LAB 5:  
1)

1. I tried improving it by slowing the frame change rate, I did this by incrementing the current frame tracking variable by a smaller amount and flooring it for the reference for what image to draw.

2)

1. My ellipse does move from one keypoint to another.
2. I changed the increment value for the lerp function to be smaller, this means that more ellipses are drawn between the keyframes resulting in a smother animation.

LAB 6:

1)

1. The velocity increases due to the acceleration being set to increment.

2)

1. Changing M (mass) makes the spring spring slower, increasing K (spring constant) makes the spring spring faster, increasing D (damping) makes the spring take longer to return to a still state, and changing R (rest position) changes where the spring top will be (on the y axis).

3)

1. The particles are born in the .run function, they are assigned their attributes at the start of the class, the .isDead function determines if the particle has exceeded its lifespan and returns a boolean that deletes it by splicing it in a for loop in .run, the remaining particles are animated in the .display function and changed according to the controlling processes, the particles are rendered in draw by calling .run.

LAB 7:

1)

1. Using cross product we can check if the z vector has exceeded 0 and then flip the rotation to fix the problem.
2. I see no reason to do so as this works fine at the moment

2)

1. I added a shield and spear to my 3D stick man.

4)

LAB 8:  
2)

1. 1400
2. When I use headphones I can hear a bit higher than 1400
3. 2000
4. It is lower than 2000, I think this is due to the quality of sound being lower so I can't make out the sound as well as I could using headphones
5. It sounds closer together
6. I believe this is due to the fact that the higher the frequency the smaller the gap is between waves, so the larger frequencies would be very close together.
7. 2100

3)

1. It increases/gets higher  
   It gets sharper

LAB 9:

1)

1. i) f  
   ii) 1  
   iii) 0  
   iv) 3f  
   v) 1/3  
   vi) 0  
   vii) (2k-1)\*f  
   viii) 1/(2k-1)  
   ix) 0
2. i) Looks like a sine wave  
   ii) Becomes more like a square wave  
   iii) Sounds more natural, beeps make up the tone instead of a continuous noise  
   iv) The pitch gets higher  
   v) It's a very high pitch sound that also cracks/breaks constantly

3)

1. 22050 Hz
2. 10000, because of aliasing
3. 10000, because of aliasing
4. 1000, because of aliasing
5. Increase, as the frequency increases, and it did actually increase
6. Increase, as the frequency should increase, however it actually decreased due to aliasing
7. A slow increase in pitch, and then a slow decrease in pitch
8. That it resets due to aliasing