



Feathery Fun

As you watch the presentation about feathers, complete these questions:

1. How often do birds molt?
2. What is keratin and how does it relate to feathers?
3. Where do the colors of feathers come from?
4. Write a few words about each of these characteristics ;
 - a. Insulation
 - b. Water repellant
 - c. Flight assistance
 - d. Camouflage

e. Displaying

f. Protection

g. Intimidation

h. Sound production

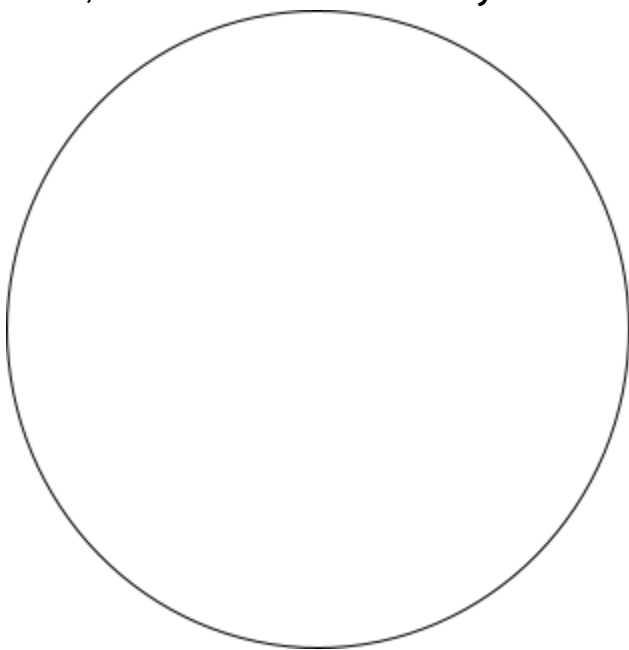
5. Explain how some feathers are iridescent.

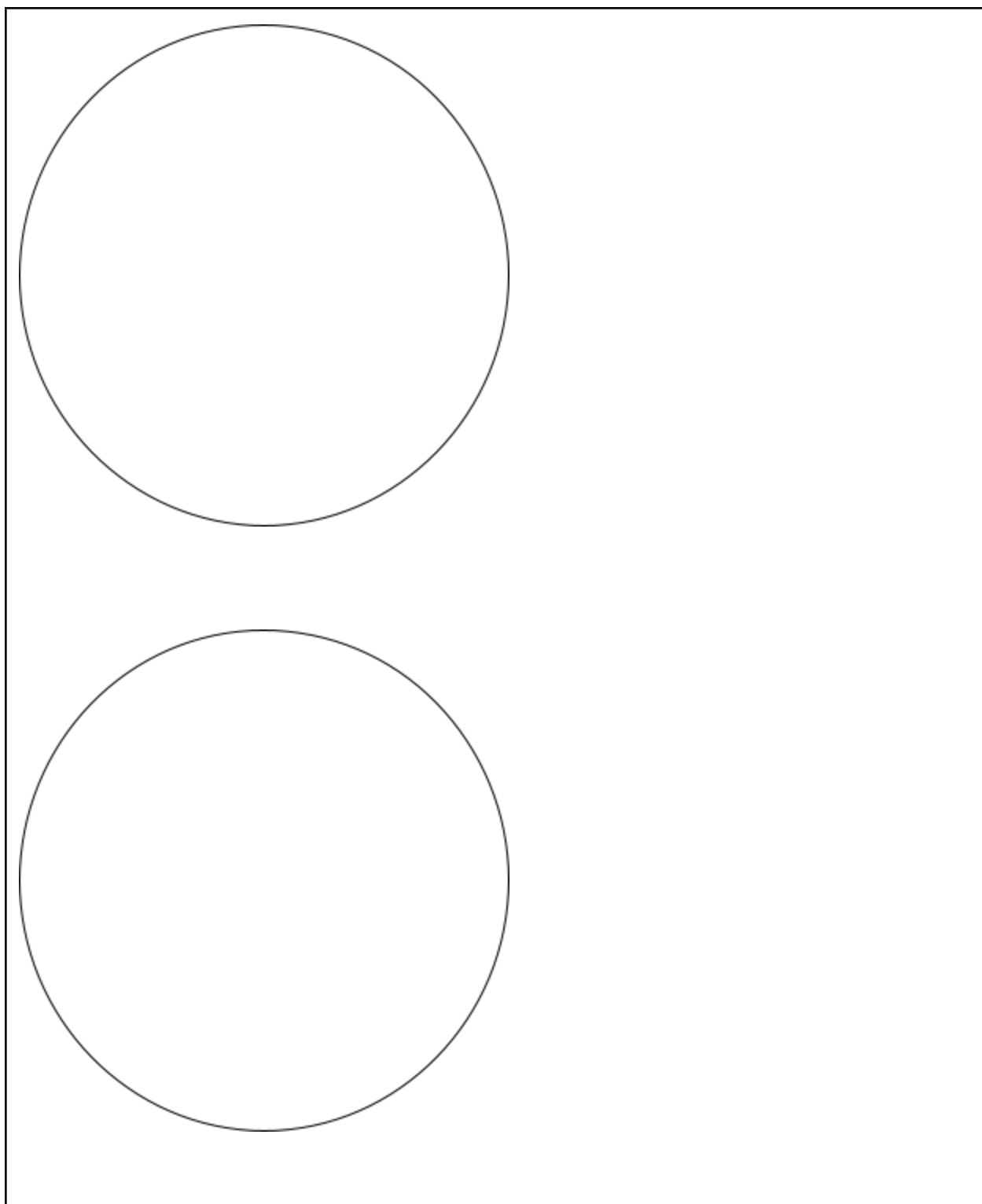
6.

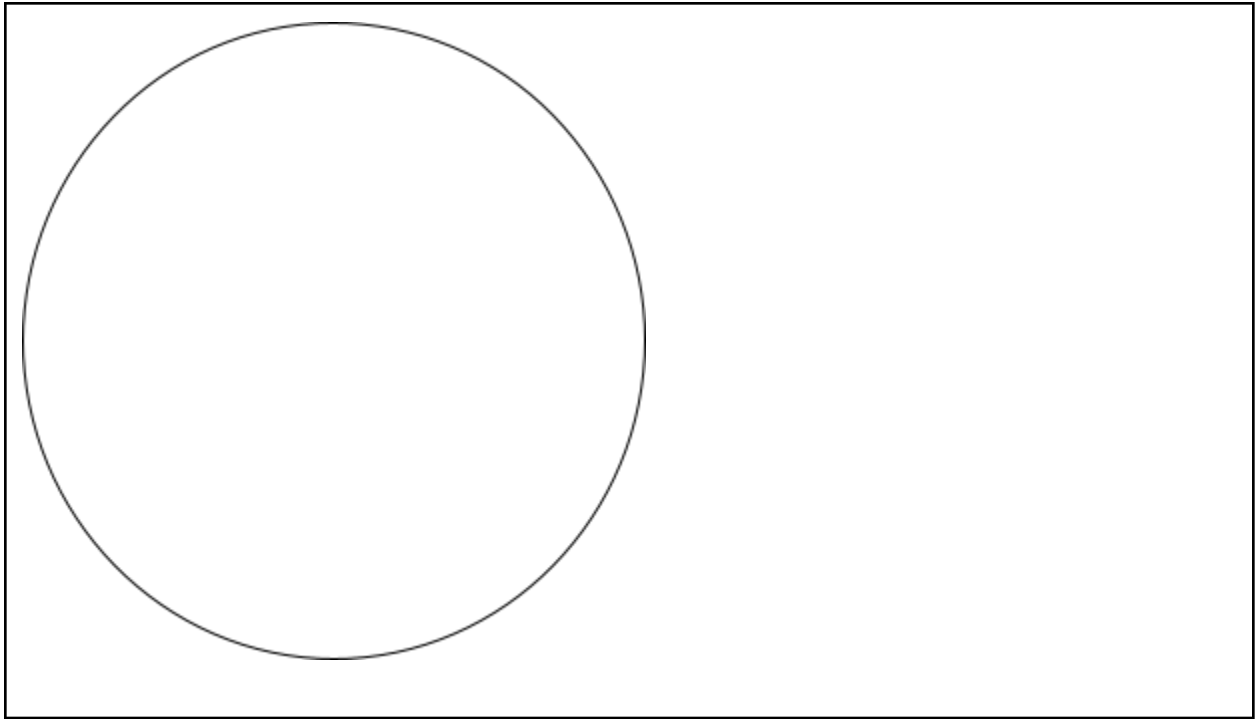
Type of feather	Characteristics
Flight	
Down	
Semiplume	

Contour	
Filoplume Feathers	
Bristle	

Draw, label and describe what you see under the microscope or hand lens.








Brainstorm at least 5 designs for your wing.

Which idea did you choose? Explain your decision.



Draw and label your design below.

Data Collection

- **Flight simulation:**
 - Estimate the potential flight distance based on wing size and weight.
 - Hold the wings up and blow on them, observing lift and stability.
 - Compare wingspan-to-distance.

- **Waterproofing test:** using a pipette, drop small water droplets on the wings,

observing how they repel or absorb the water.

- **Insulation test:** Compare the temperature increase inside an unwrapped cup versus one with a model wing "blanket" covering it. Place a thermometer inside an uninsulated cup. Wrap or cover a second cup with a thermometer with your model wing. Record the starting temperatures and the temperature after 5 minutes,



ANALYZE IT

Summarize your results.

How would you change your design to improve it? Why would you make these changes?