

Good Morrow me Lords and Ladies! Ye are well on ye way to completing the Quest of finding Bernoulli's Principle! Have ye ever wondered how a plane stays in the air even when it weighs thousands of pounds? Have ye ever looked at birds in flight and pondered how they manage to fly when ye can't? Ye would not be the first to ever wonder about these things. From the beginning of time people have wondered how things fly. Over time our ancestors examined these things and quickly understood that if we were to study the principles of flight we might be able to fly also. Today ye will be doing a web-Quest to find out more information on Bernoulli's Principle and other principles of flight.

For a review of the properties of air that we have studied in class, go to this website:

http://www.learnalberta.ca/content/setf/html/StudentResource/source/ Welcome.html

Use the following website to learn a little more about Daniel Bernoulli and to answer the following question.

http://www.learnalberta.ca/content/setf/html/StudentResource/source/ Welcome.html

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1) Who was Daniel Bernoulli? _____

Have a look at the following websites:

http://www.learnalberta.ca/content/setf/html/StudentResource/source/ Welcome.html http://www.planemath.com/activities/pmenterprises/forces/forces4.html http://library.thinkquest.org/2819/bernoull.htm

2) Draw a diagram that illustrates the Bernoulli Principle below. When you are finished make sure to write an explanation below it.



Use this website to answer Question #3.

http://www.learnalberta.ca/content/setf/html/StudentResource/source/

Welcome.html

3) How does the Third Theory of Motion (for every action there is an opposite or equal reaction) apply to lift?_____



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Watch the following videos to answer questions 4,5,6 &7. fessorgizmo.com/04Bernoulli.html e is moving air there is _____ pressure.

5) What is keeping the ball in the column of air in Professor Gizmo's experiment with the golf tee and the plastic tube? _____pressure.

http://www.professorgizmo.com/05Bernouli%26Airplanes.html

6) Why does the paper lift when Professor Gizmo blows on it?_____

http://www.professorgizmo.com/06AirplanesFly.html

7) How does an airplane come down (or land)? _____

Now go to these websites to answer the Question #8:

http://www.learnalberta.ca/content/setf/html/StudentResource/source/

Welcome.html

http://www.mansfieldct.org/schools/mms/staff/hand/flight4forcesoverview.htm http://www.youtube.com/watch?v=ooQ1F2jb10A

http://fi.edu/flights/own2/forces.html

http://wright.nasa.gov/airplane/forces.html



8) What are the four forces of flight? Label them on the diagram below.







Bonus: Why to geese fly in formation?_____

Go to this link to see a plane and a bird in flight.

http://schoolteachers.ca/Webquest/Flight/Video_of_Flight/kittyhawk.html

http://nature.ca/discover/exb/hwdbrdsfly/index_e.cfm

Use the following websites to find the answers to the next question.

http://www.rspb.org.uk/youth/learn/adaptation/flight/feathers.aspx

http://www.blackgold.ab.ca/ICT/Divison2/TopicA/How%20Birds%20Fly.htm

http://fsc.fernbank.edu/Birding/skeleton.htm

http://www.all-birds.com/Anatomy.htm

http://wings.avkids.com/Book/Animals/intermediate/birds-01.html

10) What adaptations enable a bird to fly? Complete the following chart by writing down how birds have been adapted in the following areas so they can fly.



d)

Skeleton	
Body Shape	
Wing Structure	
Tail	
Propulsion	
Other	

Congratulations me Lords and Ladies! Ye shall now be experts in Bernoulli's Principle! Submit ye completed Web-Quest to Mrs. Harbidge and prepare for ye next mission!