

Design a Zoo!

Equipment

- A4 1cm² sheet of paper
- Pencil
- Ruler
- Scrap Paper
- Colouring Pencils
- Eraser

KS2 National Curriculum Links

Mathematics

- Number - Addition and Subtraction
- Number - Multiplication and Division
- Measurement
- Geometry
- Statistics

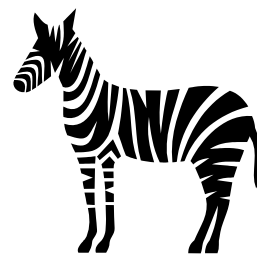
English

- Writing - Composition
- Spoken Language

Science

- Animals, Including Humans

Art and Design



Task 1 – Budgets

You will be using the sheet of A4 paper to plan your zoo to scale.

Each square that you plan to build on will cost you £10. You have a budget of £3,000 to spend on your whole design.

The following buildings are compulsory and must be included in your design:

Minimum Number	Building	Area	Cost per Building (£10 per 1cm ²)	Total Cost
1	Ticket Kiosk	2cm x 1cm		
1	Café	4cm x 3cm		
2	Ice Cream Shop	1cm x 1cm		
1	First Aid Post	2cm x 2cm		
1	Zoo Keeper Staff Room	3cm x 3cm		
1	Vet Hospital	5cm x 2cm		
2	Toilets	2cm x 3cm		
1	Gift shop	3cm x 3cm		
1cm ² footpath around each building			£0 – No Cost	
			Total Cost	

What is your total spend on compulsory buildings?

How much budget do you have remaining to complete your design?

The following buildings are optional. You can choose if you would like them in your zoo:

Building	Area	Number of Animals per Building	Cost per Building (£10 per 1cm²)
Tree	1cm x 1cm	0	
Playground	3cm x 4 cm	0	
Tiger Enclosure	4cm x 5cm	2 Tiger	
Elephant Enclosure	6cm x 8cm	6 Elephants	
Sea Lion Enclosure	3cm x 4cm	4 Sea Lions	
Reptile House	5cm x 3cm	50 reptiles (including snakes, lizards and crocodiles)	
Flamingo Enclosure	3cm x 2cm	12 Flamingos	
Hippo Enclosure	6cm x 3cm	2 Hippos	
Cheetah Enclosure	2cm x 9cm	5 Cheetahs	
Chimp Enclosure	3cm x 7cm	6 Chimps	
Petting Farm	4cm x 4cm	2 Horse, 5 Sheep, 6 Chickens	
Penguin Pool	3cm x 5cm	15 Penguins	
Red Panda Enclosure	2cm x 2cm	2 Red Pandas	
Lemur Enclosure	6cm x 3cm	8 Lemurs	
Bug House	2cm x 4cm	1000 invertebrates (including ants, cockroaches, tarantulas etc.)	
Aquarium	4cm x 5cm	200 fish (including piranhas, sea horses and clownfish)	

Task 3 – Managing your Zoo

The Zoo Keepers need to count their animals every year. This is called an **inventory**.

What is the total number of animals living in your collection?

Year of Inventory	
Total Number of Mammals	
Total Number of Reptiles	
Total Number of Birds	
Total Number of Amphibians	
Total Number of Fish	
Total Number of Invertebrates	

Fill out the table below for the zoo inventory for your collection:

Task 4 – Feeding your Animals

Each week you will need to order fresh food to keep the animals healthy.

Weekly Food Order

Animals (Per 1 Enclosure)	Meat	Fish	Vegetables	Fruit	Hay	Bamboo
Tigers	30 kg					
Elephants			60 kg	35 kg	1000 kg	
Sea Lions		40 kg				
Reptiles	20 kg	10 kg	20 kg	15 kg		
Flamingos		20 kg				
Hippos			300 kg		100 kg	
Cheetahs	10 kg					
Chimps			50 kg	15 kg	20 kg	
Farm			20 kg	10 kg	50 kg	
Penguins		30 kg				
Red Panda			10 kg	5 kg		30 kg
Lemurs			20 kg	5 kg		10 kg
Invertebrates			15 kg	15 kg		
Fish	5 kg		15 kg			

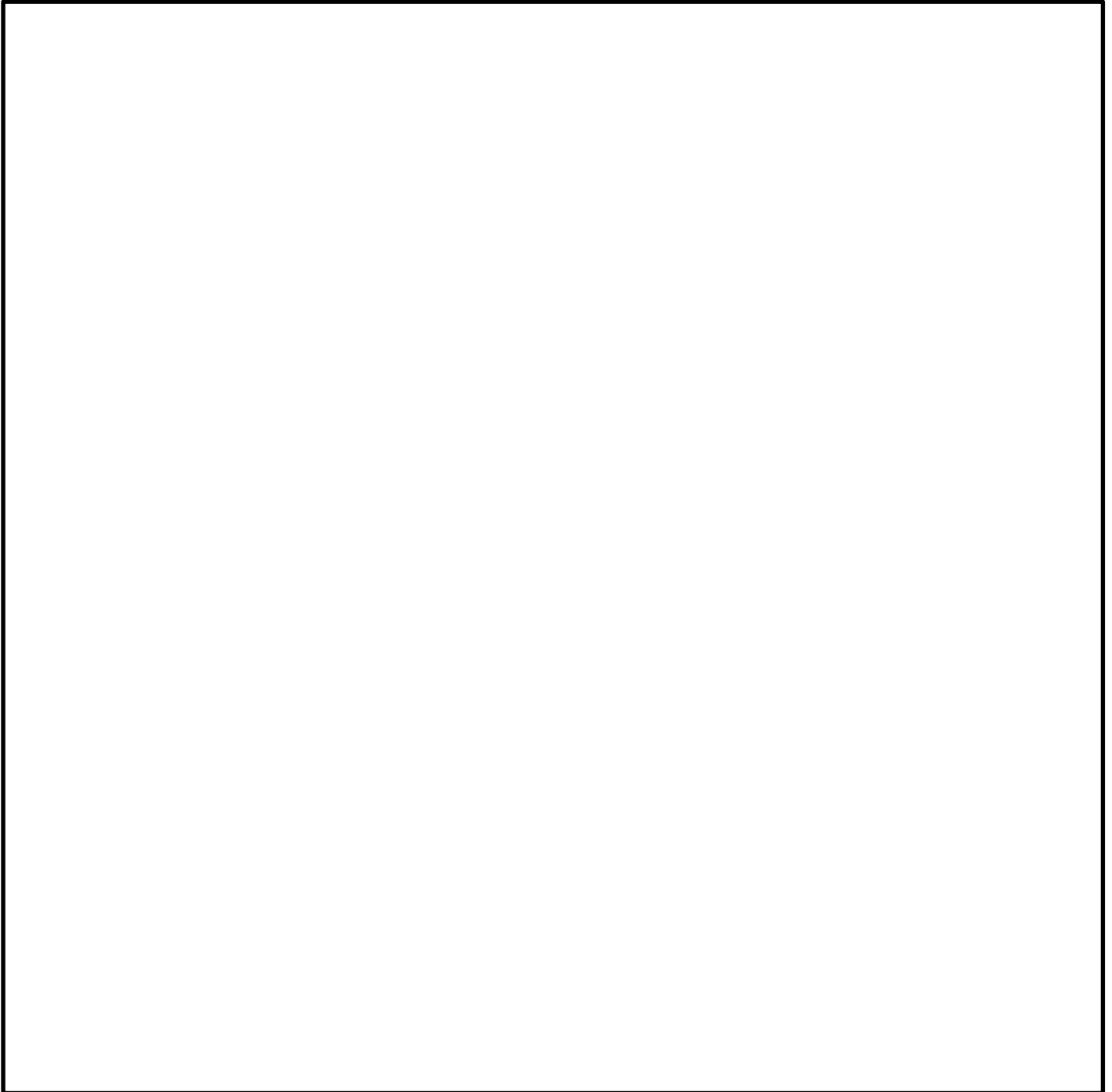
Calculate how much food you would need to order based on the number of animals in your collection.

	Total Kg	Cost per Kg	Total Cost
Meat		£5.00 per kg	
Fish		£5.00 per kg	
Vegetables		£0.50 per kg	
Fruit		£2.00 per kg	
Hay		£0.10 per kg	
Bamboo		£1.00 per kg	

Task 5: Advertise your Zoo

Total Cost	
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Design a poster advertising your zoo. Remember to mention the different species and facilities that you have to offer.



Task 6 – Visiting the Zoo

Pick one of the animal enclosures on your plan and give directions to a visitor to the following locations

My chosen enclosure is:

Directions to the nearest toilets

Directions to the nearest café

Directions to the nearest gift shop

Swap your directions and plan with a partner to see if they are able to find the correct building based on your instructions.

Task 7: Presenting at your Zoo

The presenters at ZSL Whipsnade Zoo give talks about the animals in the zoo.



Write a two minute talk that you can deliver to your class about one of the species in your zoo.

Include the following information in your talks:

- Where are the animals found in the wild?
- What do they eat?
- How long do they live for?
- What threats do they face in the wild?
- Interesting facts about your chosen species

Recommended websites for your research

ZSL	www.zsl.org
IUCN Red List	www.iucnredlist.org
Arkive	www.arkive.org
BBC Nature	www.bbc.co.uk/nature/animals