Girls Who Code Their Dreams: A Cross-Curricular Lesson Plan Inspired by Ayça Arifoğlu Gülener's Inspiring STEM Journey

1 – GENERAL INFORMATION

- **Lesson Title:**
  "Code Your Path: Ayça Arifoğlu Gülener's Inspiring Tech Journey"
  (Alternative: "From Curiosity to Code – Ayça's Story")
- **Teacher's Name:**
  [To be filled in by the implementing teacher – name, institution, and country]
- **Target Group:**
  Girls aged 13–15 – lower secondary school or preparatory high school level
  (Interest areas: technology, computer science, career guidance, female representation)
- **Subject(s):**
  - ICT / Computer Science
  - Guidance / Career Planning
  - English (supportive content – for the transcript and video)
- **Duration:**
  2 consecutive lesson hours (40 + 40 minutes) – including warm-up, video analysis, discussion, and creative reflection activities
- **Lesson Date:**
  15.09.2025
- **Materials/Tools:**
  - Interview video with Ayça Arifoğlu Gülener
  - Selected inspirational quotes from the interview (e.g., "Opportunities are everywhere; the key is to notice them and take bold steps.")
  - Projector or screen
  - Post-it notes, A4 paper, pens
  - Student reflection/evaluation cards
- **References:**
  - CodingGirls WP3 Guidelines
  - Ayça Arifoğlu Gülener's Interview (Transcript + Milestones)
  - "Women in Code" Living Book draft
  - CodingGirls Lesson Plan Template (Coordinator Format)

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2. LEARNING OBJECTIVES

By the end of this lesson, students will be able to:

1. **Recognize** Ayça Gülener's personal and professional journey as an example of women's empowerment in technology.
2. **Identify** at least three challenges she faced in her career path and explain how she overcame them.
3. **Reflect** on the role of determination and adaptability in pursuing a technology-related career.
4. **Discuss** the importance of female representation in ICT and related fields.
5. **Express** their own aspirations and action steps inspired by Ayça's story through a short written or visual activity.

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3. KEYWORDS & THEMES

Keywords

- Ayça Gülener
- Women in Technology
- Software Development
- Career Journey
- Determination
- Overcoming Challenges
- Dreams and Goals
- Inspiring Story
- Female Representation
- Lifelong Learning

Themes

1. **The Role and Representation of Women in Technology**
    - How Ayça's experiences illustrate the impact women can have in the tech sector.
2. **Resilience and Determination in the Face of Challenges**
    - The obstacles Ayça encountered in her career and how she overcame them.
3. **Education and Continuous Development**
    - Her university studies, workplace learning processes, and methods for self-improvement.
4. **Challenging Social Stereotypes**
    - Breaking the perception that "women are underrepresented in technology."

5. **Inspiration and Mentorship**
    - The importance of role models and guidance for young girls pursuing tech careers.

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4. STEP-BY-STEP TEACHING PROCEDURE

Duration: 2 × 40 minutes

Approach: Through Ayça's story, students explore themes of determination, STEM, gender equality, international experience, mentoring, and pursuing their dreams.

Tools:

- Interview video
- Milestone sections (all 8 sections)
- Interview transcripts in English and Turkish
- "Living Women in Code" booklet (introducing Ayça)
- Materials for in-class reflection and production activities (Post-it notes, A4 paper, pen)

LESSON 1 — Discovering Ayça's Journey (40 Minutes)

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1. Warm-Up & Motivation (5 min)
Write on the board: *Dreams – Technology – Women – Courage – Success*

Ask: "Do you know a woman who has achieved great success in a different field?"

Allow 1–2 students to share.

Ask students to write 3 words that come to mind when they think of "Success" on small slips of paper.

2. Introduction to Ayça's Story (3 min)
Teacher's sample speech:
"Today, we will listen to the story of a woman from Turkey who trained herself in the field of technology and gained international experience. From her high school days until now, Ayça has drawn her own path with determination."

3. Video Watching & Milestone-Based Discovery (27 min)

Milestone 1 – Personal Information & High School Years (00:00–00:20)
Ayça talks about where she is from and how she enjoyed math and science during high school.
Teacher Questions:

- "How do you think Ayça's interest in technology might have started during high school?"
- "Which subjects do you work on more willingly?"
  Mini Task: Write down "1 skill I would like to learn in high school."

Milestone 2 – Choosing University & Major (00:21–00:51)
Ayça shares how she decided to study engineering and choose her major.
Teacher Questions:

- "How can choosing a major affect our lives?"
- "Which areas would you like to study?"
  Mini Task: Write 3 features of your dream job.

Milestone 3 – Challenges in Learning Coding (00:52–01:38)
Ayça says learning programming was difficult at first but she didn't give up.
Teacher Questions:

- "Why didn't Ayça give up?"
- "What motivates you when you face difficulties?"
  Activity: *Problem–Solution Map* – Write about a situation you found challenging and list the solution steps underneath.

Milestone 4 – Erasmus & International Experiences (01:39–02:11)
Ayça talks about opportunities to study and intern abroad through Erasmus.
Teacher Questions:

- "How could studying abroad change things for you?"
- "Why is meeting new cultures important?"
  Mini Task: Write "One country I want to see and why."

Milestone 5 – Mentors & Sources of Inspiration (02:12–02:44)
She talks about the mentors who guided her career and the support from her team.
Teacher Questions:

- "What is a mentor?"
- "Do you have someone who supports you?"
  Activity: *Support Map* – Write your name in the center and add the names of people who support you around it.

Milestone 6 – Professional Achievements (02:45–03:19)
She talks about banking and technology projects, and the software she developed.
Teacher Questions:

- "What can developing a project bring you?"
- "Why does helping others bring happiness?"
  Mini Task: *If I Invented…* – Students write a short sentence about a useful invention idea.

Milestone 7 – Message & Inspiration for the Future (03:20–04:00)
Ayça ends with encouraging words for young girls.
Teacher Questions:

- "How would you apply Ayça's message to your own life?"
- "What is the most powerful sentence you remember from this story?"
  Quick Reflection Card: "Ayça showed me that I can…"

Milestone 8 – Advice for Young Girls (05:48 – End)
Ayça's message: "Be curious, work hard, trust yourself — and remember, you don't have to know everything to start succeeding."
Teacher Questions:

- "Why is curiosity an important part of the learning process?"
- "What are the advantages of starting without knowing everything?"
  Activity: *My Courage List* – Students write something they want to try but have been postponing, and explain why they can start now.

4. Exit Ticket (5 min)
Write on the board: "Today I realized that…"
Each student writes one sentence and hands it in.

LESSON 2 — Turning Inspiration into Action (40 Minutes)

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1. Warm-Up & Review (5 min)
Write this sentence on the board: *"Inspiration is just the beginning; taking action brings change."*

Give students 1 minute to think of 3 main ideas they remember from Lesson 1.

The teacher takes voluntary shares from 3–4 students.

2. Inspired by Ayça's Journey (5 min)
Re-watch Milestones 3, 4, and 8 from the interview (total 1.5–2 minutes).

Purpose: Reinforce the themes of overcoming challenges, seizing new opportunities, and the message of courage.

Teacher Question: "How did these three parts make you feel?"

3. Group Task: "My Own Roadmap" (15 min)
Tools: Turkish & English transcript of the interview, Ayça's page in the *Living Women in Code* booklet, A3 paper, colored markers.

Students work in groups of 3–4.

Task: "Draw your dream roadmap inspired by Ayça's story."
Include:

- Starting point (current situation)
- Skills to be learned
- Possible challenges & solutions
- Desired goal
- Motivation sentence (inspired by Milestone 8)

Teacher Guidance:
While groups work, walk around and encourage ideas.
Sample questions:

- "Can you add something non-tech to the skills section?"
- "Which of Ayça's methods could you use to overcome challenges?"

4. Presentations & Peer Feedback (10 min)
Each group presents their roadmap to the class in 2–3 minutes.

Other students give 1 feedback as "+" (strength) and " 💡 " (idea to improve).

5. Individual Reflection: "Letter to Ayça" (5 min)
Students write a short thank-you and inspiration message to Ayça.

Content suggestion: What I learned, which message inspired me most, what I will do next.

Volunteers may read their letters aloud in class.

6. Closing Message (Teacher)
"Today, you didn't just listen to a story; you took the first steps in your own story. Just like Ayça, be curious, work hard, trust yourself, and don't be afraid to start."

5. CROSS-CURRICULAR INTEGRATION

1. **Mathematics / Science**
   Ayça's strong interest in mathematics and problem-solving skills can be directly linked to Mathematics and Science classes. Students can explore data analysis, logical reasoning, and real-life problem-solving activities inspired by her academic background and approach to learning.

2. **Technology and Engineering**
   Ayça's journey in developing technical skills through STEM-related experiences encourages students to design prototypes, solve problems, and create innovative solutions. This can be connected with robotics clubs, STEM projects, or maker activities in schools.

3. **Social Studies / Citizenship Education**
   Ayça's educational and professional achievements highlight themes such as community engagement, innovation, and the importance of contributing to society through science and technology. Students can discuss how individuals can use their knowledge and skills to make a positive impact.

4. **Guidance and Career Development**
   Ayça's story is an inspiring example of discovering one's potential, setting goals, and following a clear path toward achieving them. Students can work on identifying personal strengths, setting career objectives, and preparing step-by-step action plans.

5. **Gender Equality Education**
   Ayça's success as a woman in STEM creates a valuable opportunity to discuss gender equality and equal opportunities in education and careers. Students can explore the representation of women in science and engineering, the challenges they face, and strategies for overcoming them.

6. **English as a Foreign Language**
   The English version of Ayça's interview offers students authentic listening, reading, and comprehension practice. The transcript can be used for vocabulary building, reading comprehension, and speaking activities.

7. **First Language Education**
   Writing tasks such as *"If I Were Ayça…"* or *"My STEM Story"* encourage students to create their own narratives in their first language. These activities help develop writing skills, emotional expression, and storytelling abilities.

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6. EVALUATION CRITERIA

This section outlines strategies for formative, inclusive, and student-centered assessment, focusing on curiosity, resilience, and inspiration drawn from Ayça's journey. The aim is to nurture personal growth and meaningful learning in a supportive, respectful environment, rather than competition or grades.

Skill Area	Assessment Tool / Strategy
Emotional Reflection	**Exit Ticket:** Students complete the prompt: *"The most inspiring thing I learned from Ayça today was…"*. Optional: Some students may share their answers aloud to foster empathy and collective inspiration.
Creative Thinking & Expression	**Creative Output Observation:** The teacher observes originality, symbolism, and personal connection in outputs such as *Career Roadmaps* or *STEM Story visuals*. Focus is on ideas and meaning, not artistic perfection.
Engagement & Participation	**Observation Checklist:** Informal tracking of students' active involvement, willingness to share ideas, collaboration in group work, and attentiveness during video segments and discussions.
Empathy & Perspective-Taking	*"If I were Ayça…"* prompt: Students' reflections show their ability to imagine Ayça's experiences, challenges, and successes from her perspective.
Communication & Sharing Skills	**Peer Presentations:** Brief group presentations or story-sharing sessions are evaluated for clarity of message, confidence, and respectful listening to peers.
Goal Setting & Self-Awareness	**Dream Statement:** *"In the future, I want to… because…"* prompts are used to reveal students' aspirations and values, linked to themes from Ayça's story—there are no right or wrong answers.

Additional Notes for Teachers

• These criteria measure connection, creativity, and self-expression, not perfection.

• The assessment process should be supportive, encouraging, and non-judgmental—every student's learning journey is unique.

• Strategies can be applied through individual observation, short feedback moments, or group reflection sessions.

• Emphasis is placed on progress, participation, and inspiration, rather than competition.

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7. RESOURCES AND MATERIALS (Extensions & Enrichment)

These enrichment activities aim to extend learning beyond the classroom, strengthen real-world connections, and encourage interdisciplinary engagement. Teachers may choose any of these options based on available time, local context, and student interest.

1. **"My Role Model" Poster Exhibition**
   Objective: Introduce inspiring women in STEM and develop students' research skills.
   Activity: Each student prepares an A3 poster introducing a woman working in science, technology, or engineering (local or international). The poster includes a photo (if possible), her field, and an inspirational quote or achievement.

Extension: Display the posters in school corridors as a "Women in STEM Gallery." Invite families and teachers to visit the exhibition.
Pedagogical Value: Enhances research, visual presentation, and career awareness.

2. **School Visit or Online Talk with a Woman in STEM**
   Objective: Connect students with real-life role models.
   Activity: Organize a school visit or an online live session with a female professional in a STEM field.
   Preparation: Students prepare questions in advance about her career journey, motivations, and challenges.
   Pedagogical Value: Increases awareness of gender roles in professions and demonstrates that STEM success is accessible to everyone.

3. **"My STEM Dreams" Digital Wall (ICT Integration)**
   Objective: Foster digital creativity and safe sharing.
   Activity: Students design digital posters, dream timelines, or STEM stories and share them on platforms such as Padlet or Jamboard.
   Outcome: Creates a safe, inclusive space for self-expression and peer feedback—especially valuable for introverted students.
   Cross-Curricular Links: ICT, Visual Arts, Language.

4. **Collaboration with Parents – "STEM at Home" Diaries**
   Objective: Build home-school connections through everyday STEM experiences.
   Activity: For one week, students log simple STEM-related activities or observations at home (e.g., repairing something, cooking with measurements, using an app).
   Outcome: Highlights the presence of science and technology in daily life.
   Pedagogical Value: Encourages reflection, family involvement, and real-life relevance.

5. **Language Extension: Write a Letter to Ayça**
   Objective: Deepen emotional reflection through writing.
   Activity: Students write a letter (in Turkish or English) to Ayça, sharing their feelings and thoughts after hearing her story.
   Optional Twist: Letters can be compiled into a class book or, if possible, shared directly with Ayça.
   Skills Developed: Narrative writing, empathy, language fluency.

6. **Local Community or Municipality Collaboration**
   Objective: Amplify student voice and visibility.
   Activity: Share selected student works with local organizations such as municipal women's centers, youth clubs, or women-focused NGOs.
   Outcome: Raises awareness of women in STEM and gives students recognition beyond the school.
   Sustainability: Fosters long-term community engagement.

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8. SUPPORTING MATERIALS AND RESOURCES

This section lists only the essential materials and resources needed to implement the lesson effectively. All key educational tools will be provided through the project's digital platform. No specialized or hard-to-access materials are required.

Digital Materials Provided by the Project

Resource	Description
Ayça's Story Video	Short inspirational video (approx. 6–7 minutes) in Turkish with English subtitles. Edited versions with key milestones will also be provided for lesson segmentation.
PDF Transcript (TR + EN)	Full transcript of Ayça's story in both Turkish and English for schools without video projection or for transcript-based learning.
Lesson Plan Document	This complete teaching guide, including step-by-step procedures, milestone integration, activity templates, and pedagogical notes.
Digital Platform Access	All resources will be hosted on the project platform (e.g., Living Libraries / CodingGirl Educational Portal), with login instructions provided. Teachers will download and print the needed worksheets.
Printable Templates	- STEM Dream Map

- STEM Story Panels
- Exit Ticket ("The most important thing I learned from Ayça was…")
- Reflection Card ("If I were Ayça, I would…") |
  | **Ayça's Profile Book** | A short "Living Libraries" style booklet introducing Ayça, her background, achievements, and inspirational messages, designed for classroom display or reading circles. |

Basic Stationery (Typically Available in Schools)

These are low-cost and widely accessible materials that support creative expression:

- A4 or A3 white paper
- Pencils and erasers
- Colored pencils or crayons
- Rulers, scissors, glue sticks
- Sticky notes or small cards (optional)

Accessibility Recommendations

- Print transcripts in large font if needed.
- Allow oral sharing instead of written tasks where appropriate.
- If video cannot be shown, use the transcript with guided reading questions.

Note to Teachers:
No external apps or paid tools are required. This lesson is designed to work offline if needed, using only the resources provided by the project and materials already available in schools.