

Learning for a Sustainable Future's

Thinking Forward

*Back to School Toolkits for Building
Classroom Communities in a Pandemic World*



Grades 9-12

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Learning for a
Sustainable Future

LSF

Thinking Forward Toolkit

Rationale

Teachers will be greeting new groups of students this year after many unique and challenging months of schooling. They will be eager to begin learning together again and to build the skills, knowledge and understanding so beneficial to all students. But there are many important lessons from the past months that we don't want to miss or forget. In spite of severe restrictions, uncertainty and physical and mental challenges, there have been countless examples of adaptability, creativity and transformational actions.

Purpose and Focus of the Toolkits

These toolkits will provide educators with sessions for reflection and thinking about the Pandemic experience in a thoughtful, proactive and engaging way. They are designed for primary, junior, middle school and high school levels. The material and activities are age appropriate, applicable to diverse learners and can connect to any subject discipline or curriculum.

The focus is on key concepts which will help students to move forward with new awareness, resilience and optimism for the future. While each session connects to students' experiences, the concepts investigated are also linked to the UN Sustainable Development Goals, allowing students to see how their learning is useful and to act on it.



Overview

What is in the toolkit?

There are 4 sessions containing outlines, activities, and resources to explore concepts. Each lesson is designed to be 45 minutes to 1 hour in length:

Session One: The introduction to the Thinking Forward process includes creating a safe space and essential agreements for listening and responding with respect and the power of diverse perspectives. Teachers will already be working on core social skills for creating a positive learning culture, so this lesson will be useful beyond the Thinking Forward lessons.

Session Two: The session explores the concepts of Adaptability and Creativity. These qualities were critically important skills and so often exhibited throughout the year. Students will be encouraged to reflect on the many ways things changed rapidly in their world to keep them safe and to continue learning, working and staying connected. The role of technology, the importance of nature and green spaces, the adaptations made in business, health and government practices could all be included.

Session Three: This session explores the concept of trust in the Scientific Method for Evidence-Based Decisions and Actions. Many have described the last year as living through the “world’s largest science experiment”. What have we learned about seeking trusted sources and having to wait for validated results of tests and data before acting? How can we use this understanding going forward in evaluating information, seeking validated facts, managing our emotions throughout the process and taking responsible action?

Session Four: This session explores the concepts of Interconnection, interdependence and citizenship. It looks at the importance of our human connections, our societal systems and our interconnected natural world. How did we try to maintain our connections in the last year? What worked for us? What is our responsibility in helping keep ourselves safe and to help others keep safe. “What do we want to maintain and improve in our systems going forward?”

“The trees act not as individuals, but somehow as a collective. Exactly how they do this, we don’t yet know. But what we see is the power of unity. What happens to one happens to us all. We can starve together or feast together.”

- Robin Wall Kimmerer, Braiding Sweetgrass

- The sessions can take place in any learning space, including in class, online, or outside in nearby nature.
- Several strategies are taken from LSF's climate change education resource, [Empowering Learners in a Warming World](#) which includes [42 active learning strategies](#).
- In addition, many resources included can be accessed on LSF's [Resources for Rethinking database](#)
- Also check out this [Emotional Resilience Toolkit for Climate Work](#) and this article, [SDGs- Why it Matters](#)

Important Note: Getting to know students at the beginning of the year is a common school practice. For many reasons, it will be important for teachers to have any information that might make this year more challenging or make reflection on the past year especially difficult for an individual student.

[Learning for a Sustainable Future \(LSF\)](#) is a Canadian charity founded in 1991 to promote, through education, the knowledge, skills, values, perspectives, and practices essential to a sustainable future.

Session 1 - Key Concepts: The Power of Diversity and Perspective

Background Information

The introduction to the Thinking Forward process includes creating a safe space and essential agreements for listening and responding with **respect and the power of diverse perspectives**. Teachers will already be working on core social skills for creating a positive learning culture, so this lesson will be useful beyond the Thinking Forward lessons.

Sustainable Goals



Good Health and Well-being: Positive Learning Environments where all voices are heard, valued and respected contributes to the health and well-being of everyone in the community.



Reduced Inequalities: Listening to understand and address inequalities helps create a sustainable community for all.

Provocation

"Today we are exploring the concept of valuing perspectives and the power of diversity."

Through the Pandemic we have heard the quote, "We are all in the same storm, but we are not in the same boat." (Damian Barr)

Show (paper or digital display - click image to enlarge) and discuss possible meanings of the drawing with a nearby partner. What concepts about society do you notice communicated in this picture?



Illustration by Barbara Kelley

Activity 1. Value Line

Value Line (15 min) no resources needed other than note-taking.

Value Line Ask for three volunteers to help with the activity.

One person will call out the statements, one will interpret the value line and one will note the results. Students will stand along the imaginary line and will move up and down the line to answer each of five statements.

This activity is designed to get them thinking about their personal experiences and prepare for deeper consideration of the key concepts of perspective taking.

Instructions: "Stand along this imaginary line. This end will be the 'strongly agree' location and the other end 'the strongly disagree' point.

Listen to the statement and move to the place on the line that most represents your perspective. We will then take a quick interpretation of the results and make note of it.

Value Line Statements to consider from your personal experiences and point of view.

1. Online learning was great for me.
2. I learned a lot of subject content through on-line learning.
3. I missed the social part of school the most.
4. I learned a lot about how to use tech effectively for learning this year.
5. Learning online is harder than learning at school.

Have the interpreter look at where the students placed themselves on the line and say where most and least placed themselves. The notetaker will add this to their notes. After the activity, ask the class what surprised them most about what they observed in the activity. Make note of these comments as well.

Circle Discussion

KBC - Questions for demonstrating Understanding- Connecting to Local and Global Goals.

Knowledge Building and Determining Understanding

Activity 3- Knowledge Building Circle [KBC](#)

See more [Scholastic- KBC](#)

5 minutes set up, 10 minutes discussion

5 minutes -Write an essential agreement statement.

Notes to Facilitator:

All ideas are Improvable! (Scardemalia and Bereiter, 2006 in [Knowledge Building in Inquiry](#))

Together we can build new knowledge and understanding

This activity requires all members to sit in a circle. The method will need a few minutes to explain how a Knowledge Building circle works. The teacher is a member of the group and may take notes but is not directing the flow of discussion.

In a KBC, we demonstrate:

- Respectful Listening
- Asking Questions for the group to answer together (not the teacher)
- Waiting for a turn to talk (some classes use an object to pass to the speaker)
- Paraphrasing what someone has said to clarify the idea
- Accepting diverse ideas and perspectives or suggestions
- Adding on to the comments and ideas of others with connected ideas or examples
- Encouraging everyone to contribute if they wish to.

In a KBC, members explain their ideas and ask questions, such as:

- “Can you tell me more about your idea?”
- “ Have you considered (another person’s) idea or perspective?”
- “ How do you know that?”
- “ Why do you think that might happen?”
- “ Can we think of an example or evidence for that point?”
- “ Can someone explain that idea a bit more”?
- “ Can I add on to that idea or comment?”
- “ Is there more information we need to help us?”

Select one or both questions for the KBC

“You expressed your own point of view in the Value line and you could see where your experiences were similar and sometimes very different from others.”

Question 1

Why is considering diverse perspectives so difficult to practice but so important to our health and wellbeing?

Question 2

Returning to the picture we used for our provocation. Through the Pandemic we have heard the quote, “We are all in the same storm, but we are not in the same boat.”

How could the ability to consider perspectives help everyone through this Covid storm and other challenges including the inequalities in society?

Taking Action: *Allowing time for students to take action is an essential part of the learning process*

What could we do to make people feel their perspectives are more welcome and valued in our class? How could we do this in our school?

What could we do in our class to learn more about each other’s ideas and perspectives?

Consolidation Close the sessions by thanking all the participants and by taking time to write a statement for your class.

Essential Agreement:

In our class we will _____

[Other Resources](#)

Session 2 - Key Concepts: Adaptation and Creativity

Background Information

This session explores the concepts of Adaptability and Creativity.

These qualities are critically important skills and were so often exhibited throughout the year. Students will be encouraged to reflect on the many ways things changed rapidly in their world to keep them safe and to continue learning, working and staying connected. The role of technology, the importance of science, nature and the adaptations made in business, health and government practices could all be included.

Sustainable Goals



Closely linked to SDG 9, **Industry, Innovation and Infrastructure**, this session will provide students with examples from the pandemic related to the super human power of adapting to constraints or crisis through creative imagination, cooperation and resilience.

Provocation

10-15 minutes- Two options for provocation- Art or Digital prompts

Resources: sticky notes or natural materials, paper and markers

In small groups, pairs or alone, find a way to create a thumbprint on paper if at home or school, in dirt, sand or chalk if outside. You have 30 seconds to add to this print to make a creature and give it a name.

What ideas or concepts about creativity do you notice through this short process. (ie no creatures are the same- individuality, expression, imagination, problem-solving needed etc).

How did the two constraints that were put on this activity- short time and the requirement to make a creature, make the work harder or easier for you. Explain your ideas to the group or a partner.



Creative Creature- Concepts

In pairs, groups or on line: Each member can pick a topic and view the stories and photos which highlight a few of our creative adaptations to the constraints of COVID-19. After viewing for 5 minutes-make a collaborative mind map of the ideas and actions.

[ABCnews- Video- Necessity is the Mother of Invention](#)

[CTV- Vaccines the miracle of Science and supply chains](#)

[CBC Arts- Innovation](#)

[Adapted Teaching](#)

[Weforum Digital Entrepreneurs](#)

[Recycling Pandemic Waste](#)

[Stanford-Social Innovation](#)

[National Post- Social Media Innovation:Vax Hunters](#)

[Urban.org Social Policy Research and Development](#)

Note: With more time, these articles could be linked to literacy by using a reading strategy or Visible Thinking routine such as [Harvard.edu- Visible Thinking Routines- Headlines](#)

Activity 1. The Creativity of Constraint

15 minutes- partner or small group activity.

Resources: *paper and markers*

5 Whys

To find a partner in class or outside or online. Do a walk about the space if possible and stop on a signal, or work with a nearby classmate in person or virtually to reflect on one or two of the most creative adaptations to the pandemic that you remember from school, society or home or one that you selected from the provocation activity.

You will each pick one creative solution and explore it using the 5 why process. Put the solution in the centre of a page and draw why lines and jot notes to link thoughts as they are explained.

The notetaker simply asks why? or Why was this good? at the end of each answer, helping to prompt deeper reflection. After completing the 5 whys, switch roles to give the other partner a chance to explore their thinking.

Circle Discussion

15 minutes - Circle formation

In a KBC or other group discussion format, reflect together.

Resources: Teacher or student can act as notetaker. Talking stick if needed.

See instructions for KBC in session one.

What insights about creativity and innovation will you remember from our activities today and having lived through the Pandemic? Consider SDG 9 in your thinking.

(prompt if needed what are some of the steps or stages leading to innovation and problem-solving)

What innovations from the last year do we value most and need to continue to develop?

What steps can we take in our class and with each other to help creativity and adaptive problem-solving happen every day?



Taking Action

Add one more statement of essential agreement: _____

To encourage creativity in our class we will.....

Action: How can we use what we have learned to address an issue in our school or community with creativity?
How can we start?

Session 3 - Key Concepts: Science-Based Decision-Making

Background Information

This lesson explores the concept of trust in the Scientific Method for Evidence-Based Decisions and Actions. Many have described the last year as living through the “world’s largest science experiment”. What have we learned about seeking trusted sources and having to wait for validated results of tests and data before acting? How can we use this understanding going forward in evaluating information, seeking validated facts, managing our emotions throughout the process and taking responsible action?

Sustainable Goals



Evaluating Data and Using Validated Information is part of a Quality Education. This leads to safe and sustainable actions including responsible consumption and production practices.



Provocation

10-15 minutes

Resources - tech to watch video and note-taking method.

Watch the Video on How Science Progresses. Students can set a note for a 3-2-1 strategy and discuss in pairs or on their own using the 3-2-1 strategy.

[How Science Works- 7 minutes](#)
[3-2-1 strategy for summarizing](#)

Activity 1.

Six Hats -Resources- Pre-assigned groups of 6 and a note-taking method either digital or paper. We are living through the world's largest Science lesson which has an impact on our thinking and feelings about the processes of science, data-based decision making and actions.

[De Bono's 6 Hats PDF](#)

Statement to explore: The Pandemic has had a lasting impact on our thinking about science and evidence-based actions. See PDF for Six Hats Roles which can be displayed or printed for groups to us. Begin with 5 minutes of independent work to consider the perspective followed by small group sharing.

Circle Discussion

KBC- Use a discussion circle to build on the ideas of this session.

What lessons about science might we take forward from living through this experiment lesson together? How might we use this understanding when considering the responsible production and consumption of new medicines or other consumer goods in the future?

How do we manage our emotions to resist jumping to conclusions?

How will our thinking about the scientific method influence the way we consider information and media going forward? Why are these skills critical in a quality education?



Taking Action

In our class work, how can we demonstrate our skills in gathering information, testing out ideas and evaluating data before drawing conclusions? In our class we will

What areas of our school community might improve if we use this thinking process in our planning and actions? How could we start?

Session 4 - Key Concepts: Interdependence and Citizenship

Background Information

This lesson explores the concepts of Interdependence and citizenship. It looks at the importance of our human connections, our societal systems and our interconnected natural world. What is our responsibility in helping keep ourselves safe and to help others keep safe. What do we want to maintain and improve in our social systems and public institutions going forward for peace and justice? What is our role as active citizens in making this happen?

Sustainable Goals



Peace, Justice, and
Strong Institutions

Provocation

Walking Activity

Small group, partner or independent activity. Take a 10-minute walk around your school, schoolyard, around your school or near your home if you are learning on-line. Make a list of 5 or more things you see that are designed for common use or community use (example: sidewalks, stoplights, trees, parks or green space etc)
For each item on your list, discuss what rules are in place which make the space safe and sustainable for everyone.

Resource [ED/CAn The Walking Curriculum](#)

When we think of the concept of citizenship, we think of our rights and our responsibilities for the common good.

Discussion Question for Pairs: Cause and Consequence: What would happen if we ignored the rules around that space or structure? Is our use of the structure a right or a responsibility — or both? Share your ideas using the 30 second sound bite strategy.

[30 Second Sound bite](#)

Alternative Text- Children's Picture book YouTube read-aloud

[Kid's Book- What if everybody did that?](#)

Activity 1.

Activity to explore Citizenship and Interdependence

Resources- sticky notes, a ball of yarn/string and a ball.

Key Vocabulary: Interdependence, citizenship, public institutions, reciprocity.

- 1) Select one structure within or outside the school identified from the list made during the provocation (ie a sidewalk, park, stop light, tree, crosswalk etc)
- 2) Brainstorm on sticky notes or cards all the public institutions, or organizations and citizens involved in this structure including the process of approval for construction or creation, the construction, maintenance, the payment and the use of that structure? Prompts if needed: neighbourhood organizations, local, provincial or federal governments, city planners, city maintenance or school board if structure is on board property, architects, engineers, law enforcement, environmental and social advocacy groups, equipment and construction firms. Gardeners if applicable and citizens including the students!

Whole class reflections to connect the provocation to the activity.

What benefits do we get from that structure?

What does it require from us to maintain it? How is this an example of a **reciprocal relationship**?

In what ways do we benefit from the work of many groups and public institutions everyday?

- 3) Handout one card per student and form a circle.
- 4) Pass a ball of string across the circle, back and forth to each student to form a string web. Place a ball in the center to represent a city park or green space with trees. Note how many groups and institutions are interconnected and interdependent to support that natural space that helps us all. Discuss what benefits we get from nature from that space.
- 5) String Drop! Have a student call out one card at a time starting with some public institutions to direct who drops their string. Note what happens to the web. How long does it take before the ball falls?

For further study and lessons see LSF Resources for Rethinking [R4R](#) such as [Who's Responsible- Teaching the SDGs](#)

And the Series of Lessons- Cultivating Peace in the 21st- social justice, equity and security topics. [Cultivating Peace 21](#)

Circle Discussion

KBC- We are all Connected! In thinking about the Pandemic, what institutions and groups are working as an interconnected, interdependent complex system to us as safe as possible? What are we especially grateful for over that last year in thinking about our institutions?

Why and how are these and other institutions important to peace and justice in society? The 16th Sustainable Development Goal is about Peace, Justice and Strong Institutions. What is required to keep institutions evolving and improving to support us all in the future?



What actions can we take as citizens continue to improve and protect public institutions? Consider voting and paying taxes as the starting place- what else could we do? Reflect on the lessons learned from the pandemic in your thinking.

Taking Action

How can we demonstrate active citizenship in our class?

In our class we will ...

What opportunities for active citizenship can we commit to in our school and community?

Final Thoughts

Give each student 2 sticky notes. They will each take 5 minutes to write their ideas or suggestions and post them on two papers, jamboards or white boards around the room for each of the two questions below.

Play [One World](#) video during this reflection time.

Read all the Essential Agreements we have constructed based on our reflections on the Pandemic.

1. In Thinking Forward to this school year, how can we know we are staying true to our agreements and making progress in our actions? Put your ideas on a sticky note.
2. Which one of the sessions raised the most important ideas for you and why? Put your ideas on a sticky note to share.

Allow time for students to discuss and share their ideas.

Thank all participants for the active citizenship they have shown during these 4 sessions!

Review and connect their essential agreements to the Sustainable Development goals and their own actions throughout the year.