

Rock Ridge High School Career Academies and Pathways

**What is a Capstone Project and how does it fit into the
Pathways?**

Structure of a Capstone Project

- **Capstone Project Structure: A High-Quality PBL Approach**
 - A capstone project is the **culminating experience** of a student's learning journey — an opportunity to apply academic knowledge and real-world skills to a meaningful challenge or question. Grounded in the **Gold Standard PBL framework** from the Buck Institute for Education (PBLWorks), a high-quality capstone experience engages students in sustained inquiry, authentic work, and public sharing.

While formats can vary, a comprehensive capstone project typically includes several key components...

Core Components of a Capstone Project

1. **Driving Question & Project Proposal (Letter of Intent)**

- Students design a meaningful **driving question** rooted in a real-world problem, passion, or need.
- They write a formal **Letter of Intent** that clearly states their purpose, goals, anticipated outcomes, and why the project matters.

2. **Mentorship & Community Partnerships (Authenticity)**

- Students collaborate with a **mentor or field expert** who provides feedback, insight, and real-world perspective beyond the classroom.
- These partnerships deepen authenticity and connect student work to professional contexts.

3. **Inquiry & Research (Sustained Inquiry)**

- Students conduct **in-depth research** to develop a strong foundation of knowledge related to their topic or problem.
- Inquiry may include interviews, data collection, literature review, surveys, or field observations.

4. **Design, Creation & Implementation (Student Voice & Choice)**

- Students move from planning to **hands-on creation or action** — building, organizing, designing, experimenting, or implementing solutions.
- This is where they take ownership, make decisions, and demonstrate applied learning through a real-world product, service, or event.

5. **Reflection & Documentation (Critique & Revision)**

- Throughout the process, students **reflect on their learning journey** — documenting decisions, challenges, feedback, and growth.
- Final reflections may take the form of a written narrative, portfolio, or digital journal that shows how their understanding and skills evolved.

6. **Public Presentation (Public Product)**

- Students share their work with an **authentic audience** — teachers, mentors, peers, community members, or professionals — in a formal presentation.
- This presentation communicates their process, findings, product, and impact, and celebrates their achievement.

Capstone Project Ideas by Category

Community & Social Action

- **Civic Engagement Campaign:** Design a social media campaign, petition, or advocacy plan around mental health, sustainability, or school policy.
- **Community Garden:** Plan, build, and maintain a garden that addresses food access or nutrition education.
- **Peer Mentoring Program:** Create a mentorship initiative pairing older and younger students.
- **Diversity & Inclusion Project:** Organize a cultural celebration or awareness campaign.
- **Wellness Initiative:** Design a stress-management workshop series for students.

Capstone Project Ideas by Category

STEM & Innovation

- **Renewable Energy Prototype:** Design a small-scale wind turbine or solar-powered device.
- **Cybersecurity Plan:** Develop a digital safety training or security plan for a small business.
- **Mobile App:** Create an app that solves a real community challenge.
- **3D Printing Innovation:** Prototype a prosthetic device or new product.
- **Environmental Monitoring System:** Build an IoT system to track water quality or pollution.

Capstone Project Ideas by Category

Arts & Humanities

- **Creative Portfolio:** Curate a body of writing, art, or photography around a central theme.
- **Documentary Film:** Tell the story of a local issue or historical event.
- **Podcast Series:** Share community stories or analyze key cultural topics.
- **Interactive Exhibit:** Design a museum-style exhibit that educates and engages.
- **Sustainable Fashion Line:** Create an eco-conscious clothing collection.

Capstone Project Ideas by Category

Business and Entrepreneurship

- **Marketing Plan for a Local Business:** Develop and implement a digital marketing strategy for a small business or nonprofit organization.
- **Student-Run Business:** Start a small business within your school or community, handling all aspects from market research to sales.
- **Financial Literacy Program:** Create a series of videos or a workshop to teach other teens about personal finance and investing.
- **Fundraiser for Charity:** Plan and execute a large-scale fundraising event for a local charity.
- **E-commerce Website:** Develop and launch an e-commerce site for a specific product, such as a local produce or artisan goods.

Getting Started on your Capstone Project

Getting Started: A Student-Centered Roadmap

1. Identify Your Interests & Strengths (Student Voice & Choice)

- Reflect on your passions, skills, and curiosities. What issues or topics matter most to you?

2. Define a Problem or Purpose (Authentic Challenge)

- Ask: “*What real-world problem can I help solve?*” or “*What impact do I want to make?*” This gives your project meaning and direction.

3. Refine Your Focus (Manageable Scope)

- Narrow your idea into a clear, actionable project. For example: shift from “renewable energy” to “designing a wind turbine for off-grid use.”

4. Build a Support Network (Mentorship & Collaboration)

- Connect with mentors, professionals, or community partners who can guide, challenge, and support you.

5. Plan Your Process (Project Management)

- Break your capstone into phases — research, design, creation, reflection, and presentation — with clear goals and timelines.

6. Document and Reflect (Critique, Revision & Growth)

- Keep a **project journal or digital portfolio** to track your progress, challenges, and insights. This documentation will strengthen your final reflection and presentation.

Capstone Information

- **Click below to see more information regarding Capstone Projects with ideas and suggestions.**
 - <https://www.inspiritai.com/blogs/ai-blog/capstone-project-high-school-guide-2025-inspiritai>
- **Is a Capstone Project required for graduation?**
 - Not at this time, but we would like to integrate it into the process.

Academy Pathway Completion

Upon completion of a Pathways and a Capstone Project, students will be recognized at:

- **Graduation:** Students will be identified in the graduation program with an asterisk that recognizes their completion.
- **Awards Assembly:** Students will be recognized with a certificate of completion at the annual Student Awards Assembly.
- **Graduation Honor Cord:** Students will receive a cord to wear at graduation.



Natural Resources, Engineering, Manufacturing, Architecture, & Construction



Rock Ridge High School Natural Resources, Engineering, Manufacturing, Architecture, & Construction Career Academy is a dynamic program designed to prepare students for rewarding careers in some of today's most essential industries. This academy offers hands-on learning experiences, integrating classroom instruction with real-world applications. Students engage in specialized coursework that covers fields such as environmental sustainability, engineering design, advanced manufacturing, and construction technology. Through partnerships with local businesses, industry experts, and post-secondary institutions, the academy provides students with access to internships, mentorships, and certifications that align with their career goals. Whether exploring renewable energy, designing innovative structures, or mastering state-of-the-art manufacturing techniques, students graduate with the skills, knowledge, and confidence to succeed in college or the workforce. This academy is ideal for students passionate about building the future and shaping the world around them.

Sample Careers	•Architect •Carpenter •Electrician •Equipment Operator •Plumbing •Masonry Welding •Mining •Millwright •Machinist •Technicians •Engineer •Lineman •Contractor •Diesel Mechanic •Small Engine Repair •Auto Mechanic •Bus Driver •Railroad Worker •Forester/Logger •DNR •Veterinarian •Landscaping •Zoologist •Biologist •Lab Technician •Agricultural Engineer •Climatologist •Engineering •Technology •Science •Mathematics
Pathways	

Required	Advanced Courses (Must Choose 6)		Capstone	
• Career Exploration	• Design and Construct I	• Small Engines	• Senior Internship	Construction, Architecture, & Engineering
	• Design and Construct II	• Auto Maintenance	• Capstone Project	• Skilled Trades
	• Building Construction I	• Auto Mechanics	• Individual Project approved by Administration	• Design/Pre-Construction
	• Building Construction II	• Welding I		• Engineering
	• Home Maintenance	• Welding II		Natural Resources
	• Wood Tech I	• Welding III		• Mining Systems
	• Wood Tech II	• Mining and Millwright		• Plant, Animal & Natural Resource Systems
	• Tech Math	• Botany		• Environmental Services
	• Environmental Science	• General Biology		Maintenance & Repair
	• Zoology	• Tech Math		• Facility Maintenance
	• Physics	• College Trig		• Equipment Maintenance
	• Engineering I	• College Alg		• Manufacturing Maintenance
				• Technology



Business, Information Technology, Communications, & Arts



Rock Ridge High School Business, Information Technology, Communications, & Arts Career Academy is an innovative program designed to prepare students for success in dynamic, fast-paced industries. This academy offers a comprehensive curriculum that combines rigorous academics with hands-on learning experiences. Students explore areas such as business management, entrepreneurship, information systems, digital media, graphic design, and performing arts. Through collaborative projects, internships, and access to state-of-the-art technology, students gain practical skills and industry knowledge. The academy emphasizes creativity, critical thinking, and communication, equipping graduates with the tools to excel in college, careers, and beyond. It fosters a passion for innovation and empowers students to become leaders in their chosen fields.

Sample Careers

•Lodging (Lodging Management, Concierges, Housekeeping/Janitorial/Maintenance, Front Desk/Guest Services, Event Management, Finance) •Recreation, Amusement & Attractions (Museum Curator, Tour Guide, Park Ranger)
•Restaurants and Food/Bev Service •Travel •Marketing Specialist •Sales Representative •Social Media Manager
•Advertising & Promotion Manager •Public Relations •Business Consultant •Accountants •Loan Officers •Tellers •Tax Preparers •Insurance Sales Agents •Appraisers •Claims Adjusters •Personal Financial Advisors

Pathways

Required Course	Advanced Courses (Choose 5)		Capstone	
• Intro to Business	• Marketing Strategies	• Culinary I	• Senior Internship	Business Administration
• Career Exploration	• Advanced Marketing	• Culinary II	• Capstone Project	• Entrepreneurship
	• The Art of Persuasion	• Food and Nutrition	• Individual Project approved by Administration	• Marketing
	• Entrepreneurship I	• Photography		• Finance
	• Entrepreneurship II	• Adobe Suite		• Human Resources
		• Intro to Communication		Arts, IT, & Communication
		• Journalism I		• Audio/Visual Technology
		• Journalism II		• Web & Digital Communications
				• Design
				• Visual & Performing Arts
				• Broadcasting



Health Science and Human Services



Rock Ridge High School Health Science and Human Services Career Academy provides students with an immersive educational experience that prepares them for careers in healthcare, public service, and related fields. This academy integrates core academic subjects with specialized coursework and hands-on learning opportunities. Students explore areas such as nursing, emergency medicine, psychology, and social work, gaining foundational knowledge and practical skills. Through partnerships with local healthcare providers, government agencies, and community organizations, students engage in internships, job shadowing, and service-learning projects. Graduates of the program are equipped with the expertise and certifications to pursue post-secondary education or enter the workforce in a variety of rewarding and impactful careers.

Sample Careers

•Medicine - (Physician, PA, Pharmacy, etc.) •Laboratory/Radiology •Mortician/Funeral Director •Physical Therapy, Occupational Therapy, Exercise Physiology •Pre K-12 + Teacher •Educational Administrator
•Librarian/Media Specialist •Mental Health Counselor/Psychologist
•Sign-Language Interpreter/Speech Pathologist •Human Resources •Family/Community Services •Social Worker
•Personal Care Assistant PCA •Personal Care (Cosmetology) •Correctional Officers •Police, Sheriff Patrol Officer, & Protective Services •Fire Fighter, EMT, & Paramedic •Natural Resource Officer •Lawyer, Paralegal, Legal Support

Pathways

Required Courses	Advanced Courses (Choose 6)		Capstone
• Career Exploration	• Intro to Chemistry	• Medical Terminology	• Senior Internship
	• Human Anatomy and Physiology I	• Medical Careers	• Capstone Project
	• Human Anatomy and Physiology II	• EMR	• CNA - Employment
	• General Biology	• CNA	• Individual Project approved by Administration
	• Psychology	• Intro to Teaching	
	• Child Development	• EMR Course	
	• Intro to Communication	•Law & Criminal Justice	
	• Intro to Physics	• Microbiology	

Human Services

- Personal, Family, & Community Services
- Law, Public Safety, Corrections, & Security
- Counseling Services

Health Science

- Diagnostic & Therapeutic Services
- Emergency Medical Services
- Health Information & Support Services

Education & Training

- Teaching and Training
- Early Childhood Development
- Administrative & Professional Support

Next Steps

- Get this in front of the RRHS teachers
- Get this in front of the seniors at RRHS
- Develop a plan to do Pathway course completion confirmation, as this is needed to qualify for recognition at graduation
- Continue to discuss what the Pathway/Capstone completion recognition will be at RRHS graduation ceremony