**Flight Lesson(s) 4**

**Learning Goals**

We are learning to:

* + identify and describe the four forces of flight, and understand the relationships between these forces that are required for flight
  + use appropriate science and technology vocabulary (e.g. *aerodynamics, compress, flight, glide, propel, drag, thrust, lift*) when we talk and write about flight

**Lesson**

**Part A: Forces of Flight – Nelson 104 – 108**

1. Review the Flight Learning Goals, and zero in on #1 and 3 *(show on PPT)*
2. Say “Today we are going to read a non-fiction text to find out more about how flight works. We will use the headings to make a mind map to organize our work. Please raise your hand if you have seen a mind map before.” *(Show examples on PPT)*
3. Please write today’s day in your notebook, and also the title, “Flight Graphic Organizer” or something like that.
4. Now, let’s look at the selection on page 104-108. I would like you to notice the headings and subheadings. *(Maybe use the Averkey and a plastic sheet to show the text?)*
5. Let’s make a mind map, a visual, to organize this text graphically *(model on the board or on a chart – include a section for “important vocab” as well as a space in each main section for “introduction”).* Please copy this graphic organizer into your notebook as I draw it on the board.
6. As we read together, let’s add some notes to our graphic organizer. (*Model and do it together for pp 104-105*)
7. I will be meeting with Connor, Marquise, Omar, Christian, Hanieh, Sarah and Rosha here at the front. For the rest of you, I would like you to work with a partner at your table group to finish reading this selection, and add notes to your organizer. Remember to include important vocabulary.

You have 20 minutes.

1. What did you learn about how flight works from reading and recording your note in a graphic organizer? *(take time to have some people share their thinking)* I am going to show you how to create a mind map like this online or on a device. But first, I will ask Connor and Marquise to collect the Nelson books. In the meantime, please keep your notebooks with you, and be sure you have a device at your table group.
2. Many mind-mapping apps are available for ipad or tablet, and the internet also has some good ones that are free. I will give you time to do this, but in the meantime, please keep your device screen down, and watch while Ms. Teschow demonstrates on the overhead.

This one is called “Popplet” *(click on the ppt link, and model making a mind map, step by step – remember size, colour, vocab box, etc.)*

1. Now, I would like you to try – use the graphic organizer you created in your notebook, and work with a partner on a device to make a mind map, using popplet or another app. I will be working with my group to make a mind map.
2. How do we know if our mind map is a good one? Let’s set some criteria. *(Record ideas on a chart paper – make sure to include the following:*

* *size/hierarchy to capture title, topics and subtopics*
* *links show connections between topics and subtopics*
* *colour to show which sections belong together*
* *short words or phrases*
* *words spelled correctly*
* *other?)*

How would you improve your mind map to make it even better? Think to yourself, then tell someone nearby.

1. Please take a short break to use the washroom or get a drink, then come back and you will be working on creating your own mind map. You will read another selection about flight, and create a mind map of your own to submit on Edmodo before lunch. You will need a Nelson Literacy Book and a device. Please work independently and individually, unless you are working with me. The instructions are on the board.

If it is your day to go to the library or use the reading corner, you may use a computer in the lab or somewhere else if you don’t have your own device. Please come and see me to make arrangements before you leave.

1. Once you have completed and submitted your mind map, you may read or write silently, or work on other Edmodo projects. Please do not disturb others. Thank you.
2. Check Edmodo; dismiss class by those who have submitted.