LESSON PLAN

Explore medical systems in various countries, sustainable waste management in medical facilities, and how careers in Medicine and Scientific Research take shape worldwide.

Medicine and Scientific Research provides youth with knowledge and skills to equip them to explore a career in this field. Youth learn about global healthcare, from home remedies to national healthcare systems. Youth consider different types of sustainable healthcare, from 'green' healthcare to eco-friendly hospitals. Learning about the concept of healthcare justice, youth learn how bias and discrimination can operate within healthcare systems. Youth also consider sustainability practice as they relate to waste management in medical facilities and scientific research practices to increase sustainability in the medical field.

About Global Nomads Group

For over 25 years, Global Nomads Group has leveraged technology to host digital safe spaces for young people around the world to share their stories, challenge assumptions, engage with and learn from each other, and, by doing so, foster a more just world.

Objectives

By the end of this module, students will:

1. Students will learn about types of healthcare.
2. Students will explore the concept of home remedies and traditional medicine.

Introduction

- Welcome the students and introduce the topic of healthcare as a human right.
- Discuss the United Nations Sustainable Development Goal 3, "Good Health and Well-Being", and its emphasis on building prosperous societies through ensuring healthy lives and well-being.

Reflection on Healthcare Systems

- Ask students to think about how the healthcare system in their country has been built.
- Encourage them to consider the accessibility of healthcare, treatment of different patient groups, and the values reflected in their country's healthcare system.
- Allow students to share their thoughts and initiate a brief discussion.

Communication Skills in Healthcare

- Discuss with students the importance of effective communication in healthcare and establishing trust with patients.
- Provide examples such as giving patients enough space and time to share their concerns, using accessible language and terminology, and acknowledging fears and hesitations about treatment options.
- Encourage students to share their ideas and engage in a class discussion.

Personal Biases in Healthcare

- Explain the concept of personal biases in healthcare and how they can influence the way individuals perceive and interact with different patient groups.
- Conduct a brief activity by presenting scenarios related to healthcare and asking students to share their initial thoughts and associations.
- Discuss how these thoughts reflect personal biases and beliefs related to healthcare.
- Emphasize the importance of recognizing and working to dismiss personal biases in the medical and scientific research professions.

Health and Traditional Medicine

- Introduce the concept of traditional medicine and its importance in various cultures and communities.
- Discuss the potential biases and beliefs associated with traditional medicine.
- Show a video of youth from around the world sharing information about the traditional medicine they use.
- Ask students to reflect on their familiarity with traditional medicines and whether they hold any biases towards or against them.
- Encourage students to share their reflections and engage in a class discussion.

Sharing Personal Stories

- Ask students to share any personal stories or experiences related to traditional medicine from their own cultures or families.
- Allow students to share their stories voluntarily, ensuring a safe and respectful environment.
- Facilitate a discussion on the importance of understanding and respecting different approaches to healthcare.

Conclusion

- Summarize the main points discussed in the module, emphasizing the complexity of healthcare as a human right or a privilege.
- Encourage students to continue exploring healthcare systems and developing their communication skills and awareness of personal biases in the medical field.

Explore

Show the students the map, and explore the stories, articles, and videos that have been provided by their global peers. Ask the youth to pick their top three stories, and share them with their peers.

Share

Students will answer the following prompt:

1. Tell the story of a common home remedy in your country.
    1. What type of ailment does it treat?
    2. How long have people been using it?
    3. Is it something a doctor or healthcare provider would prescribe to you?
    4. Who taught you about it?

At the end of their stories, students should mention 2-4 stories and resources they've explored and would recommend to their global peers.

Objectives

By the end of this module, students will:

1. Students will learn about bias and discrimination across healthcare systems.
2. Students will explore different economic models for healthcare systems.

Introduction

- Begin the module by discussing the importance of good health and well-being for building prosperous societies.
- Explain that health is influenced by various factors, both intrinsic (within our bodies) and extrinsic (outside our bodies).
- Show the table illustrating extrinsic factors contributing to health and well-being.
- Discuss each factor briefly, emphasizing their impact on individuals' health outcomes.

Career Exploration

- Introduce the idea that students interested in the medical and scientific research field can pursue careers that address the needs in specific areas.
- Discuss the different healthcare professionals (Speech Pathologist, Dietician/Nutritionist, Environmental Epidemiologist, Psychiatrist/Psychologist/Social Worker) and briefly explain their roles and how they contribute to improving health and well-being.

Healthcare and Justice

- Introduce the United Nations' Sustainable Development Goal 3, "Good Health and Well-being", which emphasizes the following: "An additional 18 million health staff are needed primarily in low- and lower-middle-income countries to achieve universal health coverage by 2030."

- Discuss the global healthcare disparities and the impact of the COVID-19 pandemic on healthcare systems.
- Emphasize the importance of strengthening healthcare systems for a more just and sustainable world.
- Show video clips of youth from different countries sharing information about their healthcare systems.

Understanding Healthcare Systems

- Explain that healthcare systems include a complex collaboration between governments, nonprofits, and other institutions to meet the needs of a specific community or population.
- Introduce the four common healthcare models: Beveridge Model, Bismarck Model, National Health Insurance Model, and Out-of-Pocket Model.
- Show the world map displaying different healthcare systems and ask students to identify their country or any other countries they are interested in.
- Show the map depicting cancer mortality rates and ask students to observe any patterns or links between healthcare systems and disease prevalence.

Reflection and Discussion

Facilitate a class discussion based on the following questions:

1. How does the type of healthcare system impact the severity of disease?
2. What other factors might influence the prevalence of disease?
3. What are the implications of healthcare disparities on individuals and communities?

Encourage students to share their thoughts and perspectives, fostering empathy, and global awareness.

Summarize the main points discussed and emphasize the importance of understanding healthcare systems for both personal and societal well-being.

Conclusion

- Recap the key takeaways from the module, highlighting the significance of good health and well-being for building prosperous societies.
- Encourage students to continue exploring different career paths and to stay informed about global healthcare issues.

Explore

Show the students the map, and explore the stories, articles, and videos that have been provided by their global peers. Ask the youth to pick their top three stories, and share them with their peers.

Share

Students will answer the following prompt:

1. Share a story about your personal relationship to your country's or community's healthcare system.
   1. Have you or your family used your local hospital?
   2. Do you have a primary care doctor?
   3. Are medications available to you and your family when you need them?
   4. Have you personally experienced biases in your country or community's healthcare system?
   5. What is your sense of how just and sustainable your healthcare system is?
   6. What areas of your healthcare system do you think need to be improved?

At the end of their stories, students should mention 2-4 stories and resources they've explored and would recommend to their global peers.

Objectives

By the end of this module, students will:

1. Students will learn about environmental health and eco-friendly practices.
2. Students will learn about the "green" healthcare industry.

Introduction

- Begin by asking students if they have ever encountered the term "environmental health" and explain its meaning.
- Share that healthcare systems can contribute to unhealthy environments and discuss the importance of understanding the impact of healthcare on the environment.
- Show the video of youth exploring the impact of healthcare systems on the environment.

Discussion: Sustainable Alternatives in Healthcare

- After watching the video, lead a class discussion on the challenges of incorporating sustainable alternatives into healthcare systems.
- Ask students to think of an innovation in healthcare that preserves and protects the environment, maintains infection control systems, and prevents illness both inside and outside of hospitals.

Connecting the Four R's to Medicine and Scientific Research

- Introduce the concept of the four R's: Reduce, Re-use, Re-purpose, and Recycle.
- Discuss how these principles can be applied in the medical and scientific research industry.
- Use the example of medical supplies and raise questions and concerns about reducing, reusing, repurposing, or recycling certain supplies.

Examining the Use of Reusable Medical Supplies

- Discuss the concerns about the safety and effectiveness of reusable medical supplies, using the example of cloth face masks during the COVID-19 pandemic.
- Explore the advantages and disadvantages of reusable supplies and address the issue of single-use stigma.

Exploring Biomaterial Medical Science

- Introduce the field of biomedical engineering and its role in researching natural and synthetic materials for medical supplies and equipment.
- Discuss the specialization of biomaterial medical science in researching natural materials for medical equipment such as contact lenses, prosthetics, and pacemakers.
- Connect these fields to the United Nations' Sustainable Development Goal 12, "Responsible Consumption and Production".

Technology and Innovations in Healthcare

- Discuss how technology can contribute to a more sustainable healthcare industry.
- Provide examples such as telehealth reducing carbon footprint and innovations in medical technology reducing waste.
- Highlight the importance of technological infrastructure for universal access to healthcare innovations.

Sustainable Medical and Research Facilities

- Discuss the concept of energy efficiency in medical and research facilities.
- Show examples of eco-friendly hospitals, such as the Balfour Hospital and the Kohinoor Hospital, and explain their sustainable features.

- Emphasize the role of sustainable architecture and energy conservation in creating greener facilities.

Waste Management Systems in Healthcare

- Explain the role of hospital administrators and sustainability directors in improving waste management systems.
- Discuss the challenges of biohazardous waste disposal and alternative solutions such as autoclaves and steam-based technologies.
- Highlight the importance of observing practices and implementing recycling procedures, biodegradable materials, composting, and locally-sourced foods.

Conclusion

- Summarize the main points discussed throughout the module.
- Encourage students to think about their role in creating a more sustainable healthcare industry.

Explore

Show the students the map, and explore the stories, articles, and videos that have been provided by their global peers. Ask the youth to pick their top three stories, and share them with their peers.

Share

Students will answer the following prompt:
1. Think about the everyday health materials we encounter that are unsustainable.
    1. What are the benefits of these materials?
    2. What might be the environmental consequences?

3. Are there more eco-friendly materials we can use?
4. What else can be done to make the medicine and scientific research industry more sustainable?

At the end of their stories, students should mention 2-4 stories and resources they've explored and would recommend to their global peers.

Objectives

By the end of this module, students will:

1. Students will learn about the skills needed for a future in the Medicine and Scientific Research industry.
2. Students will design goals in order to further explore a career in this field.

Introduction

- Begin by discussing the opportunities and importance of the fields of medicine and scientific research.
- Emphasize the role of curiosity, scientific method, laboratory experiments, and care for people in these fields.

Exploring Careers

- Introduce various careers in the medical field by reading the descriptions and roles provided in the lesson plan.
- Discuss the skills and dispositions required for each career.
- Engage students in a brief discussion about their interests and thoughts on these careers.
- Encourage students to ask questions and share their perspectives.

Skills and Dispositions

- Discuss the importance of communication skills in the medical and scientific fields.
- Explain the need for resilience and staying calm under pressure in these careers.
- Share examples and anecdotes to illustrate the significance of effective communication and resilience.
- Encourage students to reflect on their own communication skills and resilience.

Personality Assessment

- Explain the Myers-Briggs Type Indicator (MBTI) personality assessment and its relevance to career choices by displaying the image of the 16 types of personalities
- Discuss the four-letter code used in the MBTI and its components (Introversion/Extroversion, Sensing/Intuition, Thinking/Feeling, Judging/Perceiving).
- Highlight the study that linked specific medical subspecialties to MBTI personality types.
- Encourage students to reflect on their own personalities and consider how they would align with different careers in the healthcare systems

Getting into the Medical Field

- Discuss the process of applying to medical school and the standardized tests required in different countries (e.g., MCAT, GAMSAT, IGCSE, JAMP).
- Explain the importance of internships, research experience, and recommendation letters in the application process.
- Discuss the difference in studying medicine at the undergraduate or graduate level in different countries.
- Briefly explain the process of becoming a researcher, including the degrees required and opportunities for research experience.
- Discuss the competitive nature of the medical field and the availability of scholarships and grants.

Conclusion

- Recap the main points discussed during the module.
- Encourage students to explore their interests further, reach out to professionals, and engage in self-reflection to make informed decisions about their future careers in medicine and scientific research.

Explore

Show the students the map, and explore the stories, articles, and videos that have been provided by their global peers. Ask the youth to pick their top three stories, and share them with their peers.

Share

Students will answer the following prompt:

1. No matter your interest in the medicine and scientific research industry, you can still take action related to this field for a more just and sustainable world. Using the template below, create a SMARTIE Goal.

A Smartie Goal should be:

S - Specific: Reflects a concrete, definable goal that you seek to accomplish, connected to a broader values-based purpose. Guiding Questions: What specifically do you want to do? Is the purpose of your goal clear? What is your desired result?

M - Measurable: Includes clear measures that show whether the goal has been reached (in numbers or a measurable change). Guiding Questions: How will you measure your progress? How will you know when you have achieved your goal?

A - Ambitious: Challenging enough that reaching the goal will make a difference in people's lives. Guiding Questions: Is your goal aligned with the issue? Is your goal challenging enough? Is your goal meaningful and relevant? Why does your goal matter? What makes attaining this goal important?

R - Realistic: Something you can actually accomplish. Guiding Questions: Is this goal within your power to accomplish? Do you have the resources you need to accomplish your goal? Do you have access to the contacts, support, training, facilities, education, skills that your goal requires?

T - Time-bound: Includes clear deadlines. Guiding Questions: When exactly do you want to accomplish this goal? What time frame do you need to reach your goal? When will your goal be achieved and at what pace?

I - Inclusive: The goal brings people who are directly affected, particularly those most impacted, into reaching the goal. Guiding Questions: Are all the people affected accounted for in your goal? Does it bring in traditionally marginalized people? How can you make your goal be inclusive towards/positively impact people from marginalized groups? Is your goal taking a diverse universe into consideration?

E - Equitable: Seeks to address injustice, inequity, and oppression. Guiding Questions: Does it seek to address systemic injustice, inequity, or oppression? How can you adapt your goal so that it actively and intentionally seeks to promote equity and limit the disparity of access to resources? How can you make your goal purposefully seek to share power amongst groups?