

Geo-Creature Project

Objective

To create a creature out of 'pi' related items found around the house.

Instructions

Using empty household materials that are 'pi' related (i.e. circular, cylindrical, spherical, etc...), build a fictitious creature or one that is based on a real animal.

Requirements

- Must be secure (use glue, screws, nails, etc...to hold pieces together)
- Secure it to a piece of wood, cardboard, box, etc...
- Be creative
- Fill in the attached sheet of information & calculate the approximate surface area and volume for the creature.

What to turn in

- Completed Geo-Creature
- Attached worksheet & any additional sheets that includes your work
- The rubric/grading sheet (cut out and attach)

Due Date

Friday, March 17, 2017



Example of a geo-creature

Geo-Creature Worksheet

Creator's Name _____

Name of Geo-Creature _____

List of items used to create your geo-creature

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Surface Area & Volume of each section of the geo-creature

Section 1 name (i.e. head, leg, etc...) _____

Section 1 Surface Area _____

Section 1 Volume _____

Section 2 name (i.e. head, leg, etc...) _____

Section 2 Surface Area _____

Section 2 Volume _____

Section 3 name (i.e. head, leg, etc...) _____

Section 3 Surface Area _____

Section 3 Volume _____

Section 4 name (i.e. head, leg, etc...) _____

Section 4 Surface Area _____

Section 4 Volume _____

Section 5 name (i.e. head, leg, etc...) _____

Section 5 Surface Area _____

Section 5 Volume _____

Hints for finding Surface Area & Volume

- Before attaching any of your creature's parts together, measure the radius of any cylindrical, conic, or circular items.
- If you are using any spherical items, in order to calculate surface area & volume, estimate the radius by taking the circumference measurement and dividing it by 2π .
- Recommended unit of measure: cm

Surface Area Formulas (cm²)

Circle: πr^2

Cylinder: $2\pi r h + 2\pi r^2$

Cone: $\pi r l + \pi r^2$ $l =$ slant height

Sphere: $4\pi r^2$

Volume Formulas (cm³)

Cylinder: $\pi r^2 h$

Cone: $1/3 \pi r^2 h$

Sphere: $4/3 \pi r^3$

If you have additional sections, please attach another piece of paper with necessary info.

Total Surface Area _____

Total Volume _____

Grading Guidelines

****Geo-Creature Project is worth 1 test grade****

Materials	15 points possible
Creativity	15 points possible
Overall Presentation	20 points possible
Calculations	50 points possible



Geo-Creature Grade

Name: _____

Materials _____/15 points possible

Creativity _____/15 points possible

Overall Presentation _____/20 points possible

Calculations _____/50 points possible

Total _____/100 points possible