THEORY OF FLIGHT

Grade Six Curriculum - Workshop Modules

<u>HALF DAY</u> – MORNING TOUR - (9:30am to 12:00am)

SCHEDULE: (Grade 6) (Maximum 35 Students)

9:20	Arrive
9:30 – 9:40	Introduction and House Keeping topics to whole Group (10 minutes).
9:45 – 10:25	Theory of Flight, Bernoulli's Principle, parts of plane and function to small group (40 minutes).

- Review four forces: Thrust, Drag, Lift, Gravity.
- Review Pitch, Roll, Yaw.
- Review parts of plane: propeller, engine cover or cowling, landing gear, wing strut, wing, flaps, ailerons, fuselage, horizontal stabilizer, fin, rudder, elevator, elevator trim tab.
- Bernoulli's Principle, Shape of wing creating high and low pressure.
- Air pressure in relationship to altitude.

10:30 – 11:10	Tour aircraft and other artefacts. Tour restoration hangar if time permits to small group. (40) minutes.

- Explain British Commonwealth Air Training Program.
- Tour planes: Nieuport XI, Tiger Moth, Chipmunk, Cornell, Harvard, Tracker, DC 3, T33, Cessna Skymaster.
- Artefacts: engines, instruments.
- Tour restoration hangar if time permits.

11:15 to 11:55	Flight simulator small group (40 minutes)
12:00	Depart

Science Six Learning Indicators and Outcomes

FL6.1: d, g, h

FL6.2: a,b,d,h

FL6.3: b,d,e,

THEORY OF FLIGHT

Grade Six Curriculum - Workshop Modules

<u>HALF DAY</u> – AFTERNOON TOUR - (1:00pm to 3:30pm)

SCHEDULE: (Grade 6) Maximum 35 students

12:50 - 1:00	Arrive
1:05 – 1:15	Introduction and House Keeping topics to whole Group (10 minutes).
1:20 – 2:00	Theory of Flight, Bernoulli's Principle, parts of plane and function to small group (40 minutes).

- Review four forces: Thrust, Drag, Lift, Gravity.
- Review Pitch, Roll, Yaw.
- Review parts of plane: propeller, engine cover or cowling, landing gear, wing strut, wing, flaps, ailerons, fuselage, horizontal stabilizer, fin, rudder, elevator, elevator trim tab.
- Bernoulli's Principle, Shape of wing creating high and low pressure.
- Air pressure in relationship to altitude.

2:05 – 2:45	Tour aircraft and other artefacts, possibly tour restoration hangar if time permits to small group (40) minutes.

- Explain British Commonwealth Air Training Program.
- Tour planes: Nieuport XI, Tiger Moth, Chipmunk, Cornell, Harvard, Tracker, DC 3, T33, Cessna Skymaster.
- Artefacts: engines, instruments.
- Tour restoration hangar if time permits.

2:50 – 3:30	Flight simulator small group (40 minutes)
3:30	Depart

Science Six Learning Indicators and Outcomes

FL6.1: d, g, h

FL6.2: a,b,d,h

FL6.3: b,d,e,

THEORY OF FLIGHT

Grade Six Curriculum - Workshop Modules

FULL DAY TOUR - (9:30am to 2:30pm)

SCHEDULE: (Grade 6) (Maximum 35 – 55 Students)

9:15 – 9:25	Arrive
9:30 – 9:40	Introduction and House Keeping topics, break up into groups (10 minutes)
9:45 – 10:25	Theory of Flight, Bernoulli's Principle, parts of plane and function, Pitch, Roll, Yaw, air pressure (ASL and GSL), altimeter (40 minutes)

- Review four forces: Thrust, Drag, Lift, Gravity.
- Review Pitch, Roll, Yaw.
- Review parts of plane: propeller, engine cover or cowling, landing gear, wing strut, wing, flaps, ailerons, fuselage, horizontal stabilizer, fin, rudder, elevator, elevator trim tab.
- Bernoulli's Principle, Shape of wing creating high and low pressure.
- Air pressure in relationship to altitude.

10:30 – 11:10	Tour aircraft and other artifacts (40) minutes

- Explain British Commonwealth Air Training Program
- Tour planes: Nieuport XI, Tiger Moth, Chipmunk, Cornell, Harvard, Tracker, DC 3, T33, Cessna Skymaster, Cessna 180.

11:15 – 11:55	Aviation Communication and Aviation Careers (40 minutes)

- Aviation radio/communication, ATC tower – ground, squawk code/radar, phonetic alphabet.
- Career opportunities because of flight technology: pilot, airplane mechanic, ATC, Flight Services, Inspectors, manufacture of planes, ground staff, stewards etc.

12:00 – 12:40	**LUNCH** (Optional Scavenger Hunt Activity)
12:45	Rejoin break-out groups and move to your next activity.
12:50 - 1:30	Flight simulator small group (40 minutes),
1:35 – 2:15	Construction of wooden Beaver plane (40 minutes)

- Construction of Museum plane.
- Tour restoration hangar

2:30	Depart

Science Six Learning Indicators and Outcomes

FL6.1: d, g, h

FL6.2: a,b,d,h

FL6.3: b,d,e,