# Endotherms vs. Ectotherms

Chapter 3

# Endotherms

- Endotherms are animals that warm their bodies mainly from their own metabolism.
  - We call these animals warm-blooded.
  - Maintain a constant body temperature regardless of changes in the surrounding temperature

# How do endothems adapt?

- **Fat** layers, fur, and feathers insulate the body and retain heat.
- Shivering muscles contract to increase body heat.
- Some animals hibernate. Hibernation enables animals to survive long periods of cold and lack of food.
- Canines, like this Brittany, use panting as a means of temperature regulation.

# Ectotherms

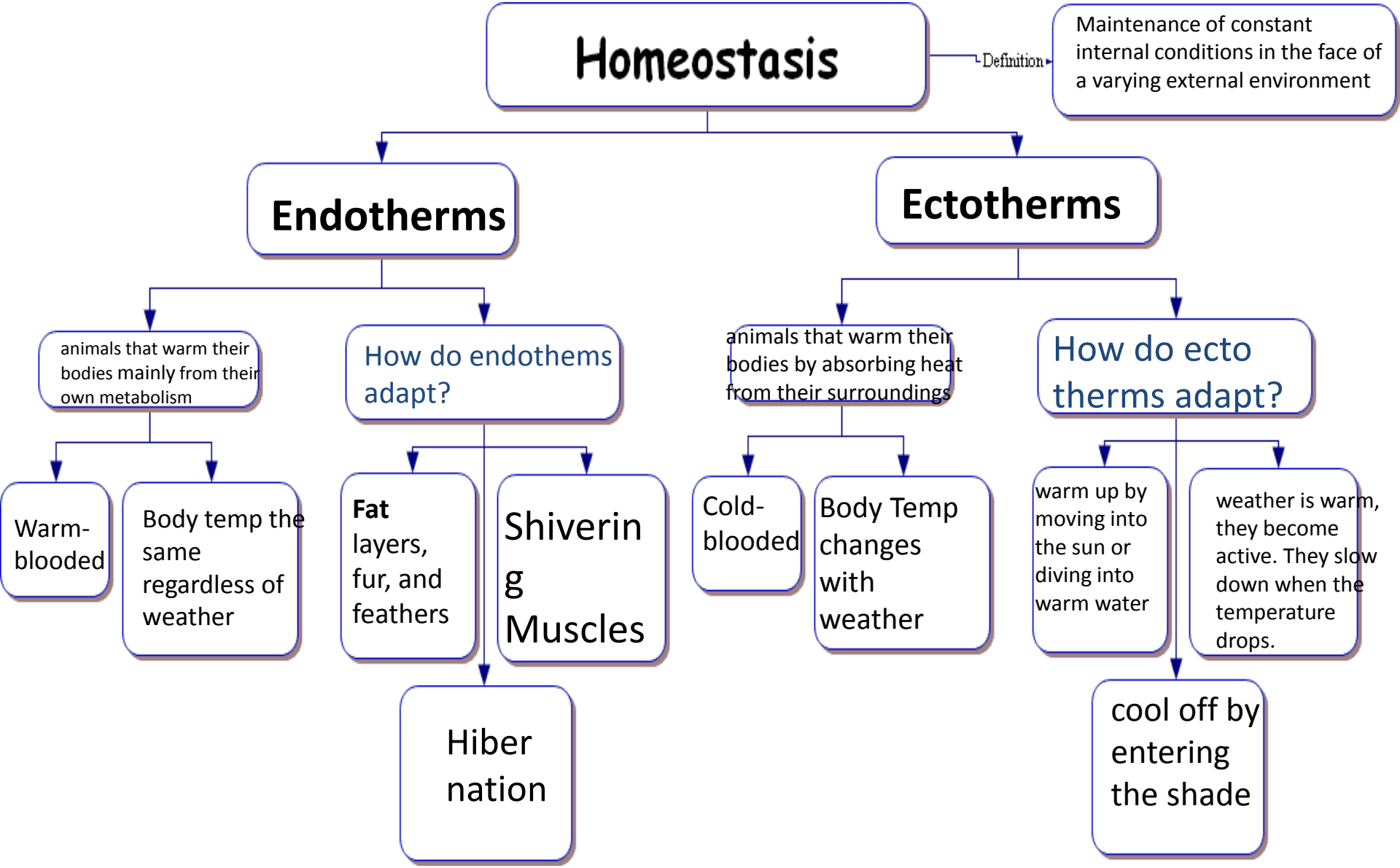
- Ectotherms are animals that warm their bodies by absorbing heat from their surroundings.
  - We call these animals cold-blooded
  - Body temperature fluctuates with changes in the surrounding temperature.

# How do ectotherms adapt?

- Most marine fish and **invertebrates**, however, live in water that stays the same temperature.
- When the weather is warm, they become active. They slow down when the temperature drops.

# How do ectotherms adapt?

- To warm up, reptiles find sunny places, and stretch out for maximum exposure. If it gets too warm, lizards alternate between sun and shade.
- <u>Amphibians</u> warm up by moving into the sun or diving into warm water. They cool off by entering the shade.


Homeostasis
Definition
Maintenance of constant internal conditions in the face of a varying external environment
Endotherms
Ectotherms
animals that warm their bodies mainly from their own metabolism
How do endothems adapt?
animals that warm their bodies by absorbing heat from their surroundings
How do ecto therms adapt?
Warm-blooded
Body temp the same regardless of weather
Fat layers, fur, and feathers
Shiverin g Muscles
Hiber nation
Cold-blooded
Body Temp changes with weather
warm up by moving into the sun or diving into warm water
weather is warm, they become active. They slow down when the temperature drops.
cool off by entering the shade