



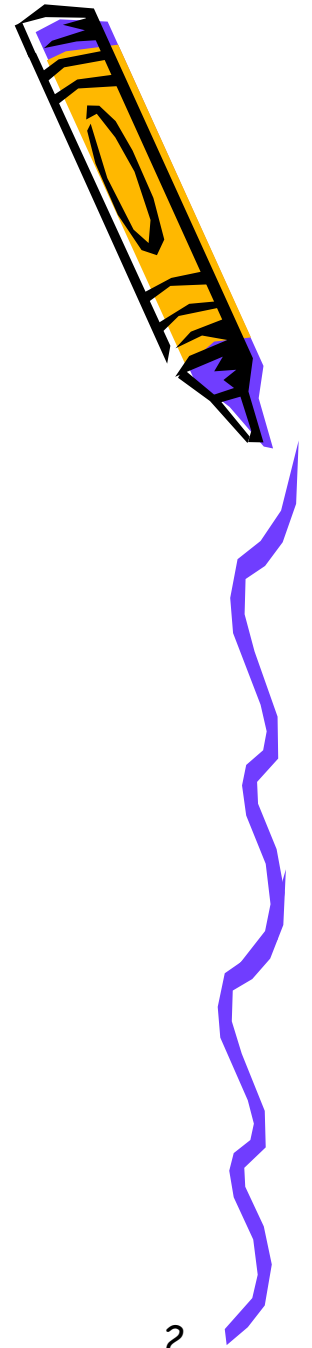
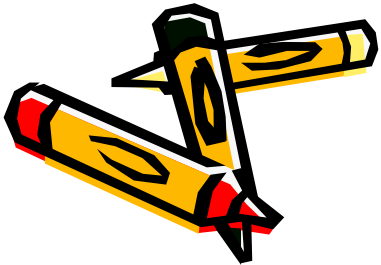
UMMS Quiz

How UMMS and partners serve the public and prepares the workforce for careers in health care and biomedical science?



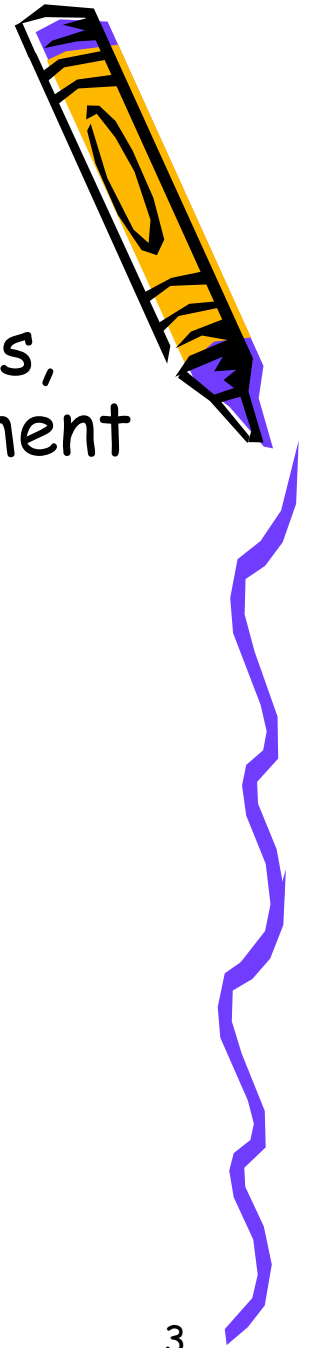
Who participates in the Worcester Pipeline Collaborative?

- UMMS
- UMMHC
- Abbott Bioresearch Laboratory
- Worcester Public Schools
- Quinsigamond Community College
- Clark University
- Plumley Village
- Past Partners
 - Worcester State College
 - Assumption College



RSRC K-12 Science and Math Curriculum Library

- Standards-based instructional materials, parent materials, professional development books and tapes
- K-6 inquiry-based science units with supplies needed to do experiments
- Support for district curriculum committees in reviewing, piloting and implementing new materials.
- Support for UMMS staff going onto classrooms.

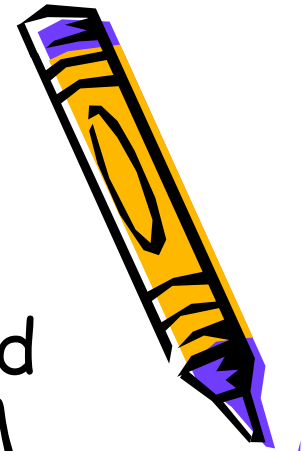


PALMS Alliance

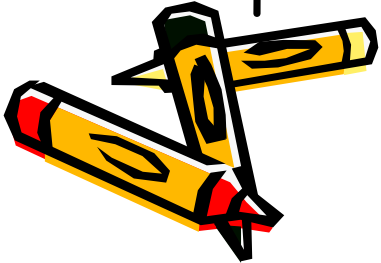
- Statewide collaborative of organizations dedicated to improving math and science education.
- Headquartered at UMMS and leverages resources across the state.
- Developing Mathematics Learning communities, creating professional development materials, providing facilitator training to master teacher.



Central MA STEM Pipeline Network

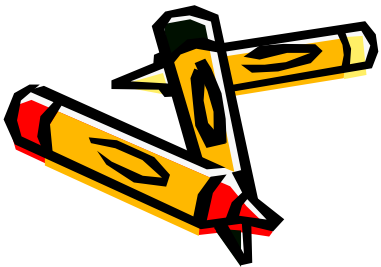
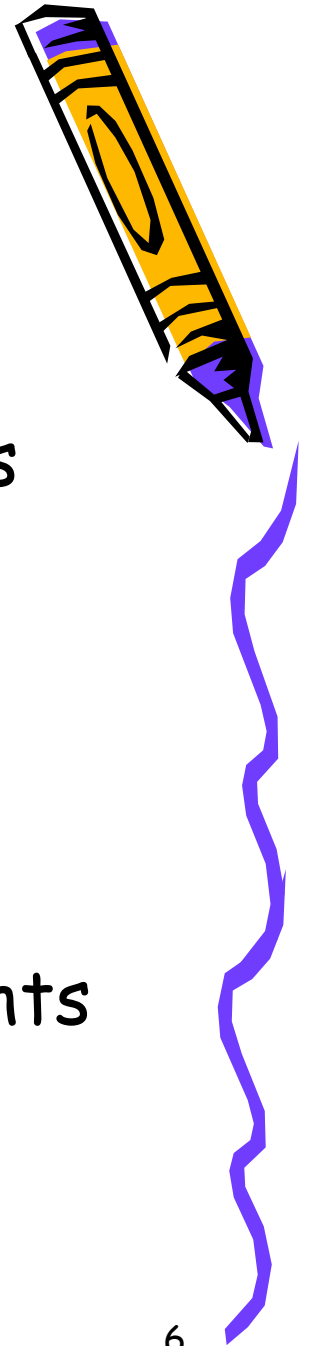


- Connecting business, K-16, non profits and STEM regional alliances to enhance STEM education and workforce development
- Funded by Economic Stimulus Package of 2004 and administered by the Board of Higher Education
- Professional development for MS math and science teachers that impacts student achievement
- Expanding robotics in Worcester



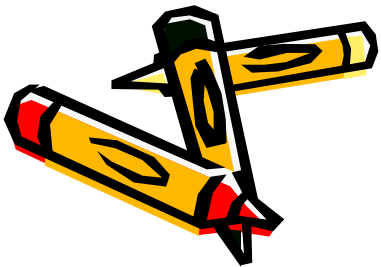
K-6 North Quadrant Elementary Schools

- Eight Elementary Schools
 - Reading to English Language Learners
 - Mentoring
 - Tutoring
 - Guest Speakers for classrooms
 - Science Projects Coaches
 - Volunteers for Family Discovery Nights

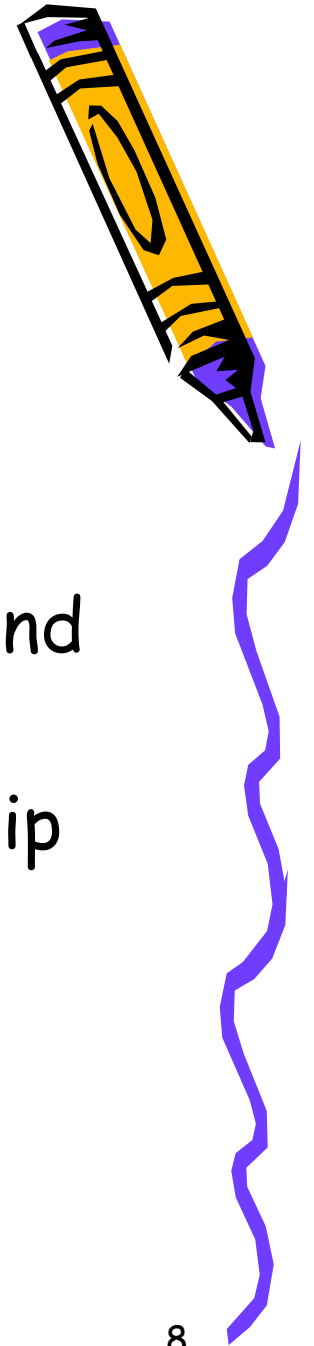


Science To Go

- Program to replace consumable supplies and materials in K-6 inquiry-based science units.
- Obstacle to full implementation of hands-on science lessons
- Efficient, local and cost effective for districts
- 21 districts participate-Eastern Massachusetts



K-8 Math Professional Development



- Everyday Mathematics and Connected Mathematics Program teacher training, study groups, and support materials
- Training teachers to be highly qualified and pass the teacher test.
- Developing Mathematical Ideas Leadership Training (DMI)
- Principal Training in Standards-based Mathematics (Lenses on Learning)



K-6 Visiting Scientists

- GSBS students provide hands-on science activities to fifth grade classes at Lake View Elementary School bi-weekly and weekly after school program at Grafton Street School
- GSBS students also coordinate the Kids to College Program for the sixth grade classes at Lake View
- Assumption College students provide inquiry-based science activities to fifth graders at Roosevelt School



Middle School Professional and Curriculum Development

- Summer Content Institutes and graduate level courses in mathematics
- Proportional Reasoning and Data Analysis professional development curricula
- Training in how to examine student work to identify student's math understanding.
- Helped develop new 7th grade science curriculum for WEMS
- Summer 2004 assisted in developing the 8th grade science curriculum



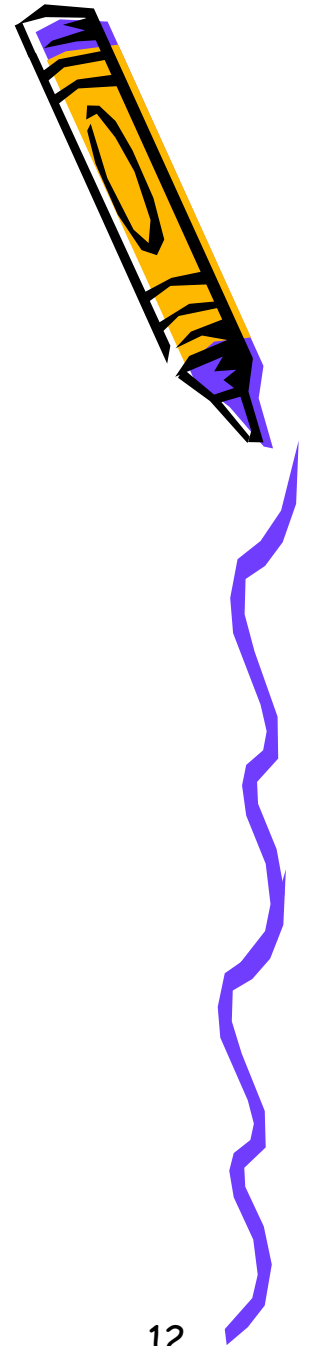
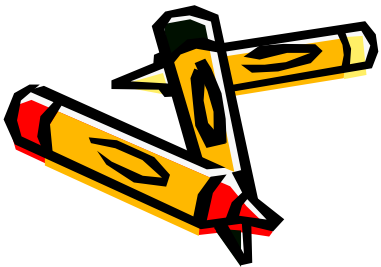
WPC and RSRC Laboratory Opportunities

- Hands on laboratory experiments for middle school and high school classes.
- Independent research for advanced high school students
- Host Advanced Placement Chemistry class for DHS



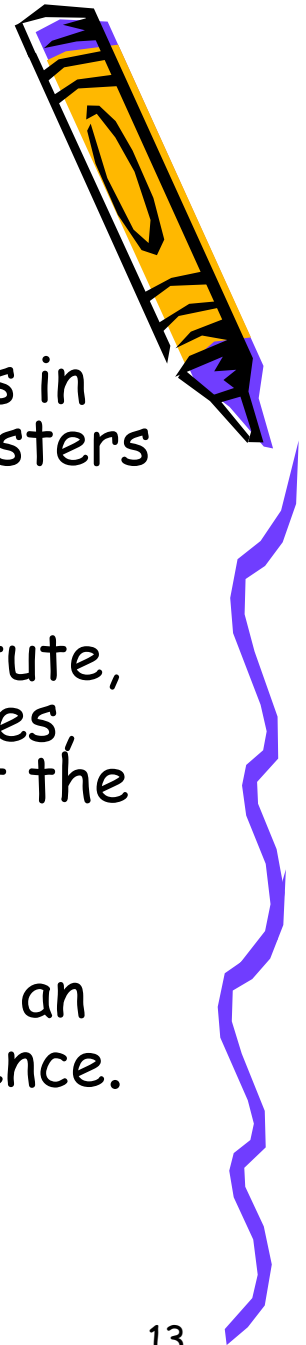
Women in Science Conference

- Worcester middle school girls
- Workshops with women scientists and engineers
- Noon luncheon at Medical School
- Inspirational keynote speakers



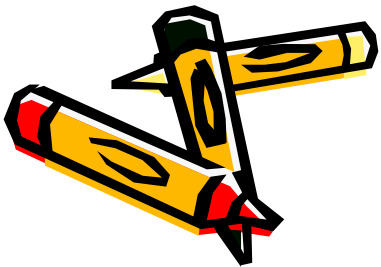
Science Can Open Pathways for Exploration (SCOPE)

- **SCOPE** encourages and supports middle school girls in developing their skills and knowledge in science, fosters leadership and communication skills
- **SCOPE** provides a week-long summer science institute, weekly experimentation in a laboratory, field studies, tours of UMMS facilities, and museum programs at the EcoTarium.
- **SCOPE** Family/Community nights allow participants an opportunity to present their work to a larger audience.



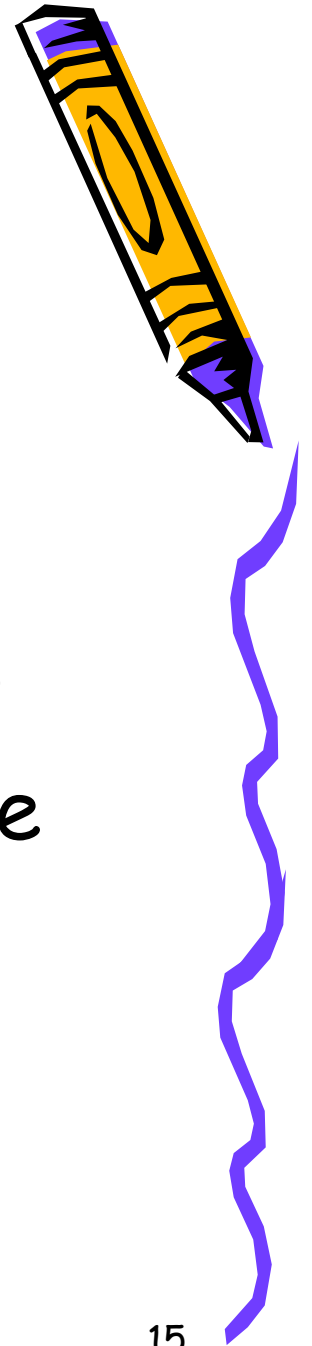
Summer Science Odyssey

- Provides two-2 weeks summer experiences for 40 middle school students
- Weekly themes and field trips
- Also provides opportunities for three high school students be assistants
- Special features; free admission, breakfast, lunch and snacks
- Collaborates with the GEAR-UP office



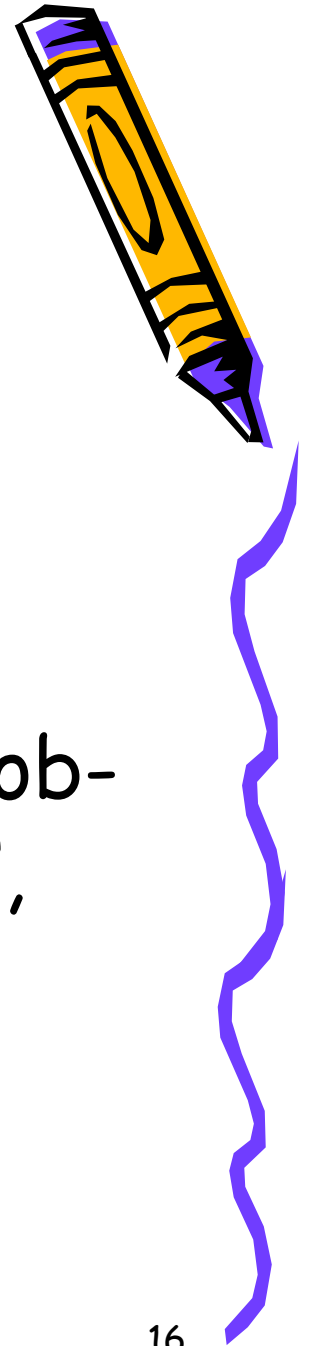
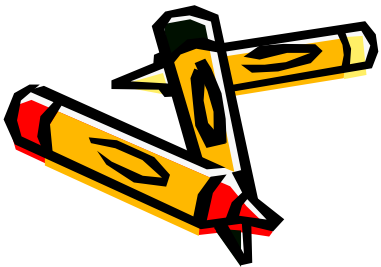
After School Science Clubs

- Worcester East Middle School
- Worcester Vocational High School
- Plumley Village Home Work Center
- Minority Achievers Program at the YMCA Central Branch



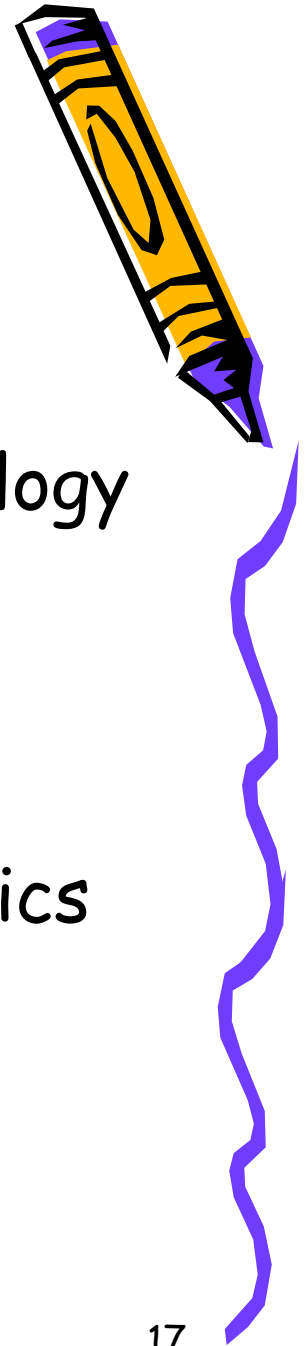
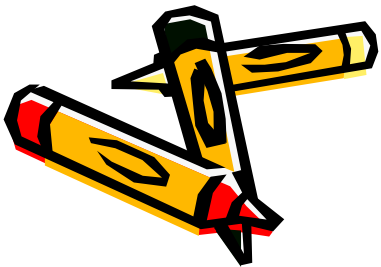
Shadowing and Tours for 7th and 8th Graders

- 7th grade students participate in tours at UMMS, UMMHC and lab activities at the WPC City Campus
- 8th grade students participate in job-shadowing experiences at UMMHC, UMMS and Abbott Bioresearch Center



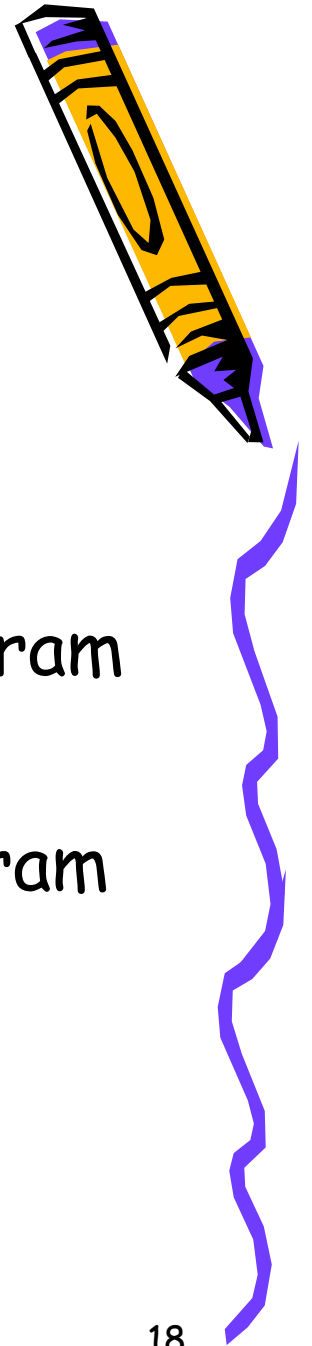
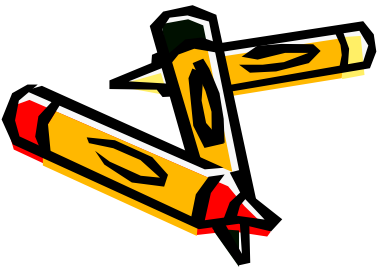
Professional Development for High School Science and Math Teachers

- Content Networks in AP Chemistry, Biology and Calculus
- Team teaching with scientist
- Summer Content Institutes
- Training in Standards-based Mathematics Program, IMP
- Consulting in PD planning



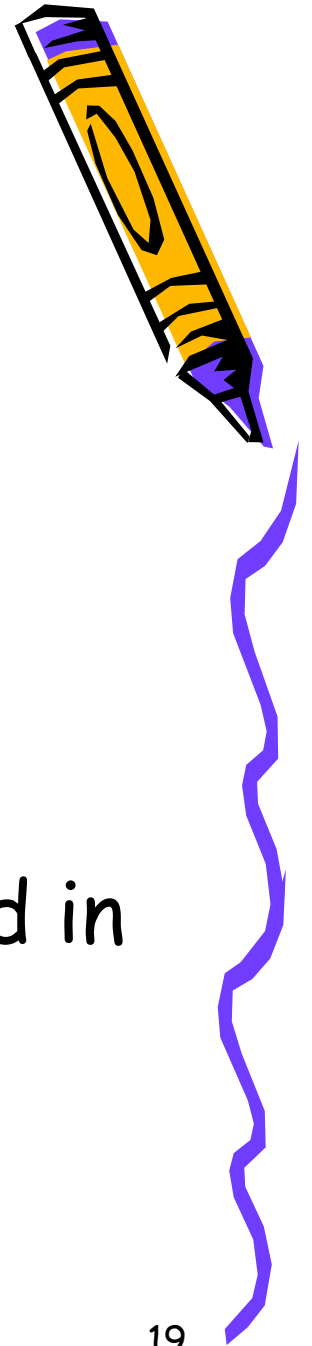
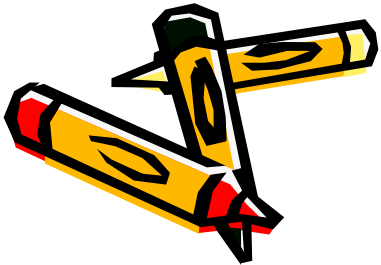
High School Programs

- North High School Health Science Academy
- Worcester Voke Health Assistant Program
- Doherty High School Site Program
- Northborough High School Quest Program



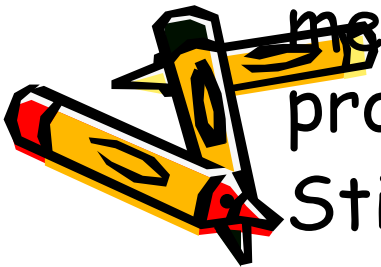
Collaborative Open Houses and Tours

- Host Open Houses for students in Massachusetts school districts
- Host Open Houses for the NYLF in Medicine (3 "Pipeline" students are given scholarships)
- Provides tours for students enrolled in Anatomy, AP Biology and health clusters



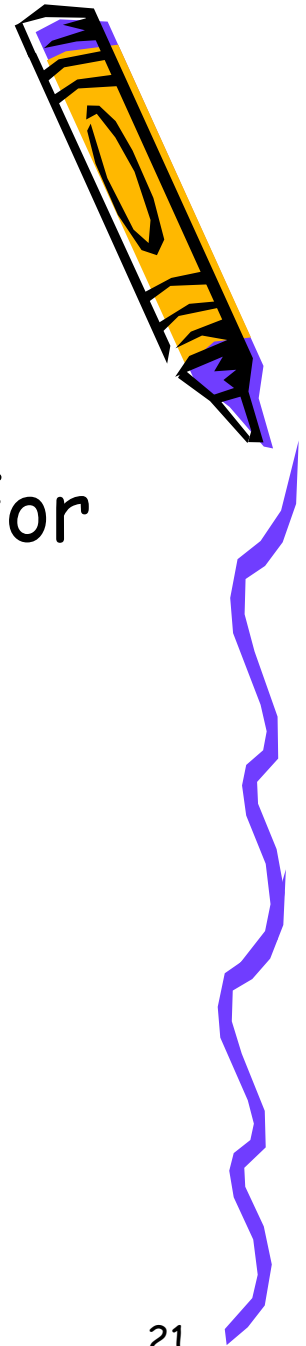
High School Health Careers Program (HSHCP)

- High School Sophomores and Juniors in MA
- To improve participants' academic, communication and computer skills
- To make students aware of the college application and financial aid process
- To introduce students to research or clinical internship opportunities
- Presentations on contemporary issues in medicine allow students to interact with professionals
- Stipends are provided upon completion



Internships

- NHS Health Science Academy
- WVHS Health Assistant Program
- ASCEND - After School Centers for Exploration and New Discovery
academic year and summer opportunities
- HSHCP summer internships
- College



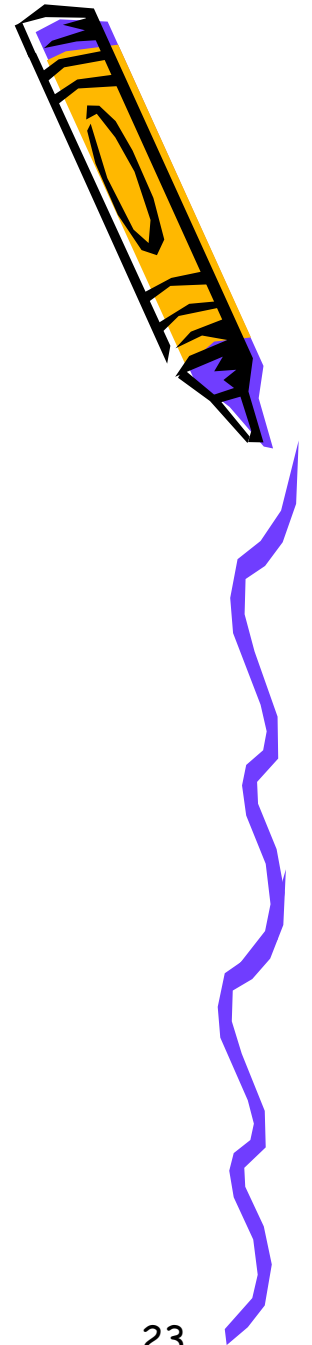
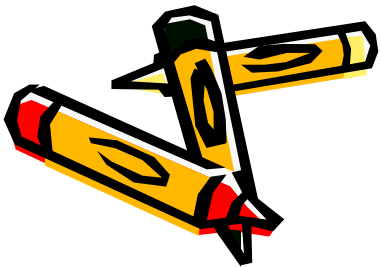
College Programs

- Summer Enrichment Program
 - To enhance communication skills
 - To prepare students for the MCAT, GRE, AMCAS applications
 - Provides students with information on how to finance medical, graduate or professional education
- Summer Research Fellowship Program
 - 10 week summer research experience
 - 500 applicants from US colleges and universities
 - 50-60 participants in UMMS research labs
 - Closing poster session



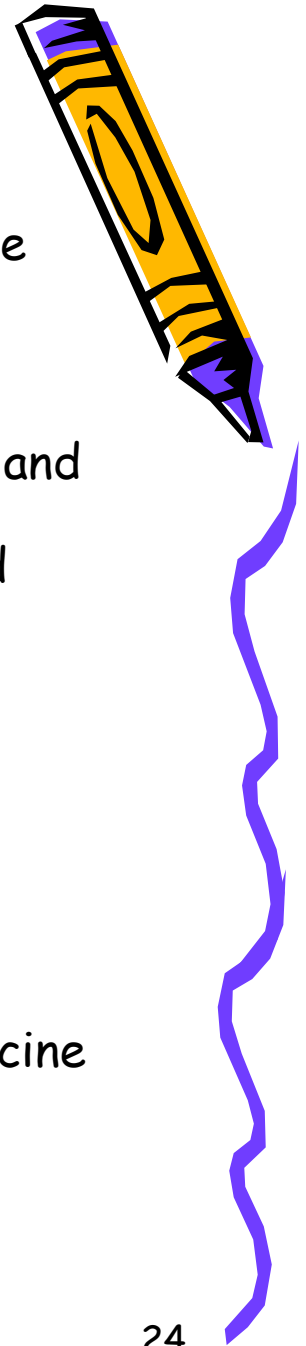
Community

- Science Fairs (local, regional, state, international)
- PIP (Parent Involvement Projects)
- Family Math and Science Nights
- YMCA Minority Achievers
- Annual African American Festival
- Teddy Bear Clinic
- Plumley Village Health Fair
- Kids' Fair at the Centrum
- Annual Latino Festival



UMMS & UMMHC Participants

- Neurodiagnostics
- Respiratory Therapy
- Orthopedics Clinic
- Radiology Department
- Operating Room
- Pharmacy
- Blood Donor Center
- Food and Nutrition
- Health and Fitness
- Employee Health
- Interpreter Services
- Clinical Laboratory
- Pediatric Clinic
- Animal Medicine
- Medical Education
- Biomedical Engineering
- Maternity
- Sleep Disorder Clinic
- Emergency Medicine
- Center for Infectious Disease and Research
- Department of Medicine
- Department of Cell biology
- Department of Biochemistry and Molecular Pharmacology
- Program in Gene Function and Expression
- Department of Molecular Medicine
- Department of Neurobiology
- Department of Molecular Genetics and Microbiology
- Library
- Department of Physiology
- Department of Nuclear Medicine
- Cardio Cath Lab
- Clinical Engineering
- Vascular Surgery



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