Portfolio and Capstone Guidebook

Asia Society – Partnership for Global Learning
Capstone Work Group, January 2015

*The information for the capstone project was created by the Graduation Guidelines Capstone Work Group. For a list of the members of the work group or for a copy of the Capstone and Portfolio Guidebook, click **here**.*

Design Framework   Page Number

The following framework is offered to help guide the design, implementation, and evaluation of the initiative. This framework is meant to provide several specific steps that are flexible enough to be customized to your local community.
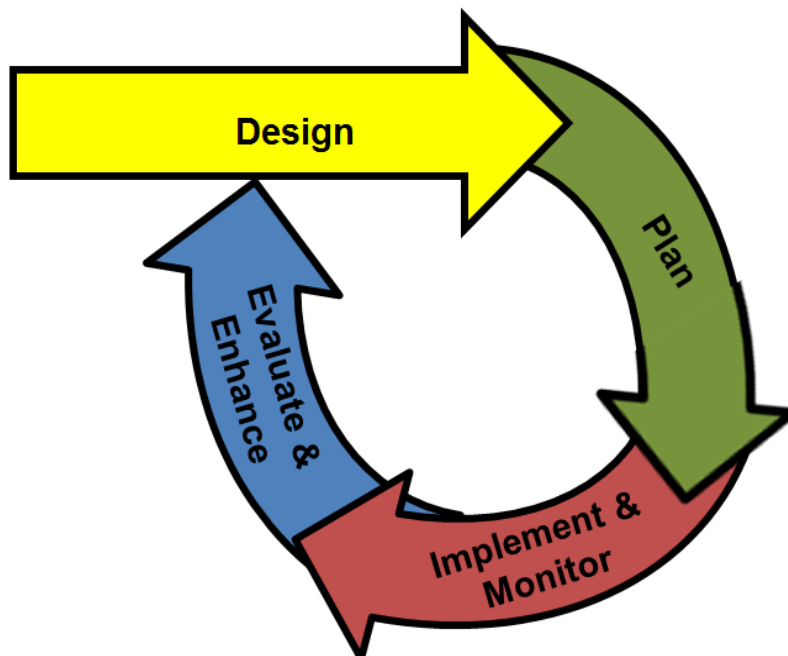
1. Review Design Framework and Steps

Diagram 1: The Design, Planning, Implementation, and Evaluation Framework.

1. Review Design Framework and Steps (con't)

The framework begins with a ***design phase*** that is both collaborative and iterative. The goal of this phase is to engage a variety of constituents in the conceptualization of how portfolios and capstones might meet the needs of students. In the design phase, the reader will be able to: identify key competencies for students to demonstrate; develop an assessment process (including a way to ensure rigor and validity); and review other successful models to inform the design. The ***plan phase*** is intended to help identify the needs of students and teachers to ensure they are properly prepared and supported throughout implementation. It is also a time to develop a concrete action plan with a timeline. The third phase is the time to ***implement and monitor*** the portfolio and/or capstone approach. It is during this phase that the action plan is operationalized and data is collected on what is working with the design and what can be improved.   The planning and implementation phases both inform the design. As elements need to be changed or modified, the data collected informs improvement of the overall process and the original design. The ***evaluate and enhance phase*** provides an opportunity to take stock of the successes or areas for growth. While data analysis and overall reflection is ongoing, it is in this phase that the design team should make a formal summative assessment of the students and of the process for that year. There is always another opportunity to refine the design, make adjustments to the implementation plan, or update resources and materials necessary for student success. Elements of each phase are detailed in Diagram 2 below.
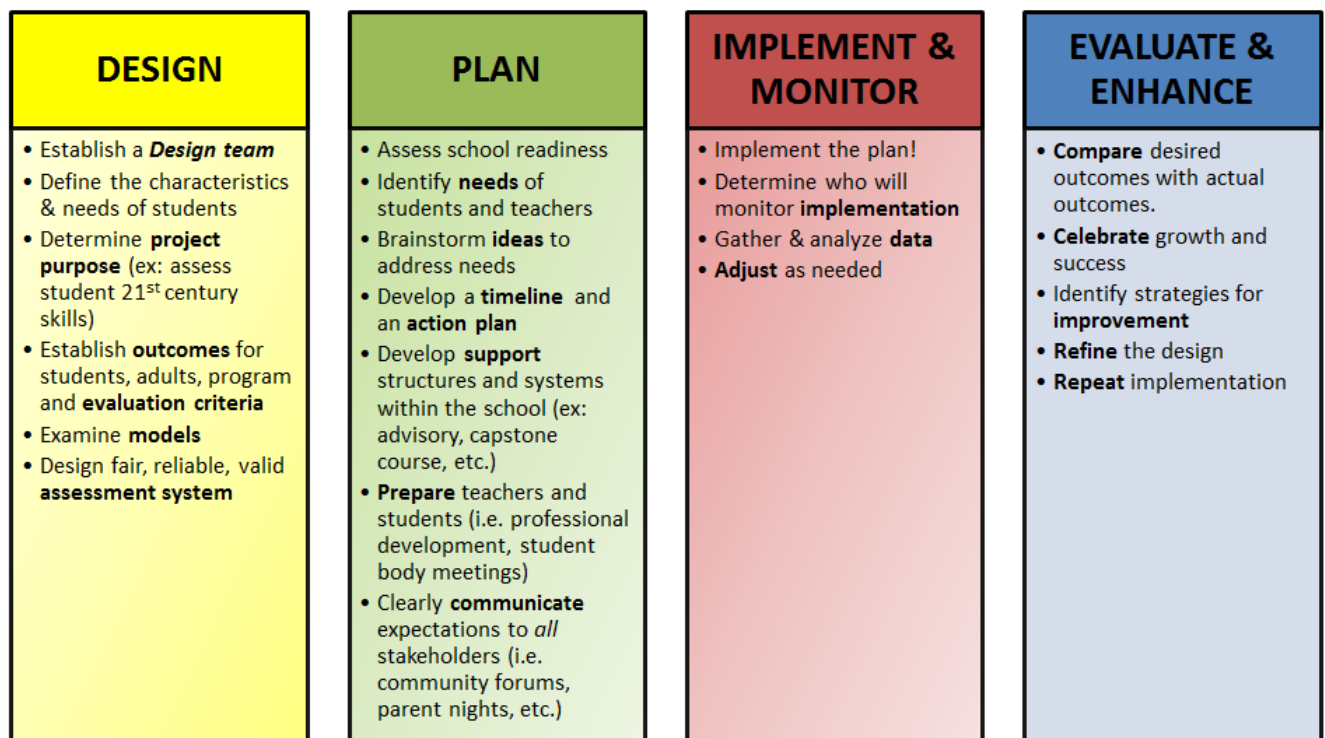
DESIGN	PLAN	IMPLEMENT & MONITOR	EVALUATE & ENHANCE
• Establish a ***Design team*** • Define the characteristics & needs of students • Determine **project purpose** (ex: assess student 21st century skills) • Establish **outcomes** for students, adults, program and **evaluation criteria** • Examine **models** • Design fair, reliable, valid **assessment system**	• Assess school readiness • Identify **needs** of students and teachers • Brainstorm **ideas** to address needs • Develop a **timeline** and an **action plan** • Develop **support** structures and systems within the school (ex: advisory, capstone course, etc.) • **Prepare** teachers and students (i.e. professional development, student body meetings) • Clearly **communicate** expectations to *all* stakeholders (i.e. community forums, parent nights, etc.)	• Implement the plan! • Determine who will monitor **implementation** • Gather & analyze **data** • **Adjust** as needed	• **Compare** desired outcomes with actual outcomes. • **Celebrate** growth and success • Identify strategies for **improvement** • **Refine** the design • **Repeat** implementation

Diagram 2: Elements of Design, Planning, Implementation and Evaluation

2. Establish a Design Team

Identifying individuals to become involved in the design process is a critical first step. By creating a broad based working committee that represents a variety of viewpoints, it's possible to take into account every constituency impacted by the initiative. This group might represent the perspectives of students, teachers, administrators, parents, higher-education representatives, and potential community partners, including local businesses, industry, and agencies. Provide this group with background materials and rationale in order to to ensure that all parties have an equal understanding of their purpose and the intended outcomes. Involve teachers so they can provide unique insight into the reality of the classroom, as well as expertise about how such an approach might be implemented. Teachers also offer a critical voice in determining how to operationalize the portfolio or capstone experience. Students, who will be the main users of the system, offer practical insights about how they will respond and interact with whatever is designed. If either teachers or students say that the process is not clear or too cumbersome, it is unlikely that the school or district will fully realize the intended outcomes. Parents also serve as a valuable voice in the process, especially since this new approach may be a departure from what they expect of the high school experience. When informed and involved, parents can serve as powerful advocates for the initiative, and could help educate other parents about the importance of portfolios or capstones for students. Local community members or business partners often make the case for why demonstrating skills and competence in these ways better prepares students for college and career.

> **Engage Stakeholders**
>
> - Identify the problem you are trying to solve or opportunity for learning you will create
> - Identify *who* needs to be involved and why (expertise, implementers, supporters, resisters)
> - Identify *what* role they will each play
> - Identify *when* they will be involved

It is recommended that a team of no more than 15 members participates in the design process. Since many schools already have created some sort of shared decision-making or curriculum committee, it may be wise to start with an existing structure in the school instead of creating an additional group. For this effort, you will want to consider criteria such as representation from each content area, grade level, and/or those who service specific populations of students.

The insert to the right demonstrates an example of the composition of a design team.. While this committee structure does not formally include local industry or higher education members, these constituents have been involved in the implementation and evaluation phase of the process. Consider creating smaller focus groups with members from both of these groups.

> School A has successfully utilized a design team that consists of 15 members. The team is composed as follows:
>
> - **Building Principal: (1)**
> - **School Counselor: (1)**
> - **Teachers: (6)** 1 from math, science, ELA, social studies, arts & world language; representing grades 9 – 12
> - **Students: (4)** 1 from each grade level
> - **Parents: (2)** Parent of a rising 9th grade student & a rising 10th grade student
> - **Board of Education Member: (1)** Serves as a BOE member, but also is a parent and local business owner

3. Determine the Purpose of the Project

In the next phase, project leaders must identify 1)which approach (portfolio, capstone, or both)is best for students and 2) what will be measured. . For example, whichever approach is implemented may measure 21st century skills, local priorities, disciplinary content knowledge, ICAP, or a combination of all of these things.

Sample Portfolio and Capstone Approaches

Approach	Purpose and Measure(?)
ICAP	Assist students in exploring available postsecondary career and educational opportunities.
21st century skills only	Determine students' proficiency on a set of defined "21st century skills" (as defined in the Graduation Guidelines) such as critical thinking, communication, problem solving.
21st century skills and local priorities only	Determine students' proficiency on a set of defined "21st century skills," as well as knowledge or skills deemed important by the local authority. This could include knowledge of the local community or community service component.
21st century skills, local priorities and core disciplines	Determine students' proficiency on a broader set of competencies that includes deep content knowledge in one or more content area. Students demonstrate deep content knowledge and their ability to apply it across different contexts.
21st century skills, local priorities, all disciplines	Determine students' proficiency on a broader set of competencies that includes deep content knowledge in all key content area (as defined by the school).

During the design process, schools determine which students will participate in the assessment system. For example, schools may opt to ask students to complete a portfolio or capstone experience only during their senior year to demonstrate their proficiency for graduation. In other schools, students collect of work and demonstrations of their learning throughout high school, then make a final presentation in the senior year.

Schools may also decide to implement this new approach in a variety of ways, including a small pilot at a certain grade level, a "roll up" starting in grade 9 and progressing one grade level a year until all students 9 – 12 participate, or they may decide to implement across multiple schools in a district to allow for greater leverage of resources, expertise, and collaboration. Each approach still follows the phases in the framework offered earlier, but the scope of the implementation will meet the needs of the school/district based on readiness and other competing initiatives.

Examine Models: While the team is designing the first iteration of the portfolio and/or capstone system, it will be important to evaluate the capstone and/or portfolio projects that already exist in your district. Are there examples from CTE classes? Have individual or teams of teachers experimented with either process in one class, one grade, or one content area?

It will also be useful to examine systems from other schools and districts. Consider each model's intended audience, purpose, and approach to implementation. Some examples that may inform your own design include:

Asia Society's Graduation Performance System	http://sites.asiasociety.org/pglonline/about/our-initiatives/graduation-performance-system/
Envision School's Graduate Portfolio	http://www.envisionlearning.org/tools-and-resources/
Expeditionary Learning's Passages Approach	www.vimeo.com/68481107http://www.vimeo.com/68481107 http://www.vimeo.com/68481107
Virginia's Capstone Course	http://www.doe.virginia.gov/instruction/english/capstone_course/index.shtml
West Windsor-Plainsboro Regional School District	http://www.west-windsor-plainsboro.k12.nj.us/departments/Curriculum/21st_century_competencies

4. Develop Competencies and Rubrics

Once the design team has decided which approach to take, they can articulate the competencies that students will be responsible for demonstrating. For example, the creation of **A Graduate Profile** may be one first step to articulate what you will expect students to know and be able to show upon graduation. **(Capstone Promising Practices)** More specifically, a set of performance outcomes or competencies should be developed based on the structure of the portfolio and/or capstone. In other words, if the portfolio is grade level or discipline specific, each discipline should have a set of outcomes for which students must demonstrate proficiency. If the experience is based on 21st century skills, outlining what those skills are, and what students must demonstrate to express proficiency, is necessary.

The competencies should align to the Colorado Academic Standards and require a similar level of rigor (especially for discipline specific competencies such as science, social studies, math, and ELA). Identifying the competencies that students will need to demonstrate, in the language that is easily accessible to students and their families, helps communicate the targeted outcomes and levels of desired performance. The use of rubrics also helps communicate to students, teachers, and parents what college-ready, proficient, and advanced work looks like.

Rubrics communicate to all constituents what success looks like, while taking into account the various levels of performance a student may achieve. A collaborative process to design rubrics is helpful in creating a common understanding of what success will look like, fosters the use of common language, and ensures a more consistent use of the rubric. Developing rubrics for portfolios and capstone projects usually begins with a small team and eventually expands to everyone in the school who will be part of the assessment process. This ensures multiple points of view to inform decisions about priorities for assessment and to develop a more broadly understood definition of what proficiency/competency looks like in student work. An inclusive process leads to an instrument that is embraced by the whole school community. Ideally, students are involved in the development and use of the rubrics. Keep in mind that students will use the rubrics to self-assess, to plan and guide their work, and to assess peers. For students and teachers, rubrics are not only an end point instrument for summative assessment; the rubric should also help guide their work from the beginning, culminating in a clear demonstration of learning and competency.

First, the team needs to research rubrics, literature, and examples from the field to establish a collective body of knowledge. At a minimum, the small design team should make time for text-based discussion(s) around select literature about **Performance Assessment and Rubrics (Capstone Resources**) from research and from the field. The team could then choose one piece from the literature they have gathered for the whole faculty to read and discuss. Even for a faculty who has been using rubrics, reading and discussing current best practice will be informative. One quality source of information about quality design and use of rubrics is Stanford University's Center for Assessment, Learning, and Equity (SCALE).

SCALE defines the following criteria for quality rubric design:
- Rubric language is transparent and easy to interpret.
- Rubric language provides concrete images of proficient and advanced levels of performance, using descriptive, not quantitative or judgment-laden, language.
- Rubrics represent a developmental continuum based on observed patterns in student performance.
- Indicators are observable traits in student work products, and not processes that cannot be observed in the work itself.
- A scoring dimension reflects one major idea and is not overladen with too many indicators or ideas.
- Each dimension reflects relatively independent traits (minimal overlap with other dimensions)

If you are working with portfolios, decide which kind of portfolio (p. 7) serves your purpose. Begin by brainstorming categories and indicators (i.e. "look-fors") of proficiency in each category: Consider what is not covered by other current assessment measures that are important to your school's vision of college and career readiness. Consider both process and content competencies. Your students have already worked hard to meet expectations of their teachers. Use those works to mine information about what students do related to the competencies you will assess. For example, you may choose a piece of student work that requires students to demonstrate their ability to use primary sources to back up an argument, or present information in a non-textual way (e.g. an infographic). Teachers may examine work showing various levels of proficiency to help calibrate their use of the rubric and anticipate potential weaknesses in the tool. In this process, reviewing **Rubrics Developed in Other Schools** can also inform your design. You might find a version that will work for you with only slight or no revision (**Capstone Resources**). For your discussion either in small or large groups, an **Affinity Mapping Process** (**Capstone Promising Practices**) can provide structure to narrow your list. If you find an already prepared rubric that will work for you, you could skip the steps of crafting language and go to the trial run.

Deciding the process for crafting the language of the rubric should depend on your local context and culture. While one person could craft the language for the entire rubric, there is also a value and, arguably, efficiency in splitting up the indicators between pairs on the team. They can then present their work for edits and revisions and, most importantly, questions from the larger team or the whole faculty to ensure that everyone grasps the meaning of each "look-for" within the indicators. This is essential as it is a chance for users to study the language and understand what they are assessing. It is also crucial for users to have a voice n the development in order to build ownership and buy-in.

If possible, using the rubrics in a pilot program will allow you to further vet them for quality. Use the rubric to rate samples of student work before trying it out with the students in the classroom. If there are issues remaining with the descriptors or indicators, they will be revealed. If community members or other partners are part of the team that is assessing portfolios and capstone projects, it is worthwhile to include one or two of them in a trial run to ensure the rubrics do not contain too much jargon or unobservable elements. When staff and students are involved in the development of the rubric, scoring is generally more consistent. For external accountability purposes, however, you may need to calibrate or norm scorers.

You may find it necessary to revise language and content based on user feedback. Provide a format for written feedback from the trial runs. You might also want to provide a format for discussions about successes, challenges, and suggestions for improvement. The original design team, or another small work team, can then use the feedback to improve the rubric that will be used going forward. After the initial experience with the competencies and scoring of student work, it may be necessary to adjust the competencies to provide even greater rigor, especially as schools are able to scaffold the learning and expectations for students over the years. There is often a tendency to continue revising. Try to stick with the original version for at least two cycles.

The Resources section contains additional resources for rubric development.
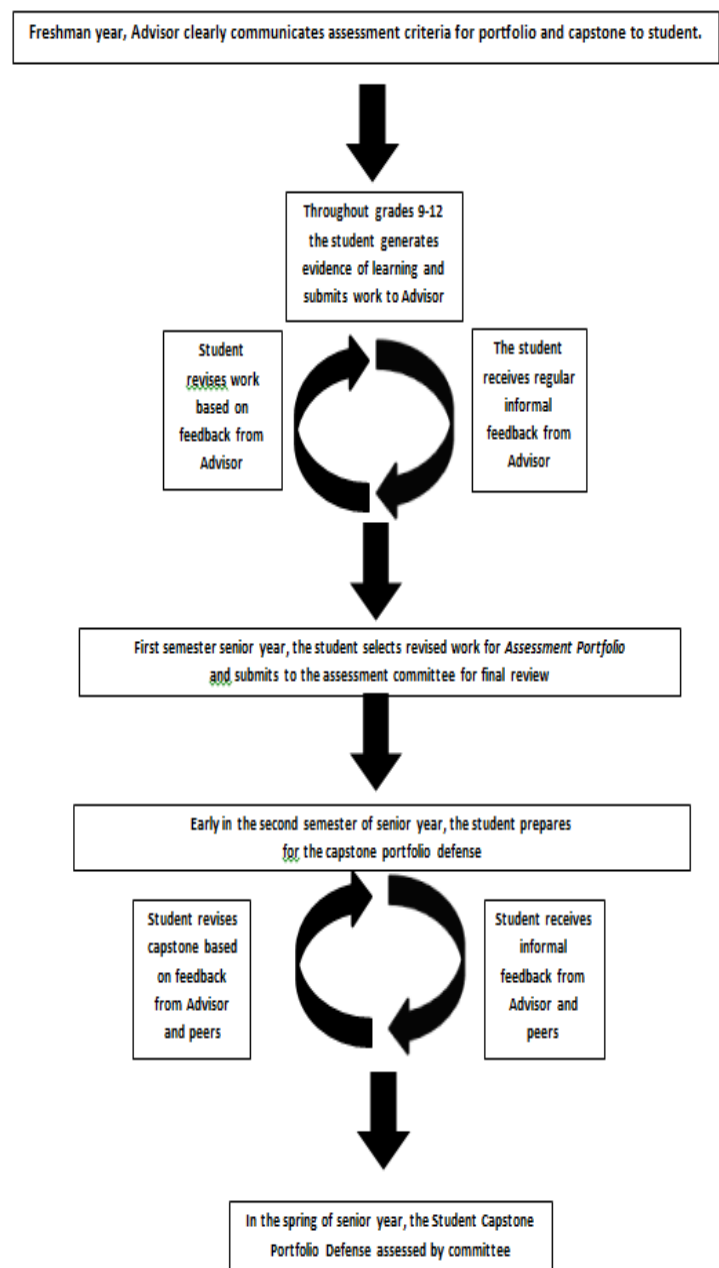
5. Design the Assessment Process

After the competencies and program goal have been articulated and assessment tools developed, a fair, rigorous, and reliable assessment system should be developed. In designing an assessment process, the team should consider:

- How and when will the assessment criteria be communicated to the student?
- When and where will formative assessments occur?
- Who will provide formative feedback?
- Where and when will summative assessments occur?
- Who will assess the summative tasks?

Sample Portfolio and Capstone Assessment Process

An example of an assessment process is presented in this diagram. This sample high school model is dependent on having a grades 9-12 advisory program that meets weekly and is small enough to all for individualized teacher-to-student support. Advisory provides the student with time for personalized learning, career and college exploration, socio-emotional development, and study skills. The *Resources* section contains additional tools to support an Advisory program. In addition, the school provides a senior seminar class to help support the final development of the portfolio. (Note: Though this model relies on an advisory program, a school can design and implement capstone and portfolio projects that are embedded in some or all content areas. It is not imperative to also implement an advisory program.)

The advisor is responsible for clearly communicating the performance outcomes, the criteria for assessment, assessing student work, and for providing on-going formative feedback. With appropriate professional development, any member of the school staff, including administrators and counselors, could be responsible for facilitating an advisory. This fosters strong adult-student relationships and support and reduces the size of each advisory. During the development of a working portfolio, students use feedback to revise products in the portfolio. In grade 12, the student selects final products, which demonstrate attainment of the communicated outcomes, for the summative assessment portfolio. Students submit their final portfolios to an assessment committee for evaluation.

Freshman year, Advisor clearly communicates assessment criteria for portfolio and capstone to student.

Throughout grades 9-12 the student generates evidence of learning and submits work to Advisor

Student revises work based on feedback from Advisor

The student receives regular informal feedback from Advisor

First semester senior year, the student selects revised work for *Assessment Portfolio* and submits to the assessment committee for final review

Early in the second semester of senior year, the student prepares for the capstone portfolio defense

Student revises capstone based on feedback from Advisor and peers

Student receives informal feedback from Advisor and peers

In the spring of senior year, the Student Capstone Portfolio Defense assessed by committee

In their senior year, as students prepare for the portfolio defense, the advisor provides on-going feedback. Students use the advisor's feedback to reflect upon and revise their portfolio defense. Who will be on the assessment committees and how their scores will be calibrated for reliability is an essential decision. Some schools cast a wide net for community members and educators in the broader community. At DCIS, students choose their committees using a set of criteria that includes a diverse range of perspectives. Members of the assessment committees provide as unbiased a review of student work as is possible. Most importantly, they understand evidence based assessment and provide examples to support their scores. Developing reliability and consistency is a critical component to ensure the portfolio assessment is equitable, rigorous, and reliable. In the rubric development process, build in time to practice scoring smaller performances and student work with discussion among participants about scores and evidence; that way, you can discuss Misconceptions or questions about the rubric and performance assessment Eventually, the development of "anchor papers" or student work that represents certain levels of achievement can be collected to help teachers calibrate their scores. Time and facilitation to take this step will establish a foundation for years to come.

## 6. Create Ongoing Local Program Evaluation

Creating a plan for evaluation prior to implementation helps you focus your efforts, informs your implementation plan, and serves as a foundation for continuous improvement. Here are the essential components of the evaluation cycle:

An important first step in evaluation is to develop program goals. Consider using the well-tested SMART goals[1] template: **S**pecific, **M**easurable, **A**ttainable, **R**elevant, and **T**ime-bound to create goals that can be reliably monitored and evaluated. For example, if the school's priority is to improve students' communication skills during public presentations, a SMART goal could be:

> *By May 2015, 80% of seniors will have scored proficient or beyond in the communication domain of the portfolio defense.*

The SMART format helps to develop general benchmarks to track the data in a way that is informative for implementation. Advisors could set up practice portfolio defense presentations and systematically collect student performance data. With a rubric in hand, they can:

- look for patterns of proficiency with specific skills within the identified domain;
- make midcourse adjustments and provide interventions for individual students or for everyone if data suggests that is needed; and
- create a calendar or schedule of multiple benchmarking points and multiple means of assessment along the way to monitor progress.

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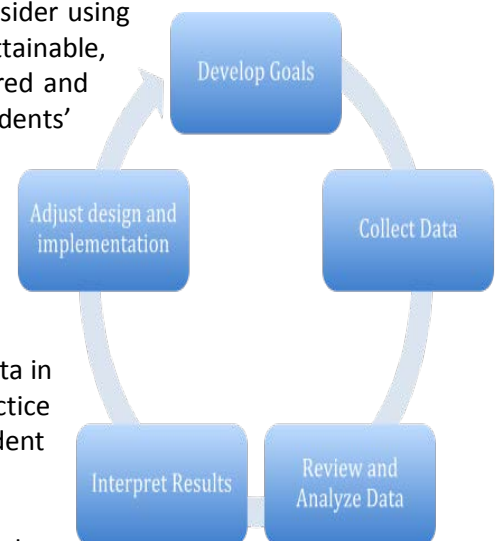
[1] Doran, G. T. (1981). There's a S.M.A.R.T. way to write management's goals and objectives. Management Review, Volume 70, Issue 11(AMA FORUM), pp. 35-36.

Formats for assessment (with the rubric as your guide) might include practice presentations for an audience, one-on-one teacher student conferences, and peer feedback. Student self-assessment is also crucial.

At schools where portfolios and capstones are an integral and robust part of students' educations, these assessments of learning are not merely another means for adult evaluation of students. Rather they are a complementary approach to develop student ownership of their learning and their demonstration of that learning. By providing time and guidance for students to reflect on their evidence of proficiency with the rubric and monitor progress with an organizational checklist, they take responsibility for their own success. Students can then identify gaps and challenges to seek help when needed.

With data from ongoing evaluation collections to monitor individual student progress toward demonstrating proficiency, advisors and teachers can look for patterns across their classroom/advisory, either informally or using a protocol, on their own or with other colleagues. They may meet together as faculty teams and confer with students to see patterns and then brainstorm and plan for interventions or continuing support.

Once final data regarding program goals has been collected, stakeholders can determine whether or not the goal was achieved. This is addressed further in the **Evaluate and Enhance** section of the guidebook.