A classroom resource on how to:

Learn, grow and fail forward

Grades 5 to 8

LESSON PACKAGE

SHIFT
failure

ESSENTIAL QUESTION

What is experiential learning and how can I incorporate it into my classroom instruction with these curriculum resources?

What Is Experiential Learning?

Experiential learning is based on a structured academic foundation that goes beyond volunteering and community service. It's a practice that engages teachers and students with their communities in a structured way and allows students to meet their learning objectives while addressing their community's needs. It views education as a process of empowerment and sparking passion in students to work together and learn about the world.

FOUR STEPS OF EXPERIENTIAL LEARNING

1. Investigate and Learn
Students explore topics related to a real-world challenge or opportunity.

2. Action Plan
Students develop a plan to implement their experiential learning.

3. Take Action
Students implement their action plan

4. Reflect and Celebrate
Students reflect on the outcomes of their initiatives and celebrate their actions.

Setting Students Up for Success: In School, the Workplace and Life

We have to prepare our students to be future ready for an environment that demands students to be problem solvers, creative thinkers, possess emotional intelligence and succeed in this tech driven world. Our goal is to support students by equipping them with the skills, knowledge and insights necessary for their future success, while also encouraging them to make a positive impact and assist others around them.

Each of us should improve our lives and our world by reaching out to others. It involves focusing less on "me" and more on "we"—our communities, our country and our world.

Future Ready: By focusing on their futures and building skills to prepare them, students can shift their focus away from the chaotic external world toward a well-organized, customized plan that empowers them to prepare for the future that motivates them.

Social-Emotional Learning: These resources are grounded in social-emotional learning principles, helping students develop the skills to manage their emotions, resolve conflicts and make responsible decisions.

Global Mindset: The ability to operate comfortably across borders, cultures and languages is invaluable. This programming promotes global mindedness and cultural competency amongst student populations during their formative years.

Active Citizenship: Students act on their growing knowledge by connecting with others in their communities, thereby generating interest, further research and engagement in local and national causes.

REFLECTION

is a key component of our experiential learning model. Our reflection activities direct students' attention to new interpretations of events and provide a lens through which they can be studied and interpreted.

LEARNING SKILLS LEGEND

Look out for these icons in the lessons as skills your students can develop throughout their learning.

ARGUMENT FORMATION **INFORMATION LITERACY** **LEADERSHIP SKILLS** **ORGANIZATION** **ACTION PLANNING** **RESEARCH AND WRITING** **CRITICAL THINKING** **REFLECTION**

Assessing the Learning

You know your students best—their learning styles and preferences, skill levels and knowledge. You are in the best position to anticipate the habits of mind that will make this classroom resource successful. We are mindful that students may be at different reading levels, including English Language Learners (ELL), and may have learning differences. In response, the Educator Notes throughout the resource make suggestions for differentiation along with extension and enrichment ideas that can be used.

Teaching strategies include film, storytelling, brainstorming and project-based learning. Assessment strategies include graphic organizers, think-pair-share, discussions, reflections and peer feedback.

Subjects:

Language, Social Studies, Science and Technology

Skills Learned:

Essential Questions:

- What is failure?
- Why is failure an opportunity?

Material and Resources:

- Chart paper and markers
- Sticky notes
- Laptops/tablets

Word Bank
Failure: An action or instance of failing or proving unsuccessful. Nonperformance of something due, required or expected.
Opportunity: A situation or condition favourable for attainment of a goal.
Growth: The act or process, or a manner of growing; development; gradual increase.
Success: The favourable or prosperous termination of attempts or endeavours; the accomplishment of one's goals.

Shift Failure Overview

As individuals, we understand that failure and learning from our failures is a part of everyday life. Learning from our failures also provides each of us with an opportunity to learn and create a growth mindset.

Shift Failure is a classroom resource that brings the concept of failure into our classrooms and engages students to learn about how each failure that they encounter presents an opportunity to grow and learn. Students will look at the stories of famous personalities that have encountered failure and reflect on how these individuals used these failures to create growth opportunities that led to great success. They will also participate in a project-based learning activity that will lead them through the identification of an issue to solving the issue, while also learning from the possible failures that occur during the execution of the solution. This resource includes detailed plans, blackline masters and guides for assessment.

In this resource you will find five lessons:

Lesson 1: Growth vs. Fixed Mindset

A fixed mindset means one believes intelligence, talent and other qualities are unchangeable and innate. If you do not have a certain skill, you believe you will never acquire it. By contrast, a growth mindset believes intelligence and talent can be developed with work and effort. Mindset plays a major role in motivation, resilience and achievement.

In this lesson students will reflect on failing and how to grow from failure, how to identify a mindset and opportunities to learn.

Lesson 2: Successful People Who Have Failed

Everyone experiences failure at some stage in life. Before their success, some of the world's highly successful people experienced epic failures. Those who have failed have learned valuable lessons from their experiences.

In this lesson students will explore famous personalities whose failures have led to successes and opportunities.

Lesson 3: Failure to Innovation

It is important to see how failure can lead to innovation as they are tightly tied together; one helps create the other. Innovation is about trying new things, taking risks, recreating and reimagining. It comes with accepting mistakes and failure. Failure is a crucial part of the innovation process.

In this lesson teachers and students will create an environment that embraces failures and demonstrates critical thinking in the design process.

Lesson 4: Fail Forward Challenge

If you study success stories in science, business or art you will always find stories full of mistakes and trials. So, what exactly does it mean for an experiment or project to fail? It could mean failing to reach your goal or missing out on the intended outcome. Students need to understand why something failed and how to approach the challenge the next time.

This lesson will focus on hands on experience with identifying a challenge, creating a solution, learning if the solution works or fails and reflecting upon the process.

Lesson 5: The Power of Reflection

Odds are, not everything has gone perfectly in one's life. Everyone experiences trials, tribulations and triumphs—whether it was unfair, unjustified or unacceptable. We all have failed and failed hard, but failure can be valuable tool when used correctly. It is in these moments when things don't go right that you can really identify areas for improvement.

This final lesson will explore the power of reflection on failure and success.

Growth vs. Fixed Mindset

Understanding the **differences** between mindsets.

SHIFT *failure*

Lesson 1: Growth vs. Fixed Mindset

Skills Learned:

INFORMATION LITERACY   **CRITICAL THINKING**   **REFLECTION**

Estimated Time:

60 minutes

Learning Goals:

Students will:

- Understand and be able to articulate the differences between a "growth" and "fixed" mindset
- Reflect on how failing is an opportunity to grow and learn
- Identify times in their lives where they failed and how this can become an opportunity to learn

Investigate and Learn

1. Provide each student with three pieces of paper and **Blackline Master 1: Origami Activity** and place an image of an origami swan or crane (or any animal or plant of your choice) on the board. Ask the students to recreate the origami animal just by using the image on the board with no instructions. Provide students with 5 minutes to try and then ask them, how did they feel while trying to recreate the origami? Discuss students' possible frustrations about the process and ask them what could have made the process more achievable. Then, provide students with the second piece of paper and ask them to improve upon their first design. Repeat the discussions. Lastly, provide students with clear instructions, the third piece of paper and 10 minutes to recreate the origami animal. Ask them how they fared with the instructions. Did it make the task easier or more difficult? How did the teacher demonstration and teacher support help? Here is an easy reference to the origami swan: **https://youtu.be/ iLthkCU-92U**

2. Recommended Assessment for Learning: Ask the students how they feel with the addition of help. Does the process feel more achievable? Encourage the students to consider that learning to do something is a process and you have to be open to trying, even if you fail.

3. Introduce the idea of growth vs. fixed mindset to the students. Tell them that this concept will be the focus of today's lesson and discussion. Ask students to consider, what is a mindset? Explain to students that a mindset is a set of beliefs that shape how you make sense of the world and yourself. The mind is the most powerful tool that any human has. It has the capacity to change the way you look, move and think about the world around you. It influences how you think, feel and behave in any given situation. It means that what you believe about yourself impacts your success and failure.

Examples:

Fixed Mindset	Growth Mindset
Either I'm good at it or I'm not.	I can learn to do anything I want.
That's just who I am. I can't change it.	I'm a constantly evolving work in progress.
Either I'm good at it or I'm not. If you have to work hard, you don't have the ability.	The more you challenge yourself, the smarter you become.

To understand the students' preconceived notions about the topic, conduct a brainstorming session to gauge their understanding, but also to provide you with an idea about where to aim the content within the lesson.

Create a Venn diagram on the board and place the words "Fixed Mindset" on one side and "Growth Mindset" on the other side. Ask students, what does a fixed mindset mean? What does a growth mindset mean? Are there any similarities between the two ideas? What are the differences?

4. **Recommended Assessment as Learning:** Read students the book, "What Do You Do With a Chance" by Kobi Yamada or show them the video of the read aloud, "Read Aloud: What Do You Do With a Chance? By Kobi Yamada | Stories with Star" **https://www.youtube.com/watch?v=kvyXPTGP2U8**.

After reading the book, using think-pair-share, ask the students to answer the following questions:

• What does "the chance" signify?

• What are some of the chances you are given in your life?

• Do you take those chances or are you afraid of the risk?

• Has there been a time when you took a chance, or a big risk and it had a bad outcome? How did this make you feel? Would you consider taking that chance again?

Educator's Note: If you feel that the book "What Do You Do With a Chance" by Kobi Yamada will not resonate with them, show them the video "Growth Mindset vs. Fixed Mindset" **https://www.youtube.com/watch?v=KUWn_TJTrnU** and ask the following questions after viewing the video:

• How does one change their mindset from fixed to growth?

• How does having a growth mindset allow for continual development?

• How does embracing challenges enable learning?

• Is failure important? How does failing lead to learning?

These questions can be used as the Recommended Assessment as Learning, if you select this activity.

5. As a class, reflect on the following scenarios and consider how each of these individuals can shift their thinking from a fixed mindset to a growth mindset. What steps do they need to take to change the way they think?

a. Charlie loves to play with puzzles. This time, they wanted to challenge themselves with the Rubik's cube. They tried for an hour to figure out how to solve the cube but started getting very frustrated. They thought, "This is too difficult, maybe I should stick with puzzles that I know that I can solve."

b. Ashraf loves to ice skate and is thinking about trying out for the school's ice hockey team. They have never played ice hockey, so decides to practice before the school's tryouts. While on the ice, they realize that skating while trying to hit a puck is difficult. Ashraf thinks, "I am never going to be able to do this, so why even try."

c. Jessie loves to conduct experiments and is thinking of joining the science club at school. However, they know that the requirement for joining the science club is to achieve A grades in both Science and Math. Jessie has an A grade in Science but is finding it difficult to understand some parts of the math course. Jessie thinks, "I am so stupid, I will never achieve my dream of joining the science club and conducting experiments."

6. Ask the students to share a time in the past year that they have failed or been unsuccessful at something. This can either be at school, at home or at an activity that they do. If students are uncomfortable vocalizing those incidents, provide them with a sticky note to write on.

Have them consider:

- How big was the failure?
- Are they still pursuing the failed activity?
- If they are, why did they continue and what was the outcome?
- If they are not, what feelings did their failure bring up to cause them to abandon the activity?

7. **Using Blackline Master 2: Fixed vs. Growth Mindset**, have students write down their own thoughts and feelings that are fixed mindsets. Have them shift these fixed mindsets into opportunities for growth and shift their thinking into having a growth mindset.

8. **Recommended Assessment of Learning:** Provide each student with a sticky note and ask them to complete the sentence, "Failure can help me by…" Encourage students to consider failing as a starting point to learning to do something in a different, more effective way. Share with them stories of some Canadians that experienced failure but did not give up. Ask them to reflect on their sentence. If they had not given up how would things have gone differently?

Educator's Note: These lessons include the discussion of failure. Some students may find these discussions unsettling, as failure is a concept that they may not have been introduced to, or failure as seen as "taboo" or a negative outcome, leading to undesirable consequences. In these instances, remember to encourage the students' mindset to shift toward thinking about failing as an opportunity to grow and learn, and to be better.

FAILURE
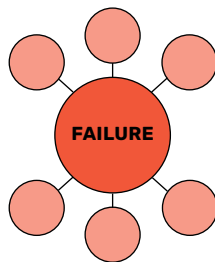
Blackline Master 1: Origami Activity

Draw or paste the origami swan after you have attempted to create the swan.

Attempt 1: No instructions	Attempt 2: Instructions	Attempt 3: Instruction, Plus Teacher Demonstration and Support

After each attempt answer the following questions:

1. How effective was your attempt at creating the swan? Rate yourself from 1-10 after each attempt.

_____

2. Was it difficult or frustrating to create the swan?

_____

After the second and third attempt, answer the following questions:

3. How did the instructions help the process of creating the swan?

_____

4. Did the addition of the teacher demonstration and support help you successfully create a swan?

_____

5. How did you feel after you were able to successfully create the origami swan?

_____

6. What did some of your initial attempts teach you?

_____

Blackline Master 2: Fixed vs. Growth Mindset

Fixed Mindset	**Growth Mindset**
e.g., I'll never get better at this.	e.g., I will get better with practice.
I'm afraid to try this.	Trying new things helps my brain grow.
I am either good at it, or I'm not.	I can learn to do anything I want.
If I don't try, then I won't fail.	Failures are just opportunities for growth.
I am jealous of other people's success.	I am inspired by other people's success.

Successful People Who Have Failed

Exploring failure, **growth** and success.

Lesson 2: Successful People Who Have Failed

Skills Learned:

INFORMATION LITERACY

RESEARCH AND WRITING

CRITICAL THINKING

REFLECTION

Estimated Time:

75 minutes

Learning Goals:

Students will:

- Understand that failure is not a negative, but an opportunity to learn and grow
- Explore famous personalities whose failures have led to successess can become an opportunity to learn

Investigate and Learn

1. Ask the students, what does it feel like when you receive a poor grade, when your team in sports loses a game, or when you are unsuccessful at completing a task or a goal you have set for yourself.

2. Explain to students that failure is defined as a lack of success or the inability to meet an expectation. However, sometimes as humans we can read too much into failure. It may seem like our entire existence is crumbling and all of our hopes and dreams are coming to an end. We may even tie failure to our self-worth, self-esteem and self-acceptance. Often, the expectation we fail to meet is the expectation that we've created in our own mind.

3. Recommended Assessment for Learning: Provide each student with **Blackline Master 1: Successes and Failures** and ask them to write down all the ways they have failed or been unsuccessful at a task over the past week. After writing the list ask them, how does it make you feel when you write out everything that you have not managed to achieve this week?

4. On the same activity sheet, ask the students to circle or highlight those failures that they tried to have another go at. Ask the students to consider, how did it feel to try again? Were you successful the second or third time you tried? Did you learn anything while trying?

5. Show the students the video "Kids Book Read Aloud: The School of Failure by Rosie J. Pova and Monika Filipina" **https://www.youtube.com/watch?v=-VtcXrJIKXg** or, if your students would be more receptive to a TED Talk, "Failure is Necessary | Courtney Johnson | TEDxEvansville" **https://www.youtube.com/watch?v=qHIsMGDaeFw**.

6. Recommended Assessment as Learning: In small groups, ask the students to discuss how failure enables growth in characters or persons in the videos. Why is failure a necessary component to growth? How can failure enable success?

7. On the front board, write the names of the following individuals:

    a. Rupi Kaur

    b. Lorne Michaels

    c. Terry Fox

    d. David Suzuki

    e. Alexander Graham Bell

    f. Mike "Pinball" Clemons

    g. Penny Oleksiak

    h. Oprah Winfrey

Ask the students, what do you think each of these individuals has in common with each other? Some answers may include, "they are famous" or "they have achieved really amazing goals." Lead the discussion to highlight that even though each of these individuals has achieved greatness in their lives through working hard and pursuing their goals, each of these individuals have had some form of failure in their lives that they have had to work to overcome.

8. **Recommended Assessment as Learning:** Create small groups and allocate 1-2 famous people to each group. Provide each group with poster paper and markers or laptops with Microsoft PowerPoint and have them create a 3-minute presentation highlighting the stories of their famous people.

In the presentation ask students to consider the following key areas:

- What is this person famous for achieving?
- What is this person's story about achieving fame?
- What failures did this person encounter in their life?
- How did they overcome this failure?
- Why do you think this failure led to their eventual success?
- Put yourself in this person's shoes; what would you have done when you encounter failure?
- What advice would you give to this person when an inevitable failure occurred?

9. Provide each student with **Blackline Master 2: Road to Success**. As each group is presenting, students fill in the table that highlights the famous person, the failure they encountered and how they overcame this failure from the presentations.

Famous Person	Failure	Road to Success
e.g., Michael "Pinball" Clemons	Unsuccessful at being drafted into the NFL and then cut from the Kansas City Chiefs before the regular season.	Signed with the Toronto Argonauts. Benched in his first season. Didn't give up, worked hard to become one of the CFL's most exciting and successful players.

10. **Recommended Assessment of Learning:** Ask the students to reflect inward about their own failures. Ask them to add themselves to the activity sheet and reflect on some of their own personal failures and consider how they can grow them into success stories. Encourage those students who want to share, to place their stories on the front board, and those that do not can write them down on a sticky note or their personal journals. Remind students that no failure is too big to grow from. Every time we are unsuccessful at a task or personal goal, we have the opportunity to learn from that experience and try again.
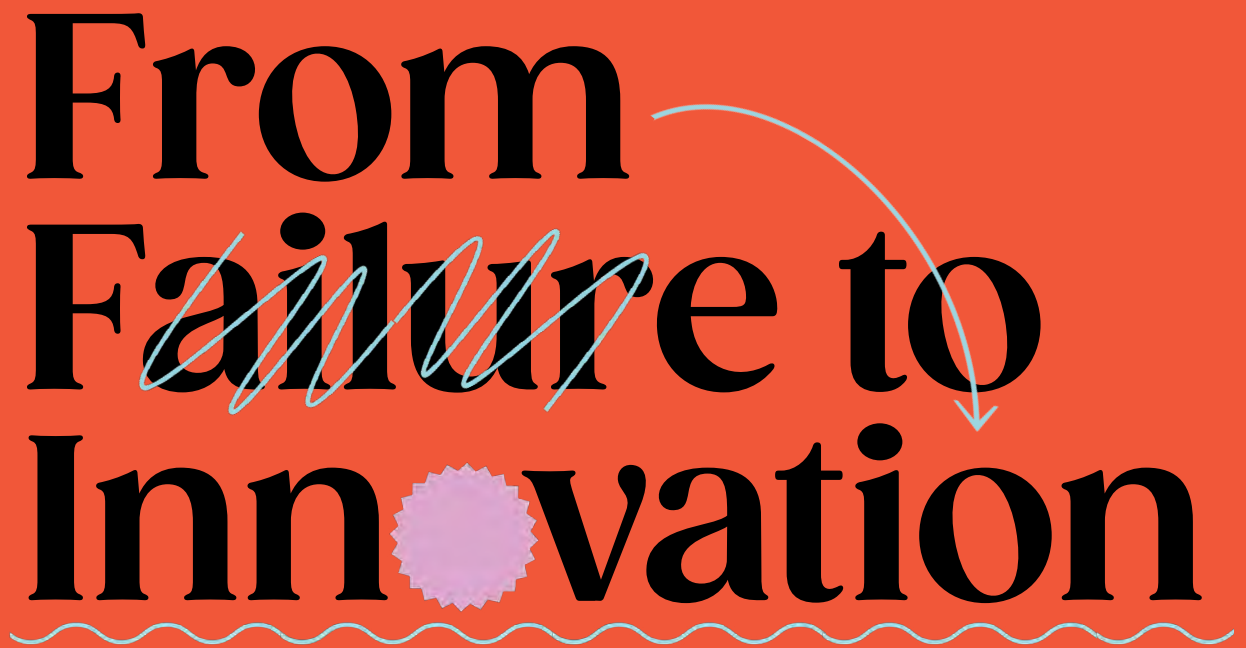
Blackline Master 1: Successes and Failures

Successes	**Failures**
e.g., I was successful at baking a cake.	e.g., I failed at baking cookies.

Blackline Master 2: Road to Success

Famous Person	Failure	Road to Success
e.g., Michael "Pinball" Clemons	Unsuccessful at being drafted into the NFL and then cut from the Kansas City Chiefs before the regular season.	Signed with the Toronto Argonauts. Benched in his first season. Didn't give up, worked hard to become one of the CFL's most exciting and successful players.

From Failure to Innovation

Trying, failing and creating new ideas.

Lesson 3: From Failure to Innovation

Skills Learned:

INFORMATION LITERACY   **ORGANIZATION**   **RESEARCH AND WRITING**   **CRITICAL THINKING**   **REFLECTION**

Estimated Time:

75 minutes + 45 minutes (Second Day)

Learning Goals:

Students will:

- Understand the concept of innovative thinking
- Reflect on how failure can lead to innovation
- Demonstrate critical thinking in the design thinking process

Investigate and Learn

1. Explain to students, great ideas are sometimes created from bad and weird ones. Innovation is about trying new things and taking risks, which inevitably involves mistakes. Many people want to embrace their innovative spirit but fear the consequences of failure.

2. Tell students that usually we search for good ideas. However, let us try a creative twist and think about bad ideas. What are some really bad ideas for products? What could a really bad food or beauty product be? What would be a really bad recipe, household product or game for children? In small groups, ask students to come up with one really bad idea. Have them consider, why do we consider this product to be so bad? Is there a type of audience that may like this product?

3. Recommended Assessment as Learning: Show students the video "10 Famous Failures Who Never Gave Up and Succeeded in Life" h**ttps://www.youtube.com/watch?v=PaLanU3oMQU**. In pairs, ask students to select one of the individuals in the video that initially failed, but eventually gained success. Using **Blackline Master 1: Famous Failures**, research and outline how their initial failure led to success. Have them consider the following questions:

a. Why were they considered a failure?

b. How did this make them feel?

c. How did they move beyond their failure?

d. What was their initial step towards success?

e. Did they continue to gain success? How?

4. After students have completed the Famous Failures activity, as a class discuss what were the key similarities between each of the famous failures. What did each person continue to do to achieve their success? Explain to students that each person tried and continue to create even though they encountered failure. Similar to their bad ideas at the beginning of the class, these individuals created many bad ideas before one great idea emerged. Each of these people had an innovative mindset.

5. Tell students that innovative thinking or having an innovative mindset involves approaching problems and opportunities with an open mind. It is a mindset that seeks out new and better ways of doing things, often through experimentation and trial and error.

Educator's Note: To develop the concept of an innovative mindset in the students, a Marvelous Mistakes wall can be created in the classroom. When something does not work in a student's design or work, have them write it on a sticky note or put the work on the wall to showcase the piece. Have them include a sentence describing how the mistake is informing the next phase of work. Encourage students to share this failure with the class and have the class give the student a round of applause for each failure shared. This activity can be completed at the end of every day as a classroom ritual.

6. Recommended Assessment of Learning: Explain to students, in groups of three they will be designing a catapult to launch a ping pong ball across the classroom. Their challenge is to have a catapult design that launches the ping pong ball the furthest. Provide each group with **Blackline Master 2: Design a Catapult** to work through the design and creation of the activity.

Educator's Note: To build this activity into a deeper STEM lesson, provide students with a further explanation about potential energy, kinetic energy, gravity, force and elasticity. **https://www. teachengineering.org/lessons/view/cub_energy_lesson01**

7. Provide each group with popsicle sticks, 1 ping pong ball, rubber bands, paper, bottle cap, masking tape, PVA glue or hot glue (if available). Have each group design the catapult on paper, before attempting to physically create it. Have them consider the distance required to launch the ball, how the catapult will hold the ping pong ball and how effectively it will launch the ball.

8. Once the design has been approved by the teacher, have the groups create the catapult and test the design. Have them consider, did the catapult work? Can it be improved? What design changes are needed to upgrade its performance? Have the groups update the design on paper, before attempting to redesign the actual catapult. On the design, have them reflect and write down what changes are being made to the design and why this will be more effective.

Educator's Note: This experiment may take more than one lesson to complete if the students want to test and recreate their designs multiple times. Consider breaking this lesson over two days, if needed.

9. After each of the groups have improved their designs, conduct a launch of the ping pong balls using each of the group's catapults.

10. After the launch, conduct a class reflection about the process. Consider the following questions for discussion.

    a.   Which group's catapult was the most successful?

    b.   What was different about their catapult's design versus your own?

    c.   How many times did they attempt to create your catapult?

    d.   How did you find the process of redesigning your catapult?

    e.   Why was it important to continue to design, reflect, test and upgrade?

Educator's Note: This activity can be conducted as a classroom discussion or a written reflection. Use **Blackline Master 3: Catapult Reflection** for a written reflection.

11. Remind students, that each time they redesigned their catapult they were reflecting on a potential issue or failure with their design, they were willing to create, iterate and change to design the best possible catapult that would be successful in launching the ping pong ball.

Blackline Master 1: Famous Failures

Famous Person:
Idea:
Questions:
1. Why were they considered a failure?
2. How did this make them feel?
3. How did they move beyond their failure?
4. What was their initial step towards success?
5. Did they continue to gain success? How?

Blackline Master 2: Design a Catapult

Design 1:

Did the design work?

What are some of the issues with the design?

How can you upgrade the design?

Blackline Master 2: Design a Catapult

Design 2:

Did the design work?
What are some of the issues with the design?
How can you upgrade the design?

Blackline Master 2: Design a Catapult

Design 3:

Did the design work?
What are some of the issues with the design?
How can you upgrade the design?

Blackline Master 3: Catapult Reflection

Which group's catapult was the most successful?

What was different about their catapult's design versus your own?

How many times did you attempt to create your catapult?

How did you find the process of redesigning your catapult?

Why was it important to continue to design, reflect, test and upgrade?

Fail F rward Challenge

Acquiring knowledge by exploring real-world challenges.

Lesson 4: Fail Forward Challenge

Skills learned:

LEADERSHIP SKILLS **ORGANIZATION** **ACTION PLANNING** **CRITICAL THINKING** **REFLECTION**

Estimated Time:

2 hours per day, over the week + 2 hours (presentation preparation) + 1 hour (presentations) Total time: 13 hours

Learning Goals:

Students will:

● Identify a current issue/challenge within their school environment

● Create a solution for the issue/challenge

● Implement the solution for the issue/challenge

● Reflect on their failures during the implementation phase

Investigate and Learn

1. Ask students to think about their school environment. What are some of the challenges or issues currently present within their school? As a class, create a list of these issues on the front board. Example issues:

- How do we ensure that all students have a plan upon graduating high school?

- How do we ensure that our school environment is safe and free of violence?

- How can we campaign to add air conditioning to the school classrooms?

- How can we prevent students from defacing the bathrooms?

- How can we ensure that there is enough time in the week to add "fun" lessons, such as sports, drama and music?

- How can we reduce the garbage in our landfill?

2. Have students consider how they can create an action plan to solve some of these issues within their school. Tell them, their challenge is to take one of these issues and solve it for the school. Remind them that it may be hard, and they might be unsuccessful the first few times, but they must learn from each failure.

Educator's Note: If students are having difficulty thinking about challenges or issues in their school environment to solve for, consider using these projects for their culminating activity.

Option 1: Science Fair Activity – Students will create an experiment to showcase at the school Science Fair. The experiment will be an iterative activity that requires trial and error. They will set up booths and have attendees walk up to experience the experiment. The overall goal is to have attendees walk away feeling like they have learned from their failures. After the event, encourage students to analyze the successes and failures of the overall event and their specific booths. Students can decide if their challenge was too hard or easy and record observations from seeing attendees participate in their activities.

Example Science Experiments:

a. Float and sink – Which objects in our environment float and sink? What materials can float and sink? How can you create a hypothesis based on your understanding on water, density and materials?

b. How does salt affect density? Explore the salinity of various bodies of water, then recreate their waters to see if you make an egg float or sink. Experiment with other objects.

c. Does colour affect memory? Can certain colours improve your memory? Explore the idea of black markers vs. coloured markers to see what participants can remember.

Option 2: Research Project – Students will create a presentation about a success they have achieved and the failed projects that led to their success. Encourage them to highlight and include a skill they have learned from failure. Have students present their research in an innovative method (i.e., motivational video you would share on TikTok, children's book, song/rap), and have them evaluate what they learned from their experience. If the success was skill related, have them teach this skill to their peers in a creative manner.

Option 3: Learning From the Community (Research Project) – Students will research failed proposals or initiatives relating to a political, environmental or social issue in a local city/town jurisdiction or school/school district. They will then create a briefing on the proposal, its outcome and why it failed. Students will then highlight three key learnings from its failure, and each identify a skill they have learned more about from this failure.

Next, students will design and present a revised proposal that could be successful in the future. Have students present their research in an innovative method and have them evaluate what they learned from their experience.

3. Ask students to create small groups and select one of the challenges to solve. In their groups, have them create "need to know questions." What do they need to know to begin to understand the issue in more depth? What research do they need to conduct to learn more? Remind students that research can include books, the internet and talking to people around the school to gain a deeper insight. The "need to know questions" should get students to think about what they need to know to answer the driving question.

4. Provide each student with two sticky notes and in their small groups, individually think about an idea that could solve their selected challenge. Have them write this idea on the sticky note and share the idea with their group.

5. Recommended Assessment as Learning: Using these ideas, have the group outline a step-by-step process about how they will solve their selected challenge. Have students also consider what obstacles they might encounter while implementing their solution to the challenge. Have them share this process and challenge with the teacher. If students require time to research, provide them with additional time to learn more about their potential solution. Remind students that they may fail the first few times they implement their solution, however, they should reflect and adapt their solution based on their learnings.

Process Guide (**Blackline Master 1: Process Guide for Challenge Solution**):

a. Step-By-Step Guide: Break down into steps how they will solve the issue.

b. Challenges and Obstacles: What failures might occur during implementation? How can they learn from these issues to reimplement them?

c. Resources: What resources will they need?

d. Idea Research: What research did they complete to come up with this idea? (if applicable)

Educator's Note: When reviewing the solutions to the challenges, consider if these solutions can be easily implemented within the school. If the ideas seem too far-fetched, encourage students to rework their idea to something that can be implemented within the confines of their school environment.

6. Over a week, provide students with time to implement their solutions for the selected challenges. Remind students that they may not be successful the first or second time they try to implement their potential solution. Using **Blackline Master 2: Project Test Analysis**, have students complete a test analysis each time they try to implement the solution and outline the cause of the failure, lessons learned and how they will pivot in their next try.

7. Recommended Assessment of Learning: In their small groups, ask students to create a 5-minute presentation for their project to the class using the presentation questions on the next page. Students can present this project using any method, e.g., Microsoft PowerPoint or Sway, Prezi, TikTok style video or a blog post.

Educator's Note: Use **Blackline Master 3: Rubric** as a tool for assessing the students.

Educator's Note: Each group may select a different method of presentation. Have a laptop, tablets and video cameras available for students to select from. Students will require time to prepare these presentations. The development and time to present can be considered a new lesson if required.

Presentation questions:

a. What was the challenge selected to solve?

b. What solution was created to address the challenge? Explain the step-by-step process.

c. What issues came up during the solution? Were they in line with the challenges thought of pre-solve?

d. Did the solution work the first time? What did they learn each time they tried to solve the issue?

e. Did they update/change their initial solution idea after learning from the initial attempts?

f. How does failing create an opportunity to learn and grow?

8. Have the small groups make their presentations. As students are listening to the presentations, encourage them to think about what each group learned from the failures of their initial solution. After the completion of all the presentations, share these learnings as a class.
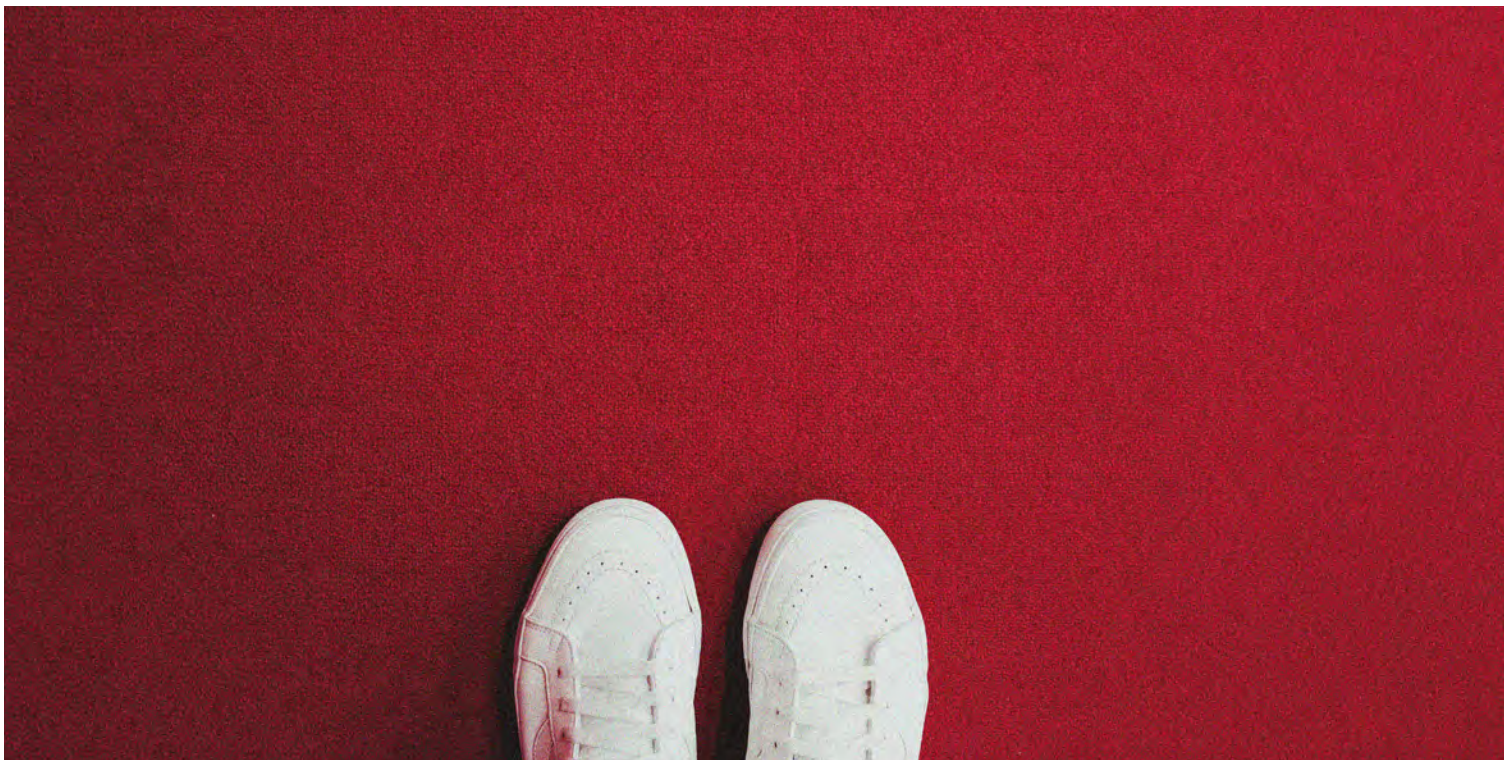
Blackline Master 1: Process Guide for Challenge Solution

Step-By-Step Guide:
Break down into steps how you will solve the issue.

Challenges and Obstacles:
What failures might occur during implementation? How can you learn from these issues to reimplement them?

Resources:
What resources will you need?

Idea Research:
What research did you complete to come up with this idea? (if applicable)

Blackline Master 2: Project Test Analysis

Challenge:

Solution:

Test 1:	Test 2:
Issue: Potential Fix: Lessons Learned:	Issue: Potential Fix: Lessons Learned:

Test 3:	Test 4:
Issue: Potential Fix: Lessons Learned:	Issue: Potential Fix: Lessons Learned:

Blackline Master 3: Rubric

Category	Excellent (4)	Good (3)	Fair (2)	Needs Improvement (1)
Delivery	The group held the attention of the entire audience with the use of direct eye contact, seldom looking at notes. The group spoke with fluctuation in volume and inflection to maintain audience interest and emphasize key points.	The group consistently used direct eye contact, but still returns to notes. The group spoke with satisfactory variation of volume and inflection.	Most of the group displayed minimal eye contact with audience while reading mostly from the notes. Most of the group spoke in uneven volume with little or no inflection.	The group held no eye contact with audience as entire presentation was conducted while reading. The group spoke in a low volume or monotonous tone, which caused the audience to disengage.
Content/ Organization	The group demonstrated full knowledge of the planning and execution of the project and was able to answer any class questions and provide explanations and elaboration. The group provided a clear purpose and subject, clear methodology and relevant information.	The group demonstrated enough knowledge of the planning and execution of the project and was able to answer some class questions and provide some explanations and elaboration. The group has a somewhat a clear purpose and subject, clear methodology and relevant information.	The group is uncomfortable with the information and is only able to answer rudimentary questions. The group attempted to define purpose and subject but did not have a clear methodology and process.	The group did not have a grasp about the information and could not answer any questions. The group did not provide any relevant information about the purpose, subject and methodology.
Enthusiasm/ Audience Awareness	The group demonstrates strong enthusiasm about the topic during entire presentation. The group significantly increases the audience's understanding and awareness about the challenge.	The group demonstrates some enthusiasm about the topic during entire presentation. The group increases the audience's understanding and awareness about the challenge.	The group demonstrates little enthusiasm about the topic during entire presentation. The group raises awareness about the challenge.	The group demonstrates no enthusiasm about the topic during entire presentation. The group fails to raise awareness about the challenge.

The Power of Reflection

Considering how ==experiences== impact learning outcomes.

Lesson 5: The Power of Reflection

Skill Learned:

REFLECTION   RESEARCH AND WRITING

Estimated Time:

60 minutes

Learning Goals:

Students will:

- Understand that failure is not always negative
- Reflect on how their own failures can become successes

Investigate and Learn

1. **Recommended Assessment for Learning:** As students walk into the classroom provide each student with an entry ticket from **Blackline Master 1: Entry Ticket**. Ask them to reflect and respond to the following question on their own: How does failure lead to success?

2. After students have individually responded to the question, ask them to share their response in small groups of four. In the small groups, encourage each student to read their response verbatim. After they have heard each person's response, ask them to collectively respond to the following question: What is the process to move from failure to success? What steps do I need to take?

3. Show students the video "J.K. Rowling's Ultimate Advice for Every 20 Year Old | One of the Best Motivational Speeches Ever" **https://www.youtube.com/watch?v=WSnUTljM6xg**. Place the following questions on the front board for students to consider and reflect on while watching the video.

a. How did J.K. Rowling overcome her failure?

b. Why does J.K. Rowling feel that failure led to her greatest success?

c. How can failure lead to growth and success in your own lives?

Ask students to create pairs and answer the questions above using **Blackline Master 2: Failure to Success – J.K. Rowling**. After students have completed the questions, have them share their responses with the class.

Educator's Note: Discussing failure can be a sensitive process, so it is important to ensure that each student in the classroom feels comfortable to open up and discuss. If students do not wish to openly share, have them write their responses to either share with the teacher 1:1 or to keep to themselves. Remind students that during the sharing process they must respect each other's opinions, show empathy and remember, just because you have failed at something, does not mean you are a failure.

4. Ask students to think about one area in their lives, either at home, school or an extra-curricular activity that they are not doing the best, an area where they have failed at times and are finding it difficult to succeed. Provide each student with **Blackline Master 3: My Failure and the Road to Success** and have them write this failure down, using as much detail as possible. Have them consider the following questions:

   a. Why am I failing in this area?

   b. What do I find difficult?

   c. How does this failure make me feel?

   d. Do I believe I will ever succeed in this area?

5. **Recommended Assessment of Learning:** On the front board place the following list of 15 Steps to Failing Forward by John C. Maxwell **https://opensourcedworkplace.com/news/failing-forward-john-c-maxwell**.

   a. Realize there's one major difference between average people and achieving people

   b. Learn a new definition of failure

   c. Remove the 'you' from failure

   d. Take action and reduce your fear

   e. Change your response to failure by accepting responsibility

   f   Don't let the failure from outside get inside you

   g. Say goodbye to yesterday

   h. Change yourself and your world changes

   i. Get over yourself and start giving yourself

   j. Find the benefit in every bad experience

   k. If at first you do succeed, try something harder

   l. Learn from a bad experience and make it a good experience

   m. Work on the weakness that weakens you

   n. Understand there's not much difference between failure and success

   o. Get up, get over it and get going

Using **Blackline Master 3: My Failure and the Road to Success**, ask students to select three to five of the Steps to Failing Forward and outline the steps that they will take to change their failure to a success. Have them consider: How can I apply this step to my own way of thinking? How can my failure move to a success? What will I need to do to grow and learn from this challenge?

6. Ask students to form a circle and share their current failures and their roads to success.

Blackline Master 1: Entry Ticket

How does failure lead to success?

How does failure lead to success?

How does failure lead to success?

Blackline Master 2: Failure to Success – J.K. Rowling

How did J.K. Rowling overcome her failure?

Why does J.K. Rowling feel that failure led to her greatest success?

How can failure lead to growth and success in your own lives?

Blackline Master 3: My Failure and the Road to Success

What is my current greatest failure?

Thinking questions:

• Why am I failing in this area?

• What do I find difficult?

• How does this failure make me feel?

• Do I believe I will ever succeed in this area?

Road to Success

Steps to Success

Steps to Success

Steps to Success

Steps to Success