

WESTEM INCLUSIVE TOOLKIT FOR FACULTY IN HIGHER EDUCATION



MATHS TEMPLATES ON CANVA



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PREFACE

WESTEM, is an Erasmus+ project seeking to increase awareness and overcome the gender gap in the areas of Science, Technology, Engineering, Maths (STEM). The STEM Gap is not easy to tackle, and requires sustainable strategies for long term impact. The WESTEM project foresees to create a platform for empowering young women to confidently step into the STEM-field. The project aims to set the path in Higher Education Institutions (HEIs) for inclusive and better opportunities for girls and women to complete studies in STEM fields.

The WESTEM transnational consortium comprises 5 partner organisations from different countries across the European Union: Coordinator KC Kompetenscenter (Sweden), brainplus + Projektmanagment Schabereiter (Austria), SYNTHESIS Center for Research and Education Ltd (Cyprus), University of Thessaly (Greece) and S-NODI (Italy).

All WESTEM updates and results can be retrieved from the project website:

<https://www.westem.eu/>



HOW TO USE THE TEMPLATES

The CANVA templates provided here, are to be used as part of the WESTEM INCLUSIVE toolkit for Maths.

How to use the CANVA templates:

- Do not edit these slides directly.
- Make a copy of the presentation instead on CANVA, and use the saved copy with your students in the classroom.
- Internet access and a computer are a prerequisite to complete the activities proposed on CANVA.





LEARNING RESOURCE A

MATHS

Nurturing a growth mindset

COLLABORATE ON A WHITEBOARD

Consider and write a short post-it and put it under the heading that best represents your opinion.

Tip: Collaboration makes teamwork easier! Click "Share" and invite your students to fill this up. Use this page for bulletins, brainstorming, and other fun team ideas.

Right-click on the **background** of the slide, or on the **thumbnail** below, for the option to **expand** this page into a **whiteboard** for more space!

Copy a note, drag to the board, and write your ideas.

Copy a note, drag to the board, and write your ideas.



Something is unchangeable, derives from our nature

Write a note here
Your name



Something can grow through strategic actions/efforts

Write a note here
Your name



WORKSHEET TEMPLATE PER GROUP



One person per group:
Please make a copy of this document and share the linked digital worksheet with your group.

You'll be placed in your **breakout rooms** soon to have some discussion time about the following.

- a. How will you try to learn more about [course topic]?
- Review of materials recommended by the professor.
 - If appropriate, practice problems that challenge you.



15min

Group Brainstorm Activity

a. How will you try to learn more about [course topic]?

Team 1



Name



Name



Name



Name



Name

Note to teacher: Publish this design as an assignment from the publish menu and students will be sent an email notifying them. Or select - Share - Share as template - copy the link and share with your students. Or simply paste the Canva link to embed the thumbnail into this document.

WORKSHEET TEMPLATE PER GROUP



One person per group:

Please make a copy of this document and share the linked digital worksheet with your group.



15min

You'll be placed in your **breakout rooms** soon to have some discussion time about the following.

- a. What makes our brains adaptable, or change?
1. When you think or do something you are directing your mind down a particular road or pathway in your brain.
 2. Repeatedly thinking a certain way or doing something strengthens the pathway.
 3. The opposite is true, too: not thinking a certain way or ceasing to do something weakens a pathway.

Group Brainstorm Activity

a. How will you try to learn more about [course topic]?

Team 1



Name



Name



Name



Name



Name

Note to teacher: Publish this design as an assignment from the publish menu and students will be sent an email notifying them. Or select - Share - Share as template - copy the link and share with your students. Or simply paste the Canva link to embed the thumbnail into this document.

LETTER TO A FUTURE STUDENT

- **Make** a copy of this sheet.
- Using the space, create a collage about you!
- **Task:** Take a few minutes to think of a time when you overcame a struggle to learn something.
- Reflect on the times when you failed at first but through persevering your brain created new neural connections and you eventually became better at the task at hand.
- Write a letter to a future student of your class about this struggle. In at least five sentences, tell this student your story and give them advice on what they should do next time they encounter an obstacle when learning something new.





LEARNING RESOURCE B

MATHS

Gender Stereotypes in STEM Representations

COLLABORATE ON A WHITEBOARD

What are the skills, ideas, adjectives, qualifiers that you spontaneously associate with men, boys, girls and women?

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Copy a note, drag to the board, and write your ideas.

Copy a note, drag to the board, and write your ideas.

Associations with women

Write a note here

Associations with men

Write a note here

GROUP DISCUSSION

Team 1
Marie Curie



Carla



Anna



Danny



Josh



Ina

Instructions

Preparation:

- As a group, choose one of the categories available about ads and choose one advertisement to discuss.

Activity:

- In the first box, paste your chosen advertisement.
- Look at the advertisement, then answer the following questions as a group.

1 min:

- Write your names on the sticky notes.
- Use them to answer the questions.

10 mins:

- Write down your answers to the questions in the boxes.
- These can just be phrases or bullet points.

5 mins:

- As a group, discuss the answers.
- Decide which answers you will present to the class.

5 mins:

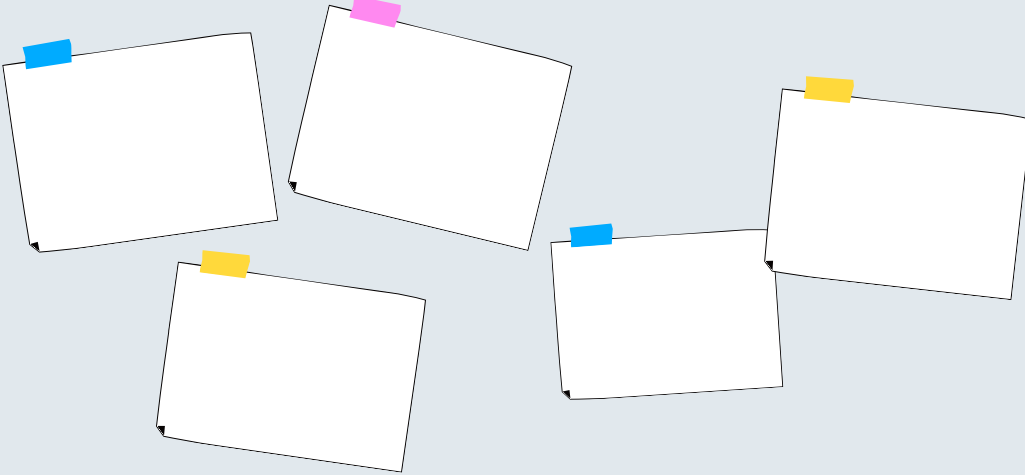
During the plenary session, each presenter explains the group's findings to the rest of the students.
A class discussion can follow to give everyone an opportunity to share his or her opinion.

Our Chosen Advertisement



Title of advertisement
Link to the resource

How does the advertisement make you feel?



Your A+ answer goes here
Your Name

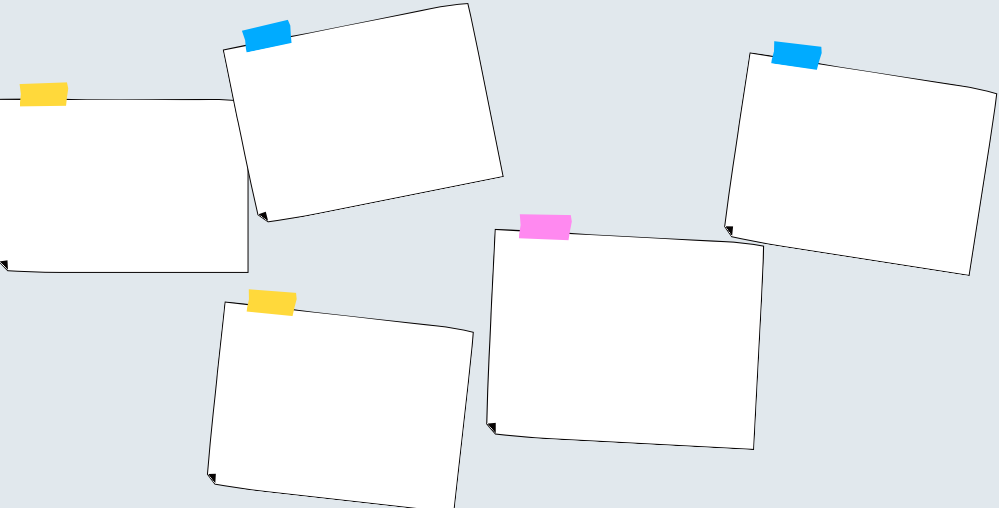
Your A+ answer goes here
Your Name

YOUR A+ ANSWER GOES HERE
YOUR NAME

Your A+ answer goes here
Your Name

YOUR A+ ANSWER GOES HERE
YOUR NAME

What is the advertisement's message for you? Does it differ for each gender?



Your A+ answer goes here
Your Name

YOUR A+ ANSWER GOES HERE
YOUR NAME



LEARNING RESOURCE C

MATHS

Maths Ambassadors and Ambassadors

FAQ for speakers

1

What qualifications do I need to apply to your company?

2

How many graduates does the company hire per year (What levels of qualification, kinds of degrees, for which departments?)

3

Is this the first job you landed post-studies?

4

How do beginners get their start in the company or research institute? (internships, volunteering for International Experience programs, etc.)

5

Could you name some of the biggest challenges related to your profession? How did you deal with them?



Whiteboard Page

Copy a note, drag to the board, and write your ideas.

Copy a note, drag to the board, and write your ideas.

Write a note here

Write a note here



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COLLABORATE ON A WHITEBOARD

Now that the session is complete, and you have listened and engage with our speakers, what do you think about your studies and career prospects? Does gender matter? What are your chances to succeed?

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Right-click on the **background** of the slide, or on the **thumbnail** below, for the option to **expand** this page into a **whiteboard** for more space!

Copy a note, drag to the board, and write your ideas.

Copy a note, drag to the board, and write your ideas.

What I thought of my career prospects are before this session

Write a note here

What I think of my career prospects following this session

Write a note here



LEARNING RESOURCE D

MATHS

STEM ROLE PLAY GAME

ROUND 1: TIMELINE

Begin the game by showing the class a STEM card which has the date on.

Each subgroup will have their chance to pick 2 cards to reveal which historic figure they got.

Once the random choice is made, players have 2-3 minutes to review the fact card about their historic figure and consider where it fits in the timeline on Canva.

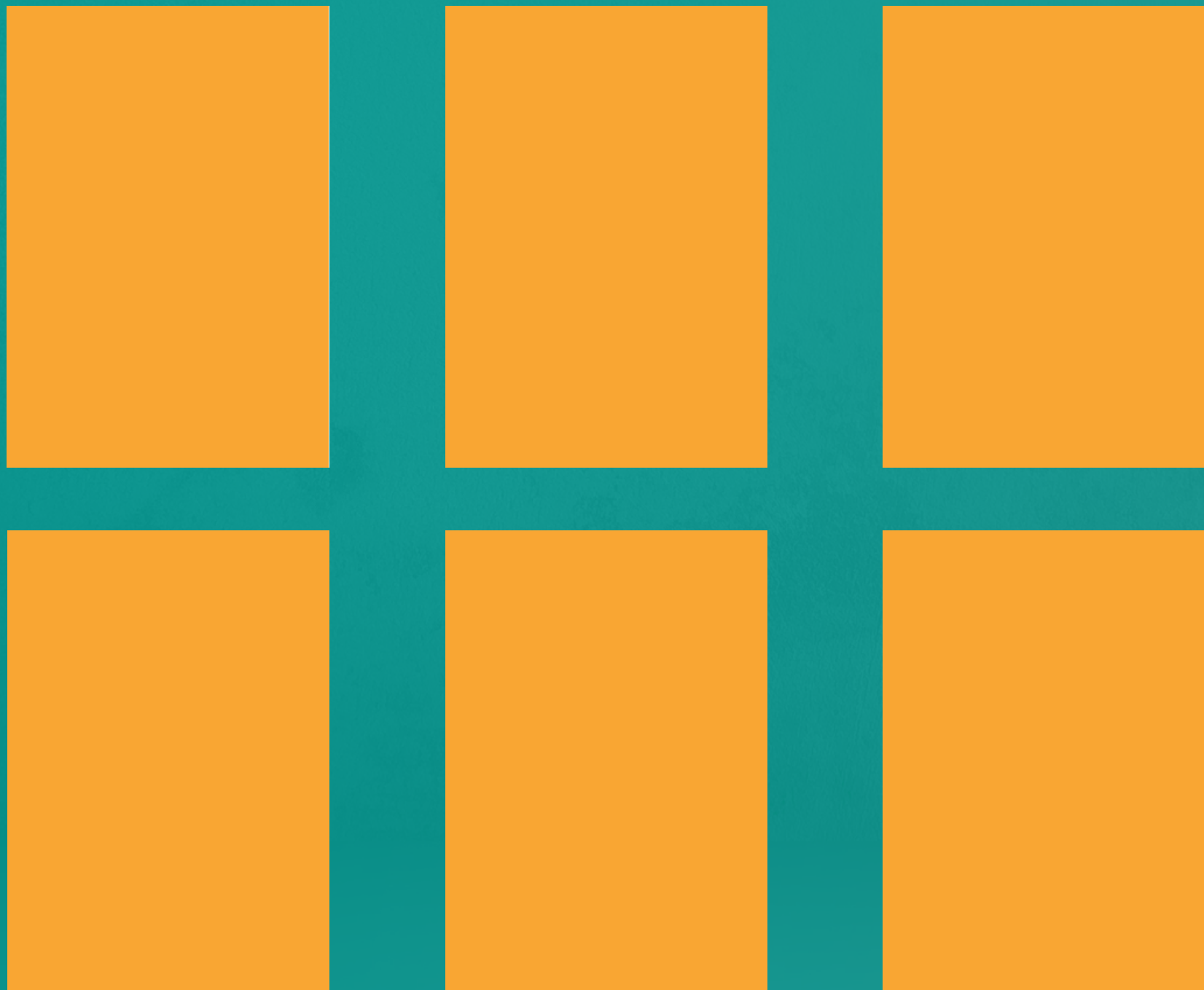
A representative then presents their card in the class for discussion, addressing the background, life and achievements.

Another group chooses one card randomly and the same procedure follows.

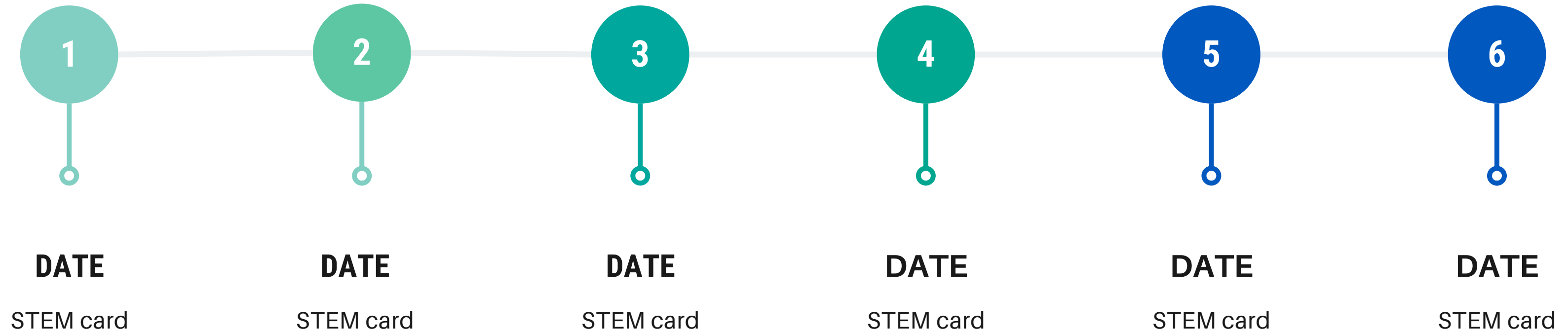
When the game is completed, or time is up, facilitators invite participants to have a look over the entire timeline: "In a short time, we have seen a lot of discoveries by women throughout history."

HISTORIC WOMEN IN STEM

Choose one card to flip and reveal the historic STEM female figure.



TIMELINE OF HISTORIC **STEM** FIGURES



Tip: Collaboration makes teamwork easier! Click "Share" and invite your students to fill this up. Use this page for playing the STEM ROLE PLAY GAME. Have your students place the STEM card where they see fitting.

Right-click on the **background** of the slide, or on the **thumbnail** below, for the option to **expand** this page into a **whiteboard** for more space!



AINA WIFALK

A Swedish social scientist and inventor of the modern walker.



Life

Suffered from polio when she was 21 years old. The disease affected her badly, but eventually it led to one of the most important innovations for people whose bodies need support in their daily lives – the rollator.



Purpose

Aina Wifalk was a driving force in welfare issues and established a number of patients' associations, including groups for people with multiple sclerosis and victims of traffic accidents.



Best achievement

When she had formulated her idea – a walking frame on wheels – she submitted a proposal to a government innovation fund, which gave her a small grant and put her in contact with a fabricator. Production began three years later.

ROUND 2: ROLE PLAY

Identify and record in writing 2–3 contemporary influential women in STEM (200–300 words in total).

A representative then presents their card in the class for discussion, addressing the background, life and achievements.

They then have to imagine the challenges faced in the era the persona lived and dedicate 1-2 days to research about this and return to present in the whole class.

The class decides the teams and individuals who best represented their historic figure.

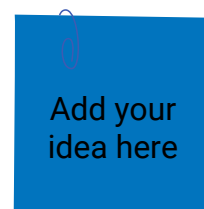
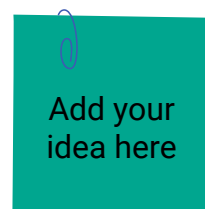
What's your brainstorming topic?

Brainstorm Area

Our Favorite Ideas

01

Copy a sticky note, and then we'll write our thoughts, ideas, and inspiration.



02

Use the stars to vote which ones we like to pursue.



02

Circle or comment on any promising ideas.





LEARNING RESOURCE E

MATHS

VISUAL ROADMAP

Tip: Collaboration makes teamwork easier! Click "Share" and invite your students to fill this up. Ask them to copy and paste the slides for the activity and complete it individually.

STEM Studies Visual Roadmap

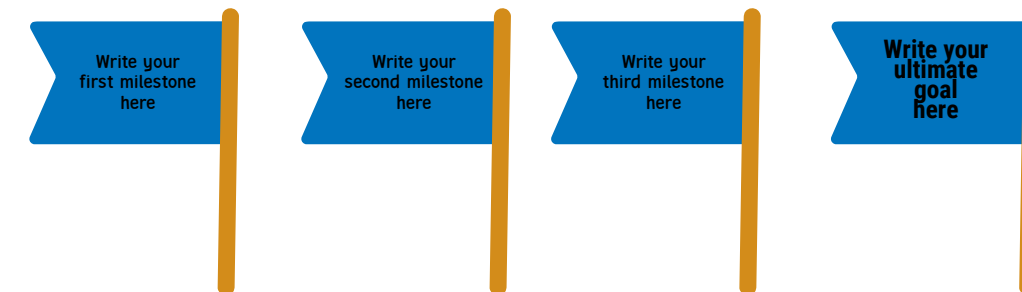
Achieving our ultimate goal does not happen overnight.

It's the totality of small, individual milestones added up together. This project future roadmap will help us visualize the small milestones we need to complete to achieve our ultimate goal.

We will also identify blockers that could prevent us from moving forward and come up with practical solutions to address those blockers.

1

Fill in each of the milestones we want to reach on the way to our ultimate goal.



2

What are blockers that might stop us from reaching these milestones?

3

How can we solve or address these blockers?

Ultimate Goal

This is the bigger goal we want to achieve, which we will break down into smaller, achievable milestones below.



Milestone 1

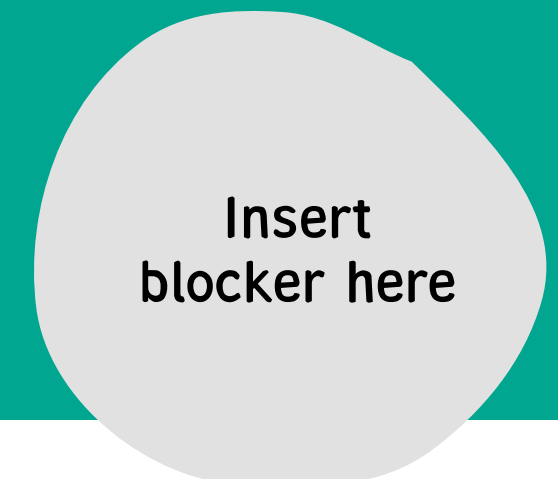
This is our first milestone we need to reach to inch closer to our ultimate goal.

Tip: Collaboration makes teamwork easier! Click "Share" and invite your students to fill this up. Ask them to copy and paste the slides for the milestones and complete it individually, one for each milestone.



Blockers

What are factors that might stop us from reaching our milestones and ultimate goal? How do these relate to your gender, or other characteristics of diversity, if at all?



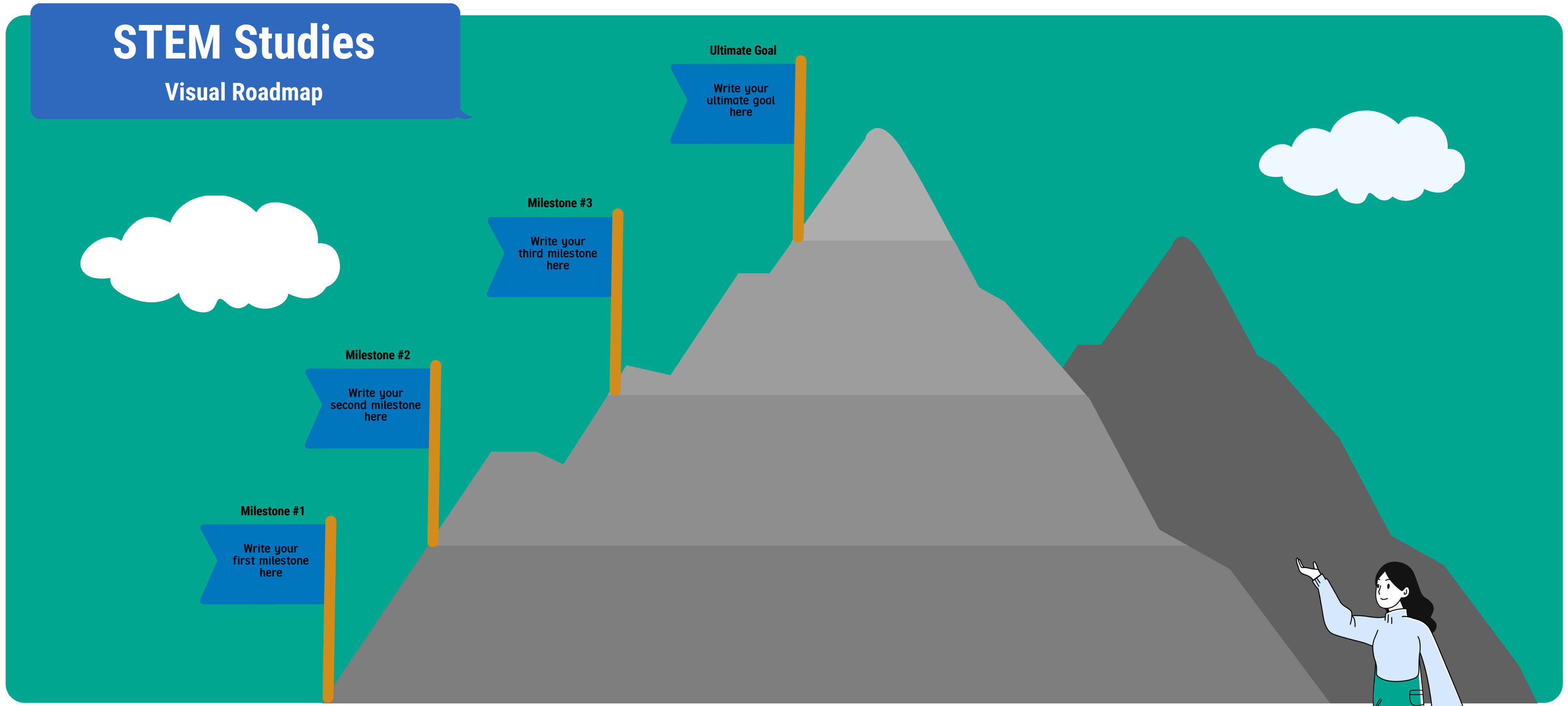
Solution

How can we solve or address these blockers to reach the ultimate goal?



STEM Studies

Visual Roadmap



1

Fill in the flags with milestones showing major progress of the team's journey towards the goal.



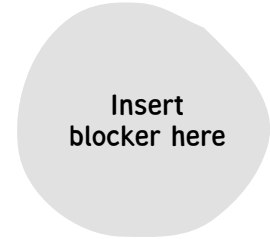
2

Write down in the notes any tasks you need to do to reach the milestone and place it on the mountain.



3

List down any blockers related to gender or other diversity characteristics that may be stopping you from reaching these milestones and place it on the mountain.



Action Items

Let's go back to the previous worksheets and synthesize what next actions are appropriate for us to move forward as a group and individually.

1

Write action items in the boxes.

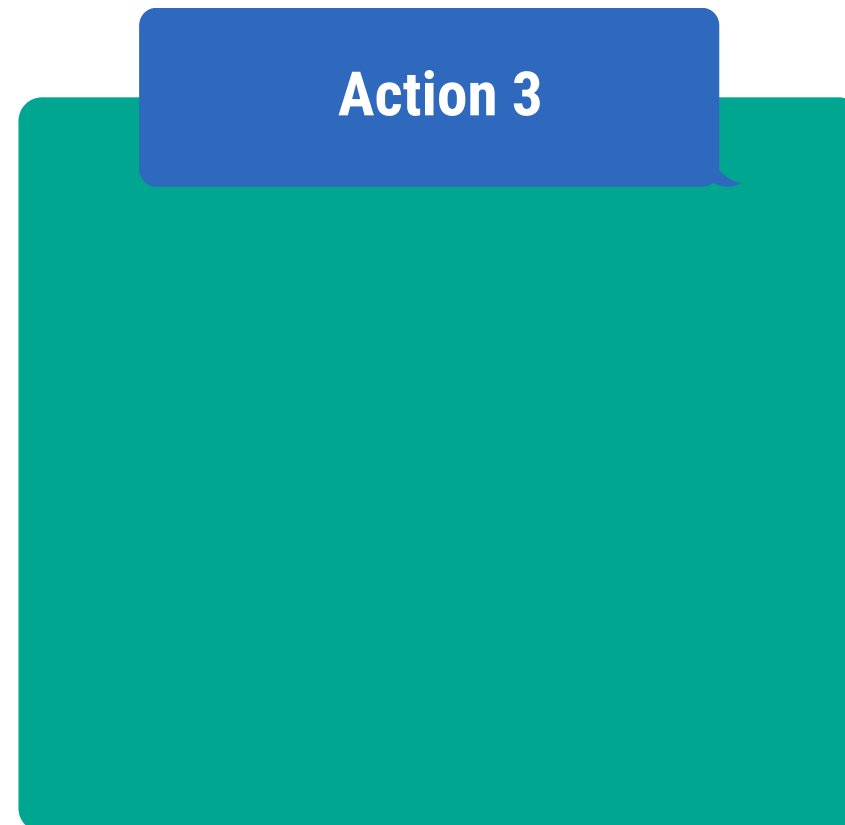
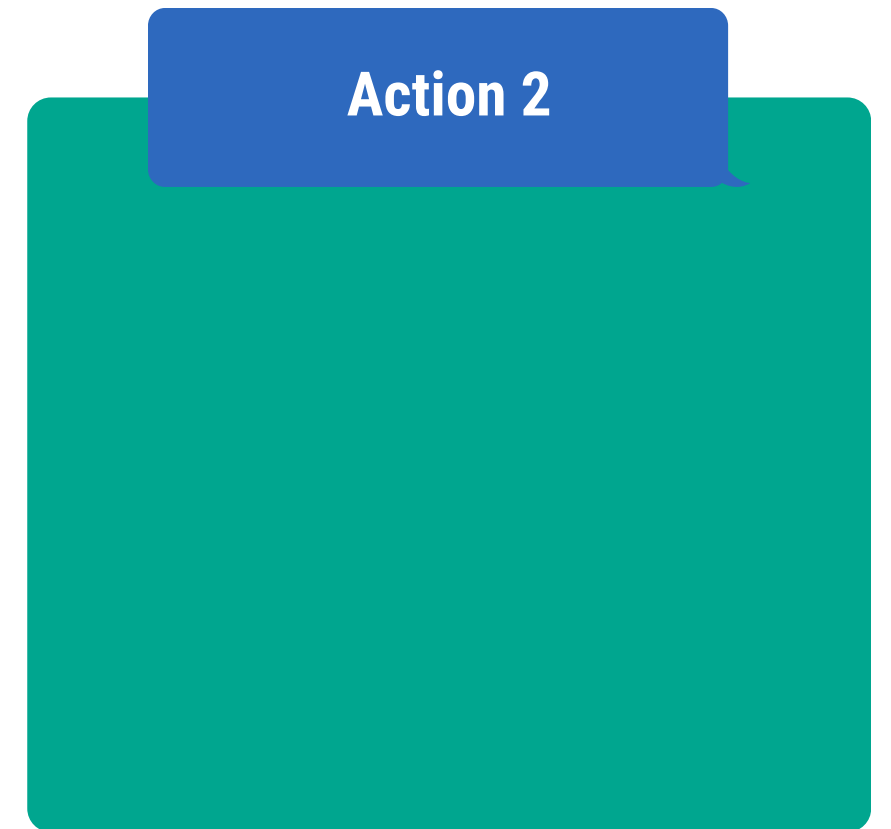
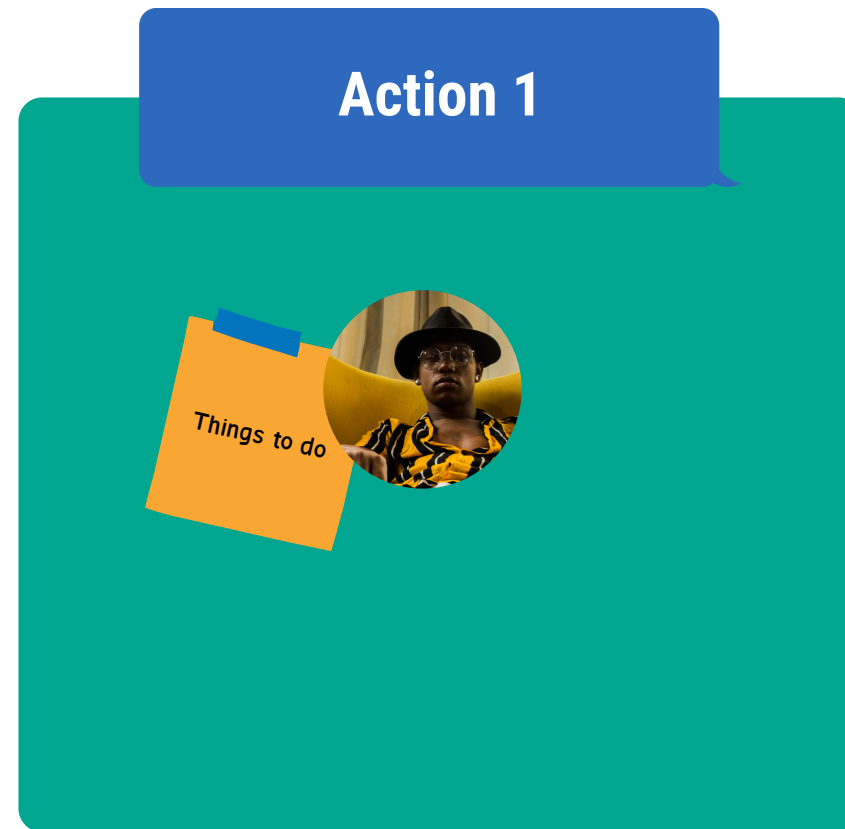


2

Drag your photo under the action item you want to own.

Action Items

- 1 Write action items in the boxes.
- 2 Drag your photo under the action item you want to own.



**The mind is just like a muscle – the
more you exercise it,
the stronger it gets and the more it
can expand.**

Idowu Koyenikan



Funded by
the European Union

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