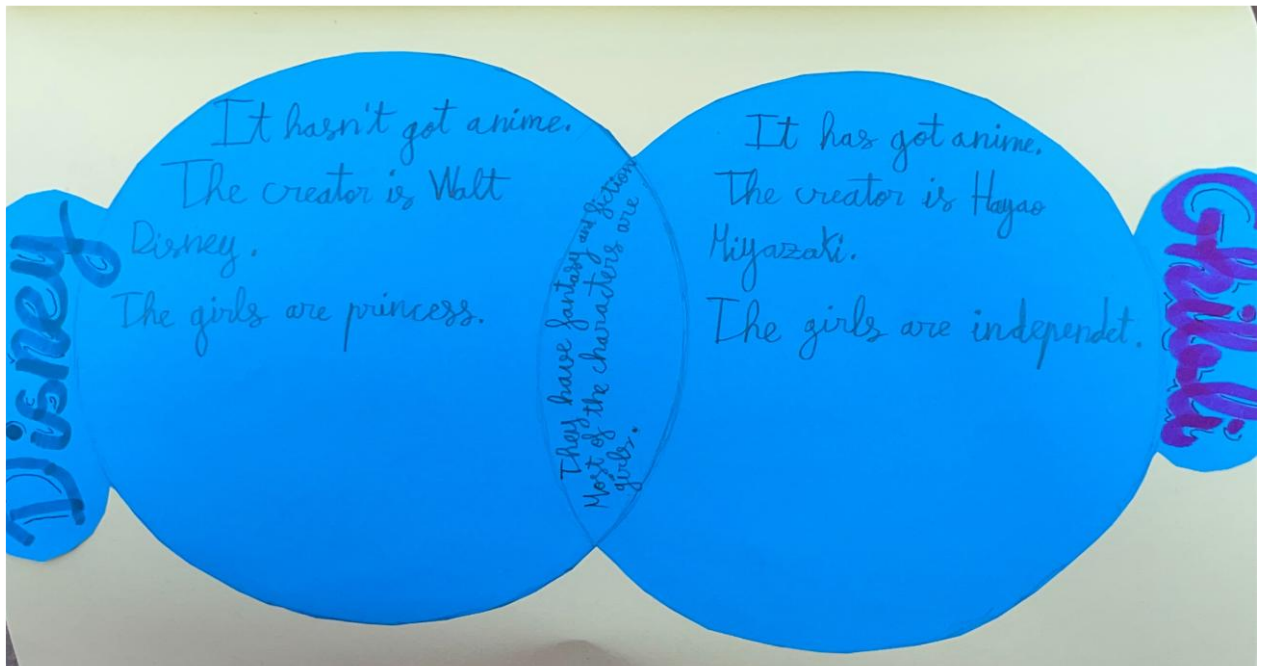
Appendix H.3: Mind-map sample



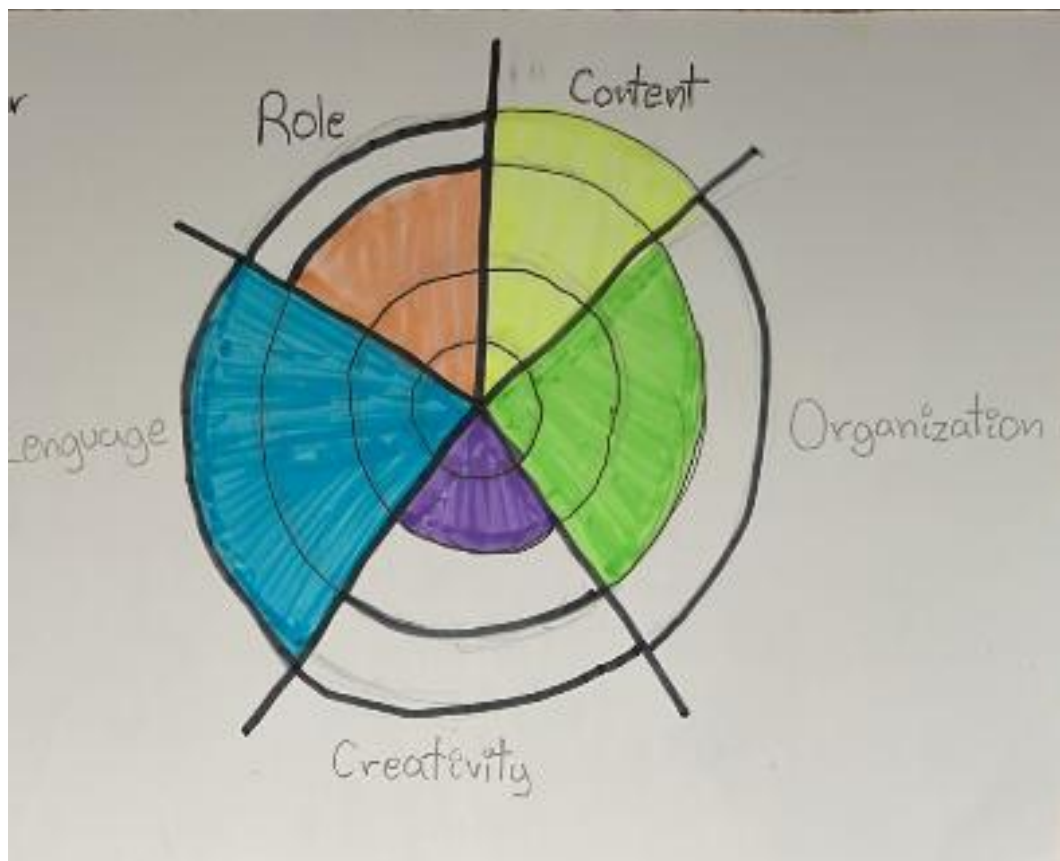
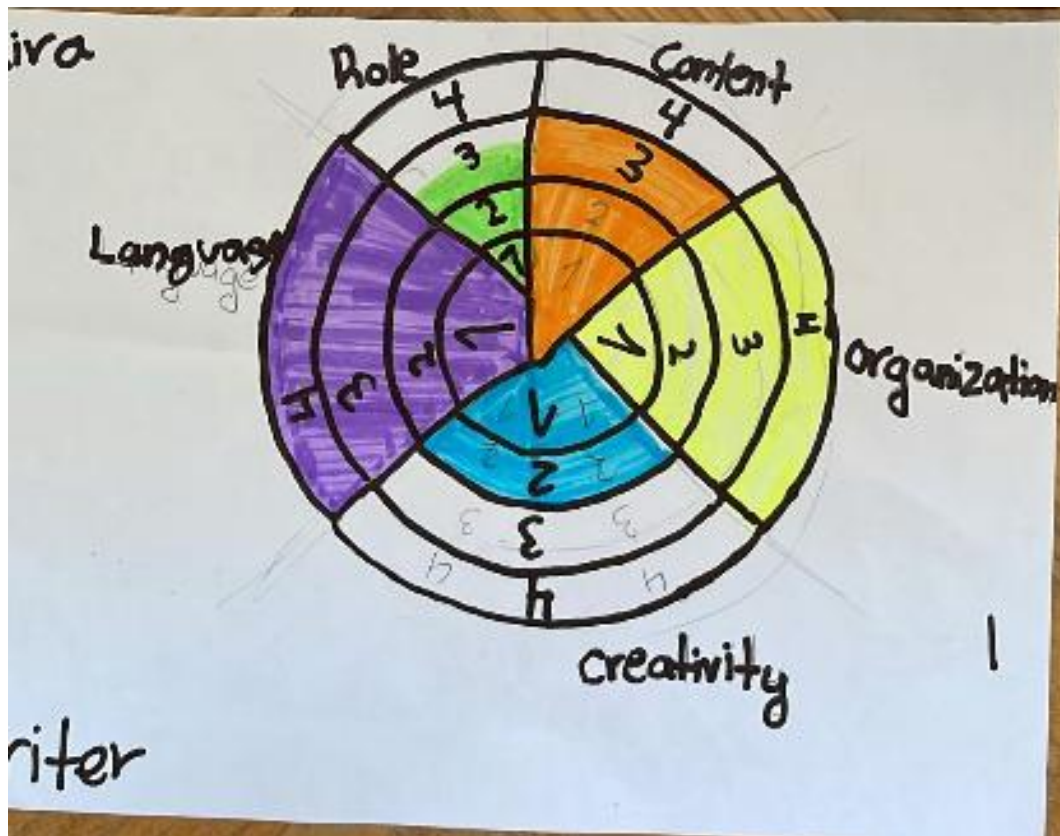
Appendix H.4: Letter sample



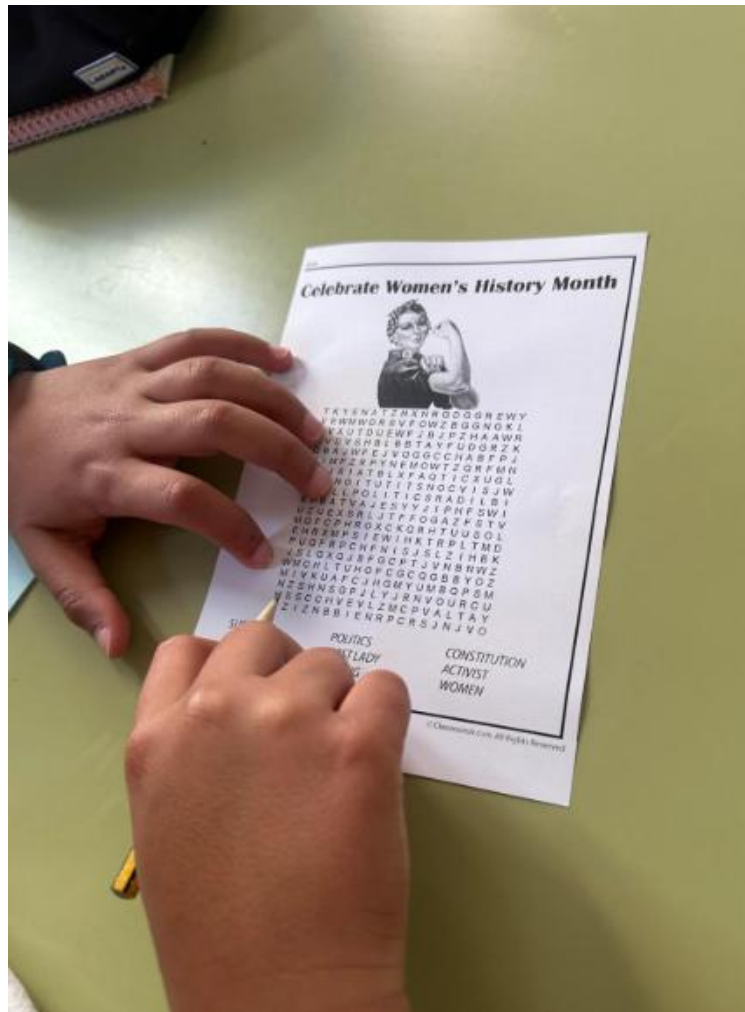
Appendix H.5: Venn diagram samples



Appendix H.6: Bullseye sample





Appendix H.7: Student fulfilling “Word search”





Appendix H.8: Complete “Fill the gaps, honour their legacy” activity


**Fill the gaps, Honor their Legacy**


 Rosalind Franklin  a picture of the DNA.

 Marie Curie  radium and polonium.  
• She  from radiation exposure.

 Katherine Johnson  trajectories for NASA's space missions.

 Ada Lovelace  mathematics.  
• She  the world's first computer algorithm.

 Clara Campoamor  for women's right to vote in Spain.  
• She  with politicians to demand equality.

 Trinidad Arroyo  as Spain's first female ophthalmologist.  
• She  in Spain in 1872.