IGNITE MY FUTURE

THINK SOLVE CREATE CONNECT

LESSON TITLE

10 Tips for Success

Guiding Question: Why should we continue to explore?

SUBJECTS

Language Arts
(sequencing events)
Computer Science

COMPUTATIONAL THINKING PRACTICES

Developing and
Using Abstractions

COMPUTATIONAL THINKING STRATEGIES

Abstract
Develop Algorithms

MATERIALS

Sticky notes

Whiteboard or overhead projector

Computers with internet access

Blog Post Template

AlphaBoxes student capture sheet

Roadmap to Success flowchart capture sheet

Ignite Curiosity

- What makes a product or business successful?
- What are some of your hobbies?
- How could you use your hobby to make money?
- Do you think your hobby could become a business?
- How could thinking like a computer make your dream job come true?

In this lesson, students will use the computational thinking strategies of abstracting and developing algorithms to decode what makes a company successful. In **THINK**, students will research successful small businesses and identify common themes and patterns. In **SOLVE**, students will reframe their research into the form of an algorithm. They will work in teams to identify 10 steps that an aspiring entrepreneur should follow to achieve success. In **CREATE**, students will expound on their algorithm for success by writing a blog post. The post must transmit what they have learned about successful businesses to an audience of aspiring start-up entrepreneurs with a wide variety of passions and hobbies. Their post must be specific enough to capture their secrets of success but broad enough to apply to any interest. In **CONNECT**, students will identify how the computational thinking strategies of abstracting and developing algorithms connect to the careers and problems of tomorrow.

Students will be able to:

- **Analyze** a list of companies and identify patterns of success,
- **Abstract** the patterns and common features to develop a generalized algorithm, and
- **Create** a blog post that illustrates algorithmic thinking and could apply to entrepreneurs of every interest.

Students will act as bloggers challenged to write a blog post containing 10 tips about making a hobby a career. First, they will brainstorm their hobbies and what makes a successful business or product.

1 **Read** the following to students:

What is the "secret sauce" that makes some products fly while others flop? What are the ingredients or ideas that make some companies successful? What if you could make something you love into a successful business? Today, you will take the role of a blogger who will answer this question with a blog post that describes 10 tips someone could use to make their passion project a successful business. To create your list, you must search for and find patterns about what makes businesses and companies successful. You can identify the common themes in business success using the computational thinking strategy of abstraction. Then, you can use those common themes to develop an algorithm or "roadmap to success" that teaches others how to turn their hobbies into thriving businesses.

2 **Begin the class discussion** by using the alphabet to brainstorm examples of hobbies. Beginning with A, ask students to provide examples of hobbies that begin with each letter (if they are unable to come up with ideas for each letter, skip letters that prove difficult). Record students' examples on a whiteboard, a projector, or other central location.

3 **Next,** divide the students into small groups and pass out one copy of the AlphaBoxes student capture sheet to each group. Instruct the students to brainstorm successful products or businesses that begin with each letter of the alphabet and record these in the left column under the letter. If groups find some letters difficult, they can skip those. If groups have too many companies or ideas for their capture sheets, they can get another from the front of the room.

Students will read a variety of success stories about recent start-up companies in various industries and search for patterns. Then, they will abstract what they've learned from the readings into an algorithm for success that is general enough to apply to any type of business.

1. **In their groups,** direct students to their AlphaBoxes capture sheets and instruct them to complete the right column under each letter. In these columns, students should record possible reasons why the company is successful (for example, it seems friendly or helpful, it's easy to make returns or exchanges, it has innovative products, its products last a long time, its products are affordable, its products have great design). Students should identify common themes and patterns they notice in the box at the bottom of the capture sheet.

2. **Gather** the students together and engage them in a whole-class discussion in which they share the common themes and patterns they identified when working in their groups. What do successful companies have in common? What patterns did they find?

3. **Label** different sections of the room with the common themes that the students have identified. If students have trouble identifying themes, some might be: pricing, advertising, innovation, ease of buying or using products, high-tech products, customer service, and creativity.

4. **Assign** each group one of the following Small Business Success Stories (Government of Canada):
   - Small Business Success Stories – Indigenous Peoples
   - Small Business Success Stories – Youth
   - Small Business Success Stories – Women

5. **Instruct** students to write down any interesting facts or notes that they think are important in any of the categories on their sticky notes. When students have finished, have them post their notes across the classroom. Have the students do a gallery walk to see their classmates' responses.

6. **Each group must collaborate** to select 10 sticky notes from the walls that they will use to formulate their blog post.

7. **Each group will now read** over the notes they have selected to abstract general themes they can use to write their blog post.

8. **Tell the students** that they will now use their themes to write an algorithm, which is a specific series of steps toward a goal. For their blog posts, they will construct an algorithm that is a "roadmap to success" for a new business. Pass out the Roadmap to Success flowchart capture sheet. Tell students: "As you imagine that you are transforming your hobby into a business, think carefully through the success tips that you have learned so far. Some of these are more important than others, and some need to happen before others. As you create your algorithm, discuss with your group what the order of the tips should be. For the purposes of this list, the first step should also be the most important step. All the other steps should build on the first step. The steps also need to be abstract and general enough to apply to different kinds of businesses or products. For your algorithm, the first step will be identifying the hobby or idea you want to turn into a business.

Teacher Note: If some groups have difficulty with the idea of sequential steps, take them through an example, such as baking a cake:

- Find a recipe.
- Go to the store to buy ingredients.
- Purchase ingredients.
- Mix ingredients.
- Bake the cake.
- Frost the cake.
- Eat the cake.

Students will use their algorithm to create a blog post.

1. **Each group** should now have a list of tips that make a successful business recorded on their Roadmap to Success flowchart capture sheet. They will now use their algorithm to create a mock-up of a blog post.

2. **Ask** students to go back to class's list of hobbies. Could their hobby follow the "steps" that they have written and be transformed into a successful business? Tell students that they will be using their list individually to create a blog post. Encourage them to customize the list with illustrations of their particular hobby, but remember to keep the tips general enough that they could apply to different hobbies as well.

3. **Students can create** their blog post in a Google or Word document. They may also choose to extend their learning by posting their blog on the website Instructables (please note the acceptable use policy for age restrictions and parental/educator assistance guidelines).

   Extension:

   - Students will use the website Instructables to create a blog post/instruction article that identifies 10 tips someone could use to create a successful business from a passion project. Pass out the Blog Post Template as a guide.
   - Instruct students to create an account and blog individually at Instructables using these steps:
     - Enter an email.
     - Create a username and password.
     - Select "I'm not a robot."
     - Check your email and click on "verify your email."
     - Select "Publish > New Instructable."
     - Name your project.
     - Add images and words to your blog post/instructional article.
     - Preview, save, and publish your blog post.

4. **Summarize** with students using the following guiding questions:
   - How did abstracting information from several sources help you create your 10 tips for a successful business?
   - How does writing specific steps help other people learn from your research and ideas?
   - What is something you enjoy doing that you would want to turn into a business? How could you get started?

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?

Students are likely already consumers of many different products and/or services. Do they eat at fast food restaurants? Do they play video games on the Internet? Do they listen to songs on the computer or radio? If they had unlimited money, what products or services would they buy? Because students are already consumer-minded, this thinking can be applied to products or services that they might be able to sell or businesses where they might want to work.

In this lesson, students learn that the steps that take a product from production to profit are similar to the steps involved in many other tasks. Any complicated task can be broken down into simpler components. This is the basis of algorithms. Just like computers must be programmed with the step-by-step processes to handle large amounts of data, we use algorithms for everything from getting ready for the day to baking a cake.

How does this connect to careers?

Journalists and **Bloggers** develop written content for advertisements, books, magazines, movie and television scripts, songs, blogs, and other types of media.

Software Engineers are the creative minds behind computer programs, applications, and systems.

Marketing Experts, including **Market Research Analysts**, study market conditions to examine potential sales of a product or service. They help companies understand what products people want, who will buy them, and at what price.

Advertising, Promotions, and **Marketing Managers** plan programs to generate interest in products or services. They work with art directors, sales agents, and financial staff members.

Business Managers oversee an array of business-related activities such as sales personnel, advertising, marketing, and financial teams. They plan, direct, and coordinate all the supportive services of an organization or business.

How does this connect to our world?

Why should students be concerned or aware of the content in this activity as a global citizen?

Tata Consultancy Services' #DigitalEmpowers campaign focuses on all the ways we can use technology to improve the world. One way that we can each improve the world is by sharing our passions.

Hobbies are a wonderful way to relax, but sometimes they can also be a way to make money. Some hobbies are services. For example, some people have skills in organizing or decorating. Today, almost every task can be bought or sold.

This lesson is a good introduction to economics and business. Because products can be bought and sold online easily, producers can reach a global audience and spread their ideas. Small companies, some of which are outgrowths of individuals' passions, can succeed thanks to digital marketing and online platforms. Nonprofit organizations can also use these platforms to spread awareness, ideas, and products.

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

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"

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.	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.

Global Competencies cont.

Highlighted sections apply to this lesson

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.

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.

Blog Post Template

Create a blog post that will communicate what you have learned about successful businesses. Your audience is other aspiring start-up entrepreneurs with a variety of passions and hobbies.

Headline (Title)	
Opening **(introduce the topic to your audience)**	
Content **(make sure to include your 10 tips for creating a business, from a passion project)**	
Quote or Important Reference Data	
Closing **(summarize your blog post and include a call to action statement, if applicable)**	
Images/Video	
Sources	

AlphaBoxes

A	B	C	D	E
Amazon Large Variety of Products				
F	**G**	**H**	**I**	**J**
K	**L**	**M**	**N**	**O**
P	**Q**	**R**	**S**	**T**
U	**V**	**W**	**X**	**Y**
Z	**What do successful companies have in common? (What patterns did you find?)**			

Roadmap to Success

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

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