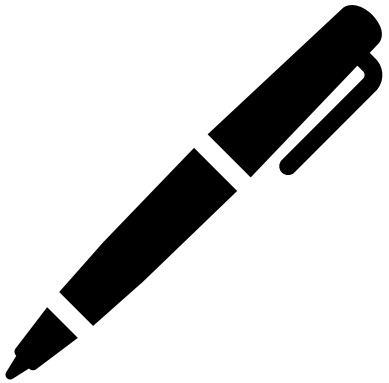
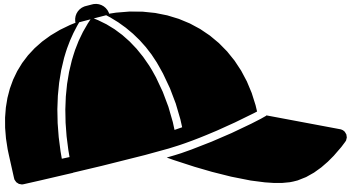
Icebreaker Alternative uses game



Pen



Hat

Umbrella

Ball

Paperclip

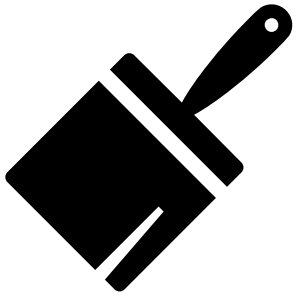
Mug

Toothbrush

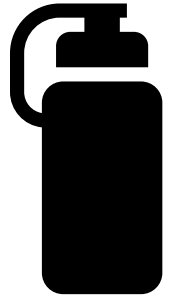
Spoon

Clock

Chair



Paint brush



Water bottle

Activity 1: 21st-Century Skills Rubric Self-reflection Activity

Purpose of this activity:

This activity is designed to help you really engage and understand the 21st-Century Skills rubric. This activity introduces you to the 21st-Century Skills rubric in **the form of a self-reflection quiz (**we took the original rubric and turned it into a self-reflection quiz). It addresses the 5 main skills as well as the sub-skills, and their descriptions. This activity is not just about reading the rubric; we want you to think deeply about what these skills mean. The process of personally reflecting on these skills will help you to engage deeply with the content. This way, when we use the 21st-Century Rubric in the next activity, you'll be familiar with some of the contents.

INSTRUCTIONS

PART ONE: Reflection (5-10 minutes)

1. **Read each statement carefully**: Take your time to understand what each statement is asking about.

2. **Reflect**: Reflect on how often you do what's described in the statement.

3. **Choose your answer:** For each statement, pick the option that best fits you:

    - "Never" if you don't do it at all.
    - "Rarely" if you've done it a few times, but not much.
    - "Sometimes" if you do it about half the time.
    - "Often" if you do it most of the time.
    - "Always" if you do it every time, without fail.

Be honest: There are no right or wrong answers. It is simply about engaging deeply with the content.

PART TWO: Discussion (10 minutes)

In pairs discuss the following:

1. Did anything surprise you about your answers?
2. Which skills are you strongest at, can you give some practical examples to support your answers?
3. Which skills are you not as strong at, what do you think you could do to grow these skills?

21st-century skill	Statement (descriptor)	Never (0) I don't do this at all	Rarely (1) I've done this a few times, but not much	Sometimes (2) I do this about half the time	Often (3) I do this most of the time	Always (4) I do this every time without fail.
Critical thinking - Critical thinkers ask questions, find the right information, and apply it to solve a problem	**1.1 Asking questions:** I ask detailed and relevant questions to learn more about a topic or situation.					
	1.2 Evaluating ideas: When faced with a problem, I can effectively pick out which pieces of information are most helpful to find a solution.					
	1.3 Identifying patterns: I use tools like mind maps and diagrams to organize my thoughts and see connections between different pieces of information.					
Communication - Communication is the process of sharing information, attitudes, and values. Both "what we say" (verbal communication) and "how we say it" (non-verbal communication) are important.	**2.1 Non-verbal communication**: I'm good at noticing things that aren't spoken, like how someone's voice sounds or the expression on					
	2.2 Articulation: I make sure to use words that fit the situation I'm in - I wouldn't talk to a friend the same way I'd talk to a colleague.					
	2.3 Empathising: I try my best to understand other people's feelings, even if I haven't been in their situation myself.					
Creativity - Creative thinking is defined as the ability to come up with many different ideas and apply them to find realistic solutions to problems. There are two important aspects to creative thinking: Originality and usefulness	**3.1 Number of ideas:** I come up with many different ideas.					
	3.2 Range of ideas: The ideas I come up with are varied and diverse.					
	3.3 Feasibility of ideas: I make sure that my ideas are realistic and can solve a problem, they aren't just theoretical.					
Collaboration - Collaboration is when two or more people work together to solve a problem. Interdependence is achieved when group members share responsibility and pool their information and resources to develop a shared understanding of the problem and their solution to it.	**4.1 Negotiating roles and responsibilities:** When working in a group, I am able to discuss and decide on the role that I should play in the group.					
	4.2 Pooling resources: I willingly share what I know and my past experiences with the rest of my group to help make our project better.					
	4.3 Engaging with roles and responsibilities: I consistently engage with my role and follow through and complete the tasks I have been assigned in my group.					
Metacognition - Metacognition is about being aware of how we think, what we know, and how we know it. Metacognition helps us to reflect on our thinking, set goals, and monitor and evaluate our learning.	**5.1 Setting goals and planning:** When I start a project, I set specific goals and make a detailed plan of how I'm going to achieve them.					
	5.2 Monitoring progress against plans: I check how I'm doing compared to the plan I made to make sure I'm on track.					
	5.3 Reflecting on planned work: I look back on my project to think about what I did well and what I could do better next time. I also think about what I knew before and how that helped me.					

Activity 2: Part 1

Template 1: 21st-Century Skills Observation Tool															
Subject	**Cell phone tower project / Bridge building project [delete as applicable]**														
Class	1.1 Asking **questions**	1.2 **Evaluating ideas**	1.3 **Identifying patterns**.	2.1 **Non-verbal communication**	2.2 **Articulation**	2.3 **Empathising**	3.1 **Number of ideas**	3.2 **Range of ideas**	3.3 **Feasibility of ideas**	4.1 **Negotiating roles and responsibilities**	4.2 **Pooling resources**	4.3 **Engaging with roles and responsibilities**	5.1 **Setting goals and planning**	5.2 **Monitoring progress against plans**	5.3 **Reflecting on planned work**
Learners	**Critical Thinking**			**Communication**			**Creativity**			**Collaboration**			**Metacognition**		

Comments_____

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Activity 2: Part One Explanations about the activity for participants

Group One: The Cellphone Tower Project

Driving Question: *How can we use limited resources to design and construct a cellphone tower to improve signal connectivity for a remote community?*

Project Scenario: Your team is part of a forward-thinking tech startup that aims to bridge digital divides in rural areas. A community located in a mountain valley has approached you with a challenge. The mountainous terrain around the village is causing significant cellphone signal issues, cutting them off from the digital world.

The villagers need a cellphone tower to enhance their connectivity. However, they're faced with specific constraints. The remote location has limited access to conventional materials, and there's a need to respect the untouched natural landscape. To tackle these limitations, they've provided you with specific materials that are environmentally friendly. Your challenge is to create a prototype of the cellphone tower using only these materials, demonstrating its feasibility and design efficiency.

Instructions:

- Your task is to construct a prototype of a cellphone tower that is at least 50cm high, using only the materials provided.
- Start by discussing your approach and assigning roles and responsibilities within your team. This could include roles such as design, construction, and project management.
- Your tower needs to be stable enough to hold a small object at the top (like 3 board markers). These objects will represent the antenna, the critical part of the tower that sends and receives signals.

You have 25 minutes to complete this task. After your roles are assigned, spend the remaining time planning and constructing your prototype.

Remember, this project isn't just about building a cellphone tower; it's about using teamwork, creative problem-solving, and innovation. This exercise is designed to simulate a Project-Based Learning approach in a condensed timeframe.

Group Two: Observation of 21st-Century Skills

Instructions:

Your role as Group Two is critical - you're the observers, the eagle-eyed scouts looking out for the demonstration of 21st-Century Skills in Group One's activity.

Here's what you need to do:

1. Each member of Group One is an observation subject. As they engage in their task, your job is to carefully monitor their actions and interactions.

2. Your main tool is Template 1: Observation Rubric. This template lists the various 21st-Century Skills you should watch for.

3. Every time you notice a member of Group One demonstrating a particular skill, mark it on the template. **The aim is not to evaluate how well they're performing the skill, but simply to acknowledge that a particular skill is being used.**

Here is an example

Template 1: 21st Century Skills Observation Tool

Subject:	Building Project														
Class:	1.1 Asking questions:	1.2 Evaluating ideas:	1.3 Identifying patterns:	2.1 Non-verbal communication:	2.2 Articulation:	2.3 Empathising:	3.1 Number of ideas:	3.2 Range of ideas:	3.3 Feasibility of ideas:	4.1 Negotiating roles and responsibilities	4.2 Pooling resources:	4.3 Engaging with roles and responsibilities:	5.1 Setting goals and planning:	5.4 Monitoring progress against plans:	5.3 Reflecting on planned work:
Learners	Critical Thinking			Communication			Creativity			Collaboration			Metacognition		
Zama	IIII	II	I	II	I	II	IIII IIII	IIII II	IIII II	IIII IIII II	IIII IIII	IIII III	IIII III	III III	III

4. Before you begin observing, discuss and strategize with your team. How will you split up the observation tasks? Will each of you monitor all the participants, or will you each concentrate on observing one or two specific individuals? Make a plan that works best for your team.

Remember, your observations are a crucial part of this exercise. Pay attention, be fair, and happy observing!

Activity 2: Part One Explanations about the activity for participants

Group One: Observation of 21st-Century Skills

Instructions:

Your role as Group One is critical - you're the observers, the eagle-eyed scouts looking out for the demonstration of 21st-Century Skills in Group One's activity.

Here's what you need to do:

5. Each member of Group One is an observation subject. As they engage in their task, your job is to carefully monitor their actions and interactions.

6. Your main tool is Template 1: Observation Rubric. This template lists the various 21st-Century Skills you should watch for.

7. Every time you notice a member of Group One demonstrating a particular skill, mark it on the template. **The aim is not to evaluate how well they're performing the skill, but simply to acknowledge that a particular skill is being used.**

Here is an example

Template 1: 21st Century Skills Observation Tool

Subject:	Building Project														
Class:	1.1 Asking questions:	1.2 Evaluating ideas:	1.3 Identifying patterns:	2.1 Non-verbal communication:	2.2 Articulation:	2.3 Empathising:	3.1 Number of ideas:	3.2 Range of ideas:	3.3 Feasibility of ideas:	4.1 Negotiating roles and responsibilities:	4.2 Pooling resources:	4.3 Engaging with roles and responsibilities:	5.1 Setting goals and planning:	5.4 Monitoring progress against plans:	5.3 Reflecting on planned work:
Learners	Critical Thinking			Communication			Creativity			Collaboration			Metacognition		
Zama	IIII	II	I	II	I	II	IIII IIII	IIII II	IIII II	IIII IIII II	IIII IIII	IIII III	IIII III	III III	III

8. Before you begin observing, discuss and strategize with your team. How will you split up the observation tasks? Will each of you monitor all the participants, or will you each concentrate on observing one or two specific individuals? Make a plan that works best for your team.

Remember, your observations are a crucial part of this exercise. Pay attention, be fair, and happy observing!

Group Two: The Bridge Building Project

Driving Question: *How can we use limited resources to design and build a bridge that effectively connects a research station that has been cut off from the mainland?*

Project Scenario: Your team is part of an innovative engineering firm tasked with a unique challenge. A remote research station located on a small island is struggling with transporting resources. The island is surrounded by marshland, making it difficult to move necessary supplies from the dock to the main station.

The station's staff have approached your firm with a request: they need a bridge that can help them easily transport their resources. However, they also have specific constraints. Given the delicate ecosystem of the marshlands, they want the solution to be environmentally considerate. They've provided a set of environmentally sustainable materials, native to the area. They've asked your team to create a prototype to demonstrate the feasibility of building the bridge with these materials.

Instructions:

- Construct a bridge at least 30cm long and 10cm high using only the given materials.
- Discuss and assign roles and responsibilities within your team.
- Make sure the bridge can hold three board markers or similar items, these will symbolise the traffic on the bridge.

You only have 25 minutes for this exercise. Start by discussing and planning your prototype. Assign roles within your team: who will create the design, who will handle the construction, and who will oversee the project's overall management? Once roles are assigned, work together to construct your prototype within the remaining time.

Remember, this project is not just about building a bridge; it's about teamwork, creative problem-solving, and responsible engineering. This exercise is designed to simulate a Project-based Learning approach in a very condensed timeframe.

Good luck and enjoy the experience.

Activity 2: Part 2

Template 2: 21st Century Skills Subject Teacher Scoring Tool
Class:

Name	Cell phone tower project / Bridge building project [delete as applicable].																			
	Critical thinking (CT)				Communication (C)				Creativity (CR)				Collaboration (COL)				Metacognition (COG)			
	1.1 Asking questions /4	1.2 Evaluating ideas /4	1.3 Identifying patterns /4	Total (/12)	2.1 Non-verbal communication /4	2.2 Articulation /4	2.3 Empathising /4	Total (/12)	3.1 Number of ideas (/4)	3.2 Range of ideas (/4)	3.3 Feasibility of ideas (4)	Total (/12)	4.1 Negotiating roles and responsibilities	4.2 Pooling resources	4.3 Engaging with roles and responsibilities	Total (/12)	5.1 Setting goals and planning	5.2 Monitoring progress against plans	5.3 Reflecting on planned work.	Total (/12)
Zama	2	2	1	6	1	1	1	3	4	4	4	12	4	4	4	12	4	4	4	12