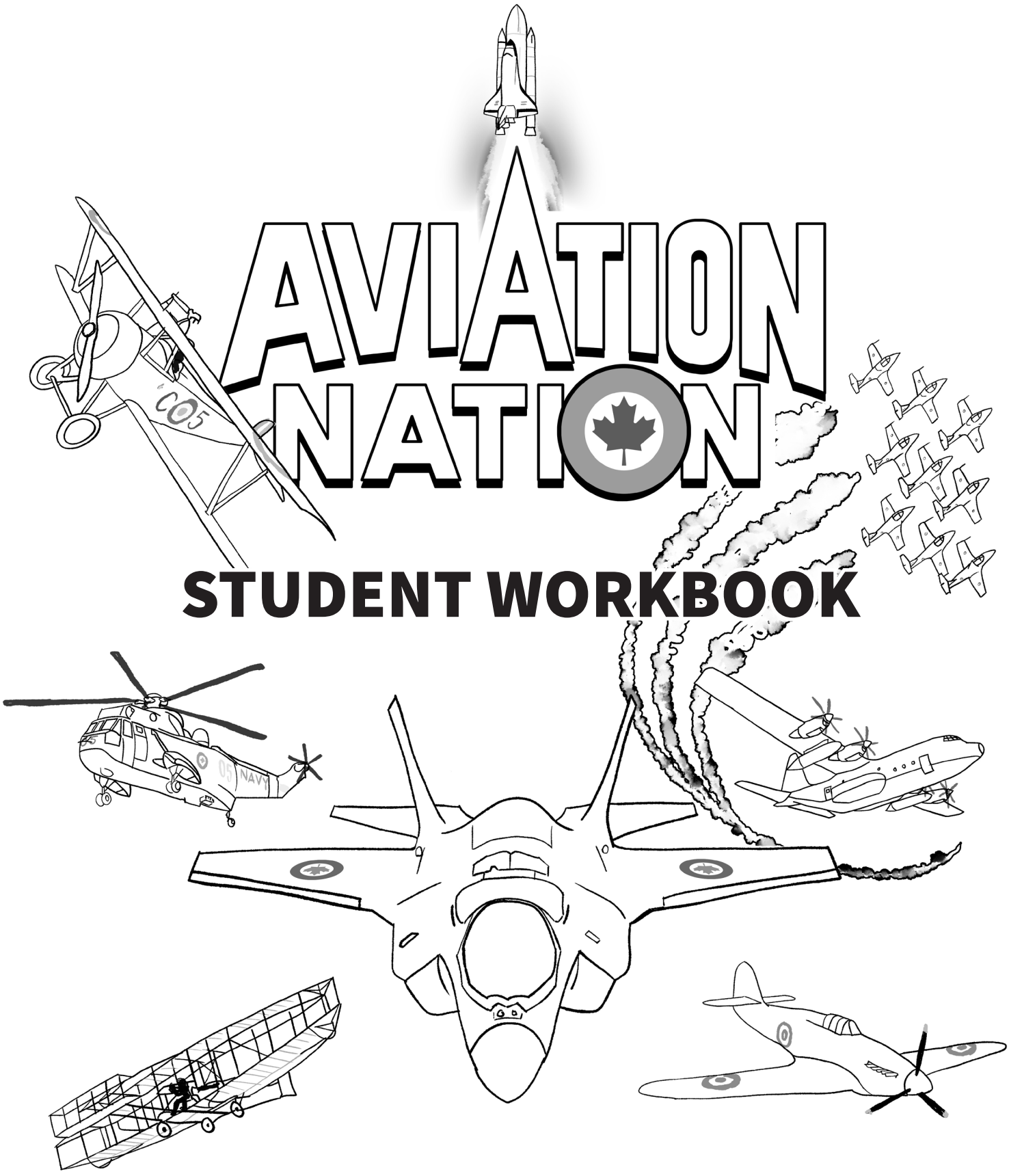

STUDENT WORKBOOK

STUDENT NAME

RCAF FOUNDATION
FONDATION de l'ARC

Hey future aviators! This student workbook will help educate you about aviation in Canada through stories about famous aviators, flights, aircraft, and innovators. It's proudly brought to you by the Royal Canadian Air Force (RCAF) Foundation.

The RCAF Foundation's mission is to support the Royal Canadian Air Force by inspiring young people like you with community-based fun and educational programs and special events that honour both the RCAF and aviation in Canada. The Foundation works hard to ensure that aviation continues to grow as an important part of Canada's future.

In 2024, we celebrated the RCAF's Centennial—100 years of the Air Force in Canada!

To find out more about the Foundation, including podcasts, specials events, and videos (on our YouTube channel), visit our website https://rcaffoundation.ca/ or follow us: @rcaf_foundation.

AREAS OF FOCUS

SUPPORT

INDUSTRY

YOUTH ENGAGEMENT

COMMUNITY

HERITAGE

LESSON ONE

EXIT TICKET

The RCAF's tartan and roundel are symbols of pride and identity for its members. What symbols or traditions do you think are important in your own life or community, and why? How do these symbols contribute to a sense of belonging and shared identity?

Create your own tartan/roundel

LESSON TWO: PART ONE

FLIGHT PREDICTIONS

What are the names of the people on your flight crew?

_____

What is the name of the first airplane you are building? _____

Describe the defining features of your airplane.

_____

_____

_____

_____

What forces will affect the distance your plane will fly? Explain your thinking.

_____

_____

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_____

What is the name of the second airplane you are building?_____

Describe the defining features of your airplane.

_____

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What forces will affect the distance your plane will fly? Explain your thinking.

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LESSON TWO: PART TWO

FLIGHT OBSERVATIONS

Airplane 1	Length in metres (Prediction)	Time in seconds (Prediction)	Length in metres (Actual)	Time in seconds (Actual)
Flight 1				
Flight 2				
Average				

Record your observations from Airplane 1

_____

_____

_____

_____

_____

_____

Airplane 2	Length in metres (Prediction)	Time in seconds (Prediction)	Length in metres (Actual)	Time in seconds (Actual)
Flight 1				
Flight 2				
Average				

Record your observations from Airplane 2

_____

_____

_____

_____

_____

_____

LESSON TWO: PART THREE

FLIGHT CONCLUSIONS

Based on your test flights, which plane flew furthest?

_____

Based on your test flights, which plane flew for the longest amount of time?

_____

How can you use the forces of flight to explain these results?

_____

_____

_____

_____

_____

_____

Understanding the forces of flight, what changes could you make to this airplane to make it fly even further/longer?

_____

_____

_____

_____

_____

_____

Based on the features of your plane, how do you think it could be best used in the aviation industry? Think about defence and protection, search and rescue, dispatch and diplomacy, and even recreation! Explain your rationale.

_____

_____

_____

_____

LESSON THREE: INFOGRAPHIC PRESENTATIONS

PEER EVALUATION

Presenter's name:_____

Infographic title:_____

Date: _____

Please rate the following aspects of the presentation on a scale of 1 to 5.

Clarity of Presentation	1 NOT CLEAR	2	3	4	5 VERY CLEAR
Information Accuracy	1 INACCURATE	2	3	4	5 ACCURATE
Visual Appeal/Design	1 NOT APPEALING	2	3	4	5 VERY APPEALING
Organization and Flow	1 NOT ORGANIZED	2	3	4	5 VERY ORGANIZED
Engagement Level	1 NOT ENGAGING	2	3	4	5 VERY ENGAGING
Overall Presentation Effectiveness	1 POOR	2	3	4	5 EXCELLENT

Something I liked ... _____

_____

_____

_____

Something to improve on ... _____

_____

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_____

LESSON THREE:
REFLECTION

Think about a specific aviation innovation discussed or presented in class. Describe its significance and how it has influenced modern aviation.

LESSON FOUR: PART ONE

TUNNEL PREDICTIONS

What forces will affect the height an object will fly? Explain your thinking.

_____

_____

_____

_____

How do you think an object's shape will affect its behaviour in the wind tunnel?

_____

_____

_____

_____

What objects are you testing in the wind tunnel?

_____

_____

_____

What object do you think will fly the highest in the wind tunnel? Why do you think so?

_____

_____

_____

_____

What object do you think will move the least in the wind tunnel? Why do you think so?

_____

_____

_____

_____

LESSON FOUR: PART TWO

TUNNEL OBSERVATIONS

Item	Prediction	Actual

What forces will affect the height an object will fly? Explain your thinking.

_____

_____

_____

_____

_____

_____

_____

_____

LESSON FOUR: PART THREE

TUNNEL CONCLUSIONS

Based on your experiment, which object flew the highest?

_____

What object surprised you most in your experiment and why?

_____

_____

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_____

_____

_____

How can you use the forces of flight to explain the results of your experiment?

_____

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Understanding the forces of flight and the results of your experiment, what object could you put in the wind tunnel that would fly higher?

_____

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LESSON FIVE:
REFLECTION

Why does the RCAF play music and what purpose does it have within the organization? What might be the significance of the music and instruments chosen?

How does the music make you feel? What are your thoughts about the music you have listened to? If you were a part of the RCAF, what instrument would you play?

LESSON FIVE:
REFLECTION

What did you hear in the RCAF band recordings that inspired your composition?

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Why do you feel that your composition would be appropriate for RCAF musicians to perform? Be specific and use examples from the music you heard.

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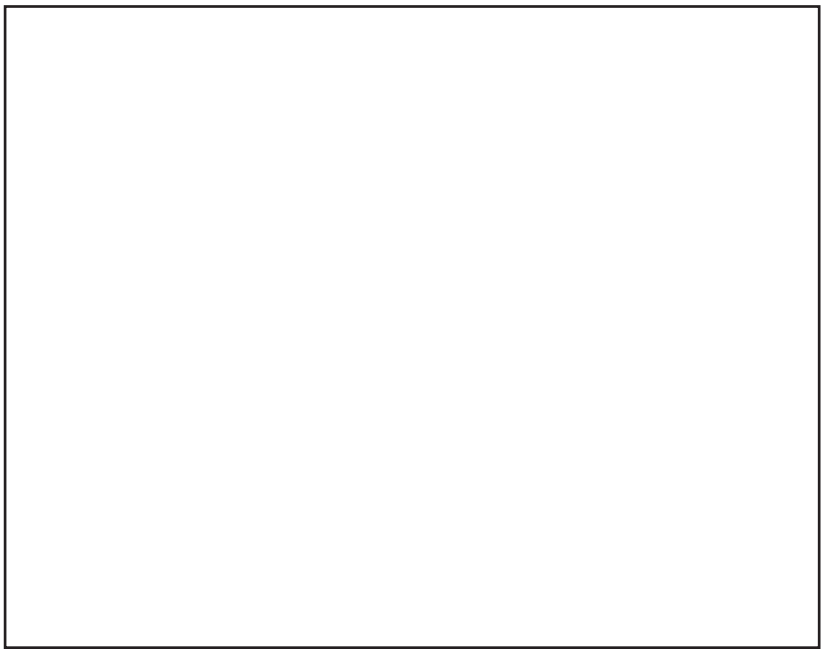
INFLUENCER NEWS

AUTHOR: _____ DATE: _____

HEADLINE:



LESSON SEVEN: AVIATOR PRESENTATIONS

PEER EVALUATION

Presenter's name:_____

Infographic title:_____

Date: _____

Please rate the following aspects of the presentation on a scale of 1 to 5.

Clarity of Presentation	1 NOT CLEAR	2	3	4	5 VERY CLEAR
Information Accuracy	1 INACCURATE	2	3	4	5 ACCURATE
Visual Appeal/Design	1 NOT APPEALING	2	3	4	5 VERY APPEALING
Organization and Flow	1 NOT ORGANIZED	2	3	4	5 VERY ORGANIZED
Engagement Level	1 NOT ENGAGING	2	3	4	5 VERY ENGAGING
Overall Presentation Effectiveness	1 POOR	2	3	4	5 EXCELLENT

Something I liked ... _____

_____

_____

_____

Something to improve on ... _____

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_____

LESSON SEVEN:
REFLECTION

Reflect on the presentation you watched about influential Canadian aviators. What did you learn about their life and their legacy?

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How did their story inspire you? What qualities do you admire most about them?

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What questions do you have about their story?

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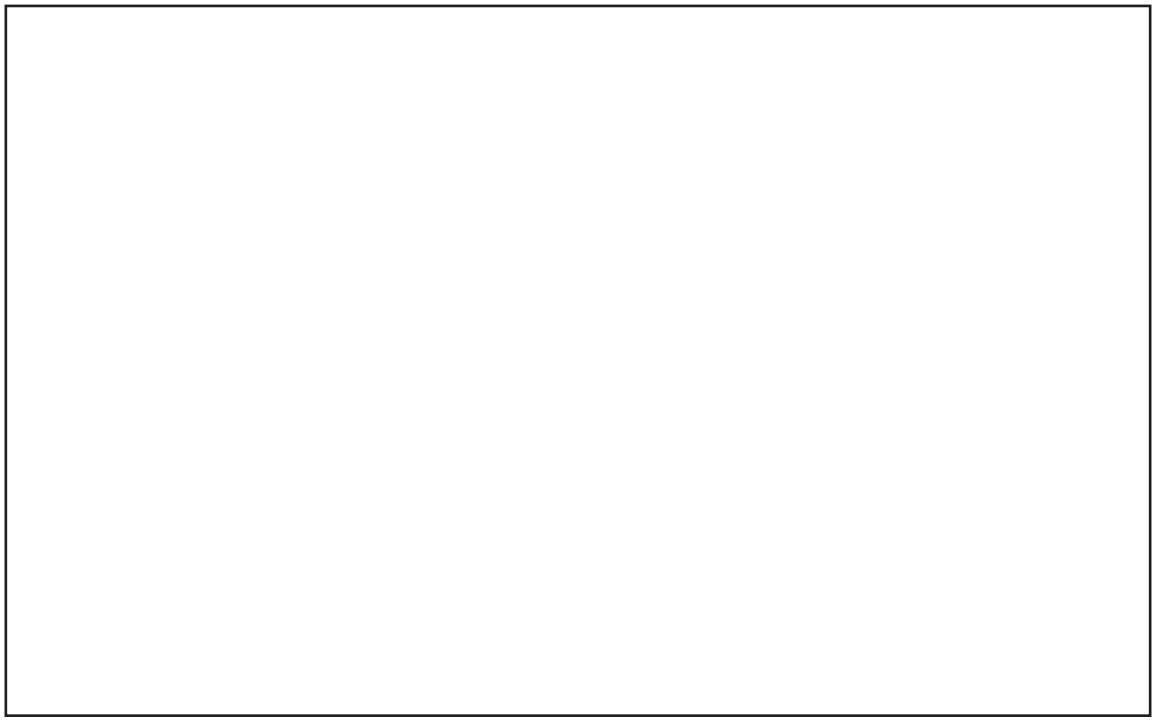
LESSON EIGHT:
MINI SIGN CREATION

Document key findings here before adding them to your mini sign:



LESSON EIGHT:
REFLECTION

Reflect on the aviation innovation you researched and presented. What did you find most interesting about this innovation and the careers involved in its development or use? How do you think the innovation and these careers have impacted the aviation industry?

LESSON NINE:
EMPATHIZE & DEFINE

Stage	Prompts	Response
Empathize	Who are the users/ stakeholders? What are their needs and challenges?	
Define	What is the specific problem or challenge you are addressing? Why is this problem important to solve?	

LESSON NINE:

IDEATION BRAINSTORM

Idea 1:	Idea 2:
Idea 3:	Idea 4:
Idea 5:	Idea 6:

LESSON NINE:

PROTOTYPE

LESSON NINE:
TESTING

What worked...	What could be improved...
Questions?	Ideas?

LESSON NINE:
REFLECTION

How did you feel about your final product? Are you happy with the end result? What would you change if you had more time?

_____

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After hearing about the different aviation innovations created in your class, which one would you be the most excited about being implemented?

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_____

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