Building a Zoo



Your task is to design a brand new zoo complete with rare and endangered animals in enclosures. Space is limited and the budget is tight so you will have to make your decisions carefully and be sure to be clever with your choice of animals. Here are some things you will need to consider:

* Different animals need different amounts of space, check the fact sheet to make sure you can give them the space they need.
* Every type of animal requires fencing, glass viewing walls, or a building to live in. Other amenities in your zoo like restaurants, washrooms, and gift shops also need a building wall. Each fence, glass wall, or building wall costs $15 to build.
* Each square meter of land costs $20 to build on.
* Your total cost to build your zoo cannot be over $40 000 (adding perimeter fencing/walls and area developed)
* Your zoo must have a minimum of:
  + 1 ticketing office
  + 8 animal attractions
  + 2 sets of public washrooms & water fountains
  + 5 food vendors
  + 3 other amenities
  + 15 trees or floral beds
  + 5 picnic tables
  + 10 garbage centres (with waste and recycling)

You also want your zoo to be profitable. Different animals and shops will bring in different dollar values per day, as the public will come to see them! Calculate your total earnings at the end of your zoo construction.



**Building Process**



Steps for Zoo Construction:

1. **Beginning ideas**

* *What are you going to include in your zoo??*
* *Narrow down your ideas by putting a symbol beside the top choices!*

*DUE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

1. **Draft**

* *Sketch a draft of your zoo using the “draft sketch pad”*
* *As you add each new part of your zoo, write down the costs and profit in your budget sheet*
* *Keep a running total of costs so you aren’t surprised at the end!*
* *Use a pencil ☺*

*DUE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

1. **Edits**

* *Double check your work to be sure you have included all required attractractions*
* *If you have money left over, add a few more attractions!*
* *Show Ms. Shannon your draft and she will give you a new piece of graph paper for your final copy!*

*DUE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

1. **Final Copy**

* *Include the following: Name of your zoo, location, ticket prices, zoo designer (this is you!), and 1-3 key features that will attract customers!*
* *Neatly colored*
* *All exhibit titles printed neatly in black pen*
* *Correct math in your budget plan*

*DUE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

**Animal Fact Files**

1. Tiger Pen
   * 1 tiger needs 45-50 m2 of land, 4 m2 of water and makes $230
   * 2 tigers need 62-70 m2 of land, 4 m2 of water and makes $340
   * 3 tigers need 85-90 m2 of land, 4 m2 of water and makes $560
2. Elephants
   * 1 Elephant needs 78-90m2 of land, 2m2 of water, and makes $240
   * 2 Elephants need 99-123 m2 of land, 10 m2 of water, and makes $440
   * A Herd of Elephants of 110-123 m2 of land, 16 m2 of water, and makes $810
3. Salt Water Crocodiles
   * 1 Crocodile needs 42-48 m2 of land and 10m2 of water and makes $180
   * 2 Crocodiles needs 66-77 m2 of land and 16 m2 of water and makes $220
   * 3 Crocodiles needs 86-99 m2 of land and 18 m2 of water and makes $360
4. Mountain Gorillas
   * 1 Silver Back Gorilla needs 42-47m2 of land, 2m2 of water, and makes $200
   * 2 Female Gorillas need 34-42m2 of land, 4m2 of water, and makes $250
   * 1 family of Gorillas need 110m2 of land, 6m2 of water, and makes $750
5. Emperor Penguin Zone
   * 3 penguins need 8-12 m2 of land and 20- 22m2 of water and makes $150
   * 5 penguins need 14-16 m2 of land and 25-28 m2 of water and makes $300
   * 7 penguins need 20- 24 m2 of land and 30-32m2 of water and makes $450
6. Tropical Fish Tank
   * Tank needs 14-24m2 of water and makes $200
7. Reptile Room
   * Reptile rooms need 24-36 m2 of land, 2m2 of water, and makes $310
8. Insect Room
   * Insect rooms need 36 m2 of land, 2-4m2 of water, and makes $420
9. Parrot Bay
   * Parrot Bay needs 36-40 m2 of land, 2-4m2 of water, and makes $220
10. Camel Corral
    * One camel needs 24-40 m2 of land, 2m2 of water, and makes $220
    * Two camels need 45-60 m2 of land, 3m2 of water, and makes $430
    * Three camels need 90 m2 of land, 4m2 of water, and makes $540
11. Pandas Play Area
    * 1 Panda needs 24-30m2 of land, 2-4m2 of water, makes $400
    * 2 Pandas need 50m2 of land, 4-6m2 of water, and make $950
12. Giraffe Enclosure
    * 1 Giraffe needs 32-37 m2, 2m2 of water, and makes $300
    * 2 Giraffes need 43-65m2, 3m2 of water, and make $430
    * 3 Giraffes need 102-115m2, 4m2 of water, and makes $535
13. American Bison Herd
    * 1 Bison needs 35 m2 and makes $120
    * 2 Bison need 45 m2 and makes $260
    * A Bison herd needs 120 m2 and makes $1000
14. California Sea Lions
    * 1 Sea lion needs 5 m2 of land and 30 m2 of water and makes $290
    * 3 Sea lions needs 15 m2 of land and 50 m2 of water and makes $460
15. Killer Whale Aquarium
    * 1 killer whale needs 40m2 of water and makes $550
    * 2 killer whales need 60m2 of water and makes $750
16. Great White Shark Tank
    * 1 Shark needs 80-82 m2 of water and makes $1000
    * 2 Sharks need 85-99m2 of water and makes $2000
17. Bottle nosed dolphins
    * 1 dolphin needs 40-50m2 of water and makes $800
    * 2 dolphins need 60-70m2 of water and makes $1100
    * A pod of dolphins needs 80-100m2 of water and makes $2000
18. Reindeer
    * 1 Reindeer needs 10m2 of land and makes $80
    * 2 Reindeer need 15m2 of land and makes $100
    * A herd of Reindeer needs 40m2 of land and makes $250
19. Monkey Zone
    * 4 Monkeys needs 15-20m2 of land and makes $280
    * 5 Monkeys need 22- 38m2 of land and makes $350
20. Cheetahs
    * 1 Cheetah needs 10m2 of land, 2m2 of water, and makes $280
    * 2 Cheetahs need 15m2 of land, 3 m2 of water, and makes $340
21. Cool off Polar Bear Zone
    * 2 Polar Bears need 10-12m2 of land, 14-22m2 of water and makes $800
22. Down under Kangaroos
    * 1 Kangaroos need 20-25m2 of land, 2 m2 of water and makes $800
    * 2 Kangaroos need 30-35m2 of land, 4 m2 of water and makes $900
23. African Lions
    * 1 African Lion needs 30-35m2 of land, 2 m2 of water and makes $700
    * 2 African Lions need 40-45m2 of land, 4 m2 of water and makes $800
    * 3 African Lions need 50-55m2 of land, 6 m2 of water and makes $950
24. Giant Ant Eaters
    * 1 Ant Eater needs 13-16m2 of land, 1 m2 of water and makes $300
    * 2 Ant Eaters need 20-22m2 of land, 2 m2 of water and makes $450
25. Anacondas
    * 1 Anaconda needs 10-12m2 of land, 1 m2 of water and makes $450
    * 2 Anacondas need 15-17m2 of land, 2 m2 of water and makes $550
26. Otters
    * 2 Otters needs 5 m2 of land and 10-12 m2 of water and makes $390
    * 3 Otters needs 10 m2 of land and 20-24 m2 of water and makes $460
27. Grey Wolves
    * 1 Wolf needs 12-15m2 of land and makes $200
    * 3 Wolves need 20-27 m2 of land, and makes $400

**Food Vendors**

1. Pizza Kiosk
   * Pizza Kiosk needs 6-8 m2 of space, and makes $550
2. Ice Cream Parlour
   * Ice Cream Parlour needs 6-12 m2 of water and makes $340
3. Fancy Fries
   * Fancy Fries needs 10-12 m2 of space and makes $770
4. Burger Inn
   * Burger Inn needs 10-15m2 of space and makes $560
5. The Zoo Cafeteria, Sit-Down Restaurant
   * Zoo Cafeteria needs 30-34m2 of space and makes $1000
6. Hot-Doggies Kiosk
   * Hot-Doggies needs 12-14 m2 of space and makes $620
7. Snowy Sno Cones
   * Sno-Cones to go needs 8-16 m2 of space and makes $540
8. Mini-Donuts Kiosk
   * Mini-Donuts Kiosk needs 8-12 m2 of space and makes $430
9. Tacos to Go
   * Tacos to Go needs 8-10 m2 of space and makes $345

**Park Amenities**

1. Ticketing Office
   * Needs 8 m2 of space
2. Pathways, Trees, Garbage Cans, Picnic Tables and flower beds
   * Each needs 1m2 of space
3. Water Fountain
   * Water Fountain 6-10 m2 of space
4. Washrooms
   * Male washrooms each need 8 m2 of space
   * Female washrooms each need 8 m2 of space
5. Zoo Photography – Get your photo taken with a zoo animal!
   * Gift Shop needs 12-14m2 of space, and makes $150
6. Zoo Toys Gift Shop
   * Gift Shop 30-40m2 of space and makes $1000
7. Build a Bear Stuffy Shop
   * Build a Bear needs 14-20m2 of space and makes $1000
8. Splash zone Waterpark
   * Splash zone water needs 26-28m2 of space and makes $200
9. Zoo Venture Playground
   * Playground needs 35-53 m2 of space and makes $600
10. Animal Themed Carousel
    * Carousel needs 10-20m2 of space and makes $200