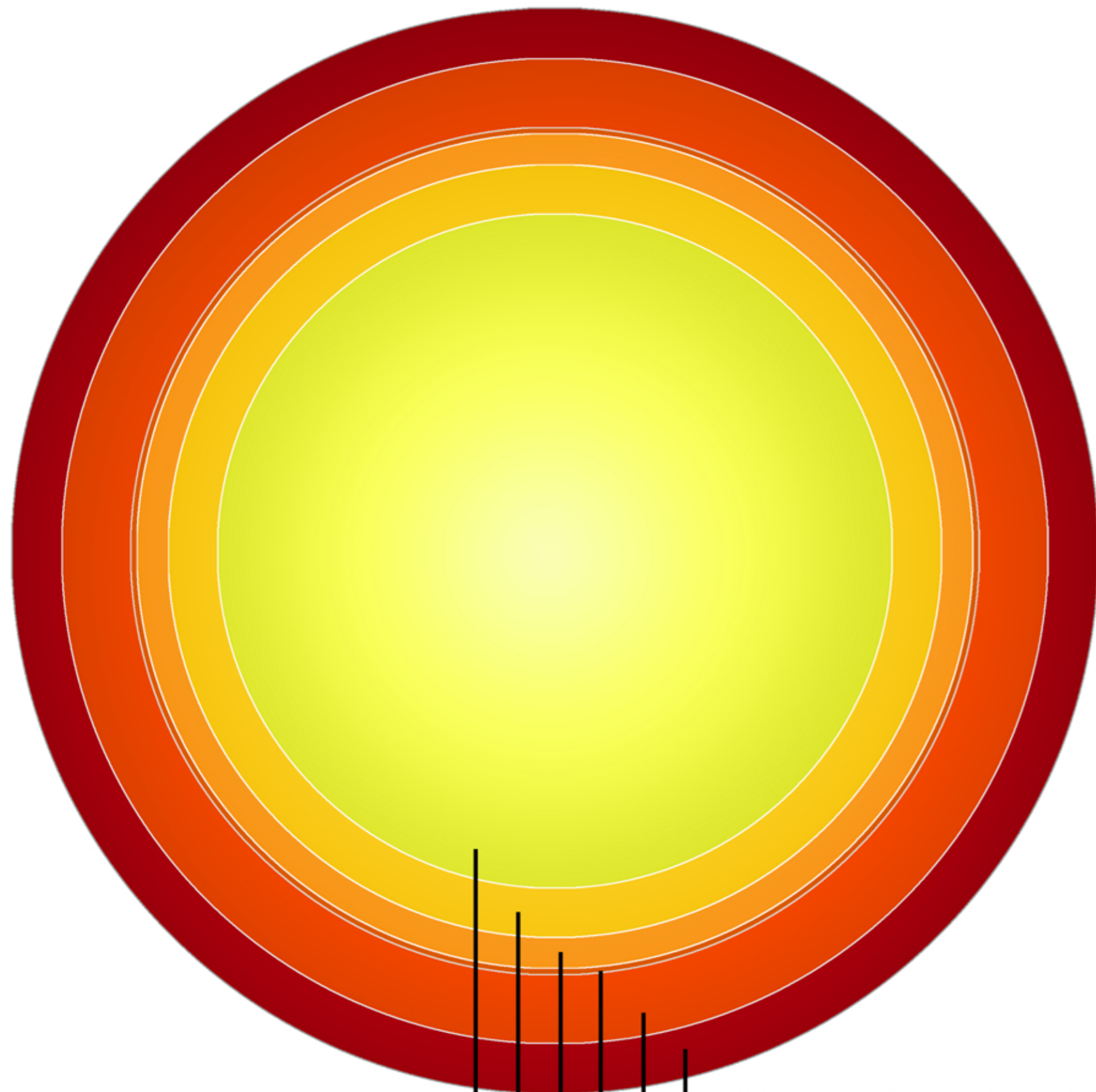


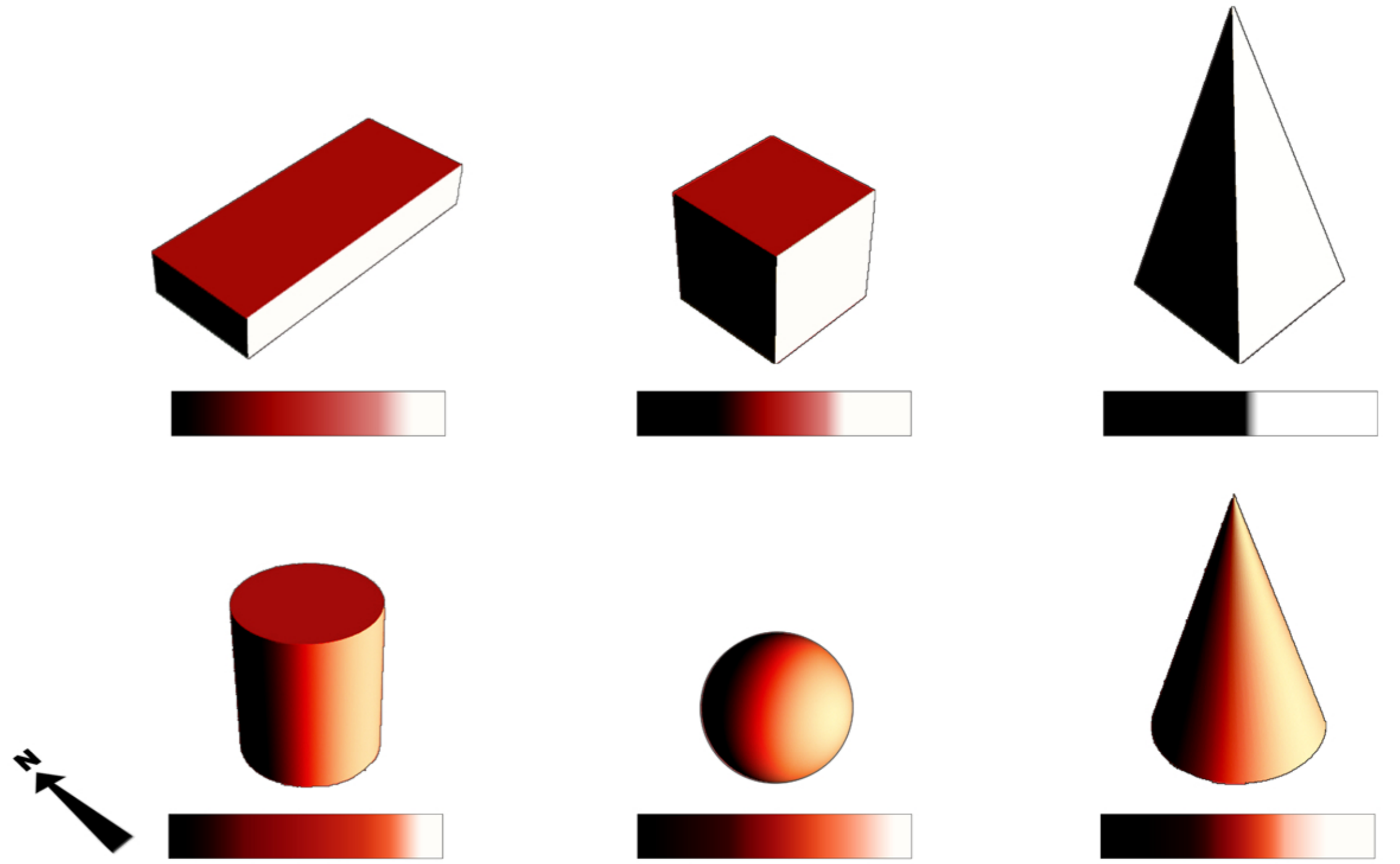
Design Strategy - Temperature

Geometry and Heat Analysis

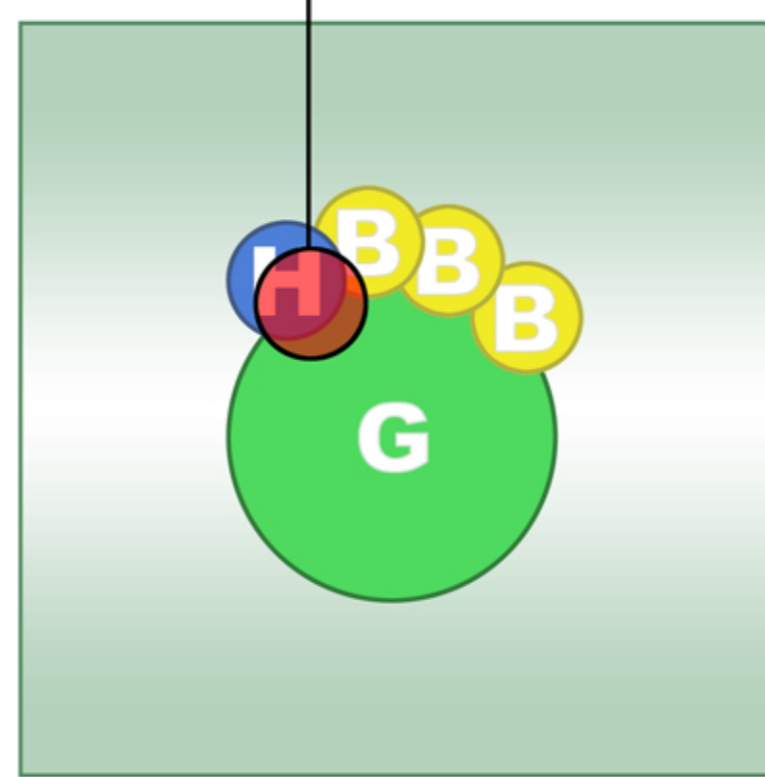
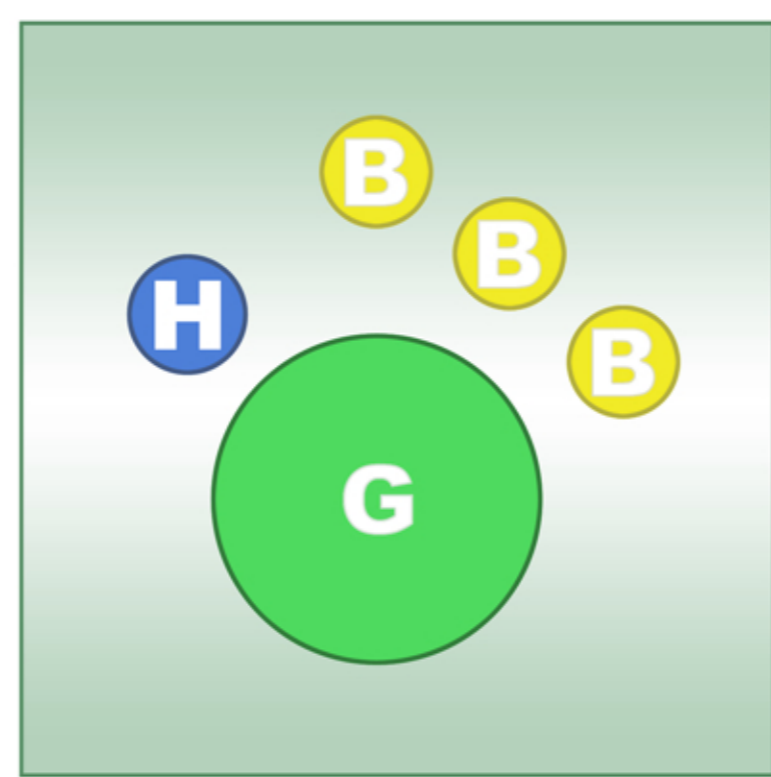
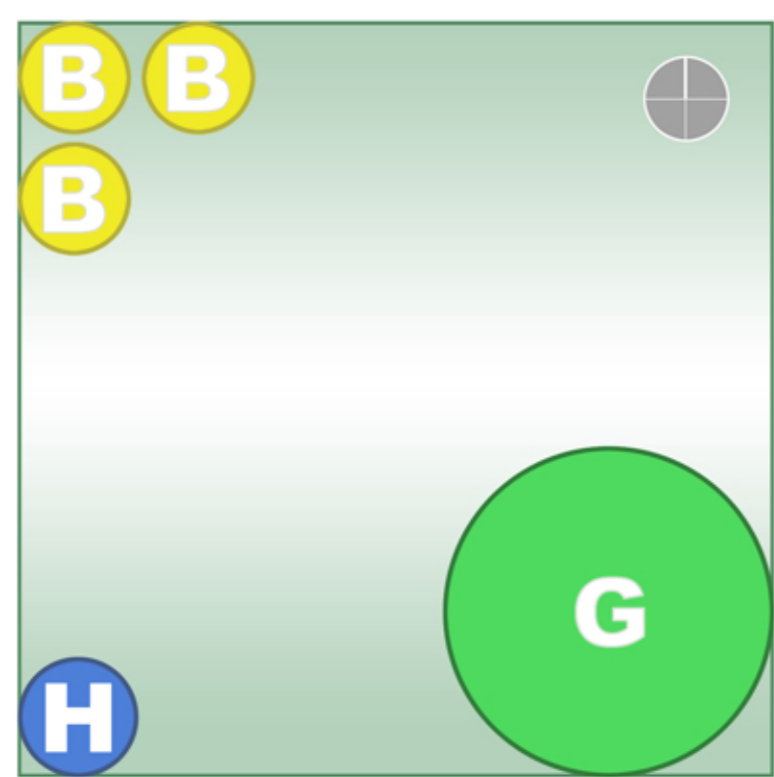
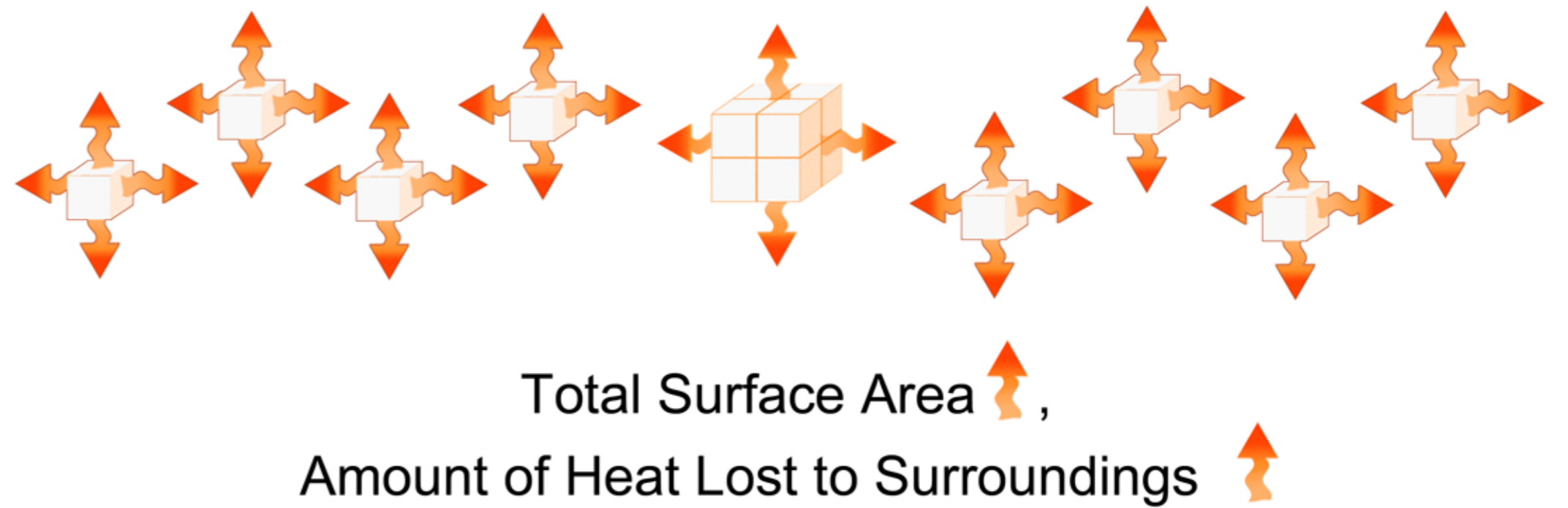
For a constant volume of 1000 unit³



- Shape, Total Surface Area
- Cuboid, 780 unit₂
- Square Pyramid, 708 unit₂
- Cone, 609 unit₂
- Cube, 600 unit₂
- Cylinder, 555 unit₂
- Sphere, 484 unit₂



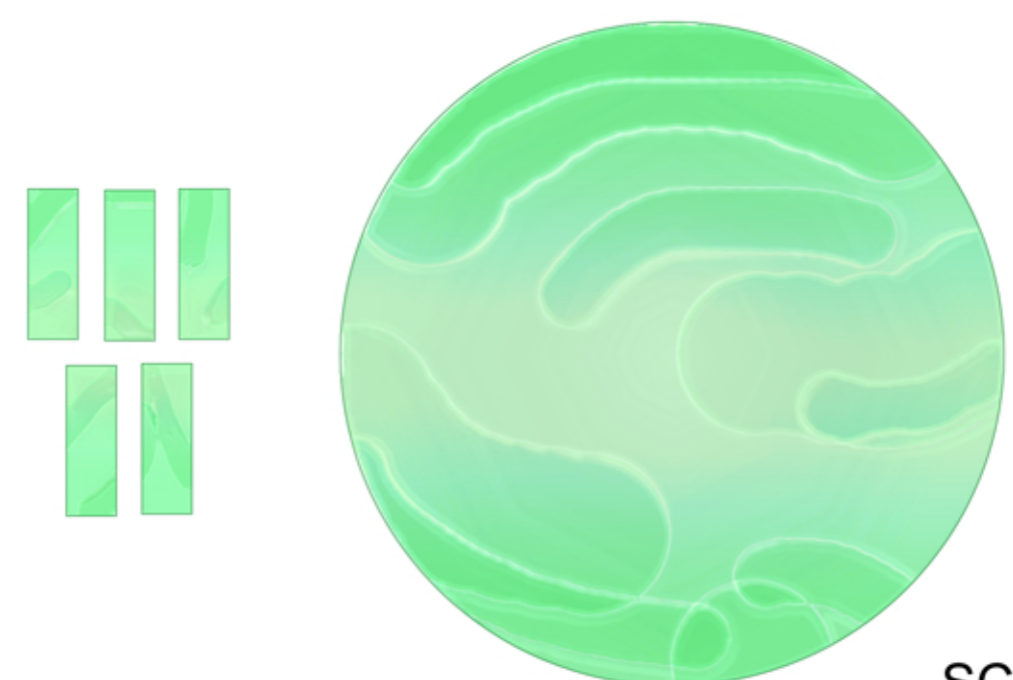
Distribution of Heat on the Geometrical Surface
Date: January 1st 2013; Time: 1200 Hours; Azimuth: 173.19 ; Altitude: 20.7



The more compact the shape, the more thermally energy efficient it is. This is because a smaller total surface area to volume ratio enables a lower net transfer of heat. Curved surfaces are more compact than angular ones which have the same volume.



SCALE 1:500



SA = 690 m ²	SA = 3040 m ²
V = 90 m ³	V = 2028 m ³
SA:V = 7.67	SA:V = 1.50
Energy Consumption = 35 000 W	Energy Consumption = 15 500 W

SCALE 1:500