APS Digital Badging Guide

For Student Advocates of Sustainability and Environmental Stewardship

VISION: Every student shapes a successful future.

MISSION: In partnership with our community, we accelerate learning for all students to develop the knowledge, skills and character necessary to shape successful futures.

Guideline Interpretation and Use

This document describes a collection of digital badges available to award to students choosing to self-advocate their interests in the areas of sustainability and environmental stewardship. It is modeled after APS's Digital Badge Program, which further distills the Colorado Department of Education designated 21st Century Skills into a list of 21 professional competencies that have been difficult to measure, but which APS considers essential to workplace success.

Brief explanations of each badge are presented along with lists of sample evidence examples, listed from higher to lower in order of grade based difficulty, which students are required to submit. The sample evidence is intended to serve as a guide for teachers looking to create their own evidence criteria for earning digital badges.

Distinctive age-based badge details (P-2, 3-5, 6-8, 9-12th grade) and student evidence submissions are maintained for APS's digital badges on credly.com, a Software-as-a-Service (SaaS) provider. Direct links to each distinct age-based badge are listed on the following pages under "Claim Code."

Badges do not need to be earned in any particular order. However, Journey badges and their corresponding Summit badge are segmented into skills categories. This guide is written with the intent that all Journey badges in a skill category are awarded before the corresponding Summit badge can be granted. Additionally, to qualify for each Summit badge, teachers are encouraged to adopt criteria requiring additional student supplied evidence that ties all skill category concepts together.

Students should speak with their teacher about the list of endorsers (community sponsors) who may be aligned with a particular badge (Journey or Summit) or assortment of badges!

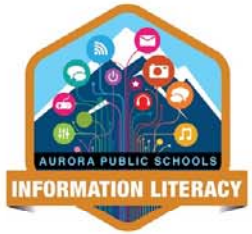
Table of Contents

- APS Badge System Framework
- Summit Badge: COLLABORATION
  - AWARENESS
  - COMMUNICATION
  - CONTRIBUTION
  - INTERACTION
- Summit Badge: CRITICAL THINKING
  - ANAYSIS
  - EXPLORATION
  - INVESTIGATION
  - ORGANIZATION
- Summit Badge: INFORMATION LITERACY
  - RECOGNITION
  - RESEARCH
  - SYSTEMS
  - TRANSFER
  - TROUBLESHOOTING
- Summit Badge: INVENTION
  - CREATION
  - FORECAST
  - INNOVATION
  - SIMULATION
- Summit Badge: SELF-DIRECTION
  - ADVOCACY
  - ATTITUDE
  - LEADERSHIP
  - LIFELONG LEARNER
- Resources

AURORA PUBLIC SCHOOLS

21st Century Credentials

Recognizing Assets, Opening Doors.



Summit Badge: COLLABORATION

(Encompasses Communication and Global & Cultural Awareness)

Students communicate and work collaboratively to support individual learning and contribute to the learning of others.

Journey Badges

In order to earn the Collaboration Summit Badge, students need to earn the four Journey Badges listed below:

- **AWARENESS:** develop cultural understanding and global awareness by engaging with learners of other cultures
- **COMMUNICATION:** communicate information and ideas effectively to multiple audiences using a variety of media and formats
- **CONTRIBUTION:** contribute to project teams to produce original works or solve problems
- **INTERACTION:** interact and actively collaborate, with peers, experts, or others

AWARENESS
Develop cultural understanding and global awareness by engaging with learners of other cultures.

Sample Evidence	*Sample evidence for meeting the Journey Badge requirement include, but are not limited to, the following:* ● Student engages in a service learning opportunity that focuses on environmental stewardship (i.e. Sierra Club Chapter meeting, hiking trip to document local flora & fauna) ● Student interviews other students about perspectives on sustainability practices for the purposes of creating and sharing a blog. ● Create environmental/energy club slogan that promotes its fundamental role and/or value and that prompts routine recollection from fellow classmates.

Badge	**Grade**	**Meeting the Criteria: How is the Digital Badge earned?**	**What evidence shows this?**	**Claim Code**
	9-12	On behalf of environmentally or resource conservation oriented student group and/or initiative, issue visual, written or verbal evidence of school and/or community awareness of group efforts.	Upload electronically captured (i.e. video, photo, online survey, follower response) evidence showing at least 50 individuals reaction to and/or response to awareness efforts.	**35E-C819-2DD**
	6-8	On behalf of environmentally or resource conservation oriented student group and/or initiative, issue visual, written or verbal evidence of school and/or community awareness of group efforts.	Upload electronically captured (i.e. video, photo, online survey, follower response) evidence showing at least 25 individuals reaction to and/or response to awareness efforts.	**7C0-0211-953**
	3-5	On behalf of environmentally or resource conservation oriented student group and/or initiative, issue visual, written or verbal evidence of school and/or community awareness of group efforts.	Upload electronically captured (i.e. video or photo) evidence showing delivery of awareness message to targeted audience.	**D15-C4CA-391**
	P-2	On behalf of environmentally or resource conservation oriented student group and/or initiative, issue visual, written or verbal evidence of school and/or community awareness of group efforts.	Upload electronically captured (i.e. video or photo) evidence showing delivery of awareness message to targeted audience.	**7CD-2AA1-1C4**

COMMUNICATION
Communicate information and ideas effectively to multiple audiences using a variety of media and formats

Sample Evidence	*Sample evidence for meeting the Journey Badge requirement may include, but are not limited to, the following:* ● Student actively participates in a TedTalk-type event with an environmental theme that can be broadcast to other schools. ● Student collaborates with others to create a podcast/radio show to address environmental, resource conservation, or sustainability issues. ● Student develops a social media campaign to raise awareness about an environmental issue at school. ● Student researches and creates regularly issued announcements for "Green Tips" via the school's EnergyCAP dashboard or shared visually in school bulletins. ● Student takes meeting minutes, documenting main discussion topics, commentary and action items (distributes copies among participants)

Badge	**Grade**	**Meeting the Criteria: How is the Digital Badge earned?**	**What evidence shows this?**	**Claim Code**
	9-12	Student promotes environmental stewardship and sustainable best practices platform through a variety of social media outlets.	Student uploads electronic copies and/or photos of at least 5 unique instances of delivered correspondence. or Student uploads transcript or link to online message board, blog or video-taped presentation delivery. (must have no fewer than 10 views/respondents/followers.)	F49-4243-A60
	6-8	Student promotes environmental stewardship and sustainable best practices platform through a variety of social media outlets.	Student uploads electronic copies and/or photos of at least 3 unique instances of delivered correspondence or Student uploads transcript or link to online message board, blog or video-taped presentation delivery. (must have no fewer than 5 views/respondents/followers.)	7F4-90A0-A10
	3-5	Student promotes environmental stewardship and sustainable best practices platform through a variety of social media outlets.	Student uploads electronic copies and/or photos of at least 1 unique instances of delivered correspondence or Student uploads transcript or link of video-taped presentation delivery. (must have no fewer than 5 views.)	3D0-EFF6-125
	P-2	Student promotes environmental stewardship and sustainable best practices platform through a variety of social media outlets.	Student uploads electronic copies and/or photos of at least 1 unique instances of delivered correspondence or Student uploads transcript or link of video-taped presentation delivery.	3D0-AECF-3A2

CONTRIBUTION
Contribute to project teams to produce original works or solve problems

Sample Evidence	*Sample evidence for meeting the Journey Badge requirement may include, but are not limited to, the following:* ● Student collaborates with an environmental or resource conservation professional to volunteer their time toward a community event. ● Student actively contributes to organize a school-wide event focusing on environmental and/or conservation awareness (i.e. energy, water, food waste, school gardens, etc.) and that intends to motivate others to take action.

Badge	**Grade**	**Meeting the Criteria: How is the Digital Badge earned?**	**What evidence shows this?**	**Claim Code**
	9-12	Demonstrate active collaboration with environmentally or resource conservation oriented student group and/or initiative.	Upload evidence of volunteer/contribution efforts amounting to 10+hours of time Upload student's image appearing in club publication/posting	**ADB-84F7-1B6**
	6-8	Demonstrate active collaboration with environmentally or resource conservation oriented student group and/or initiative.	Upload volunteer/contribution evidence, or upload copies of attendee lists bearing student's name for at least 5 scheduled meetings	**607-BB74-F9C**
	3-5	Demonstrate active collaboration with environmentally or resource conservation oriented student group and/or initiative.	Upload volunteer/contribution evidence, or upload copies of attendee lists bearing student's name for at least 5 scheduled meetings	**90A-2065-72D**
	P-2	Demonstrate active collaboration with environmentally or resource conservation oriented student group and/or initiative.	Upload student's image appearing in club publication/posting	**8F4-2009-451**

INTERACTION
Interact and actively collaborate, with peers, experts, or others

Sample Evidence	*Sample evidence for meeting the Journey Badge requirement <u>may include, but are not limited to</u>, the following:* ● Student routinely voices productive commentary within an environmental or resource conservation oriented student group and/or initiative. ● Student actively interacts with peers to organize a school-wide event focusing on environmental and/or conservation awareness (i.e. energy, water, food waste, school gardens, etc.) the outcomes of which are intended to motivate others to take action. ● Student solicits support from outside environmental or resource conservation professional to augment/support group efforts.

Badge	**Grade**	**Meeting the Criteria: How is the Digital Badge earned?**	**What evidence shows this?**	**Claim Code**
	9-12	Demonstrate proactive collaboration with environmentally or resource conservation oriented student group and/or initiative.	Student uploads evidence of at least (3) separate interactive contributions and adult sponsor's testimony to each example of student's engagement with fellow peers, experts, school staff, and/or community members. Student must also upload business card/info of recruited outside professional.	**B22-E865-C25**
	6-8	Demonstrate proactive collaboration with environmentally or resource conservation oriented student group and/or initiative.	Student uploads evidence of interactive contributions and adult sponsor's testimony of student's engagement with fellow peers, experts, school staff, and/or community members.	**DCF-5199-D5B**
	3-5	Demonstrate proactive collaboration with environmentally or resource conservation oriented student group and/or initiative.	Student uploads evidence classroom contributions and a paragraph reflecting student's engagement with fellow peers, experts, school staff, and/or community members.	**B19-0F29-B8C**
	P-2	Demonstrate proactive collaboration with environmentally or resource conservation oriented student group and/or initiative.	Student uploads photos of "team work" and provides a written explanation of the activity taking place.	**85D-908C-FF1**

Summit Badge: CRITICAL THINKING
(Encompasses Problem Solving & Global and Cultural Awareness)

Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

Journey Badges

In order to earn the Critical Thinking Summit Badge, students need to earn the four Journey Badges listed below:

- **ANALYSIS:** collect and analyze data to identify solutions and/or make informed decisions
- **EXPLORATION:** use multiple processes and diverse perspectives to explore alternative solutions
- **INVESTIGATION:** identify and define authentic problems and significant questions for investigation
- **ORGANIZATION:** plan and manage activities to develop a solution or complete a project

ANALYSIS

Collect and analyze data to identify solutions and/or make informed decisions

Sample Evidence	*Sample evidence for meeting the Journey Badge requirement include, but are not limited to, the following:* ● Student conducts "Sustainability Analysis" of community (school, neighborhood, City of Aurora, etc.) with guidance from outside experts. ● Student learns and employs a selected research method, conducts research from a variety of credible sources, cites sources, and develops a claim related to sustainability, the "green" movement, and/or environmental stewardship. ● Student researches the City of Aurora's "Environmental Policy Plan" and creates a similar plan for school. ● Student produces a scatter plot based on environmental inequality (i.e public transportation vs. alternative transportation vs. personal transportation) ● Student interviews industry professionals and create a "Green Expert Directory" for use by school. ● Student employs school's EnergyCAP service to run reports of school findings and share via social media, school website, or community forum.

Badge	**Grade**	**Meeting the Criteria: How is the Digital Badge earned?**	**What evidence shows this?**	**Claim Code**
	9-12	Student takes initiative to collect, analyze, and manipulate data to create examples and replicate feasible solutions.	Student submits written up dialogue and provides commentary for findings (i.e. Willingness to research career further, ramp up IEP, identify courses to take in future to reach career goal)	**AF9-398F-B41**
	6-8	Student takes initiative to collect, analyze, and manipulate data to create examples and replicate feasible solutions.	Student submits plan or report with feedback from teachers, students, school staff, and community (parents, family members)	**7B0-F3A8-D42**
	3-5	Student takes initiative to collect, analyze, and manipulate data to create examples and replicate feasible solutions.	Student submits findings of other schools' work in the APS community and how it relates to individual school.	**8E2-B913-4F7**
	P-2	Student takes initiative to collect, analyze, and manipulate data to create examples and replicate feasible solutions.	Student submits an example of a "green handprint," or "five things" they can do to improve the environment.	**F85-0999-974**

EXPLORATION
Use multiple processes and diverse perspectives to explore alternative solutions

Sample Evidence	*Sample evidence for meeting the Journey Badge requirement include, but are not limited to, the following:* ● Student creates focus groups with community members to help engage in community issues related to sustainability, environmentalism, etc ● Student acts as project leader for a school improvement plan that includes sustainability. ● Student attends and participates in a "Town Hall" meeting or workshop dedicated to sustainability (i.e. University of Colo. at Denver's Wirth Chair Sustainability Series or The Alliance for Sustainable Colorado's Event Calendar

Badge	**Grade**	**Meeting the Criteria: How is the Digital Badge earned?**	**What evidence shows this?**	**Claim Code**
	9-12	Student takes initiative to learn outside the classroom to investigate alternative resources and processes and shreds light on possible solutions to local challenges.	Student submits photos,videos, notes, permission slip and two (2) page report detailing environmentally-appropriate field trip (i.e. NREL, Alpine Waste, Alliance Center, Denver Zoo, etc.) Must include a paragraph on any employees, industry professionals, or "outside resources" and their career path, educational experience, and summary of skill set.	**ED2-80FD-C0D**
	6-8	Student takes initiative to learn outside the classroom to investigate alternative resources and processes and shreds light on possible solutions to local challenges.	Student submits photos and one (1) page report detailing environmentally-appropriate field trip (i.e. NREL, Alpine Waste, Alliance Center, Denver Zoo, etc.)	**115-18E2-9B0**
	3-5	Student takes initiative to learn outside the classroom to investigate alternative resources and processes and shreds light on possible solutions to local challenges.	Student submits photos and one (1) paragraph summary detailing environmentally-appropriate field trip (i.e. NREL, Alpine Waste, Alliance Center, Denver Zoo, etc.)	**49D-B8B2-6EF**
	P-2	Student takes initiative to learn outside the classroom to investigate alternative resources and processes and shreds light on possible solutions to local challenges.	Student uploads a link to online video detailing different career paths related to the environment (trash truck driver, marine biologist, farmer) and provides written explanation of which career they like the best.	**642-CFC4-30E**

INVESTIGATION

Identify and define authentic problems and significant questions for investigation

Sample Evidence	*Sample evidence for meeting the Journey Badge requirement include, but are not limited to, the following:* ● Student conducts energy audit with Project Learning Tree curriculum. ● Student conducts *Teacher Energy Report Cards* and provides avenues for classroom energy conservation improvement. ● Student uses the school's EnergyCAP Dashboard to research baseline data of natural and renewable resources at school (i.e. CO2 emissions) ● Student participates in a volunteering opportunity in the realm of sustainability and sustainable development. ● Student engages in a cost-benefit analysis of environmental issue at school (i.e. food waste cycle) and determine positive outcomes & solutions for school.

Badge	**Grade**	**Meeting the Criteria: How is the Digital Badge earned?**	**What evidence shows this?**	**Claim Code**
	9-12	Student takes initiative to further research environmental topics that are having the greatest impact in their school, community, state, country, future, etc.	Student submits videos, photos, links to social media of individual or group of individuals promoting energy efficiency practices throughout school. Student submits letter to admin outlining details and steps to change school's behavior.	**5D8-0B66-EA2**
	6-8	Student takes initiative to further research environmental topics that are having the greatest impact in their school, community, state, country, future, etc.	Student submits completed report with analysis and results of Project Learning Tree's Energy Investigations.	**73D-67EA-339**
	3-5	Student takes initiative to further research environmental topics that are having the greatest impact in their school, community, state, country, future, etc.	Student uploads examples of *Teacher Energy Report Cards* and student photos conducting reporting.	**38D-7427-BBD**
	P-2	Student takes initiative to further research environmental topics that are having the greatest impact in their school, community, state, country, future, etc.	Student uploads drawings of Word Web that relates to environmental themes.	**51F-7DB3-5A3**

ORGANIZATION
Plan and manage activities to develop a solution or complete a project

Sample Evidence	*Sample evidence for meeting the Journey Badge requirement include, but are not limited to, the following:* ● Student volunteers for sustainability events (i.e Zero Waste sports events, community garden development, Aurora Water Camp) put on within the community/school. ● Student coordinates and executes an annual school wide "Be Green Day," that is accepted and written into the school's charter. ● Student engages in a service learning opportunity that focuses on developing viable & sustainable solutions that impact communities (i.e. Keystone Science School's H20 Camp).

Badge	**Grade**	**Meeting the Criteria: How is the Digital Badge earned?**	**What evidence shows this?**	**Claim Code**
	9-12	Coordinate and execute an activity or fundraiser with an environmental theme. Working with a group of peers, plan an activity that appeals to all students at the school (i.e. Eco-Olympics event for underclassmen)	Student provides the planning document(s) used to organize and execute the event as well as photos documenting the event itself (may upload files or share links). Write up must also include how to plan for follow up event.	CC0-29B4-1D2
	6-8	Coordinate and execute an activity or fundraiser with an environmental theme. Working with a group of peers, plan an activity that appeals to all students at the school (i.e. Eco-Olympics event)	Student provides agenda and write up of day's events with photos of student body participating.	6A0-8CC8-2D9
	3-5	Coordinate and execute an activity or fundraiser with an environmental theme. Working with a group of peers, plan an activity that appeals to all students at the school (i.e. "annual Green Day")	Student provides photos and write up of favorite activity and explanation of why chosen activity is important to school's role to positively impact environment.	FF4-C2FA-640
	P-2	Coordinate and execute an activity or fundraiser with an environmental theme. Working with a group of peers, plan an activity that appeals to all students at the school (i.e. Eco-Olympics event)	Student actively participates in club meetings and contributes to ideas for weekly announcements.	78A-53F4-04F

Summit Badge: INFORMATION LITERACY
(Encompasses Find and Use Information & Information Technology)

Students apply digital tools to gather, evaluate, and use information. Students demonstrate a sound understanding of technology concepts, systems, and operations.

Journey Badges

In order to earn the Information Literacy Summit Badge, students need to earn the five Journey Badges listed below:

- **RECOGNITION:** Develop an understanding of the various tools and applications of a digital workspace
- **RESEARCH**: Locate, organize, analyze, evaluate, synthesize and ethically use information from a variety of sources and media
- **SYSTEMS**: Understand and use technology systems to plan strategies, guide inquiry, and solve problems
- **TRANSFER**: Transfer current knowledge to learning of new technologies
- **TROUBLESHOOTING**: Effectively troubleshoot systems and applications using available tools and knowledge

RECOGNITION
Develop an understanding of the various tools and applications of a digital workspace

Sample Evidence	*Sample evidence for meeting the Journey Badge requirement include, but are not limited to, the following:* ● Student develops a tutorial to educate other students on the use of a district approved computer application that leverages information obtained from the school's EnergyCAP Dashboard. ● Student takes an online webinar from Energy Star, EPA, EnergyCAP to learn more about school's operating system. ● Student develops an understanding of HTML, CSS, and/or a WYSIWYG editor to create a wiki/website dedicated to sustainability. ● Student learns to use a range of programs from Adobe as part of a mural design project with the City of Aurora. ● Student uses a variety of social media in order to market an environmental event to other students.

Badge	**Grade**	**Meeting the Criteria: How is the Digital Badge earned?**	**What evidence shows this?**	**Claim Code**
	9-12	Student actively sources various tools and applications to develop new skills in the digital world.	Student uploads a video of a tutorial of the school's EnergyCAP Dashboard and eGauge metering system and includes how to run a report of the school's energy use.	**CC7-EF61-E9E**
	6-8	Student actively sources various tools and applications to develop new skills in the digital world.	Student uploads a video of a tutorial of the school's EnergyCAP Dashboard and how to compare and contrast schools and various resources.	**A9E-882D-9BC**
	3-5	Student actively sources various tools and applications to develop new skills in the digital world.	Student uploads a weekly report of the school's EnergyCAP Dashboard for school support staff and interested parties.	**C37-D99E-FAC**
	P-2	Student actively sources various tools and applications to develop new skills in the digital world.	Student uploads a video of other students using Smart Boards/Promethean Boards to lead a group discussion on energy use.	**3D7-FBC3-AED**

RESEARCH
Locate, organize, analyze, evaluate, synthesize and ethically use information from a variety of sources and media

Sample Evidence	*Sample evidence for meeting the Journey Badge requirement include, but are not limited to, the following:* ● Student conducts research using online databases and does a literature review showcasing both information fluency and synthesis regarding environmentally-themed literature (i.e. Possible books: *Getting Green Done, Fostering Sustainable Behavior, Lorax, From Seed to Plant*, etc.) ● Student develops a cost benefit analysis on an environmental issue at school (i.e solar v. coal, plastic forks v. reusable, trash v. compost) ● Student leads/participates in a research project on a local environmental issue, determines current impact, and reports findings in an online environment ● Student researches and compiles a list of supplemental online resources for students to use as study aids in STEM classes.

Badge	**Grade**	**Meeting the Criteria: How is the Digital Badge earned?**	**What evidence shows this?**	**Claim Code**
	9-12	Students demonstrate context and in depth understanding of a “real world” topic and can debate both sides of the issue.	Student submits a two (2) page analytical report which includes a “pro” and “con” examination and concludes with a “personal” viewpoint backed up by expert citings.	**B2D-F684-11B**
	6-8	Students demonstrate context and in depth understanding of a “real world” topic and can debate both sides of the issue.	Student submits a one (1) page analytical report choosing to take a “pro” and “con” viewpoint and cites expert research to back up argument.	**876-683F-977**
	3-5	Students demonstrate context and in depth understanding of a “real world” topic and can debate both sides of the issue.	Student submits report about an environmental issue and how it relates personally to the student.	**AA1-1547-A58**
	P-2	Students demonstrate context and in depth understanding of a “real world” topic and can debate both sides of the issue.	Student submits a Problem-Solving “Wheel of Choice” with an environmental issue at the center.	**827-BC65-A57**

SYSTEMS
Understand and use technology systems to plan strategies, guide inquiry, and solve problems

Sample Evidence	*Sample evidence for meeting the Journey Badge requirement include, but are not limited to, the following:* ● Student develops an online survey to gather evidence on a current school issue related to sustainability. ● Student develops a resource and media-rich website for use by the school community dedicated to making school more sustainable. ● Student develops a Youtube tutorial video series with an environmental theme (i.e reclaiming materials in art or fashion project, how to build a composter, etc.)

Badge	**Grade**	**Meeting the Criteria: How is the Digital Badge earned?**	**What evidence shows this?**	**Claim Code**
	9-12	Leveraging tools and information available within the school's EnergyCAP Dashboard and real-time eGauge interface, develop a unique interactive experience that informs school stakeholders (i.e. students, staff, community) about proposed steps to resolve a natural resource conservation issue.	Link to webpage, social media, or upload photo of publicity material (must be an original work)	**38B-AB7C-A8E**
	6-8	Leveraging tools and information available within the school's EnergyCAP Dashboard and real-time eGauge interface, develop a unique interactive experience that informs school stakeholders (i.e. students, staff, community) about proposed steps to resolve a natural resource conservation issue.	Link to school webpage showing embedded dynamic "building block" (from Building OS)	**33B-FDEB-465**
	3-5	Leveraging tools and information available within the school's EnergyCAP Dashboard and real-time eGauge interface, develop a unique interactive experience that informs school stakeholders (i.e. students, staff, community) about proposed steps to resolve a natural resource conservation issue..	Share source code of unique dynamic "building block" (from Building OS)	**48A-C4C2-E35**
	P-2	Leveraging tools and information available within the school's EnergyCAP Dashboard and real-time eGauge interface, develop a unique interactive experience that informs school stakeholders (i.e. students, staff, community) about proposed steps to resolve a natural resource conservation issue.	Upload images of originally produced publicity materials (original work of art that represents your school, and its engagement in conservation/environmental advocacy.)	**438-8AFB-948**

TRANSFER
Transfer current knowledge to learning of new technologies

Sample Evidence	*Sample evidence for meeting the Journey Badge requirement include, but are not limited to, the following:* ● Student develops presentation materials/tutorials using *Building Kiosk* to help other students understand energy conservation. ● Student creates a written account of energy conservation techniques and records energy and resource use at the school. ● Student creates and maintains an arts blog about the state of local habitats and ecosystems. ● Student records and distributes a weekly podcast about 20th century historical environmental events.

Badge	**Grade**	**Meeting the Criteria: How is the Digital Badge earned?**	**What evidence shows this?**	**Claim Code**
	9-12	Student demonstrates a synergistic approach and understanding between two or more fields of learning and connects them together to form a new variety.	Student uploads photos, videos, pictures, reports, analyses, and examples of work showcasing mastery of fields of study and how they form a new one.	**958-1E3C-D5C**
	6-8	Student demonstrates a synergistic approach and understanding between two or more fields of learning and connects them together to form a new variety.	Student uploads photos, videos, pictures, reports, analyses, and examples of work showcasing mastery of fields of study and how they form a new one.	**D44-9E50-FDA**
	3-5	Student demonstrates a synergistic approach and understanding between two or more fields of learning and connects them together to form a new variety.	Student uploads photos, videos, pictures, reports, analyses, and examples of work showcasing mastery of fields of study and how they form a new one.	**BEC-8028-048**
	P-2	Student demonstrates a synergistic approach and understanding between two or more fields of learning and connects them together to form a new variety.	Student uploads photos, videos, pictures, reports, analyses, and examples of work showcasing mastery of fields of study and how they form a new one.	**387-2493-F02**

TROUBLESHOOTING
Effectively troubleshoot systems and applications using available tools and knowledge

Sample Evidence	*Sample evidence for meeting the Journey Badge requirement include, but are not limited to, the following:* ● Student interns with an HVAC professional and develops common troubleshooting skills related to the building control system and the school's EnergyCAP Dashboard. ● Student is appointed "Green Hero" in a classroom and has to learn about and solve problems related to environmental action.. ● Student develops presentation materials/tutorials using the school's EnergyCAP Dashboard to help other students understand energy conservation.

Badge	**Grade**	**Meeting the Criteria: How is the Digital Badge earned?**	**What evidence shows this?**	**Claim Code**
	9-12	Student is granted access to analyze real time energy use of school buildings via EnergyCAP technology.	Student provides feedback for HVAC system controls to promote efficiency or Student submits write-up of "career shadowing" with M&O HVAC Tech.	**525-6EC5-DBD**
	6-8	Student is granted access to analyze real time energy use of school buildings via EnergyCAP technology.	Student submits presentation of EnergyCAP to peers and teacher during school-wide announcements/assembly.	**4F1-76BE-E28**
	3-5	Student is granted access to analyze real time energy use of school buildings via EnergyCAP technology.	Student submits photo and one (1) paragraph write-up of "in-school" field trip with district HVAC Tech.	**2F8-13AB-F3F**
	P-2	Student is granted access to analyze real time energy use of school buildings via EnergyCAP technology.	Student uploads video of analysis of school's EnergyCAP Dashboard and explains energy use for the day.	**B46-6C3C-D6F**

Summit Badge: INVENTION

(Encompasses Creativity and Innovation)

Student demonstrates creative thinking, constructs knowledge, and develops innovative products and processes.

Journey Badges

In order to earn the Invention Summit Badge, students need to earn the four Journey Badges listed below:

- **CREATION**: creates original works as a means of personal or group expression
- **FORECAST**: identifies trends and forecast possibilities
- **INNOVATION**: applies existing knowledge to generate new ideas, products, or processes
- **SIMULATION**: uses models and simulations to explore complex systems and issues

CREATION
Creates original works as a means of personal or group expression

Sample Evidence	*Sample evidence for meeting the Journey Badge requirement include, but are not limited to, the following:* ● Student develops program to donate uneaten/unopened food & participates with EPA Food Recovery Program ● Student creates a Public Service Announcement, that focuses on natural resource or environmental themes. ● Student develops and maintains a Wiki page or blog related to resource conservation or environmental stewardship.

Badge	**Grade**	**Meeting the Criteria: How is the Digital Badge earned?**	**What evidence shows this?**	**Claim Code**
	9-12	Student creates an original work (thematically based upon school's PBIS statement, mission, or goals that conveys school's environmental engagement and its equally critical link to the local community.	Each submission must include reference to at least 3 independently researched and properly cited sources, AND written testimonials, or documented interviews from 3 (adult) professional or local community figures. 1. Upload image, link and/or electronic copy of original work 2. Upload reference sources and interviewee contact information	**3AD-9048-4F4**
	6-8	Student creates an original work (thematically based upon school's PBIS statement, mission, or goals that conveys school's environmental engagement and its equally critical link to the local community.	Each submission must include reference to at least 3 independently researched and properly cited sources, OR written testimonials, or documented interviews from 3 (adult) professional or local community figures. 1. Upload image, link and/or electronic copy of original work 2. Upload reference sources or interviewee contact information	**B8B-BCAD-32B**
	3-5	Student creates an original work (thematically based upon school's PBIS statement, mission, or goals that conveys school's environmental engagement and its equally critical link to the local community.	Upload image, link and/or electronic copy of original work or upload reference sources or interviewee contact information.	**1F5-AFD7-BC9**
	P-2	Student creates an original work (thematically based upon school's PBIS statement, mission, or goals that conveys school's environmental engagement & its equally critical link to the local community.	Upload image, link and/or other electronic copy of original work that expresses the school mission, environmental education, and community linkage.	**222-5F1C-2AF**

FORECAST
Identifies trends and forecast possibilities

Sample Evidence	*Sample evidence for meeting the Journey Badge requirement include, but are not limited to, the following:* ● Student analyzes behavior trends at the high school level for the purpose of introducing energy saving & resource conservation practices. ● Student performs research on commodities trend analysis and closely follows natural and renewable energy market to forecast market trends. ● Student studies food trends at schools and develops a Food Recovery Initiative (FRI) through EPA's FRI program.

Badge	**Grade**	**Meeting the Criteria: How is the Digital Badge earned?**	**What evidence shows this?**	**Claim Code**
	9-12	Student conducts a cost-benefit analysis and includes projected cost and return on investment.	Student uploads final analysis, with associated costs of implementation. Researches costs and benefits of opposing products. Includes expert recommendations. Makes suggestions for school/district wide implementation to school administration.	**8C0-240A-53C**
	6-8	Student conducts a cost-benefit analysis and includes projected cost and return on investment.	Student uploads final analysis and suggestions for best practices school administration.	**942-7172-C49**
	3-5	Student conducts a SWOT analysis to spotlight *Strengths, Weakness, Opportunities,* and *Threats.*	Student uploads SWOT chart and explanations of findings and how school can play critical role in changing behavior.	**17E-6BDB-D7C**
	P-2	Student conducts a SOAR analysis to spotlight *Strengths, Opportunities, Aspirations* and *Results*.	Student uploads supporting materials and final SOAR analysis.	**1F6-735A-D4E**

INNOVATION
Applies existing knowledge to generate new ideas, products, or processes

Sample Evidence	*Sample evidence for meeting the Journey Badge requirement include, but are not limited to, the following:* ● Student participates in water audit training with experts from Aurora Water. ● Student creates weekly reports with online infographics of school building performance and updates students and staff on social media platform. ● Student organizes school-wide energy reduction pledge campaign and projects information from the school's EnergyCAP Dashboard on public forum.

Badge	**Grade**	**Meeting the Criteria: How is the Digital Badge earned?**	**What evidence shows this?**	**Claim Code**
	9-12	Student leverages tools and technology available within the school's EnergyCAP Dashboard to develop a unique interactive experience that publicizes school's building performance.	Student uploads school webpage showing embedded link to the school's EnergyCAP Dashboard, a separate webpage for school's green initiatives, and testimonial of school's IT Manager indicating collaboration on design and implementation. Student also creates a social media outlet (hashtag, instagram, periscope, twitter acct) to promote school's green initiatives. *Note: Social Media must have at least 50 unique followers*	**963-56F4-191**
	6-8	Student leverages tools and technology available within the school's EnergyCAP Dashboard to develop a unique interactive experience that publicizes school's building performance.	Student creates a social media outlet (hashtag, instagram, periscope, twitter acct) to promote school's green initiatives and reports on school's building performance referencing the school's EnergyCAP Dashboard. *Note: Social Media must have at least 30 unique followers*	**650-237A-F63**
	3-5	Student leverages tools and technology available within the school's EnergyCAP Dashboard to develop a unique interactive experience that publicizes school's building performance.	Student writes editorial for school newspaper, weekly announcements, or club bulletin about school's green initiatives and reports on the school's EnergyCAP Dashboard and uploads school webpage with article in the spotlight.	**271-4F77-D1A**
	P-2	Student leverages tools and technology available within the school's EnergyCAP Dashboard to develop a unique interactive experience that publicizes school's building performance.	Students upload photos of energy journals tracking weekly energy and resource use according to the school's EnergyCAP Dashboard.	**5CD-B9AF-A66**

SIMULATION
Uses models and simulations to explore complex environmental systems and issues

Sample Evidence	*Sample evidence for meeting the Journey Badge requirement include, but are not limited to, the following:* ● Student participates in a science fair and represents an environmental theme (solar and/or wind energy, mud-watt, biofuels, etc.) ● Student completes an Environmental Course at Pickens Tech. ● Student designs and constructs a water filtration system. ● Student builds demonstration compost tumbler. ● Student constructs a diorama of natural ecosystem.

Badge	**Grade**	**Meeting the Criteria: How is the Digital Badge earned?**	**What evidence shows this?**	**Claim Code**
	9-12	Student uses hands-on learning to construct an appropriate scale model of a system, machine, process, or product that can be used to explore and accelerate learning opportunities.	Student uploads 5 minute tutorial video, blueprints, and drafts of planning, designing, building, and functionality of a finished system, machine, process, and/or product.	**10B-31CB-91C**
	6-8	Student uses hands-on learning to construct an appropriate scale model of a system, machine, process, or product that can be used to explore and accelerate learning opportunities.	Student uploads 3 minute video tutorial of planning, designing, building, and functionality of a finished system, machine, process, and/or product.	**96C-E248-257**
	3-5	Student uses hands-on learning to construct an appropriate scale model of a system, machine, process, or product that can be used to explore and accelerate learning opportunities.	Student uploads photo journal of group project and narrative of how project will impact school.	**B4F-C003-1E7**
	P-2	Student uses hands-on learning to construct an appropriate scale model of a system, machine, process, or product that can be used to explore and accelerate learning opportunities.	Student uploads photos of finished project.	**6F5-62FC-A95**

Summit Badge: SELF-DIRECTION
(Encompasses Personal Responsibility, Civic Responsibility, and Work Ethic)

Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.

Journey Badges

In order to earn the Self-Direction Summit Badge, students need to earn the four Journey Badges listed below:

- **ADVOCACY**: advocate and practice safe, legal, and responsible behaviors
- **ATTITUDE**: exhibit a positive attitude that supports collaboration, learning, and productivity
- **LEADERSHIP**: exhibit leadership abilities in a variety of settings
- **LIFELONG LEARNER**: demonstrate attributes of a lifelong learner

ADVOCACY
Advocate and practice safe, legal, and responsible behaviors

Sample Evidence	*Sample evidence for meeting the Journey Badge requirement include, but are not limited to, the following:* ● Student designs, creates, and presents light switch tags to reduce energy use and coincide with school's overall green initiatives. ● Student is active in school's green team or environmental club. ● Student participates in Aurora Water Crusaders training or Xcel Energy's Think Energy training to act as student advocate for resource conservation. ● Student actively participates in civic engagement to address environmental grievances with school and city administrators. ● Student develops a multimedia presentation demonstrating the impact of climate change on micro-macro levels throughout community and state.

Badge	**Grade**	**Meeting the Criteria: How is the Digital Badge earned?**	**What evidence shows this?**	**Claim Code**
	9-12	Student takes action and actively participates to promote outreach and education of specific topic or theme related to environmental stewardship.	Student submits photos and videos of club members in action to spread message of cause or action. Must also include social media component with a minimum of 30 additional followers.	**947-116A-62E**
	6-8	Student takes action and actively participates to promote outreach and education of specific topic or theme related to environmental stewardship.	Student submits certification of training, reports, activities, photos that coincide with project.	**B42-6396-987**
	3-5	Student takes action and actively participates to promote outreach and education of specific topic or theme related to environmental stewardship.	Student create a Public Service Announcement for school and submits link to video. Must also include link to video on school's website.	**856-F43F-C9C**
	P-2	Student takes action and actively participates to promote outreach and education of specific topic or theme related to environmental stewardship.	Student create a "green tip" for weekly announcements.	**B0C-EE40-551**

ATTITUDE
Exhibit a positive attitude that supports collaboration, learning, and productivity

Sample Evidence	*Sample evidence for meeting the Journey Badge requirement include, but are not limited to, the following:* ● Student regularly asks challenging questions that engages other students and shows interest. ● Student plays an active role in groups settings; understands the importance of shared goals and efforts.

Badge	**Grade**	**Meeting the Criteria: How is the Digital Badge earned?**	**What evidence shows this?**	**Claim Code**
	9-12	Student demonstrates perseverance, a willingness to reach goals, and remain proactive in the face of adversity.	Student submits photo and testimonial from teacher indicating student's engagement and positive approach to learning.	**0E0-E0EE-520**
	6-8	Student demonstrates perseverance, a willingness to reach goals, and remain proactive in the face of adversity.	Student submits photo and testimonial from teacher indicating student's engagement and positive approach to learning.	**F68-325C-EBD**
	3-5	Student demonstrates perseverance, a willingness to reach goals, and remain proactive in the face of adversity.	Student submits photo and testimonial from teacher indicating student's engagement and positive approach to learning.	**980-78F1-131**
	P-2	Student demonstrates perseverance, a willingness to reach goals, and remain proactive in the face of adversity.	Student submits photo and testimonial from teacher indicating student's engagement and positive approach to learning.	**4BD-4477-DD1**

LEADERSHIP
Exhibit leadership abilities in a variety of settings

Sample Evidence	*Sample evidence for meeting the Journey Badge requirement include, but are not limited to, the following:* ● Student joins and regularly participates in one or more extracurricular activities for at least a semester ● Student engages in community volunteer activities related to the environment and sustainability. ● Student takes on a leadership role in the school and works diligently to make positive environmental changes

Badge	**Grade**	**Meeting the Criteria: How is the Digital Badge earned?**	**What evidence shows this?**	**Claim Code**
	9-12	Student holds an officer position in Environmental Club/Green Team for at least one full semester and successfully fulfills the duties and responsibilities required by the role.	Student submits a description of position's duties and responsibilities and a testimonial from a fellow officer or Environmental Club sponsor that provides examples of how you fulfilled your duties.	**626-1BAD-97A**
	6-8	Student holds an officer position in Environmental Club/Green Team for at least one full semester and successfully fulfills the duties and responsibilities required by the role.	Student submits written reflection explaining what went well and areas for improvement, including how the student would lead their group differently if they were to assume this leadership role again.	**52A-90E7-AC5**
	3-5	Student holds an officer position in Environmental Club/Green Team for at least one full semester and successfully fulfills the duties and responsibilities required by the role.	Student submits "Club Journal" with photos of classroom activities, fundraising activities, community service activities, examples of student engagement and written reflections of events with positive and negative outcomes and how to improve next time.	**D27-37FF-65D**
	P-2	Student holds an officer position in Environmental Club/Green Team for at least one full semester and successfully fulfills the duties and responsibilities required by the role.	Student submits "Club Journal" with written examples and summaries of classroom activities, fundraising activities, community service activities, and school events.	**5D6-C4AE-67F**

LIFELONG LEARNER
Demonstrate attributes of a lifelong learner

Sample Evidence	*Sample evidence for meeting the Journey Badge requirement include, but are not limited to, the following:* ● Student actively seeks out academic resources for the purpose of success and knowledge growth. Can be exemplified through tutoring, group study, requesting teacher assistance outside of class, etc. ● Student shows initiative by completing additional assignments designed to complement environmental education. ● Student participates in environmental clubs and events outside the school. ● Student documents and records contributions to continue making school and community more sustainable.

Badge	**Grade**	**Meeting the Criteria: How is the Digital Badge earned?**	**What evidence shows this?**	**Claim Code**
	9-12	Student exemplifies school's PBIS statement in all aspects of learning and demonstrates ongoing, voluntary, and self-motivated pursuit of knowledge for either personal or professional reasons.	Student submits documentation of extra-curricular activities with teacher/club sponsor's testimonial in support of student's work.	**CDB-5AF3-105**
	6-8	Student exemplifies school's PBIS statement in all aspects of learning and demonstrates ongoing, voluntary, and self-motivated pursuit of knowledge for either personal or professional reasons.	Student submits documentation of extra-curricular activities with teacher/club sponsor's testimonial in support of student's work.	**65A-C1E8-0A7**
	3-5	Student exemplifies school's PBIS statement in all aspects of learning and demonstrates ongoing, voluntary, and self-motivated pursuit of knowledge for either personal or professional reasons.	Student submits documentation of extra-curricular activities with teacher/club sponsor's testimonial in support of student's work.	**DF0-A8BE-28D**
	P-2	Student exemplifies school's PBIS statement in all aspects of learning and demonstrates ongoing, voluntary, and self-motivated pursuit of knowledge for either personal or professional reasons.	Student submits documentation of extra-curricular activities with teacher/club sponsor's testimonial in support of student's work.	**968-779A-849**

Resources

Aurora Public Schools
Sample EnergyCAP Dashboard
https://v4web.energycap.com:443/embedded?key=eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJodHRwczovL2VuZXJneWNhcC5jb20vbWV0YSI6IntcImRhc2hib2FyZFV1aWRcIjpcIjk1REI4QjczQTFDNTQwNzY4ODdBMTgzNEI4OTZDMjA3XCIsXCJkYXNoYm9hcmRJZFwiOjEwNzgsXCJkYXNoYm9hcmRUeXBlXCI6XCJVU0VSXCJ9IiwiaHR0cHM6Ly9lbmVyZ3ljYXAuY29tL3N1YmplY3QiOiJjYXdyaWdodCIsImh0dHBzOi8vZW5lcmd5Y2FwLmNvbS9kYXRhc291cmNlIjoiYXBzIiwiaHR0cHM6Ly9lbmVyZ3ljYXAuY29tL3RydXN0bGV2ZWwiOiJQdWJsaWNEYXNoYm9hcmQiLCJodHRwczovL2VuZXJneWNhcC5jb20vYXBwbGljYXRpb24iOiJFbmVyZ3lDQVAtVVNFUiIsIm5iZiI6MTUwMzQyNTQ0MywiZXhwIjoxNTM0OTYxNDQzLCJpYXQiOjE1MDM0MjU0NDMsImlzcyI6ImVuZXJneWNhcCIsImF1ZCI6ImVtYmVkZGVkX2Rhc2hib2FyZCJ9.JYJimhZlmyMu3Jg20WYFlu12H8qhlnPzcBZ0Iuc1hDM

Chicago Art Department
What is a badge?
https://www.youtube.com/watch?v=_051cGs6n8w

Colorado Department of Education
Colorado Standards 21st Century Skills*: Transformative Teaching*
http://www.cde.state.co.us/sites/default/files/documents/cdelib/librarydevelopment/schoollibraries/downloads/pdf/21stcenturyskillsbrochure.pdf

Colorado Department of Education
21st Century Skills *in Colorado's Reading, Writing and Communicating Standards -*
http://www.cde.state.co.us/coreadingwriting/rwc_21st_century_skills

International Society for Technology in Education (ISTE)
Profiles for Technology (ICT) Literate Students
http://www.iste.org/docs/pdfs/nets-s-2007-student-profiles-en.pdf?sfvrsn=4

International Society for Technology in Education (ISTE)
An alignment of Colorado Academic Standards
http://www.iste.org