Lesson Plan

Supplies:

- markers/crayons
- copy paper (8 ½ x 11)
- scissors
- scotch tape
- name tags (for counselors)

Time Schedule: allotted time of approx. 60 mins

- 3-5 mins: settle down the students
- 5-7 mins: single group member speaks of the upcoming activity and the applied science
- 3-5 mins: whole group moves in front of the students to present example paper planes
- 23-25 mins: students construct paper planes (w/ help) and then apply arts and crafts
- 10-15 mins: students fly freely paper planes inside allotted area (gymnasium)
- last 3-5 mins: recap on what the students felt about the lesson and what they have learned
  Encourage students to experiment with new designs

Science Concepts:

- lift: lift is the force that holds the paper plane in the air
- drag: drag is the force that opposes the forward motion of the paper plane
- trimming: the using of certain designs of the plane to change flight quality
- force: simply a push or pull
- gravity: force that brings an object back down to Earth

Teaching Tips:

- patience: these students are 3rd-5th grade, for they have lower attention spans and will require your patience to complete the assignment
- professionalism: those teaching the students will have to have a sense of professionalism, to remain organized and calm throughout the presentation
- sense of objective: stay on task throughout the presentation, and keep the students on task as well
- don’t be condescending: these are human children after all and must be treated as such to keep their focus on the assignment
- speak with authority: you are in charge; these children are your students
- encourage: make the students feel good when they have succeeded and assist them if they are having issues

**Construction Plans:**

-first session: allow the children to construct their own paper airplane, by giving them one sheet of copy paper (possibly 1-3 for mistakes). If a child does not know to do such, inspire him/her to learn from friends or learn from one of the instructors. It is recommended that they build the generic paper airplane, construction techniques found on: [http://www.10paperairplanes.com/how-to-make-paper-airplanes/03-the-arrow.html](http://www.10paperairplanes.com/how-to-make-paper-airplanes/03-the-arrow.html)
- after constructing these airplanes, allow time to color such airplanes with different utensils
- allow the children to go in an open space to fly their planes, following which plane has flown the farthest, the recap what they learned when returning to the construction center

-second session: now teach the children to build the paper glider “the kite”. Construction methods are found on: [http://www.10paperairplanes.com/how-to-make-paper-airplanes/02-the-kite.html](http://www.10paperairplanes.com/how-to-make-paper-airplanes/02-the-kite.html)
- after construction of gliders, repeat the steps of flying them and following who’s went the farthest as said above.
- recap on what the children have learned, their favorite part, and their least favorite part as well