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. This is my 11th year teaching at Berry. 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%
- Notebook: 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.

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.

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 hand me your pass. Your reason for tardiness should be entered on the log and should be specific... not simply, "I was late".

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.
**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.

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**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. There is a lot of material in the introduction and body of each activity and it is important that you read and highlight the important concepts, terms, and facts as you proceed through the activity.

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**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.

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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 http://www.inetteacher.com/Section2.aspx?uid=103605&sid=203112&pgid=0&secid=17524

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