Learning WITH LEONG

Thank you for using our teacher materials for teaching 21st century skills. For this project, we have used ACARA's general capabilities continuum for "Critical and Creative Thinking" and "Personal and Social" as a guide and inspiration.

Our focus for the materials that follow is on the specific skill of **"Evaluating Results."**

Here, we try to provide straightforward material that can be used by educators to help make it easier to incorporate 21st century skills into units of study. The materials can be used as-is or altered to fit what works best for the intended audience. This document contains four parts…

1. **Lesson Planning: Questions for Consideration** - These questions are intended to prompt educators to think about the different ways they can incorporate this particular 21C skill into their lessons. The questions are not meant to be prescriptive in any way, nor is it intended that all of them would be applicable to every unit of study. They serve to simply offer ideas for consideration. These questions could be used by individual teachers interested in developing their lessons further, in department meetings to collectively brainstorm ways their specific subject matter could work to incorporate the 4Cs, or during professional development to support teams of teachers during their planning of units of study.

2. **Student Reflection Guide** – This section is intended for use directly with students as a way to help them become more aware of the ways in which they use various 21C skills and to contemplate the ways in which they can strengthen these skills. The guides are designed with the understanding that many of these skills can only be built through application and that metacognitive reflection helps to accelerate the acquisition of these skills. There are three pages for this section. First, a handout for students to complete at the beginning of a unit/project. Second, a check-in giving the students a chance to reflect and for the student or teacher to make some adjustments, perhaps, before the end of a unit of study. Third, a final reflection on the experience as it pertains to this particular 21C topic of focus. As with all of the materials, the expertise of the teacher would determine whether the guides are best used as-is or just in parts and can also be altered to fit the needs of the individual classroom.

3. **Character Analysis** – This section provides a list of questions to be used to examine and reflect on a person's or character's life as it relates to this particular 21C topic. The questions provide a lens through which to view that person's actions. Some examples of how to use them might be to ask students to apply them to the actions of a particular person in history, the professional trajectory of a scientist, the life of a famous artist/athlete/writer, or a character in a novel. They could be used for group discussion or

to produce presentations or essays. The questions can also be applied directly to the student's life, if desired. The hope is that through reflecting on the life of another person and how they demonstrated a particular 21C skill that the students will gain insight into the ways in which these skills impact people and can, perhaps, apply that to their own life as well.

4. **Standards** – In this section, we listed the standards that apply to this particular 21C skill. Specifically, elements from ACARA's continuums that apply to this particular topic are listed with a focus predominantly on Level 6 in the continuum. In addition, standards from several other organizations around the world are also included in order to offer educators more insight as to how 21C skills are discussed and to serve as a resource as they work to incorporate these skills into the curriculum. For more insight to these organizations, please refer to "21st Century Skills – Resources for Educators."

We hope that the resources are useful to you!

Lesson Planning

21 Century Capability: Evaluating Results

Questions for Consideration:

1. Are students asked to create well-defined goals/objectives so that they will know what results they are trying to achieve?

2. When appropriate, are students asked to establish a baseline or benchmark so they have something to compare their results against?

3. Are students asked to decide on the metrics by which they will evaluate their results/product?

4. Are students asked to consider what external factors might impact their end results/product?

5. Are students provided with ideas or asked to brainstorm about the quantitative and qualitative ways in which they might assess their results/product?

6. Are students provided with a range of data collecting methods and given time to decide what best fits the work they are doing?

7. Is technology used in ways that helps students create criteria and/or evaluate their results?

8. Are students asked to include all stakeholders in the evaluation of the results/project so as to get a wide range of feedback?

9. Is there an opportunity for students to engage in an iterative process so improvements/progress can be made based on their evaluation of the results?

10. Are students asked to reflect on their expectations and the end results and to consider reasons for any differences?

11. Are students given opportunities to communicate their results as well as any insights on implications or recommended changes they might have?

Student Reflection Guide - Anticipatory

21 Century Capability: Evaluating Results

In this unit/lesson/project, we are going to be learning to/about _____.
       (circle one)   (circle one)

Before we begin, please write about what you know about this topic already.

For this unit/lesson/project, what are the end results/product you hope to have?

Describe the qualities (quantitatively and/or qualitatively) that capture what you would consider a successful end result/product for this unit/lesson/project.

What factors (internal or external) might negatively or positively impact the end results/product?

Student Reflection Guide – Check In

21 Century Capability: Evaluating Results

In this unit/lesson/project, we are learning to/about _____.
      (circle one)   (circle one)

Please write about what you know about this topic so far.

Do you feel that you are making progress towards the end results/product that you want? Why or why not?

What information (data, feedback, etc.) do you have right now that gives you an idea of whether or not the work is going to meet the criteria you set?

What changes (if any) have you made or are thinking of making in response to the feedback you have received so far?

Student Reflection Guide - Final

21 Century Capability: Evaluating Results

In this unit/lesson/project, we learned to/about _____.
         (circle one)   (circle one)

Please write about what you know about this topic now.

Overall, did the end results/product meet or exceed the criteria? Why or why not?

What feedback (quantitative or qualitative) did you receive?

If you were to continue to work on this, what might you change/adjust so the results/product would be (even) better?

What are the implications for what was learned/created? For your own learning? For your peers? For the community?

Character Analysis

21 Century Capability: Evaluating Results

Questions for Analysis:

1. Do you think this person was good at evaluating results? Why or why not?

2. In what ways was evaluating results challenging for this person?

3. What types of projects/results did this person evaluate?

4. How did this person go about selecting the criteria by which they would evaluate the results?

5. How did this person anticipate or respond to external factors that impacted the results?

6. What were the quantitative or qualitative data that they used to evaluate the results?

7. Why was it important for this person to receive feedback (quantitative and/or qualitative) and make changes accordingly?

8. How did the project/results change over time as a result of receiving feedback?

9. Were this person's results ever different than what they expected? How so?

10. How did this person's skills in evaluating results help them to…
    a. accomplish their goal?
    b. realize their dream?
    c. overcome an obstacle?

11. How did this person's lack of ability/willingness to evaluate results impact their ability to…
    a. accomplish their goal?
    b. realize their dream?
    c. overcome an obstacle?

Standards

21 Century Capability: Evaluating Results

ACARA v.8.4
CRITICAL AND CREATIVE THINKING
Evaluate procedures and outcomes
6 - evaluate the effectiveness of ideas, product and performances and implement courses of action to achieve desired outcomes against criteria they have identified

ACARA v.9
CRITICAL AND CREATIVE THINKING
Evaluate actions and outcomes
6 - evaluate the effectiveness of a course of action to achieve desired outcomes and suggest improvements, including using a personally developed set of criteria to support judgements and decisions

P21
CREATIVITY AND INNOVATION
Think Creatively - Elaborate, refine, analyze, and evaluate their own ideas in order to improve and maximize creative efforts

PRODUCTIVITY AND ACCOUNTABILITY
Demonstrate additional attributes associated with producing high quality products including the abilities to: Be accountable for results

C21 Canada
COLLABORATION
2 - Learners reference success criteria to inform group decision-making about the content, process and product of their work together.

ISTE
1.4. Innovative Designer - Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions. Students:
1.4.c. develop, test and refine prototypes as part of a cyclical design process.

AAC&U
CIVIC ENGAGEMENT
Civic Action and Reflection: Demonstrates independent experience and shows initiative in team leadership of complex or multiple civic engagement activities, accompanied by reflective insights or analysis about the aims and accomplishments of one's actions.

CREATIVE THINKING
Acquiring Competencies: Reflect: Evaluates creative process and product using domain-appropriate criteria.

PROBLEM SOLVING

Evaluate Outcomes: Reviews results relative to the problem defined with thorough, specific considerations of need for further work.