



Student Profile Components 2010- 2011

1.1 Critical Thinking

1.3 Foundational Knowledge

1.4 Ability to Adapt

1.5 Information Technology

1.1 Critical Thinking 2010 - 2011

Program	Evidence
Automotive Technology	The scientific method is used to determine “complaint, cause, correction” for every automotive repair. This often includes issues that involve several automotive systems (e.g. suspension and drive train).
Building Trades	Students are presented with challenges whether they involve new construction or repair/alteration. Students must synthesize information related to materials, their application, effect on building science, fiscal and time restraints, and tool application to solve problems. This year, students demolished several porches and roofs at the Randolph Senior Center and then rebuilt the structures to resolve aesthetic and functionality problems to over \$35,000 worth of new porches, walkways, siding, and electrical systems.
Business Management	Students take into account products, marketability, financial threats and opportunities, accounting practices, advertising, personnel and other factors in the development of business plans.
Culinary Arts	Students use recipes and design menus that synthesize customer need, nutrition, and financial constraints. Students must organize ingredients, preparation procedures (including food safety and handling), and timelines to present products of extremely high quality.
Diesel Technology	The scientific method is used to determine “complaint, cause, correction” for every diesel and equipment repair. This often includes issues that involve several systems. As only one example of hundreds, students solved a difficult fuel-delivery system problem that included fuel system, electrical system, research, replacement and adjustment of parts.
Environmental Resource Management	Students learn and practice industry-standard logging methods and use extremely dangerous equipment to safely and efficiently harvest forest products. Students must take into account ecological concerns, land use regulations, personnel and equipment options to arrive at solutions to landowner needs.
Graphic Arts	Students apply creative and artistic character to projects <i>and</i> use sophisticated/interrelated hardware and software to produce marketable designs and products.
Health Careers	Students work with elderly and infirmed patients. Students must be able to provide daily care in the face of varying human interaction including progressive disease and death.
Human Services	Students must apply effective child development and effective teaching strategies first in a planned effort to teach and secondly in a reflective/responsive effort to match strategies to individual child/student need.
Media & Communications	Students apply creative and artistic character to projects <i>and</i> use sophisticated/interrelated hardware and software to produce marketable designs and products.
Power & Sustainable Technology	This year students built and/or installed and operated: an electric car including designing and building a frame, drive train, and suspension; 2.3 kw photovoltaic array, several liquid solar or photovoltaic arrays, a diesel to electric tractor conversion.
Public Safety & Criminal Justice	Students are presented with and solve problems ranging from legal issues in the news, to inquiries related to motor vehicle law, to hostage situations, to difficult rescue situations (including cold water rescue).

**1.3 Foundational Knowledge
2010 - 2011**

Program	% Graduate	% Successful Completion	% IRC Attainment	% State Assessment	# Dual Enrollment
Automotive Technology	100%	100%	100% ¹	50% ⁷	4
Building Trades	100%	100%	N/A	Still testing ⁸	
Business Management	100%	100%	100%	78%	
Culinary Arts	100%	100%	Still testing ²	Still testing	1
Diesel Technology	100%	100%	N/A	N/A	
Environmental Resource Management	100%	100%	100% ³	N/A	
Graphic Arts	100%	100%	N/A	N/A	
Health Careers	100%	100%	33% ⁴	N/A	2
Human Services	100%	100%	100% ⁵	N/A	
Media & Communications	100%	100%	N/A	N/A	
Power & Sustainable Technology	100%	100%	N/A	N/A	
Public Safety & Criminal Justice	92%	100%	100% ⁶	N/A	

- 1 – All AT students earned a Valvoline Lubrication Certification, 11 students earned their DMV Automobile inspection license (4 were deemed not ready to test)
- 2 – Culinary Arts “Serve-Safe” certification still in testing – anticipate 100% completion
- 3 – ERM students earned 8 individual certifications each
- 4 – Health Careers: 2 of 6 students passed the LNA certification, 1 student passed the clinical portion but did not pass the written portion due to testing protocol problems and will retest, 3 remaining students did not pass by 1-3 questions and will retest (a/o 7.15.11 three additional students passed their certification)
- 5 – All students in HS earned their CPR certifications, 2 students earned both levels 1 & 2 Certificates of Proficiency in Child Care (VT state certification).
- 6 – All students in PS&CJ earned multiple certifications (FEMA, CPR, AGC, etc.).
- 7 - Approximately 50% of AT passed the state-approved General Service Technician certification
- 8 – BT students are still completing the state-approved assessment, last year 79% earned passing scores.

1.4 Ability to Adapt 2010 – 2011

Students in every program learn theory and then experience real-life situations and are forced to adapt and respond (as well as anticipate) changes in how they must apply the theory in their daily program activities. Students must adapt to differing demands in their program *and still focus on all academic work expected of them.*

Program	Evidence
Automotive Technology	Students in Automotive Technology are presented with myriad requests and sometimes complaints from customers. Students must be able to assess customers' needs as well as the varying condition of an automobile. As automobiles are constantly changing, students must assess needs based on varying equipment configurations.
Building Trades	Students begin with information on new construction and then must translate this learning to the real-life demands of individual community projects. Every building is different and has usually undergone several repairs or improvements. Often each change affects the building science and how the building performs. This year students completed projects including energy efficiency, historic preservation, roofing, commercial renovations, and built and sold a timber frame. Students learned to adapt to differing interest in projects, tools used and, of course, in adapting to different weather and working conditions.
Business Management	Students learn to work effectively as employees, employers, and entrepreneurs. Students are impacted by variations in market, products, and the overall economy. This year, students participated in a joint business venture with the Building Trades program. Students had experienced the give and take of working in a team with individuals from other schools and varying skill sets to determine a product line, marketing plan, set pricing and work together to complete and sell products and manage the accounting and overall completion of the business.
Culinary Arts	On a daily basis, students are presented with new and widely varying customer requests. Students must work together to conceive, research, and prepare recipes and menus to meet customer needs. On a weekly basis these involve producing over 100 "Friday Night Dinners" and catering events from simple refreshments to weddings.
Diesel Technology	Students in are presented with myriad requests and sometimes complaints from customers. Students must be able to assess customers' needs (as well as the needs of maintaining the Diesel Technology fleet) in the face of varying condition of vehicles/equipment. As vehicles/equipment are constantly changing, students must respond to problems/needs based on varying equipment configurations.
Environmental Resource Management	Every parcel of land (and its uses), every tree, every environmental product is different. Students must adapt equipment use (and repair) to these constant variables. This year, students engaged in two nationally-recognized forestry trainings where they learned advanced techniques for timber harvesting. Every student had an opportunity to assess tree-felling situations, all which were different from each other, and successfully used new learning to accomplish their tasks. During one day-long, outdoor training it rained for the entire 6 hour session – all students participated without complaint!
Graphic Arts	Students must adapt and align their creative and artistic vision with those of customers, classmates, and project demands. For example, in developing RUHS's theater production posters, students take input from the producer and work to translate their vision to best represent the producer's request. This always results in multiple drafts and proofs before the final project is accepted.
Health Careers	In working with people who are often in physical and emotional distress, students must use their knowledge of healthcare practices to carry out procedures while remaining caring, compassionate, yet objective.

1.4 Ability to Adapt – continued

Program	Evidence
Human Services	Students are placed in situations in working with children where they must carry out planned lessons in the face of children’s learning and emotional variables (including having to use conflict management, supportive and motivational strategies, and adapt teaching strategies on the spot). Students sometimes face situations that involve working with their teachers to reporting abuse/neglect.
Media & Communications	Students must adapt and align their creative and artistic vision with those of customers, classmates, and project demands. For example, in the production of a weekly news show, students work in teams to capture video on location (with variables of weather/environment and imperfect/unedited performance/comment from subject) and edit it, within time constraints, to capture the story and related emotion of events.
Power & Sustainable Technology	Students must often retrofit old technology to new. Students learn to re-design, fabricate, and improvise parts and equipment resulting in a viable finished product. Students used a new dc electric engine, suspension components from an Audi and Mercedes Benz plus several custom fabrications to build an electric car.
Public Safety & Criminal Justice	Students are put in situations that duplicate actual rescue, fire service, and police service. Students must work in teams to configure human and equipment resources to respond with positive outcome. For example, students have organized confined space rescue where they must attend to air quality, confined space limitations, rescue gear to extricate a “victim” from an emergency situation. On other days, students participate in mock hostage “swat” actions, and set up and operate a professional fire truck.

1.5 Information Technology 2010 - 2011

Program	Evidence
Automotive Technology	Students use sophisticated electronic diagnostic, engine calibration, and measurement devices (e.g. “Scantron” and state-of-the-art suspension alignment apparatus). Students use the computerized “On-Demand” and vendor software to research and order parts, vehicle schematics, technical bulletins, and calibrations.
Building Trades	Students use precision tools and equipment in use by all areas of the industry – everyday (e.g. a table saw that will cut wood but sophisticated sensors will not allow it to cut fingers, a Computer Numerically Controlled router that allows students to use computers to program make products).
Business Management	Students use the entire Microsoft Office suite as they learn and use accounting, word processing, database, and information sharing/presentation applications.
Culinary Arts	Students use IT to research and plan recipes, menus, and presentations. Students use a variety of production kitchen equipment to prepare their products.
Diesel Technology	Students use sophisticated electronic diagnostic, engine calibration, and measurement devices (e.g. “Scantron”). Students also use computerized “virtual” learning systems for heavy equipment instruction. Students use the computerized “On-Demand” and vendor software to research and order parts, vehicle schematics, technical bulletins, and calibrations.
Environmental Resource Management	Students: program the state-of-the-art maple syrup apparatus to allow for changes in barometric pressure, relative humidity, and syrup content of sap; use sophisticated wood mill to efficiently turn timber into building products (timber frames, lumber); and use Geographic Information Systems (GIS) in land-use planning and mapping.
Graphic Arts	Students use Adobe Creative Suite (the industry standard that includes Illustrator, InDesign, and Photoshop programs) to apply graphic design theory in the creation of still and active projects/products.
Health Careers	Students use technology to monitor blood pressure, heart rate, and safely lift patients. Students are exposed to knowledge of radiology, physical and occupational therapy, respiratory therapy and many other areas of allied health.
Human Services	Students use IT to research, develop, and implement lesson plans for our on-site pre-school as well as for classrooms in area child care and elementary schools.
Media & Communications	Students use Final Cut Pro (the industry standard) to create and edit video productions. The animation software, Blender, is used to create animated products used in video presentations. Students use sophisticated audio, video, and electronic equipment to capture video in the field and in the studio.
Power & Sustainable Technology	Students use a variety of welding equipment, “Solar Pathfinders” to maximize solar gain in photovoltaic and liquid solar applications (as well as building and using those applications), and use electrical testing equipment.
Public Safety & Criminal Justice	Students use complex arrangements of rescue apparatus (climbing ropes, ascenders, pulleys) to plan (including mathematic calculations) and use equipment to conduct rescue operations. Students are trained in the use of cold water rescue gear. Students are trained in the correct use of simulated police weapons. Students have the knowledge and skills to operate fire apparatus including a pumper truck and multiple hose configurations.