Medical Detectives is an elective class in the Project Lead the Way Gateway (PLTW) Program. The curriculum is designed to challenge and engage the natural curiosity and imagination of middle school students. The class is designed with a blended learning model where students will receive both direct instruction from the teacher and online learning by using a computer with internet access. Students will discover how healthcare professionals act as medical detectives in identifying, treating, and preventing injury and illness in their patients. Patient medical histories are examined and students investigate how these histories guide medical detectives to the correct diagnosis and treatment of a particular illness. Students also investigate and collect vital signs such as heart rate, blood pressure, and temperature. Finally, students research pathogens involved in food borne illness and act as medical detectives in diagnosing and proposing a treatment plan for a patient with a mystery illness. The knowledge that students gain and the skills they build from the Medical Detectives course will create a strong foundation for further STEM learning in high school and beyond.

Throughout Medical Detectives, students acquire knowledge and skills in problem solving, teamwork and innovation as well as explore STEM careers. In addition, students develop 21st Century skills:

**Learning and Innovation Skills**
- Creativity and Innovation
- Critical Thinking and Problem Solving
- Communication and Collaboration

**Life and Career Skills**
- Flexibility and Adaptability
- Initiative and Self-Direction
- Productivity and Accountability
- Social and Cross-Cultural Skills
- Leadership and Responsibility

**The units covered this semester are:**
- Basic Forensics
- STEM Careers
- What is a Medical Detectives?
- Mysteries of the Human Body Systems
- Murder Mystery/Forensic Science
- Applied Chemistry
- Applies Physics
- Nanotechnology

**Learning Management System (LMS):** [mypltw.org](http://mypltw.org)

This class utilizes an on-line learning management system provided by PLTW. Most assignments will be completed and submitted electronically to the LMS for grading. Each student will be given a user name and password unique to them. They will utilize the username and password to access their daily
assignments. This allows students to work in class or access their assignments from home. There is a gradebook inside the LMS so that you can see what your student has turned in. The assignments are open for approximately two weeks before locking. Once an assignment locks, it may not be turned in for credit.

**Grading Scale:** All student work is graded on a point system. At the end of a grading period, the student’s points are added together. A letter grade is determined by figuring a percentage based upon the total points earned by a student compared with the total points possible.

Grades will be calculated according to the following scale:

- **A** = 100% - 93%
- **A-** = 92% - 90%
- **B+** = 89% - 87%
- **B** = 86% - 83%
- **B-** = 82% - 80%
- **C+** = 79% - 77%
- **C** = 76% - 73%
- **C-** = 72% - 70%
- **D+** = 69% - 67%
- **D** = 66% - 60%
- **F** = 59% & below

**Materials needed for Science:**

- Pencil or Pens
- Portable thumb drive
- 1 **Durable 11x9** single subject Notebook
- Digital Camera or Cell Phone Camera (Not required but strongly encouraged – see BYOD Expectations at the end of this document)

**Optional, but useful supplies include:**

- Colored Pencils
- Colored Markers
- Scissors
- Calculator
- Ruler with Metric units

**About Mr. Switzer:** I have two degrees, B.S. Forest Resources from the University of Idaho and a B.A. of Biology Education from Eastern Washington University. In 2011 I was married and now have one 2.5 year old toddler. My wife teaches at 4th and 5th grade at First Presbyterian Christian School in downtown Spokane. I completed my student teaching at Glover Middle School, taught Anatomy at Mead High School, and Physical Science at Lakeland High School before finding my home at Sacajawea. If you have any questions please feel free to contact me and I will return your email or call as soon as possible.

Thanks

Matthew Switzer  
Phone # 354-5469  
E-mail: Matthewsw@spokaneschools.org
Sacajawea Medical Detectives
“Bring Your Own Device” (BYOD) Expectations

The Medical Detectives Class will require students to take photographs throughout the course that will be incorporated into electronic assignment documents. Students will be allowed to use their cellphone camera, a digital camera, etc. to take pictures to be transferred into their assignments. Students that do not have a cellphone camera or digital camera may borrow a digital camera from Mr. Switzer for use during class only (limited number available). All students in the Medical Detectives class must agree to this policy allowing them to use their own devise for this course only. Please review and sign this document and have your child return it to Mr. Switzer.

General Precautions
- Any device you bring to school is personal property, and you must follow this policy and the District’s Acceptable Use Policy.
- All devices must be fully charged each school day.
- Devices cannot be charged at school due to security reasons.
- Keep your device locked in your locker or backpack when not in use.
- Any devices that stop working must be stored in a safe place and taken home to troubleshoot with parents.
- Do not give access to your device to other students unless you are with them in a group work setting.
- Device must be stored at all times unless teacher has instructed use during a lesson.
- Make sure you know your teacher’s classroom expectations.
- **BE RESPECTFUL** - Use your devises appropriately at all times.

Unacceptable uses of electronic resources include, but are not limited to:
- Using your device without teacher approval.
- Leaving your device unattended.
- Using or downloading apps during school time that are not approved by the teacher.
- Vandalism (any malicious attempt to harm/destroy hardware, software or data).
- Inappropriate access or use of other student’s devices, accounts, files, and/or data.
- Transmission or accessing obscene, offensive or threatening material.
- Unauthorized access to Blogs or Social Networking Sites.
- Keep your device free of apps, photos, videos, or music that are not school appropriate.
- Only visit school appropriate and/or approved sites.
- Do not attempt to or intentionally “go around” the school’s web filtering system.
- Do not use any “hacking software” or attempt to gain access without permission.

Discipline Steps
If a student violates any part of the above policy, he/she will be put on the following disciplinary steps:

1 – offense: Student will lose opportunity to bring their device for a week and phone call home.

2 – offense: Student will lose opportunity to bring their device and to be part of the “Bring Your Own Device” for the duration of the Medical Detectives course.
Student Pledge for “Bring Your Own Device” Use

1. I will take good care of my device.
2. I will use proper care to keep my device clean.
3. I will never leave my device unattended.
4. I will keep food and drinks away from my device.
5. I will follow the district’s Acceptable Use Policy.
6. I will protect my device by keeping it stored when not in use.
7. I will follow the policies outlined in the “BYOD” Expectations.
8. I will not disassemble any part of my device or attempt any repairs at school.
9. I will avoid using objects that may scratch the screen of my device.
10. I will use my device in ways that are educational and appropriate
11. I understand that my device is subject to inspection at any time.
12. I will be responsible for all damage or loss caused by negligence or abuse.
BYOD Agreement

I agree to the stipulations set forth in the:

- “BYOD” Expectations
- Student Pledge for “BYOD” Use
- SPS Acceptable Use Policy

Student Name (Please Print): ________________________________

Student Signature: ________________________________ Date: __________

Parent Name (Please Print): ________________________________

Parent Signature: ________________________________ Date: __________

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Spokane Public Schools

SCIENCE SAFETY CONTRACT

Student Name___________________________________________

Because of the intense lab/activity orientation of the science curriculum, the following contract has been designed to insure the safety of all students. The following guidelines include behaviors we expect all students to follow.

I agree to the following guidelines:
1. Give the teacher complete attention while directions are being given
2. Follow the directions
3. Use materials only as directed by the teacher
4. Wear all assigned safety equipment
5. Treat all materials in the laboratory as potentially dangerous
6. Use chemicals and materials safely
7. Never pose a safety threat through reckless behavior

(A safety contract must be signed by each student and a parent/guardian to allow him/her to participate in science lab activities. These guidelines are in compliance with Spokane Public Schools expectations.)

I _________________________ (student name) agree to follow the behavior guidelines required for all science lab/activities.

__________________________________   __________________
Student signature      date

__________________________________   __________________
Parent/Guardian signature     date
Welcome to Sacajawea Middle School.

Attached is the information you need to know for Mr. Switzer’s Medical Detectives class. After reading this information please have your child return this sheet to Mr. Switzer with all of the information below completed and the District Science Safety Contract/BYOD Agreement signed (other side of this sheet). Please keep the other pages for your future reference.

Thank You for your time.

Student Name____________________________________________

Parent/ Guardian Name________________________________________

Home___________________ Cell___________________ Work___________________

Parent/ Guardian Name________________________________________

Home___________________ Cell___________________ Work___________________

Parent/ Guardian Name________________________________________

Home___________________ Cell___________________ Work___________________

I have read Mr. Switzer’s Medical Detectives Class Guide________________________________________

(Parent/Guardian’s Signature)

________________________________________

(Student’s Signature)

Feel free to use this space to include any other information you would like me to know about your child in order to help them be successful in science this year.

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

*** Please turn over and complete the District Science Safety Contract/BYOD Agreement on the other side of this sheet.