

GRADE 11 SCIENCE PROJECT

UN Sustainable Development Goal Challenge



Group Project Time – Blocks 7 & 5

- ▶ Each of you has been assigned to a group distinguished by letter (A, B, etc).
- ▶ Lists are available in the gym hallway

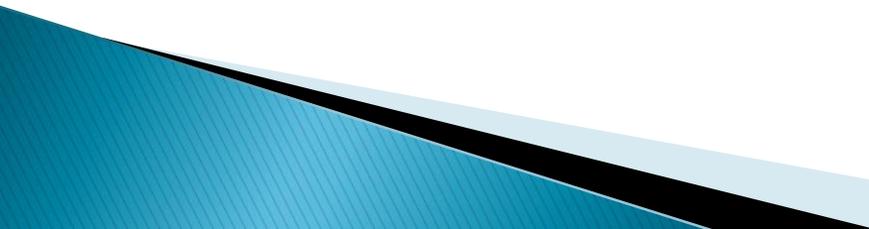
Take note of your group letter as it will tell you where to go after break.

- ▶ Groups are FINAL & will not be changed.

Group Project Time – Blocks 7 & 5

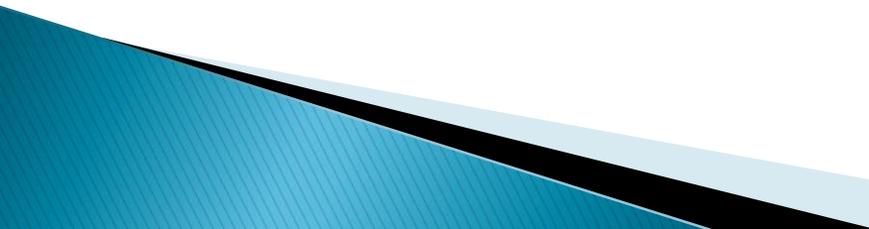
- ▶ When you return from break;
 - Find your table using your group letter
 - Bring your pen, pencil, paper, laptop etc to your table
 - At your table you will find the following:
 - A group package
 - Individual Project Sheets & Assessment rubrics
 - You will have access to ipads during these blocks
 - You will work with your group until lunch – all time spent after today is outside of class time

Collaboration

- ▶ *If everyone is moving forward together, then success takes care of itself. —Henry Ford*
 - ▶ Although rewarding and productive, working as a group can at times be challenging. Not everyone will always see eye to eye and agree on everything.
 - ▶ What are some strategies to use when you come to a standstill with your group?
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Collaboration

TIPS FOR PRODUCTIVE COLLABORATION

- ▶ Ways to solve disputes / disagreements:
 1. Democratic vote
 2. Draw straws / flip a coin
 3. Taking turns
 4. Make a list of Pros / Cons for each idea
 5. External impartial judge (Teacher Mentor?)
- 

Have a good break!

Be at your table
ready to go by
10:10am



Welcome to your group!

- ▶ **Step 1**: Introduce yourselves and share contact info – **fill out top of Proposal sheet**
- ▶ **Step 2**: Decide how you will communicate with each other

Project should take approximately 10 hours

- ▶ **When & where will you meet?**
 - In person
 - Phone, text, etc
 - Online forum or social media
 - Create a google doc for sharing info

Welcome to your group!

THINK FOR A MOMENT...

- ▶ What are your unique strengths and skills?
- ▶ What can you bring to your group?

Clear roles can often make collaboration more successful and helps avoid conflict.



Importance of Roles and Responsibilities

- <https://www.youtube.com/watch?v=U0zOqSRzR-s>

Welcome to your group!

Step 3: Make sure to discuss how you will divide up the work and what roles each team member will have

Make sure you can realistically accomplish what you take on in the time frame you agree on.

... Don't be Kyle



Topic ideas...



Possible Areas of Focus: Preventable Deaths



Child Mortality

www.irinnews.org



Neo-natal mortality



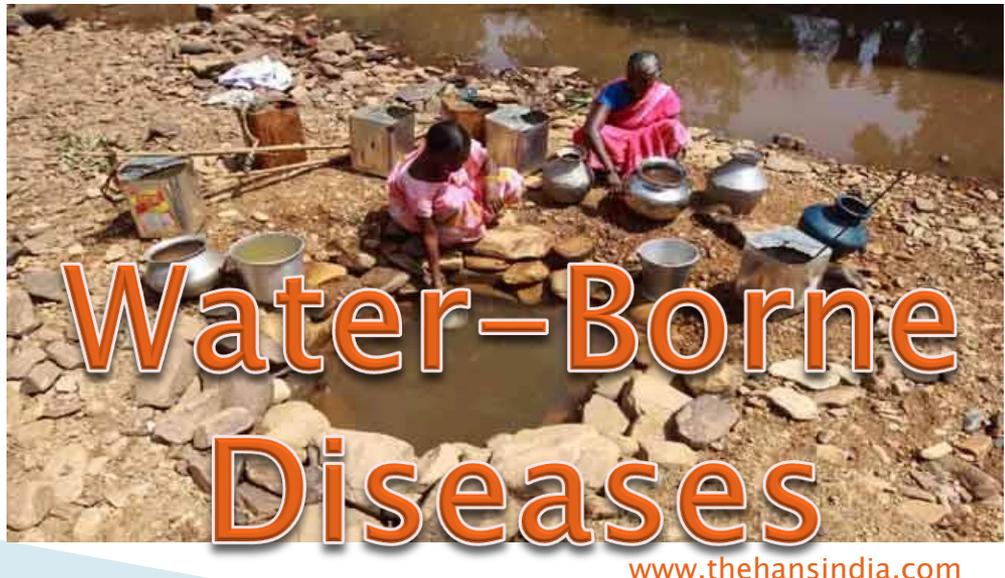
Maternal Health

www.plenglish.com



Maternal Mortality

Possible Areas of Focus: Communicable Diseases

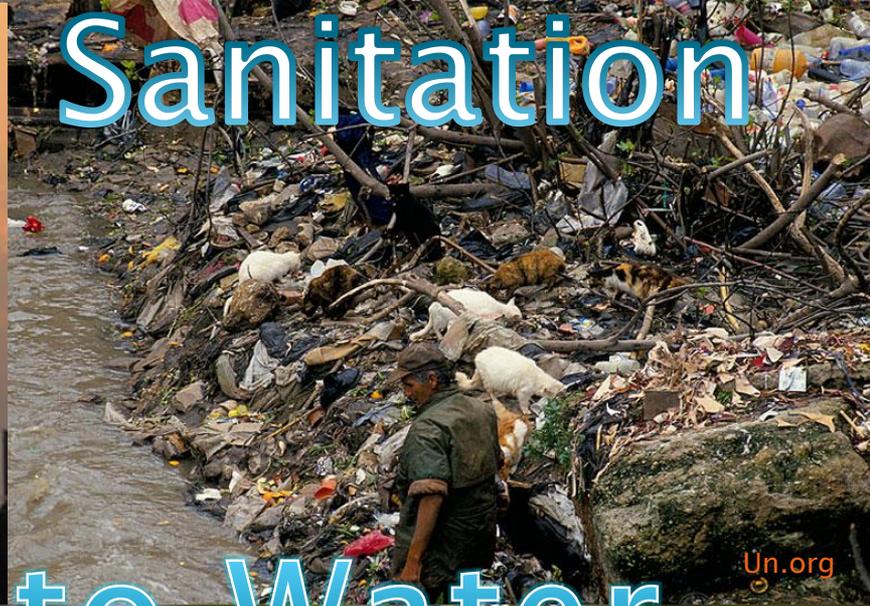


Possible Areas of Focus: Environmental Factors

Air Quality



Sanitation



www.westsidetoday.com

Access to Water

Un.org

Food & Nutrients



Water Quality

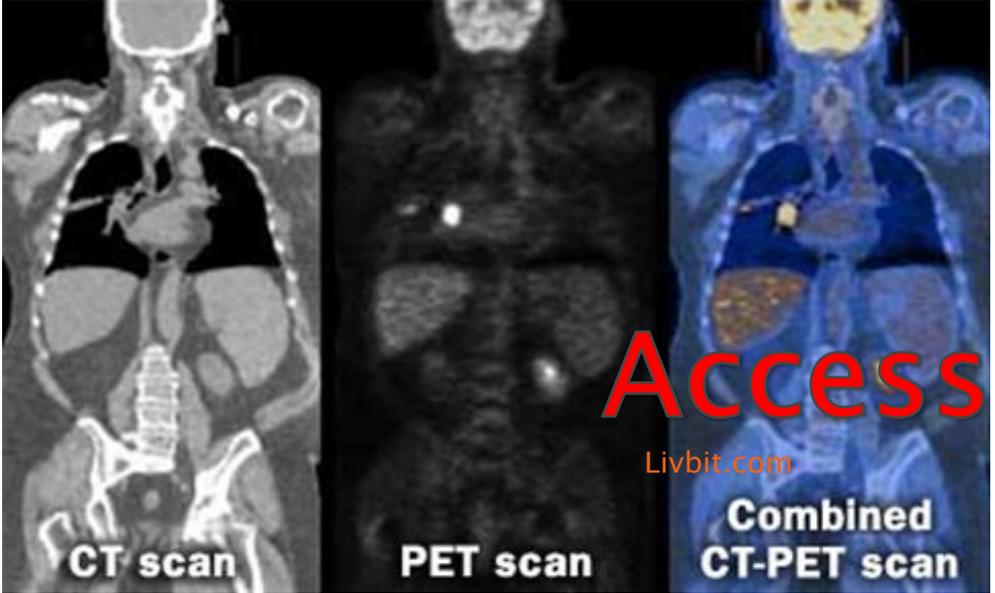


borgenproject.org

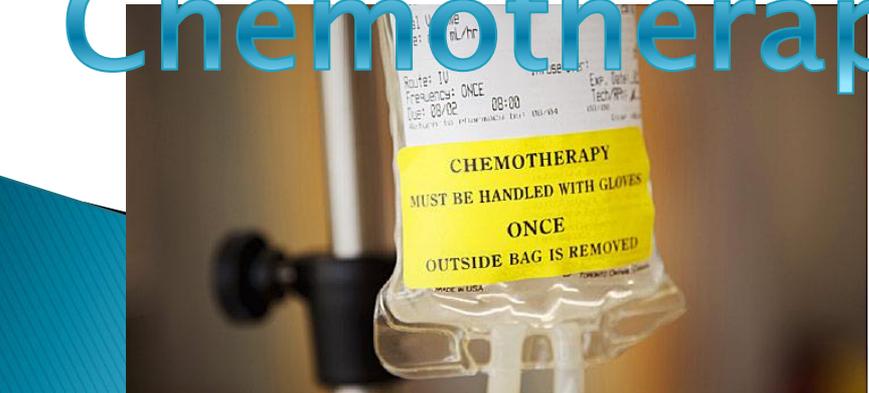
www.ithappensinindia.com

Possible Areas of Focus: Nuclear Imaging & Radiotherapy

Medical Technology



Chemotherapy



Brainstorming an idea...



Who?

How?

Where?

Impacts?

Scientific Innovations?

<https://prezi.com/jtesdo-sxtfa/good-health-well-being-2018/#>

BRAINSTORMING IDEAS...

- ▶ It is very important when brainstorming that you leave all analysis for later.

 - ▶ You will have 5 minutes
 - Throw in every idea that comes to you
 - Write down everything
 - Every idea is a good idea at this point
 - No critique during this time
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NEXT STEPS...

- ▶ Now you need to take all your ideas and discuss as a group which one you will pursue
- ▶ You have the remainder of the time until lunch to work with your group
- ▶ **PROJECT PROPOSAL SHEET**
 - Section I must be filled out and handed in TODAY
 - Each group member should write down the info on their own copy
 - You may want to do some research before you finalize your proposal

RESEARCH TECHNOLOGY

- ▶ We have ipads available for you to use today (approx 2 per group)
 - ▶ You may also use your own technology if you brought it
 - ▶ You will need to go over to the table and sign one out when we are done presenting
 - ▶ They must be returned by the end of this group work time
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Make sure you give credit where credit is due!

- If you use someone else's idea, reference them.
 - You can use an idea you have found in a new or unique way to make it yours!
 - If you have any questions, see Mr Bolivar or Ms Tieche in the library.
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Finished Product

- ▶ Your project will be a 2–3 minute video
 - ▶ It must describe:
 1. the specifics of the **problem**,
 2. the **solution** that you are proposing,
 3. and the **scientific implications** of using it.
 - ▶ You will also need to complete a written reflection
- 

Finished Product

What are **scientific implications**?

- **Positive outcomes AND Negative outcomes**
- Economic Impacts (Cost/benefit)
- Environmental Impacts (Cost/benefit)
- Other possible impacts;
 - Societal
 - Cultural
 - Political
 - Ethical

This is where you can show you understand all sides of enacting your scientific solution

Assessment

- ▶ You and your group will be assessed on the following criteria:

- 1. Self-Motivation and Perseverance**
- 2. The Impacts of Science**
- 3. Communication**
- 4. Reflecting on the Process**

- ▶ This project is worth 10% of your Term 3 grade.
 - If you are in multiple science 11 classes, this mark will count in each class.

Key Benchmarks

- ▶ **Intro & Presentation Day – February 8th :**
 - Keynote Speakers, Project Info and Planning Session
- ▶ **Group work Period**
 - EPIC time on **Wednesday, Feb 14th**
- ▶ **Check in with Teacher Mentor**
 - Weeks of March 6th – 16th
 - Arrange a time for your whole group to meet with your teacher mentor
 - Fill out Section II of your Proposal Sheet
- ▶ **Group work Period**
 - EPIC time on **Wednesday, April 11th**
- ▶ **Final due date – Monday April 23rd @ 8:30am**