

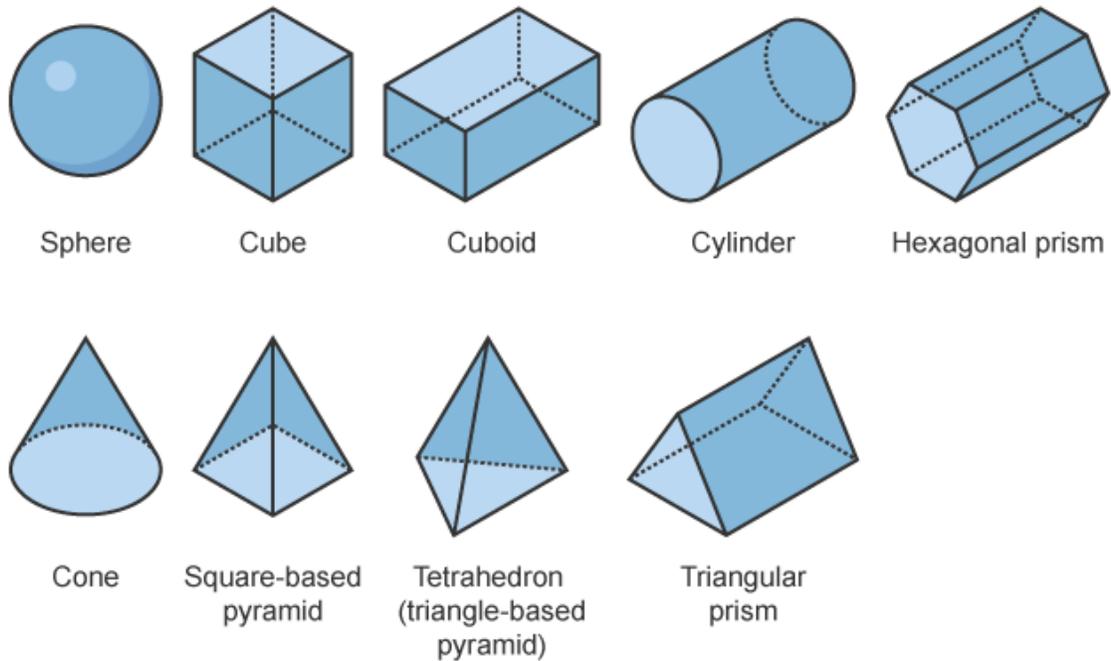
# What a Drag!

Insert teacher name here

# Engage

- ▶ What force pulls down on the plane itself?
- ▶ Does lift have to be greater than gravity to fly?
- ▶ Why are the wings at an angle?
- ▶ Do air molecules play a factor in how the airplane flies?
- ▶ <https://www.youtube.com/watch?v=v4IG8Z13CTI>

# Explore: 1



- ▶ You and your team will create an “airplane” made of out different shapes.
- ▶ After the “airplane” is made, weight will be added to it and you will time how long it takes to drop the “airplane”

# Explore 2

- ▶ Now that you have constructed your "airplane", you will add a parachute made out of various materials to see how the parachute will effect how long it takes your "airplane" to fall.



- ▶ What changes would you make to your “airplane”?
- ▶ Would you want to make your “airplane” larger or smaller? Why?
- ▶ Would you want to keep your “airplane” the same size? Why or why not?

## Explain 1



# Explain 2



- ▶ Did your “airplane” fly faster or slower with the parachute?
- ▶ How do you think the parachute played a factor in how well it flew?
- ▶ What changes would you make to your “airplane” with the parachute attached?
- ▶ Do you think the material used for the parachute affected how your “airplane” flew?

# Elaborate

- ▶ Why do you think shapes are important when building a plane?
- ▶ Why do you think airplanes have a weight limit on when flying to different destinations?
- ▶ Why do you think some aircrafts have parachutes and others don't?
- ▶ Does gravity have the same effect on all the aircrafts that fly?

# Evaluation

Complete the  
evaluation quiz  
on your own!

Turn it in when  
you have  
completed it