

Design an Eco-Explorer Zoo

The Layout Plan

For this project you will be creating a zoo for some animals. You then will come up with a budget for how much it will cost to open your zoo. Good luck!

Step 1: Research

Read the passages over the different ecosystems and animal adaptations. Figure out how you will create these eco systems so that the animals can survive

Step 2: Plan and design

Now it's time to plan out your zoo. You may use the grid attached or any paper you have around the house. Remember to follow the guidelines. You need 4 ecosystems and an aquarium. You must find the area of each exhibit and the volume of the aquarium. Don't forget to add anything the animals need to survive!

Step 3: Budget

Using your dimensions come up with how much material you will need to create each exhibit. Then use the chart to see how much it will cost to create your zoo. Make sure you are showing all your math!

Step 4: Information cards

Using all the information you have create a short description of each exhibit. What is the ecosystem? What are the animals in each ecosystem? What are some adaptations an animal will need to survive?

Step 5: Turn it in

Use your phone or parent phone to take pictures of your project. Use classdojo portfolio to post your project or send your teacher an email with the pictures attached.



Rubrics for Designing your own Zoo

Ecosystems in your zoo: <u>Science:</u> Maximum points 5				
5 Points	4 Points	3 Points	2 Points	1 Point
*Ecosystem is creative and neatly presented. * Mastery of concepts or characteristics is clear. *Includes 4 types of ecosystems correctly relating to the animal or plant life.	*Ecosystem is somewhat neat. *Mastery of concepts or characteristics is somewhat clear. *Includes 4 types of ecosystems correctly relating to the animal or plant life.	*Ecosystem is turned in. *At LEAST three types of ecosystems are present. *Some mastery of characteristics evident.	*Ecosystem is turned in. *At LEAST two types of ecosystems are present. *Some mastery of characteristics evident.	*Ecosystem is turned in. *At LEAST one type of ecosystem is present. *Very little mastery of characteristics evident.

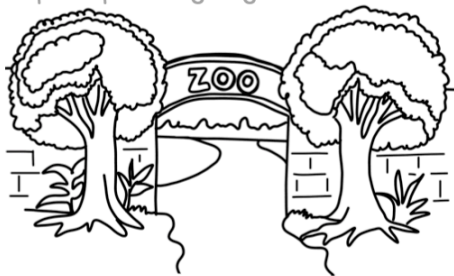
Calculations in your zoo: <u>Math:</u> Maximum points 5				
5 Points	4 Points	3 Points	2 Points	1 Point
*Clear and accurate equations (4 equations) * All products are solved correctly *The difference between area and volume is accurate.	*Clear and accurate equations. * At least 3 products are solved correctly *The difference between area and volume is accurate.	*Clear equations. * At least 2 products are solved correctly *The difference between area and volume is somewhat accurate.	*Student did not write the equation but has the correct answer. *The difference between area and volume is somewhat accurate/only one term is mentioned.	* Student displayed the equations. *All products are incorrect. *The difference between area and volume is somewhat accurate/only one term is mentioned.

Materials to build your zoo

Material	Description	Cost
Cinder Block	1.25 Feet x .75 Feet	\$1.75 Per Block
For a block wall add 10 percent for concrete		
Chain Link Fence	4 Feet Tall x 150 Feet	\$ 83.00 Per Roll
Plexiglass- Aquarium Walls/Floor	4 Feet x 8 Feet	\$ 217.00 Per Sheet
Calculate the volume of water needed to fill		
Grass Sod	500 Square Feet	\$449.00
Trees	6 Foot	\$139.00
	15 Foot	\$217.00
Rocks	Small Boulder	\$67.00
	Medium Boulder	\$144.00
	Large Boulder	\$699.00

[illegible]

Step 3 Open larger grid



Design an Eco-Explorer Zoo

Entire Zoo Blueprint

Sketch out your design of your Eco-Explorer Zoo below. Make sure to label each required part of the zoo. Make sure your lines are clear so that you can determine the specific dimensions of the area and perimeter of your buildings.



Requirements

- **4 Ecosystem Exhibits** no smaller than 1000 meters²
- **1 Ecosystem Exhibit** must be an Aquarium at least 2000 meters²
- **An Entrance** no smaller than 800 meters²
- **2 Restrooms** at least 900 meters² each
- **2 Snack Stands** at least 400 meters² each
- **A Gift Shop** that is no less than 900 squared meters
- **Walkways**

Measurements



One side of one square
is 10 meters

