



IGNITE MY FUTURE

LESSON TITLE

Build a Movement

Guiding Question: How can technology improve our lives?

SUBJECTS

English
Social Studies
Math

COMPUTATIONAL THINKING PRACTICE

Developing and
Using Abstractions

COMPUTATIONAL THINKING STRATEGY

Analyze Data

MATERIALS

[Viral Posts](#) student handout

[Mind Map](#) student handout

[Viral Principles](#) student handout

Computers with internet access

Ignite Curiosity

- Can you make a social media post go “viral”?
- Is there a social issue that matters to you that you want others to know about?
- How do movements like “caremongering” spread so rapidly?

In this lesson, students will analyze what makes memes and movements go “viral” on social media, and use that knowledge to make others more aware of important social causes. In **THINK**, students act as advertisers working for an organization promoting the United Nation Sustainable Development Goals, examining how and why some memes and social media campaigns go viral while others do not. In **SOLVE**, students analyze data concerning popular memes and social media campaigns. They then identify common themes that helped make the content go viral. In **CREATE**, students make a mind map, using the [Bubbl.us](#) web application, to synthesize common themes they see in this viral content, and write 10 principles that help predict whether content will go viral. In **CONNECT**, students identify how analytics help us test and understand aspects of human behavior, including predicting trends, promoting awareness, and measuring the success of a product or service.

Students will be able to:

- **Analyze** open-source datasets,
- **Create** a visual representation of data through a mind map artifact, and
- Better **understand** human behavior on social media.



Students will act as advertisers exploring the phenomenon of the “viral” Internet sensation by examining Caremongering, the online effort for people to support one another during COVID-19.

1 Read the following scenario to students:

Imagine you are an employee at an advertising agency, working for an organization that helps spread awareness about the United Nations Sustainable Development Goals. Your goal is to get the organization’s message out to as many people as possible. To do this, you want to help the organization’s Internet posts go viral. You will need to analyze data about viral posts, to see what they have in common, and identify 10 principles that make content go viral.

2 Ask students if they know anything about caremongering as a social movement. Share the following links with them to learn more:

- [CBC article](#)
- [CTV article](#)
- [BBC article](#)

3 Lead students to consider the importance of analytics, using the following guided questions:

- What are the benefits of having a video go viral, compared to placing traditional advertising in print, for example? (It’s quicker; you can measure the results more easily.)
- What causes might benefit from viral media?
- Can we learn what makes something go viral by watching one viral video? Why or why not?
- What resources are available that could help us measure and analyze data about viral media?

4 Distribute the [Viral Posts](#) student handout and have students complete just the first column, in which they identify the number of views each piece of content has received.

5 Direct students to the following [website](#) on *United Nations Sustainable Development Goals*. To learn more and access materials, you can access the following [website](#). Challenge students to select one goal to which they can relate, or on which they are interested in taking action. Then, work as a class to come up with a brief description of an imaginary organization working to spread awareness about these goals. As a group, identify the benefits of having a video or movement associated with treating addiction, for such an organization (increased awareness, more funding). Encourage students to think about the role of empathy in spreading awareness about social causes. What makes people really care about a social issue?



Students will analyze data about popular memes and social media campaigns. They will use this information to discern common themes and threads that helped this content to go “viral.”

- 1 Ask** students to consider how marketers, advertisers, and engineers can measure the impact of a post or other online content. You may wish to show them [examples](#) of Google Analytics in use on regular websites. Students may identify other tools, such as “shares” on sites like Facebook, or “likes” on social media sites. Invite students to discuss the following guiding questions with a partner:
 - How does analytics help us understand how people think? (Analytics helps us test and understand human behavior, what people like and dislike, and how people respond in social networks, online and possibly offline.)
 - What are some ways that analyzing data can help us in the real world? (Analytics can make things easier for people to use, more efficient, quicker, and cheaper.)
 - Why might analytics be important for groups, and people other than economists, marketing experts, and software engineers? (Analytics helps us predict trends, promote awareness, and measure success of campaigns, products, and services, which not only increases our understanding of how people think, but also helps people in various industries connect their work to users in the most effective way.)

- 2 Direct** students to the remainder of the [Viral Posts](#) student handout, filling it out with a think-pair-share activity. Individually, students should view the media and complete the remainder of the graphic organizer. Then, they should discuss their thoughts and observations with a partner. Finally, have pairs share their organizers with the entire group. If resources allow, create an “ultimate” organizer that you post or project, combining all student answers.

As a group, connect the earlier discussion on the importance of analytics to the graphic organizers that students have just completed. Ask students: What connections can we make between less quantifiable observations, such as the emotions we feel when looking at media, and data? (Data quantifies the impact of those subjective observations, and helps us understand the impact of emotions in the real world, in terms of the value (such as money and time) that consumers place on the content.) Explain that we often categorize data in two main ways: quantitative (specific and measurable) and qualitative (subjective and open to interpretation).

- 3 Tell** students that they will now use the observations they have made about these posts and their impact to identify the common themes that they have seen in viral media content. Then, they will use their analysis to create a guide to “virality” that organizations could apply to other situations, such as the *United Nations Sustainable Development Goals*.



Students will create a mind map, using the [Bubbl.us](#) web application, to synthesize the common themes they notice across social media content. They will use this mind map to create an instructional guide that an organization could use to make its campaign go viral.

Teacher note: Statistically, this project is necessarily limited by sample size. If time allows, draw students' attention to this limitation and, after they have completed their projects, share the work of researchers who have studied thousands of pieces of online content and compare the conclusions they have drawn. [\(1\)](#) [\(2\)](#)

- 1 Provide** students with the [Mind Map](#) student handout. Explain that they will be using a web application to categorize and synthesize the common themes that they have noticed in their examination of various viral posts. Their mind maps will then help them write guidelines for organizations that want to spread the word efficiently about particular causes or movements. Encourage students to use tools such as the [Visual Thesaurus](#) to help them find new terms and descriptions that link and relate concepts.
- 2 Using** the mind maps as reference, have students complete the [Viral Principles](#) student handout.
- 3 Summarize** by discussing how data analysis can provide insights into human behavior and how the organization working to promote the *United Nations Sustainable Development Goals* that you created as a class could apply these insights.
 - How did people perform data analysis before computers were available?
 - How could a computer help you with next steps?
 - How did analyzing data help you think like a computer?
 - Could you use your instructional guide to stop posts with inappropriate or cyberbullying content from going viral? Why or why not?



Select one of the strategies listed below to help students answer these questions:

- How do this problem and solution connect to me?
- How do this problem and solution connect to real-world careers?
- How do this problem and solution connect to our world?

- 1 Write** the three questions on PowerPoint or flip chart slides and invite students to share responses.
- 2 Display** pieces of chart paper around the room, each with one question written on it. Ask students to write down their ideas related to the questions on each sheet.
- 3 Assign** one of the questions to three different student groups to brainstorm or research, and then share responses.
- 4 Invite** students to write down responses to each question on a sticky note, and collect them to create an affinity diagram of ideas.

How does this connect to students?

Social media and viral posts are an increasing part of students' lives. Websites like Facebook use analytics to determine what shows up in your feed, while Google uses its own system of analytics to determine what searchers see first. The ability to reach millions of people across the world with ease is a relatively new phenomenon. Experts are studying to find out, as your students are, what psychological factors make content go viral.

How does this connect to careers?

Economists use data analysis to solve problems related to the flow of resources.

Marketing experts use analytics to determine the best way to sell their companies' products to clients.

Software engineers use data to find trends and patterns in how people use computers and the Internet, particularly on a large scale.

How does this connect to our world?

The more information we put out about ourselves and even interact with online, particularly on social media sites, the more data are available. Sometimes, this has a beneficial effect on society, as with Caremongering. In other cases, this has led to concerns about privacy and the use of targeted ads or even search browser history.

This is particularly relevant to students' lives in their own social media posts. Determining what they want to make public or keep private is a vital evaluation they will have to make continually throughout their lives. Additionally, students can focus their understanding of "virality" in social media to identify and put a stop to cyberbullying among their peers.

[TATA Consultancy Services](#) has partnered with the United Nations to help work towards the Sustainable Development Goals.

Curriculum Connections



“For the goals to be reached, everyone needs to do their part: governments, the private sector, civil society and **people like you.**”
 –The United Nations

“The Sustainable Development Goals are the blueprint for a better future. And together we can reach them. By following the Good Life Goals, we can all help make tomorrow better than today. Let’s do this! #GoodLifeGoals”



COME TOGETHER
 Actions

17

- | | |
|--|--|
| 1
Discover and share the Sustainable Development Goals | 4
Get involved and volunteer in your community |
| 2
Support those who bring us together | 5
Help make tomorrow better than today |
| 3
Celebrate the progress we’ve already made | |



Strengthen the means of implementation and revitalize the global partnership for sustainable development.

SUSTAINABLE DEVELOPMENT GOALS

Source:

[The Good Life Goals by Futerra Sustainability Communications Ltd and 10-Year Framework of Programmes on Sustainable Lifestyles and Education Programme](#) is licenced under CC BY-ND 4.0.

Find more easy-to-implement resources to integrate computational thinking practices into your classroom by visiting ignitemyfutureinschool.ca

Global Competencies

CMEC (Council of Ministers of Education, Canada) Pan-Canadian Global Competencies Descriptions

Highlighted sections apply to this lesson

Global Competency	Definition	Student Descriptors
Collaboration	Collaboration involves the interplay of the cognitive (including thinking and reasoning), interpersonal, and intrapersonal competencies necessary to participate effectively and ethically in teams. Ever-increasing versatility and depth of skill are applied across diverse situations, roles, groups, and perspectives in order to co-construct knowledge, meaning, and content, and learn from, and with, others in physical and virtual environments.	<p>Students participate in teams by establishing positive and respectful relationships, developing trust and acting co-operatively and with integrity.</p> <p>Students learn from and contribute to the learning of others by co-constructing knowledge, meaning, and content.</p> <p>Students assume various roles on the team, respect a diversity of perspectives, and address disagreements and manage conflict in a sensitive and constructive manner.</p> <p>Students network with a variety of communities/groups and use an array of technology appropriately to work with others.</p>
Communication	Communication involves receiving and expressing meaning (e.g., reading and writing, viewing and creating, listening and speaking) in different contexts and with different audiences and purposes. Effective communication increasingly involves understanding both local and global perspectives, societal and cultural contexts, and adapting and changing using a variety of media appropriately, responsibly, safely, and with regard to one's digital footprint.	<p>Students communicate effectively in different contexts in oral and written form in French and/or English through a variety of media.</p> <p>Students communicate using the appropriate digital tools and create a positive digital footprint.</p> <p>Students ask effective questions to acquire knowledge, listen to understand all points of view, voice their own opinions, and advocate for ideas.</p> <p>Students gain knowledge about a variety of languages and understand the cultural importance of language.</p>

Global Competencies cont.

Highlighted sections apply to this lesson

Global Competency	Definition	Student Descriptors
<p>Global Citizenship and Sustainability</p>	<p>Global citizenship and sustainability involve reflecting on diverse worldviews and perspectives and understanding and addressing ecological, social, and economic issues that are crucial to living in a contemporary, connected, interdependent, and sustainable world. It also includes the acquisition of knowledge, motivation, dispositions, and skills required for an ethos of engaged citizenship, with an appreciation for the diversity of people, perspectives, and the ability to envision and work toward a better and more sustainable future for all.</p>	<p>Students understand the ecological, economic, and social forces, their interconnectedness, and how they affect individuals, societies, and countries.</p> <p>Students take actions and responsible decisions that support quality of life for all, now and in the future.</p> <p>Students recognize discrimination and promote principles of equity, human rights, and democratic participation.</p> <p>Students understand Indigenous traditions and knowledge and its place in Canada, learn from and with diverse people, develop cross-cultural understanding, and understand the forces that affect individuals, societies, and nations.</p> <p>Students engage in local, national, and global initiatives to make a positive difference.</p> <p>Students contribute to society and to the culture of local, national, global, and virtual communities in a responsible, inclusive, accountable, sustainable, and ethical manner.</p> <p>Students as citizens participate in networks in a safe and socially responsible manner.</p>

Global Competencies cont.

Highlighted sections apply to this lesson

Global Competency	Definition	Student Descriptors
Critical Thinking and Problem Solving	Critical thinking and problem solving involve addressing complex issues and problems by acquiring, processing, analysing, and interpreting information to make informed judgments and decisions. The capacity to engage in cognitive processes to understand and resolve problems includes the willingness to achieve one's potential as a constructive and reflective citizen. Learning is deepened when situated in meaningful, real-world, authentic experiences.	<p>Students will solve meaningful, real-life, complex problems by taking concrete steps to address issues and design and manage projects.</p> <p>Students will engage in an inquiry process to solve problems as well as acquire, process, interpret, synthesize, and critically analyse information to make informed decisions (i.e., critical and digital literacy).</p> <p>Students will see patterns, make connections, and transfer what they have learned from one situation to another, including in real world applications.</p> <p>Students will construct, relate, and apply knowledge to all domains of life such as school, home, work, friends, and community.</p> <p>Students will analyze the functions and interconnections of social, economic, and ecological systems.</p>
Innovation, Creativity and Entrepreneurship	Innovation, creativity, and entrepreneurship involve the ability to turn ideas into action to meet the needs of a community. The capacity to enhance concepts, ideas, or products to contribute new-to- the-world solutions to complex economic, social, and environmental problems involves leadership, taking risks, independent/unconventional thinking and experimenting with new strategies, techniques, or perspectives, through inquiry research. Entrepreneurial mindsets and skills involve a focus on building and scaling an idea sustainably.	<p>Students formulate and express insightful questions and opinions to generate novel ideas.</p> <p>Students contribute solutions to complex economic, social, and environmental problems or to meet a need in a community in a number of ways including; enhancing concepts, ideas, or products through a creative process, taking risks in their thinking and creating, making discoveries through inquiry research, and by hypothesizing and experimenting with new strategies or techniques.</p> <p>Students demonstrate leadership, initiative, imagination, creativity, spontaneity, and ingenuity in a range of creative processes and motivate others with an ethical entrepreneurial spirit.</p>

Global Competencies cont.

Highlighted sections apply to this lesson

Global Competency	Definition	Student Descriptors
<p>Learning to learn and to be self-directed and self-aware</p>	<p>Learning to learn and to be self-directed and self-aware, means: becoming aware and demonstrating agency in one's process of learning, including the development of dispositions that support motivation, perseverance, resilience, and self-regulation. Belief in one's ability to learn (growth mindset), combined with strategies for planning, monitoring and reflecting on one's past, present, and future goals, potential actions and strategies, and results. Self-reflection and thinking about thinking (metacognition) promote lifelong learning, adaptive capacity, well-being, and transfer of learning in an ever-changing world.</p>	<p>Students learn the process of learning (metacognition) (e.g., independence, goal-setting, motivation) and believe in their ability to learn and grow (growth mindset).</p> <p>Students self-regulate in order to become lifelong learners and reflect on their thinking, experience, values, and critical feedback to enhance their learning. They also monitor the progress of their own learning.</p> <p>Students develop their identity in the Canadian context (e.g., origin and diversity) and consider their connection to the environment. They cultivate emotional intelligence to understand themselves and others. They take the past into account to understand the present and approach the future.</p> <p>Students develop personal, educational, and career goals and persevere to overcome challenges to reach these goals. They adapt to change and show resilience to adversity.</p> <p>Students manage various aspects of their lives: physical, emotional (relationships, self-awareness), spiritual, and mental well-being.</p>

Viral Posts

For each of the following videos, photos, memes, or other content, gather data about the post’s popularity by determining the number of views the post has had. Then, analyze the content of each post using the remaining columns.

Post, Meme, or Video	# of Views	Purpose	Format Video, Meme, Image, etc.	Description	Emotions Evoked	Appealing Qualities
United breaks Guitars						
You’re Beautiful						
Bottle Cap Challenge						
Toilet Paper Hockey Challenge						
Chris Hadfield Space Oddity						
ALS Ice Bucket Challenge						
Kombucha girl						
Canadian Pizza Delivery						

Mind Map Instructions

- 1 Visit** the [Bubbl.us](https://bubbl.us) website. You may wish to create an account to save your work before you begin; it's free and directions are available on the website's homepage.
- 2 You may wish to look** at the [Tutorials](#) before beginning work.
- 3 Using your Viral Graphic Organizer**, identify the most important terms that appear. Find one word to summarize what they have in common. Create a "Parent" button for this term and "Child" buttons for the other concepts. For concepts of equal importance, you may choose to use "Sibling" buttons.
- 4 Once you have visually mapped the concepts** you noted in the Viral Graphic Organizer, visit the [Visual Thesaurus](#) to find related terms that you might use as additional "Child" or "Sibling" boxes.
- 5 Finally**, use colors and fonts of your choice to distinguish the different levels of your mind map.

Viral Principles

Now that you have studied the principles that create popular social media posts and even social movements, complete the following question stems to guide your organization as it creates content.

1 The most important factors that make a post go viral are:

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-
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2 Factors that reduce a post's "virality" are:

3 For your organization in particular, posts targeting the following emotions would have the greatest chance of success: