The following systematic approach to curriculum development and review originates from the experiences of the Upper Primary teachers and administrators at the Hong Kong International School where over a five year period they developed a solid, highly structured calendar-based model to review and refine curriculum unit by unit. The resulting model demonstrates how a well-run curriculum renewal system centered upon teacher learning communities can drive how schools connect to and follow through to reach student learning outcomes. It should be noted that a couple aspects of this model are not to the point of being implemented but are shared here in a best practices format.

The following plan is tailored for international and independent schools as standalone entities not tied to a district organization of schools. The system provided would need to be individualized for any school and further adapted for their divisions. It represents a full year process of meetings, participants, their responsibilities, their reflections and actions. This is not a presentation of the Understanding by Design (UbD) approach to curriculum design, although, the UbD model is embedded into the actual curriculum meeting discussions.

The power of the process draws from being systematic, highly scaffolded, and based on learning communities that are reflective and learning focused. The model originates from practice in an elementary school where the social studies and science units were reviewed on an annual basis. That said, even after four years of review, most of the unit planning meetings still had plenty to be accomplished as the staff grew more adept at following the UbD design process to improve the assessments, teaching strategies and content to be taught.

The tendency was to cut the breadth of studies focusing on fewer benchmarks thus adding more depth to the students' learning experiences. Your curriculum mapping tool, whether in the form of an online software program or possibly as a Word document, can provide much of the scaffolding that guides you to follow the procedures of the system. It is very important to be able to adapt the unit plan template to meet your needs. If you are following the UbD design process, it is easy to set up your template to support the model. As you will see from the procedures below, there are several other unit template sections and potential tools that you might want to add to your curriculum mapping system.
The Unit Planning and Review Process

Prior Spring Procedures:

The Curriculum Director arranges a series of meetings bringing together the curriculum chairpersons from each division (elementary, middle and high schools) to do an overall review of current curriculum units and their alignment with school-wide approved curriculum standards and benchmarks within the framework of school goals. A central component is chosen for the upcoming year to be focused upon (e.g., Essential Understandings, information literacy, technology integration, assessments, etc.) as well as a goal for the year from for your elementary, middle and high schools (e.g., reading across the curriculum, Habits of Mind, community involvement, etc.).

From a UbD framework, this is where the school (district) goals are set as well content standards and overarching understandings/essential questions and core assessments are reviewed. Before the meeting, each division curriculum chairperson reviews the curriculum mapping tool checking for sequencing and overlapping of standards/ benchmarks. The Curriculum Director then reviews the overall K-12 program checking for proper scope and sequence before the meeting(s).

The division principals and the Curriculum Director construct a time line of curriculum review meetings for the following year that are inputted into the school calendar. All staff are notified of the curriculum meeting dates and times. Arrangements for substitute teachers are made as the curriculum meetings take place during the school day and the teachers are provided classroom coverage.

It is very important for these procedures to take place in the spring prior to a new year as opposed to trying to do them at the start of the year. The key is making this process systematic and embedded into the school calendar. The start of the school year can lead to rushed meetings where priorities are on getting classrooms up and running and not on long term, thoughtful planning.

The responsibilities for the curriculum chairpersons vary from division to division. One common theme is their being the leaders within their divisions to ensure that the unit plans are always up to date.

Participants and Responsibilities:

The larger the school, the more the unit planning is divided up by the teaching teams with a few teachers representing the larger team at the unit review meetings. An example for a large Middle School split into two houses with six social studies teachers at each grade level teaching a total of six units would be to assign each teacher a unit with one member from each grade level team in charge of working on the unit plan for their assigned unit. The teachers representing their grade level, team or department would take on the role of the being the "lead teacher". His/her responsibilities are to
set the agenda, contact participants with finalized meeting date/time and facilitate the meetings. A second teacher designated as the "scribe" during the meeting updates the unit plan in the online mapping tool and compiles the "to do” action list.

The “Collaboration Team” that partners with the classroom teachers usually consists of the following members with their stated area to support. All members participate in all aspects of the meeting not just in their area of responsibility.

**Curriculum Director**- Provides curriculum expertise and guidance for the school's big picture of scope and sequence.

**Division Principal or Associate Principal**- Provides insight for the division's big picture, instructional leadership and validation for the importance of the work.

**Librarian/Media Specialist**- Information Literacy/Research infusion.

**Instructional Technologist**- Instructional strategies, technology skills and Learning 2.0 integration.

**Learning Support Teachers** (Example of possible members depending on your school: ESL, Reading, Resource & GATE)- To support differentiation for their specific student populations.

If some Collaboration Team members are not able to attend, they should go to the online curriculum tool to review the unit, take notes and share their insight through another teacher attending the meeting. A powerful online curriculum tool adds to the collaboration by allowing for the posting of comments as “digital post-it” notes throughout the unit plan. This not only increases participation from a larger community but the additional functionality increases the tendency for teachers teaching the unit to access the plan and add notes as they go teach the unit. It goes without saying that the design of the unit template as a mechanism for reaching your goals cannot be underestimated. Much thought and research needs to go into this design process. If you are a UbD school, the sample templates provided by Jay McTighe and Grant Wiggins in their *Understanding by Design Professional Development Workbook* is the place to start.

If the elementary and/or middle school might be heading towards more interdisciplinary units of study, the up-to-date and fully documented online unit plans provide the opportunity for the art, music, guidance, foreign language, PE and other teachers to start reviewing how their respective curriculum could be adapted to integrate with the core disciplines. Keeping the units current with classroom practice is also vital for all new teachers. The more the new teachers see the culture of the learning community revolving around the curriculum, the more they will see using it as a natural part of their classroom practice.

**Time Line:**

**Six weeks** before the unit is scheduled to begin, the Collaboration Team is formed.
depending on the nature of the unit. An example is a 4th grade social studies/language arts unit would need the Curriculum Director, principal, librarian, instructional technologist, Resource, GATE, ESL and Reading teachers to attend but not the science coordinator. Depending on the size of the 4th grade, at a minimum two teachers would represent their grade level. One would be designated the "lead teacher" and the other the "scribe". The Collaboration Team members review the unit plan to search for new resources and strategies to bring to the meeting table. Previous resources are reviewed and updated within the online curriculum mapping tool.

**Four weeks** before the unit is scheduled to begin, the curriculum review meeting takes place. This meeting can run from a half to a full day depending on how developed the unit plan is. The teachers have coverage for their classrooms. As this article covers the overall curriculum development system, only a few details about the actual curriculum design meetings will be mentioned here. Another full article would be needed to cover those details. The following information stands out as key agenda topics for the meeting.

- a review of the assessments from previous year (This will also take place after the unit is taught.)
- connecting common assessments to the essential understandings and to the benchmarks
- how benchmarks and grade level expectations will be achieved
- essential questions and understandings
- key instructional strategies that connect the essential understandings and benchmarks to the assessments
- clearly documented differentiation of the teaching strategies, content and student learning products infused with technology and information literacy skills
- familiarization with the digital and library resources documented in the unit plan
- a copy of the previous year’s plan is archived in the curriculum tool

Two different approaches arise as to the focus of these meetings. One is to make the Essential Understandings the prime drivers of the discussion connecting them to the assessments, benchmarks and instructional activities. The other approach has the benchmarks at the center of the meeting connecting them to the assessments and teaching strategies.

The lead teacher facilitates the meeting while the scribe teacher uses a computer and LCD projector to share the unit plan on the screen. Having an online mapping tool that functions efficiently with ease of use that can be adapted for the needs of each division is central. As the meeting progresses and changes are made, any possible deletion of actions or materials are to be changed to red text. Any additions to the unit plan are to be added in green text.

A “to do” list is created in one section of the unit plan with specific assignments for each team member to work on after the meeting. The scribe e-mails this list out to all team members at the end of the meeting. The lead teacher oversees the follow
through of these tasks as each participant is responsible for going back to the unit plan to add "Completed" by his/her task once accomplished. It is this highly structured procedure that holds everyone accountable while moving the discussion and creativity of the meeting into action steps.

**Three weeks** before the unit begins, the unit teacher representatives then meet with their grade level, MS team or HS department to share the newly reviewed unit plan with its updated essential questions/understandings, standards and benchmarks, assessments, rubrics, etc. The scribe projects the unit plan on the screen for the team to review and make final decisions as to what was chosen to be deleted and added to the plan. All the text in the plan returns to black as the “reds” and “greens” changes are finalized.

**Two weeks** before the unit begins, the weekly plans and overall unit calendar are created by the unit teacher representatives leaving the specific daily lessons for the individual teachers to develop. The extent to which these weekly plans are developed depends on the nature of the teaching teams and their desire to follow a shared plan. At the ES and MS levels, student unit activity packets can be prepared to be shared in printed format or digitally if the teachers are using an online course management system (CMS). A CMS leads to a natural collaboration system where new ideas and resources can be shared among teachers as the unit progresses.

**At the completion of the teaching of the unit**, all the teachers meet with the Collaboration Team to discuss the results of the common assessment while recording reflections and recommendations for the following year. In preparation for the meeting, each teacher completes the "Common Assessment Analysis Report" (See Endnote). The teachers use a 1-5 scale to rank how well the common assessment measured student attainment of the standards and benchmarks. Once at the meeting, the scribe records notes from the discussion into the "Reflection" section of the unit plan.

It is at this reflection stage of the process where some very powerful questions are used to guide the discussion. It is up to each school to decide who facilitates this process whether it be the lead teacher, principal or Curriculum Director.

Possible questions are:

- What does the assessment tell you about the learning by your two strongest and two weakest students?
- What part of the assessment did most of your students find success with? The least success?
- How will you change your instruction for next year?
- How will you change your content for next year?
- How might the assessment need to be changed?
- Which current differentiation strategies need further development?
The results of this meeting lead to changing aspects of the unit during the meeting and/or posting notes in the reflection section of the mapping system for the review team the following year. Some of the student learning exemplars are then uploaded to the curriculum mapping tool to be available the following year for review and for new teachers teaching the unit.

**New Units** (to be developed)

In January of the year before a new unit is to be taught for the first time, the division principal and the Curriculum Director meet with the grade level, team or department to discuss potential units of study based on the school-wide curriculum review framework. The follow up to the meeting often involves:

- identifying the learning need: benchmarks that need to be reached
- researching potential topics for the unit
- assessing resources to teach the unit
- developing possible learning outcomes

By the end of March the Principal and the Curriculum Director meet with the teachers to decide the topic and preliminary learning objectives for the new unit. A full day curriculum creation meeting is set to take place by the end of April, thus feeding into the normal curriculum development system.

In conclusion, whether you are making the first steps to infuse more technology use into your school's classrooms or are planning a major shift in the culture of your school, take a look at how systematic and healthy your curriculum review process is. If your curriculum development process is currently not driving how you do business at your school then think about what steps and who needs to be involved to redesign the process. Here are some ideas to help guide your effort.

- The classroom teachers and the support teachers own the curriculum. The teachers manage the meetings and the overall process. Ownership leads to buy in and follow through.
- Administrative leadership provides the support you need. The building principal is the instructional leader who needs to be at these meetings validating the process and participants while making decisions that take away potential barriers when the units are rolled out. The Curriculum Director is the lead administrator who makes the final decisions connecting the curriculum from kindergarten to 12th grade.
- Sharing responsibility within the grade level, team or department takes the load off having everyone involved in the review of each unit of study. Good teaming practice is key.
- When grade level, MS team or HS departments work together on good teaming practices, the natural byproduct is the ability to trust one another to represent
the larger group at the curriculum meetings. The curriculum review process runs more efficiently when just a few point persons are empowered to lead out on their assigned units.

- Honor the previous work while also being comfortable in having critical conversations to bring about needed change.
- Look to pilot innovations but on a small scale. This supports teachers ready to try potential next phase strategies.
- The meetings take place during the school day with teachers getting coverage which further validates the importance of the process. The meetings are not seen as an "add on" after school task.
- Good broad-based training in the UbD process is needed.
- The results-driven process is circular in nature following an action research process of gathering evidence to then make decisions.
- Integration of Information & Communication Literacy (ICL), Gifted and Talented Education (GATE), Resource support, etc. by learning support specialists really leads to differentiation of content, process and product.
- Whether you are focusing on the Essential Understandings or standards and benchmarks at the start of your review meetings, look to document right into the unit plan how you will differentiate your content, process and product to meet the learning needs of your students.
- Use the unit rubrics as an additional way to integrate the information literacy and NETS. Any assessments that involve technology/design skills as well as information literacy skills must have a dedicated section of the rubric listing expected outcomes.
- Do everything way ahead of time based on the calendar of unit roll outs. This allows your teams to really craft the units not feeling rushed trying to meet at the last minute.
- The Curriculum Collaboration meetings are fun! It is a true learning community where partnerships, creativity and reserved time lead to teachers being able to enjoy the design portion of their jobs. Support the team with snacks, drinks and meals.
- You have a built in professional development program that ties directly into how and what is being taught in the classrooms. It is especially helpful to have the focus of your curriculum review connect to some aspect of your school's goals for the year.
- You really need an online curriculum mapping tool and unit template that can be adapted to meet your varying needs. One example would be the difference between an interdisciplinary elementary approach compared to a departmental high school version.
- Work to make the curriculum tool a Web 2.0 learning environment where teachers access information and can post their ideas and reflections for others to contemplate while continuing the discussion.
- Use your mapping tool to scaffold into your unit template how you want to drive your efforts to get expected results. Build in steps and guiding questions that move the discussions into action steps that affect learning in the classrooms.
- The unit plan becomes more usable the more it is connected to the course
management system. As the teacher logs into his/her course management Web page, there should be no further log in or other barriers that prevent easy access to the rich information and resources of the curriculum mapping system. On the same note, it is important to be able to hyperlink from your mapping tool directly to sample student electronic portfolios for exemplars of their work and reflections of their learning. This is especially helpful for new teachers gaining understanding of the curriculum from a teacher’s and student’s perspective.

1Endnote: Karen Moureau supplied this idea to add further structure to the reflection process.