IGNITEMYFUTURE

LESSON TITLE

Speak My Language

Guiding Question: What will our future look like?

Ignite Curiosity

- How long does it take to learn a language?
- What are some words or phrases that are essential to basic communication?
- Can technology speed up the process of learning a new language?
- How can learning a new language help people feel like part of a global community?
- Can the ability to communicate across different languages increase global goodwill in the future?

In this lesson, students will discover how thinking like a computer can speed up the process of learning a new language. In **THINK**, students step into the role of a tour guide charged with preparing a group to travel to a foreign country. The trip is in just a few weeks, but the group doesn't know the language spoken in that country. In **SOLVE**, students use the computational thinking strategy of finding patterns to design a tool that could help someone learn the basics of a language quickly. In **CREATE**, students develop a flash card game that helps travelers to learn a language quickly. They use the computational thinking strategy of collecting data, and store their language-learning shortcuts in a retrievable database. In **CONNECT**, students identify how learning languages connects to careers and to the problems of tomorrow. They also explore how learning new languages could increase global goodwill in the future.

Students will be able to:

- **Evaluate** the problem of learning the basics of language quickly, and
- **Apply** the computational thinking strategies of finding patterns and collecting data, in order to
- **Create** a computational artifact that can help someone absorb the basics of a language in a short amount of time.

SUBJECTS

English
Language Arts

COMPUTATIONAL THINKING PRACTICE

Communicating About Computing

COMPUTATIONAL THINKING STRATEGY

Collect Data, Find Patterns

MATERIALS

Computers with Internet access
*Note: Activities may be modified to use pen and paper if computers are not accessible

Smartphone or tablet that can be used to download applications

Travel Scenarios student capture sheet

Language Learning Patterns student capture sheet

Language phrasebooks, guides, dictionaries and/or textbooks

Students step into the role of tour guides charged with preparing a group to travel to a foreign country in a few weeks. The group doesn't know the language spoken in that country and needs to learn the basics of that language quickly.

1 **Read** the following scenario to students:
Imagine that you are a tour guide who will be leading a trip to another country. Most natives of that country do not speak English, so it is important that the travelers in your group know the basics of that country's language. There's just one problem—the trip is in a few weeks! It's up to you to teach your tour to communicate in this language in a very short amount of time. How can you use the computational thinking strategies of collecting data and finding patterns, to solve this problem and make sure the travelers have a great experience?

2 **Lead** students to consider some of the things that a traveler to a foreign country might need to know. These include:

- What are some of the first things a traveler needs to know upon arrival in the new country? (Where can I find transportation? Where is my hotel? Where is there a bathroom? Where can I get food?)

- What are some things about the new country that a traveler should know? (Are there special customs that I need to know about? What time do the shops or restaurants close? Is there a dress code for men or women?)

- What things will your group need to know, in order to enjoy the vacation? (How much is my money worth? Where is there a bank or an ATM? Where can I charge my smartphone? Where is the beach? Where is the ski lift? Where can I go shopping for clothes? What souvenirs can I take on the plane?)

- What things will your group need to know in case of an emergency? (Is there help for travelers, such as a Canadian embassy? Where can I buy a toothbrush or basic medical supplies, such as cough syrup or bandages? How do I find a doctor or hospital? How do I contact the police?)

3 **Have students create** their own examples of travel scenarios and record them in the Travel Scenarios student capture sheet. When they have finished, regroup as a class and discuss student responses.

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Students use the computational thinking strategy of finding patterns, to design a tool that could help someone learn the basics of a language quickly. They explore different language learning tools, to identify elements of program structure that are common to many languages and applications.

1 **Divide** students into groups. Distribute the Language Learning Patterns student capture sheet. If you are using computers, ensure that each student group has at least one computer.

2 **Explain** to students that they will be exploring different language-learning tools. Remind students that they are not required to complete the learning modules in the tools. Instead, as they browse the tools, they should identify patterns and record data about the tools in their capture sheet. Provide students with 20 to 30 minutes to review the tools and record their findings:

- Open-Access Online Courses:
  - Government of Canada Language Hub
  - Learn Québécois French
  - Learn Spanish by being a TV show star!
  - Use your own language to learn a new language!

- Apps:	- Print Materials:	- Videos:
- Duolingo	- Textbooks	- BBC's languages
- Babbel	- Dictionaries	- 50 Languages
- Tandem	- Phrasebooks/guides	- Youtube BETA

3 **When** most groups have completed the capture sheet, lead a class discussion that encourages students to share their findings. Ask students the following questions and record their answers in a central location:

- What patterns did you find in the tools?
- Did some words and/or phrases appear over and over, even though the tools were teaching different languages? Why do you think that is?
- Do you think that some tools are better than others for learning a language quickly? Why or why not?
- What computational thinking strategies for collecting data and finding patterns are useful in helping us solve this problem?

4 **Ask** students to think of different tricks or tools they have used in the past to learn things quickly. Write their answers in a central location. Answers might include:

- Memorization	- Studying	- Watching a video
- Playing games	- Drawing	- Following along with a tutorial
- Making flash cards	- Using mnemonic devices	
- Creating rhymes or songs	- Listening to a recording	

5 **Have** students rank the learning tools in order of effectiveness. Note that every person learns differently but there are some tools, such as games, that have been scientifically proven to help people learn faster.

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1 **Divide** students into pairs. Each pair should have access to a computer.

2 **Read** students the following scenario:
In a pre-trip meeting with your tour group, you have asked the travelers to indicate their preferred method for developing a comfort level with the language quickly. After taking a vote, the group decides that they would learn best by playing a game with virtual flashcards. Using what you know about the important phrases that the travelers will need, and language-learning strategies, create a flashcard game that will quickly teach key words and phrases.

3 **Instruct** students to use the website Quizlet to make a flashcard game that meets the following criteria:
*Note: you can use paper flashcards if you do not have access to computers.

- Uses different learning strategies from the Language Learning Patterns capture sheet
- Includes between 10 and 20 flashcards
- Must translate words and phrases from English into any language the students choose (students can use Google Translate to find words and phrases)
- Addresses at least 10 of the travel scenarios listed on Travel Scenarios capture sheet

4 **Provide** students with 20 to 30 minutes to create their Quizlet.

5 **When the students have finished** their Quizlets, have them present their work to the class. Note the similarities and differences between the quizzes, identifying how many phrases and words repeat across quizzes even though they do not focus on the same language.

6 **Lead** students in a discussion about the role of computers in helping to create a global community. Ask the following critical thinking questions:

- How can smartphones and computers help us communicate with people who do not speak our language?
- How do computers and smartphones change the language we use every day (emojis, texts, abbreviations, etc.) Is this good or bad?
- Why is it important to learn new languages in the age of apps and smartphones?
- How does the ability to communicate in the same language as another person impact our relationship with that person?
- How could you modify your language-learning game for a learner who cannot communicate verbally?

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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 out 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 out 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?

Some students may have been exposed to other languages in their homes, or may have had the opportunity to travel to other countries. Most students will have experienced someone else speaking a language that they do not know, such as in a store, video, or movie.

We all must learn to communicate with those around us, whether it is teaching someone to use a new technology or traveling to another country. Learning a language fluently may take many years, but learning a few words or phrases is a good place to start.

How does this connect to careers?

Statisticians use statistical methods to collect and analyze data, and to help solve real-world problems in business, engineering, health care and other fields.

Anthropologists study the origin, development, and behavior of humans. They examine the cultures, languages, archaeological remains, and physical characteristics of people in various parts of the world.

Software Developers are the creative minds behind computer programs. Some develop the applications that allow people to do specific tasks on a computer or another device. Others develop the underlying systems that run the devices or that control networks.

Translators and **Interpreters** convert information from one language into another language. Interpreters work in spoken or sign language, and translators work in written language.

How does this connect to our world?

Technology helps us communicate with others around the world. Many different cultures are needed to make the world an engaging and interesting place. The language we speak is only one aspect of our culture, but it is a very important aspect.

To help us connect with one another, we can learn new languages. In the scenario given in the lesson, learning a new language would be helpful for a good traveling experience. In the context of careers, learning a new language is a highly marketable skill. Large companies often have offices in many locations around the world, and employees must collaborate to meet company goals. Medical and scientific research teams routinely work together in many different countries, with some members speaking several different languages.

Dictation technology is rapidly evolving. Individuals with autism, cerebral palsy and other conditions that correlate to aphasia (difficulty in understanding or producing language) can now use computational tools to assist with verbal communication.

TATA Consultancy Services has used its expertise to empower millions of adults in India, by helping them learn how to read and write.

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Curriculum Connections

UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

4 QUALITY EDUCATION

"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"

4 LEARN AND TEACH

GOODLIFE GOALS

LEARN AND TEACH
Actions

4

1
Keep learning throughout life

2
Teach kids kindness

3
Help girls and boys stay in school

4
Support teachers and keep schools open

5
Defend everyone's right to an education

4 QUALITY EDUCATION
Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

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.

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.	Students participate in teams by establishing positive and respectful relationships, developing trust and acting co-operatively and with integrity. Students learn from and contribute to the learning of others by co-constructing knowledge, meaning, and content. Students assume various roles on the team, respect a diversity of perspectives, and address disagreements and manage conflict in a sensitive and constructive manner. Students network with a variety of communities/groups and use an array of technology appropriately to work with others.
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.	Students communicate effectively in different contexts in oral and written form in French and/or English through a variety of media. Students communicate using the appropriate digital tools and create a positive digital footprint. Students ask effective questions to acquire knowledge, listen to understand all points of view, voice their own opinions, and advocate for ideas. Students gain knowledge about a variety of languages and understand the cultural importance of language.

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Global Competencies cont.

Global Competency	Definition	Student Descriptors
Global Citizenship and Sustainability	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.	Students understand the ecological, economic, and social forces, their interconnectedness, and how they affect individuals, societies, and countries. Students take actions and responsible decisions that support quality of life for all, now and in the future. Students recognize discrimination and promote principles of equity, human rights, and democratic participation. 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. Students engage in local, national, and global initiatives to make a positive difference. Students contribute to society and to the culture of local, national, global, and virtual communities in a responsible, inclusive, accountable, sustainable, and ethical manner. Students as citizens participate in networks in a safe and socially responsible manner.

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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.	Students will solve meaningful, real-life, complex problems by taking concrete steps to address issues and design and manage projects.
		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).
		Students will see patterns, make connections, and transfer what they have learned from one situation to another, including in real world applications.
		Students will construct, relate, and apply knowledge to all domains of life such as school, home, work, friends, and community.
		Students will analyze the functions and interconnections of social, economic, and ecological systems.
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.	Students formulate and express insightful questions and opinions to generate novel ideas.
		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.
		Students demonstrate leadership, initiative, imagination, creativity, spontaneity, and ingenuity in a range of creative processes and motivate others with an ethical entrepreneurial spirit.

Global Competencies cont.

Highlighted sections apply to this lesson

Global Competency	Definition	Student Descriptors
Learning to learn and to be self-directed and self-aware	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.	Students learn the process of learning (metacognition) (e.g., independence, goal-setting, motivation) and believe in their ability to learn and grow (growth mindset). 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. 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. 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. Students manage various aspects of their lives: physical, emotional (relationships, self-awareness), spiritual, and mental well-being.

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Travel Scenarios

Fill in the chart as you answer these questions with your group:

What are some of the first things that your group will need to know when they arrive in the new country?	What are some things about the new country that a traveler should know?	What are things your group will need to know to enjoy their vacation?	What are things your group will need to know in case of an emergency?

Language Learning Patterns

As you browse the language-learning tools, record data using the table below. Each column on the sheet asks a question about the tool. Put a **"Y" or "Yes"** in the box if the tool does what is asked in the question. Put an **"N" or "No"** in the box if the tool does not do what is asked in the question. When you have completed the sheet, highlight any patterns that you find.

Criteria/ Tool	Government of Canada Language Hub	Learn Québécois French	Learn Spanish by being a TV star!	Use your own language to learn a New one!	Duolingo	Babbel	Tandem	Textbooks	Dictionaries	Phrasebooks/ guides	BBC Languages	50 Languages	Youtube BETA
Does the tool use videos?													
Does the tool use scenarios?													
Does the tool utilize native speakers?													
Does the tool have the learner speak?													
Does the tool have the learner write?													
Does the tool use games?													
Does the tool teach vocabulary?													
Does the tool use tests or quizzes?													
Does the tool provide cultural context?													
Does the tool include information about body language or gestures?													
Would this tool help a traveler who needs on-the-spot language help?													
Does the tool teach parts of speech?													

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