Welcome to the PLTW Medical Intervention Course!
Mrs. Summers has a BS in medical technology, a Masters degree in Business Administration, and has worked for more than 13 years in the field of biotechnology. Together we will investigate the variety of interventions involved in the prevention, diagnosis and treatment of disease as they follow the lives of a fictitious family.

**FAILURE IS NOT AN OPTION!**
The following grading scale will be used:
- Tests: 40%
- Projects / Participation: 30%
- Quizzes: 20%
- Homework: 10%
- 100%

There are a lot of labs and projects in this course and it is imperative that you are in class as most labs will not be able to be made up.

It is YOUR responsibility to get all notes and assignments, as well as make up all tests and quizzes within 5 days of missing class.

**All students start the year with an A.**
Your job is to keep it! Pay attention during class and study for your tests and you will keep your A. I will be available for after school tutorials.

**Supply List for Medical Intervention**
The following supplies will be needed for a successful year:
- 3 ring 2” notebook
- notebook paper
- pens and pencils (every day to class)
- markers or colored pencils
- index cards (100 – 200)
- Signed Syllabus (kept in notebook)

I will check for these items on third day of class. This will be your first assignment. Remember you are trying to keep you’re A. Please let me know if you are having trouble securing these items.

**Grading Scale**
- 100 – 93 A
- 92 – 85 B
- 77 – 84 C
- 70 – 76 D
- below 70 F

**Tardies**
The tardy policy will strictly follow the school policy. If you should arrive late go directly to the “tardy log”, sign in and leave your pass on the table next to the log. Your reason for tardiness should be entered on the log and should be specific… not simply, “I was late”.

**CALLING MRS. SUMMERS**
The best way to reach Mrs. Summers is by email: karen.jaeger@cms.k12.nc.us

main phone #: 980-343-5992

Parents: please provide me with an email address for updates.
Announcements over the PA System
No matter what is going on in class, when someone comes on the PA system all talking and activity ceases!

CLASSROOM MANAGEMENT
No set of rules is all inclusive. I believe the following 6 points will lead to success in my class and in life!

1. **Be prepared** – bring your materials to class daily.
2. **Be on Time** – avoid tardiness and turn in assignments when they are due.
3. **Be present and participate** – pay attention in class; share your ideas, questions, thoughts, and brilliant insights!
4. **Be respectful and safe** – treat other people, materials, and equipment with consideration and follow all guidelines provided by the teacher.
5. **Be honest / have integrity** – no cheating, plagiarism, falsifying data or lying.
6. **Adhere to the rules and policies** – follow all dress, food, behavior, and electronic device rules as required.

Study Tips for Success
1. Read through your notes each evening
2. Write down important concepts and terms on index cards for review on the bus, during lunch and at night before bed
3. Outline material covered during class and use Cornell notes if possible
4. READ the assigned material so you will be prepared.

No food or drink in class!
We are in a working laboratory and for safety reasons there will be no food or drink allowed in the classroom.

Student signature: __________________________

Parent signature: __________________________

Parent Email for updates: __________________________
Course Topics

Unit One: How to Fight Infection

Lesson 1.1: The Mystery Infection
   Activity 1.1.1 - Medical Interventions Inventory
   Activity 1.1.2 - Investigating an Outbreak
   Problem 1.1.3 - Using DNA to Identify Pathogens
   Activity 1.1.4 - What’s the Concentration?
   Activity 1.1.5 - ELISA
   Activity 1.1.6 - Final Diagnosis

Lesson 1.2: Antibiotic Treatment
   Activity 1.2.1 - Antibiotic Therapy
   Project 1.2.2 - Attack of the Superbugs
   Activity 1.2.3 - When Antibiotics Fail

Lesson 1.3: The Aftermath: Hearing Loss
   Activity 1.3.1 - Good Vibrations
   Activity 1.3.2 - Can You Hear Me Now?
   Activity 1.3.3 - Cochlear Implant Debate

Lesson 1.4: Vaccination
   Activity 1.4.1 - Disease Prevention Through Vaccination
   Activity 1.4.2 - Vaccine Development
   Activity 1.4.3 - Life of An Epidemiologist

Unit 2: How to Screen What Is In Your Genes

Lesson 2.1: Genetic Testing and Screening
   Activity 2.1.1 - Chronicles of a Genetic Counselor
   Activity 2.1.2 - Copy Your Genes
   Activity 2.1.3 - Test Your Own Genes
   Activity 2.1.4 - Genetic Testing
   Activity 2.1.5 - Maternal and Child Health

Lesson 2.2: Our Genetic Future
   Activity 2.2.1 - Gene Therapy
   Activity 2.2.2 - Reproductive Technology

Unit Three: How to Conquer Cancer

Lesson 3.1: Detecting Cancer
   Activity 3.1.1 - Who is Affected by Cancer?
   Activity 3.1.2 - Diagnostic Imaging Career Activity
   Activity 3.1.3 - When Cells Lose Control
   Activity 3.1.4 - DNA Microarray
   Activity 3.1.5 - Unlocking the Secrets in Our Genes

Lesson 3.2: Reducing Cancer Risk
   Activity 3.2.1 - Am I at Risk?
   Project 3.2.2 - Skin Cancer Prevention
   Activity 3.2.3 - Breast Cancer Screening & Prevention
   Activity 3.2.4 - Virology Career Activity
   Activity 3.2.5 - Routine Screenings
Lesson 3.3: Treating Cancer
   Activity 3.3.1 - Diary of a Cancer Patient
   Project 3.3.2 - Biofeedback Therapy with EKG
   Project 3.3.2 – Biofeedback Therapy with Hand Grip Monitors (Alternative for Project 3.3.2 Biofeedback Therapy with EKG)
   Project 3.3.3 - Design of a Prosthetic Arm
   Project 3.3.4 - Occupational and Physical Therapy Careers

Lesson 3.4: Building a Better Cancer Treatment
   Activity 3.4.1 - Personalized Medicine
   Activity 3.4.2 – Nanofuture
   Activity 3.4.3 - Clinical Trials
   Project 3.4.4 - Tiny Treatment

Unit Four: How to Prevail When Organs Fail

Lesson 4.1: Manufacturing Human Proteins
   Activity 4.1.1 - All About Insulin
   Activity 4.1.2 - Protein Factories
   Activity 4.1.3 - Protein Purification
   Activity 4.1.4 - Protein Gel Electrophoresis
   Activity 4.1.5 - Careers in Biomanufacturing

Lesson 4.2: Organ Failure
   Activity 4.2.1 - Medical Detectives

Lesson 4.3: Transplant
   Activity 4.3.1 - Who Should Receive the Organ?
   Activity 4.3.2 - Finding a Match
   Activity 4.3.3 - Kidney Donation
   Activity 4.3.4 - You Be the Surgeon
   Activity 4.3.5 - Transplant Team
   Activity 4.3.6 - Are All Transplants the Same?

Lesson 4.4: Building a Better Body
   Activity 4.4.1 - Replacement Parts
   Problem 4.4.2 - The Bionic Human
   Activity 4.4.3 – Putting it all Together

Website Address: www.inetteacher.com, Teacher: Jaeger or click on the link below

or see my wiki page: http://karens summers.cmswiki.wikispaces.net