Environment Science – Workout Examples and Exercises (Module I – XIII)

1.0 Course Faculty Information
Name: Arunima Mishra
NSRIC K12 area teacher
NSRIC Inc., Toronto, Ontario, Canada

2.0 Course Information

Course Codes	SUS00: Sustainable Environment
Class Days	Follow posting in NSRIC LMS system
Class Time	Follow posting in NSRIC LMS system
Course Credit Hours	5
Class Location	NSRIC online platform
prerequisites and/or co-requisites	n/a
Level /A, E, H, I, K12, M, P, S, T, U, V, W	Mid-level courses / M

Note: The below classification of courses is related any areas of knowledge:
A: Advanced level academic level courses; **C**: Canadian immigration and training courses; **E**: Executive courses; **H**: Higher-level courses (i.e., graduate courses); **I**: Intermediate courses (i.e., university preparatory courses – Grade XII+); **K12**: Foundational, and lower-level courses; **M**: Mid-level courses (i.e., undergraduate courses); **P**: Professional courses; **S**: Short/seminar courses; **T**: Training courses; **U:** Tutorial Courses; **V:** Vocational training courses; and **W**: Workshop courses.

3.0 Professor Information

Name	Arunima Mishra
Title	Teacher K12
Contact Information	Arunimam@nsric.ca; aru31mishra@gmail.com
Office Location	NSRIC online platform
Office Hours	10: 30 am – 11:30 am EST (Monday) by email appointment

Our Specializations:

1. **ADK:** to create different avenues and opportunities for the **Acquisition and Dissemination of Knowledge**.
2. **BDM:** to create **Business Development and Marketing** relationships for the growth of the institution.
3. **CPS:** to facilitate **Cybersecurity Products and Services** and cybersecurity hands-on training for our students.
4. **IVS:** aims to provide visa processing and free advice to study abroad, and migration in various categories.
5. **OE:** to offer different courses for human resource development through the NSRIC **Online Education** platform.
6. **RID:** to conduct **Research, Innovation and Development** in the areas of your interest and expertise.

NSRIC Inc.

Bringing people together through knowledge dissemination

Office of the CEO & President - Headquarters

+1-226-271-7206

info@nsric.ca

Toronto, ON, Canada

www.nsric.ca

Our Specializations:

1. **ADK:** to create different avenues and opportunities for the **Acquisition and Dissemination of Knowledge**.
2. **BDM:** to create **Business Development and Marketing** relationships for the growth of the institution.
3. **CPS:** to facilitate **Cybersecurity Products and Services** and cybersecurity hands-on training for our students.
4. **IVS:** aims to provide visa processing and free advice to study abroad, and migration in various categories.
5. **OE:** to offer different courses for human resource development through the NSRIC **Online Education** platform.
6. **RID:** to conduct **Research, Innovation and Development** in the areas of your interest and expertise.

NSRIC Inc.

Bringing people together through knowledge dissemination

Office of the CEO & President - Headquarters

+1-226-271-7206

info@nsric.ca

Toronto, ON, Canada

www.nsric.ca

4.0 Target Audiences

- **Kindergarten Students**
- **Parents and Caregivers**
- **Educators and Kindergarten Teachers**
- **Schools and Educational Institutions**
- **Nature Enthusiasts and Environmental Educators**

5.0 Course Modules Description or Course Description

Module I:

Module 1: Welcome to Nature - Exploring the Great Outdoors In Module 1, students are introduced to the enchanting world of nature. They embark on exciting outdoor adventures to explore their surroundings, discover various elements of nature, and learn to appreciate the beauty of the natural world. Through interactive activities and nature walks, children develop an awareness of their environment and begin to nurture their love for the outdoors.

Keywords: Nature, Environment.

Module II:

Animals Friend - Discovering the Animal Kingdom Module 2 is all about getting up close and personal with the animal kingdom. Students become young zoologists as they delve into the world of animals. Through engaging activities and observations, they discover the diversity of animal life, explore habitats, and learn about the importance of animals in the ecosystem. This module fosters a sense of wonder and curiosity about the creatures that share our planet.

Module 3: Plant Adventures - Unveiling the Wonders of Flora In Module 3, students become budding botanists, delving into the mysteries of plants and the green world. Through hands-on activities, gardening adventures, and exploration of plant life cycles, children gain an appreciation for the beauty and significance of

NSRIC Inc.

Bringing people together through knowledge dissemination

Office of the CEO & President - Headquarters

+1-226-271-7206

info@nsric.ca

Toronto, ON, Canada

www.nsric.ca

plants. They plant seeds, nurture their growth, and learn how to care for the environment through responsible gardening practices.

Module 4: Weather Wonders - Understanding the Science of Weather Module 4 invites students to explore the captivating world of weather. Through experiments and observations, children learn about weather patterns, seasons, and the science behind natural phenomena. They become mini-meteorologists, understanding why the weather changes and how it impacts our lives and the natural world.

Module 5: Nature Walks - Guided Adventures in the Wild In Module 5, students embark on guided nature walks, deepening their connection with the environment. These walks offer opportunities to observe and appreciate the beauty of nature, fostering a sense of wonder and curiosity about the outdoors. Children learn about the changing seasons, the importance of preserving natural habitats, and how to respect and protect the environment.

Module 6: Caring for Our Earth - Nurturing and Protecting Our Planet Module 6 instills a sense of environmental responsibility in students. They learn the importance of caring for the Earth and discover practical ways to protect the environment. Through interactive activities, children become young eco-warriors, understanding the significance of conservation and their role in preserving the planet for future generations.

Module 7: Nature Art and Crafts - Expressing Creativity with Natural Materials In Module 7, students embrace their artistic side by creating nature-inspired art and crafts. They use materials from the natural world, such as leaves, rocks, and flowers, to express their creativity. Through these creative projects, children learn how to connect with nature and appreciate its beauty while developing their artistic skills.

Our Specializations:

1. **ADK:** to create different avenues and opportunities for the **Acquisition and Dissemination of Knowledge**.
2. **BDM:** to create **Business Development and Marketing** relationships for the growth of the institution.
3. **CPS:** to facilitate **Cybersecurity Products and Services** and cybersecurity hands-on training for our students.
4. **IVS:** aims to provide visa processing and free advice to study abroad, and migration in various categories.
5. **OE:** to offer different courses for human resource development through the NSRIC **Online Education** platform.
6. **RID:** to conduct **Research, Innovation and Development** in the areas of your interest and expertise.

NSRIC Inc.

Bringing people together through knowledge dissemination

Office of the CEO & President - Headquarters

+1-226-271-7206

info@nsric.ca

Toronto, ON, Canada

www.nsric.ca

Module 8: Storytime in Nature - Exploring Nature Through Stories

Module 8 brings the magic of storytelling into the natural world. Students explore nature-themed stories, learning about animals, forests, and adventures in the great outdoors. They also discover the joy of reading in natural settings and are encouraged to create their own nature stories and poems, enhancing their storytelling and communication skills.

Module 9: Nature Science Experiments - Becoming Young Scientists in Nature

In Module 9, students step into the shoes of young scientists, conducting hands-on experiments using elements from the natural world. Through the scientific method, children ask questions, make hypotheses, and discover the wonders of nature. They become keen observers, deepening their scientific curiosity.

Module 10: Gardening - Cultivating Plants and a Love for Nature

Module 10 teaches students the art of gardening. They learn how to plant seeds, nurture plants, and appreciate the growth of plants and vegetables. Through hands-on experiences, children develop gardening skills and a love for nature as they cultivate their own mini-gardens.

Module 11: Nature and Technology - Discovering the Intersection of Nature and Tech

In Module 11, students explore the intersection of nature and technology. They learn how technology can enhance their understanding of the natural world, using apps and tools to identify plants, track weather, and protect the environment. This module shows how technology and nature can harmoniously coexist.

Module 12: FINAL PROJECT - Showcasing Your Love for Nature

The final module is the culmination of the course, where students choose a final project based on their interests. They plan, execute, and present their projects, showcasing their love for nature and the knowledge and skills they've gained throughout the course. This module encourages creativity, self-expression, and effective presentation skills.

Our Specializations:

1. **ADK:** to create different avenues and opportunities for the **Acquisition and Dissemination of Knowledge**.
2. **BDM:** to create **Business Development and Marketing** relationships for the growth of the institution.
3. **CPS:** to facilitate **Cybersecurity Products and Services** and cybersecurity hands-on training for our students.
4. **IVS:** aims to provide visa processing and free advice to study abroad, and migration in various categories.
5. **OE:** to offer different courses for human resource development through the NSRIC **Online Education** platform.
6. **RID:** to conduct **Research, Innovation and Development** in the areas of your interest and expertise.

NSRIC Inc.

Bringing people together through knowledge dissemination

Office of the CEO & President - Headquarters

+1-226-271-7206

info@nsric.ca

Toronto, ON, Canada

www.nsric.ca

Each module in this course is carefully designed to provide a comprehensive and engaging learning experience that nurtures a deep appreciation for nature, fosters scientific curiosity, encourages creativity, and instills a sense of responsibility for the environment. Students will embark on an unforgettable journey through the natural world, connecting with the beauty and wonder that surrounds them.

6.0 Course Learning Outcomes

Upon successful completion of this course, students will be able to:

CLO1: students will be able to appreciate the beauty of nature and the importance of spending time outdoors.

CLO2: students will be able to identify and understand different animals and their habitats.

CLO3: students will be able to plant and nurture seeds, observe plant growth, and understand the significance of plants in our lives.

CLO4: students will be able to comprehend basic weather patterns, identify seasons, and recognize the impacts of weather on their surroundings.

CLO5: students will be able to appreciate and respect the natural world, recognize the changes in seasons, and observe the importance of preserving natural habitats.

CLO6: students will be able to understand the significance of environmental conservation and engage in eco-friendly practices.

CLO7: students will be able to create art and crafts using natural materials and develop a greater appreciation for nature's beauty..

CLO8: students will be able to enjoy nature-themed stories, create their own nature-inspired tales, and enhance their storytelling and communication skills.

CLO9: students will be able to conduct simple science experiments using elements from the natural world, ask questions, make hypotheses, and observe and record findings..

CLO10:   students will be able to plant and nurture seeds, understand the basics of gardening, and develop a love for nature as they cultivate their own mini-gardens.

Our Specializations:

1. **ADK:** to create different avenues and opportunities for the **Acquisition and Dissemination of Knowledge**.
2. **BDM:** to create **Business Development and Marketing** relationships for the growth of the institution.
3. **CPS:** to facilitate **Cybersecurity Products and Services** and cybersecurity hands-on training for our students.
4. **IVS:** aims to provide visa processing and free advice to study abroad, and migration in various categories.
5. **OE:** to offer different courses for human resource development through the NSRIC **Online Education** platform.
6. **RID:** to conduct **Research, Innovation and Development** in the areas of your interest and expertise.

NSRIC Inc.

Bringing people together through knowledge dissemination

Office of the CEO & President - Headquarters

+1-226-271-7206

info@nsric.ca

Toronto, ON, Canada

www.nsric.ca

CLO11: students will be able to explore the relationship between technology and nature, utilize nature apps and tools for exploration, and understand the positive role technology can play in environmental awareness..

CL012: students will be able to choose, plan, execute, and present their final projects, showcasing their passion for nature, creativity, and effective communication skills..

7.0 How the course supports the attainment of the student outcomes

Student Learning Outcomes (1-6)						
1	2	3	4	5	6	7
Moderate	Moderate	Moderate	Low	Moderate	Moderate	

8.0 Course Materials

Online course materials
- Online presentation documents in pdf form
- Audio/visual recording of lectures (Optional)
- Online tutorial and meeting with students upon request
- Enough MCQs for study and self-practiced MCQs with answers in pdf form in the MLS system
- Reading materials if any in pdf form

Textbook and resources (If any)
1) **Arunima Mishra** (2023). Fundamentals of Environment: MCQs and Workout Examples for Beginners and Nature and enthusiast.

9.0 Academic Integrity

Students are encouraged to have a look at the NSRIC's statement of academic integrity at NSRIC website. It is noted that by signing this syllabus, you will acknowledge that you have understood that any detected plagiarism should be reported.

10. Assessment for Grade

This course is an academic course (i.e., K12, and Kindergarten) based on individual and team performance as shown in Table 1. Therefore, the program courses contain nine assessments instead of assignments and quizzes for assessment. Student will receive a "Certificate of completion" after successful completion of the course.

Our Specializations:
1. **ADK:** to create different avenues and opportunities for the **Acquisition and Dissemination of Knowledge**.
2. **BDM:** to create **Business Development and Marketing** relationships for the growth of the institution.
3. **CPS:** to facilitate **Cybersecurity Products and Services** and cybersecurity hands-on training for our students.
4. **IVS:** aims to provide visa processing and free advice to study abroad, and migration in various categories.
5. **OE:** to offer different courses for human resource development through the NSRIC **Online Education** platform.
6. **RID:** to conduct **Research, Innovation and Development** in the areas of your interest and expertise.

NSRIC Inc.

Bringing people together through knowledge dissemination

Office of the CEO & President - Headquarters

+1-226-271-7206

info@nsric.ca

Toronto, ON, Canada

www.nsric.ca

Table 1: NSRIC grading system.

Type of Assessment	Grade %
Participation/Engagement/Performance	10%
Assignments	15%
Quizzes	10%
Research Project	20%
Midterm Exam I	15%
Midterm Exam II	15%
Final Exam	15%
Total	**100%**

Important Note:

i) The below-classified courses (i.e., academic courses) will only be evaluated based on the grading system shown in Table 2. A grade and certificate will be issued for the student(s) and participant(s).

A: Advanced level academic level courses; **H**: Higher-level courses (i.e., graduate courses); **I**: Intermediate courses (i.e., university preparatory courses – Grade XII+); **K12**: Foundational, and lower-level courses; **M**: Mid-level courses (i.e., undergraduate courses).

ii) The below-classified courses will **<u>not</u>** be evaluated based on the grading system shown in Table 2. A certificate will be issued for the student(s) and participant(s).

E: Executive courses; **P**: Professional courses; **S**: Short/seminar courses; **T**: Training courses; **U:** Tutorial Courses; **V:** Vocational training courses; and **W**: Workshop courses.

Participation/Engagement/Performance

Your participation in every aspect of the course is important for the learning process. Your engagement in every discussion in the course, due delivery of all practices will be fruitful. These efforts from your side will reflect your performance in the course delivery and your commitments. This performance is the reflection of your dream grade!!

At the end of the term, below Table 2 will be used for translating your marks into a "Latter Grade" based on the NSRIC grading policy.

Our Specializations:

1. **ADK:** to create different avenues and opportunities for the **Acquisition and Dissemination of Knowledge**.
2. **BDM:** to create **Business Development and Marketing** relationships for the growth of the institution.
3. **CPS:** to facilitate **Cybersecurity Products and Services** and cybersecurity hands-on training for our students.
4. **IVS:** aims to provide visa processing and free advice to study abroad, and migration in various categories.
5. **OE:** to offer different courses for human resource development through the NSRIC **Online Education** platform.
6. **RID:** to conduct **Research, Innovation and Development** in the areas of your interest and expertise.
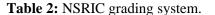
NSRIC Inc.

Bringing people together through knowledge dissemination

Office of the CEO & President - Headquarters

+1-226-271-7206

info@nsric.ca

Toronto, ON, Canada

www.nsric.ca

Table 2: NSRIC grading system.

Marks	Letter Grade	Points	Description
≥ 93	A+	4.00	Outstanding
≥ 90	A	3.75	
≥ 87	A-	3.50	Excellent
≥ 84	B+	3.25	Very good
≥ 81	B	3.0	
≥ 78	B-	2.75	Moderately Good
≥ 75	C+	2.50	Good
≥ 72	C	2.25	
≥ 69	C-	2.0	Moderately Good
≥ 66	D+	1.75	Pass
≥ 63	D	1.50	
≥ 60	D-	1.25	Poor Pass
< 60	F	0	Failing

11.0 Advice and additional requirements

I advise you to:
o   Please contact me if you need any help.
o   Students are expected to attend all scheduled online lecture classes.
o   Students are expected to study from the course materials and/or textbooks which will help them to read and understand easily.
o   Students are encouraged to write their own notes during lectures/presentations (pdf PowerPoint presentations, and additional materials if any).
o   Students are encouraged to attend online platform classes on time because late-attendee disrupts the flow of the class for both the instructor and the other students.

Additional information (During Online Course offering Period)
o   The PowerPoint course materials and video lectures will be available on the NSRIC Platform.
o   There will be scheduled discussion/tutorial sessions **every Monday** at the class scheduled time. All students must attend this session (Need student request).
o   There will be an office hour for students on Monday from 10:30 am – 11:30 am, Toronto, Canada time. Students need to send an email request so that a Zoom meeting can be arranged. In addition, any time student can set up an online appointment (i.e., phone, zoom, and/or other mode of communication) based on the availability of the course instructor. However, students should send an email request for setting up this type of meeting.

Our Specializations:
1. **ADK:** to create different avenues and opportunities for the **Acquisition and Dissemination of Knowledge**.
2. **BDM:** to create **Business Development and Marketing** relationships for the growth of the institution.
3. **CPS:** to facilitate **Cybersecurity Products and Services** and cybersecurity hands-on training for our students.
4. **IVS:** aims to provide visa processing and free advice to study abroad, and migration in various categories.
5. **OE:** to offer different courses for human resource development through the NSRIC **Online Education** platform.
6. **RID:** to conduct **Research, Innovation and Development** in the areas of your interest and expertise.

NSRIC Inc.

Bringing people together through knowledge dissemination

Office of the CEO & President - Headquarters

+1-226-271-7206

info@nsric.ca

Toronto, ON, Canada

www.nsric.ca

12.0 Course Topics

- **Welcome to Nature:** Introduction to the course, basic concepts of nature, and why it's important.

- **Animal Friends:** Learn about different animals, their habitats, and how to be kind to animals.

- **Plant Adventures:** Explore the world of plants, their growth, and how they help us.

- **Weather Wonders:** Understand different types of weather, seasons, and the water cycle.

- **Nature Walks:** Outdoor adventures to observe and interact with nature.

- **Caring for Our Earth:** Teach students about recycling, conserving resources, and being eco-friendly.

- **Nature Art and Crafts:** Fun and creative activities using natural materials.

- **Storytime in Nature:** Reading stories about nature and animals.

- **Nature Science Experiments:** Simple, hands-on experiments to explore natural phenomena.

- **Gardening:** Learn how to plant and care for a small garden or potted plants.

- **Nature and Technology:** How technology can be used to learn about and protect the environment.

- **Final Project:** Students can create a nature-themed project or presentation to showcase what they've learned.

Our Specializations:

1. **ADK:** to create different avenues and opportunities for the **Acquisition and Dissemination of Knowledge**.
2. **BDM:** to create **Business Development and Marketing** relationships for the growth of the institution.
3. **CPS:** to facilitate **Cybersecurity Products and Services** and cybersecurity hands-on training for our students.
4. **IVS:** aims to provide visa processing and free advice to study abroad, and migration in various categories.
5. **OE:** to offer different courses for human resource development through the NSRIC **Online Education** platform.
6. **RID:** to conduct **Research, Innovation and Development** in the areas of your interest and expertise.

NSRIC Inc.

Bringing people together through knowledge dissemination

Office of the CEO & President - Headquarters

+1-226-271-7206

info@nsric.ca

Toronto, ON, Canada

www.nsric.ca

. Course Goals: By the end of the course, kindergarten students should:

- Have a basic understanding of nature, animals, plants, and weather.
- Develop an appreciation for the environment and the importance of conservation.
- Develop basic observation and critical thinking skills.
- Gain confidence in exploring and interacting with the natural world.

This course would not only be educational but also fun and engaging for kindergarten students, fostering a lifelong love for nature and the environment.

Requirements/Instructions

Students are advised to register all drilling engineering modules courses for becoming the master in the subject area.

Bundled Program Description

Course Goals: By the end of the course, kindergarten students should:

- Have a basic understanding of nature, animals, plants, and weather.
- Develop an appreciation for the environment and the importance of conservation.
- Develop basic observation and critical thinking skills.
- Gain confidence in exploring and interacting with the natural world.

This course would not only be educational but also fun and engaging for kindergarten students, fostering a lifelong love for nature and the environment.

Each module should include a mix of activities, discussions, and hands-on experiences to engage kindergarten students and help them develop a deep appreciation for nature and the environment. Additionally, consider incorporating age-appropriate books, videos, and visuals to enhance the learning experience. This course is created by Arunima Mishra.

Our Specializations:

1. **ADK:** to create different avenues and opportunities for the **Acquisition and Dissemination of Knowledge**.
2. **BDM:** to create **Business Development and Marketing** relationships for the growth of the institution.
3. **CPS:** to facilitate **Cybersecurity Products and Services** and cybersecurity hands-on training for our students.
4. **IVS:** aims to provide visa processing and free advice to study abroad, and migration in various categories.
5. **OE:** to offer different courses for human resource development through the NSRIC **Online Education** platform.
6. **RID:** to conduct **Research, Innovation and Development** in the areas of your interest and expertise.

NSRIC Inc.

Bringing people together through knowledge dissemination

Office of the CEO & President - Headquarters

+1-226-271-7206

info@nsric.ca

Toronto, ON, Canada

www.nsric.ca

13.0 Course Contents and Schedule

No.	Module	Topics Nature Science	Remarks
Module I			
01		Chapter 1-Welcome to Nature	
02		Chapter 2-Animal Friends	
03		Chapter 3-Plant Adventures	
04		Chapter 4- Weather Wonders	
05		Chapter 5-Nature Walks	Assessment 1
06		Chapter 6-Caring For our Earth	
07		Chapter 7-Nature Arts and Craft	
08		Chapter 8-Story -time In Nature	
09		Chapter 9-Nature Science Experiments	Assessment 2
10		Chapter 10-Gardening	
11		Chapter 11-Nature And Technology	
12		Chapter 12-Final Project	
13		Chapter 13- Course Goal	Assessment 3

Prepared by Arunima Mishra, NSRIC K12 Unit Teacher, Dept. of Chemistry, OE Division, NSRIC Inc., London, ON, Canada.

Subtitle

The fundamental concepts for beginners and practicing Teacher and caregivers. These course learning outcomes reflect the knowledge and skills students will gain in each module, contributing to their overall understanding and appreciation of the natural world.

Our Specializations:

1. **ADK:** to create different avenues and opportunities for the **Acquisition and Dissemination of Knowledge**.
2. **BDM:** to create **Business Development and Marketing** relationships for the growth of the institution.
3. **CPS:** to facilitate **Cybersecurity Products and Services** and cybersecurity hands-on training for our students.
4. **IVS:** aims to provide visa processing and free advice to study abroad, and migration in various categories.
5. **OE:** to offer different courses for human resource development through the NSRIC **Online Education** platform.
6. **RID:** to conduct **Research, Innovation and Development** in the areas of your interest and expertise.