



# **Transition Pack**

## **Maths**

**Year 6 → Year 7**

**Name:** \_\_\_\_\_

**Everyone at Fazakerley High can't wait to meet you! We would love for you to have a go at these activities to practise using your maths skills as well as being as creative as possible!**

**We will have prizes for the most creative work packs! Good Luck!**



# Project: Design your own zoo



You have been chosen as a member of a design team to create plans for a new zoo in your town. Use the checklist and guidelines to design your zoo.

- ✓ Choose at least 10 animals to include in your zoo.
- ✓ Research the animals to learn specific habitat requirements.
- ✓ Use the provided charts to determine the amount of square metres required.
- ✓ Complete the “Zoo Planning Sheet.”
- ✓ Use grid paper to draw a blueprint of the animal exhibits.
- ✓ Add at least 2 “Extras.” Try to think what else would you see in a zoo apart from the animal enclosures.
- ✓ Label all Exhibits and Extras.
- ✓ Write the name of your zoo on your blueprint.
- ✓ Complete the “Area and Perimeter” sheet.



## **Requirements and Notes**

- You must include at least 10 different types of animals, but you may include more.
- You must include at least two of each animal, but you may use as many as you like. (For example, if you choose giraffe as one of your animals, you must have at least two giraffes.)
- When planning your zoo, be sure to include a path that is at least 2 metres wide between all exhibits. Hint: If each square is  $1\text{m}^2$ , then each side of the square is 1m. ( $1\text{m} \times 1\text{m} = 1\text{m}^2$ )

## **Here are some logistics to consider**. (Hint--You may need to do additional research!)

- Some animals should not be in the same vicinity (region/area) as others. Just because they are in the same family does not mean they can be housed together. You can put some different types of animals together in the same enclosure.
- Some animals will need specific items in their habitat such as a body of water or trees.
- Some animals will need a controlled climate (very cold, hot, or wet).
- Some animals will need cages or aquariums, while others will need large open spaces.

*\*Please note, the area suggestions are just numbers for your project purposes only. Animals in the wild or in a carefully designed realistic zoo habitat would require a much larger space in most cases!*



## Space needed for each animal



Use the following list of animals to help plan your zoo. The square metres is per individual animal. E.g. if one zebra requires 10m<sup>2</sup>, then two zebras would require 20m<sup>2</sup>. You may also use animals that are not on this list. Just make a reasonable estimate for the area required.

Mammals		Birds	
Animal	Area ( m <sup>2</sup> )	Animal	Area ( m <sup>2</sup> )
zebra	20	peacock	3.5
elephant	40	ostrich	12
giraffe	20	owl	5
hippo	25	toucan	5
rhinoceros	25	stork	2.5
anteater	8	emu	10
kangaroo	25	flamingo	2.5
camel	15	macaw	2.5
llama	15	eagle	5
hyena	20	vulture	5
warthog	10	<b>Reptiles</b>	
sloth	2.5	Animal	Area ( m <sup>2</sup> )
koala	3	alligator	15
red panda	2.5	Galapagos tortoise	7.5
porcupine	2.5	alligator snapping turtle	5
bats	5	crocodile	15
chimpanzee	12	anaconda	2.5
orangutan	15	boa	2.5
gorilla	20	Gila Monster	2
lemur	2.5	Green Iguana	2
lion	16	<b>Amphibians</b>	
tiger	16	Animal	Area ( m <sup>2</sup> )
leopard	16	poison dart frog	1.5
cheetah	20	bullfrog	1
panther	20	toad	1
black bear	15	fire-bellied newt	1.5
panda bear	10	salamander	5



# Now it's time to sketch the blueprint for your zoo!

## Tip; for drawing your Zoo blueprint :

- Use your "Zoo Planning Sheet" as a guide.
- Remember that the "Metres Squared Required" is a minimum, and your area may be larger if you want.
- Be sure to leave space for pathways. They should be 2m wide.
- You must also choose at least 2 "bonus" non-animal areas to your zoo. Your visitors would appreciate a toilet! (What else?)
- Label each area and exhibit or use a key.



Bonus Areas	Area ( : m <sup>2</sup> )
toilets	10
kiddie splash pool	30
auditorium	50
café	25
gift shop	15
playground	20
zoo equipment room	24



Extras	Area needed (m <sup>2</sup> )







## Pricing for your zoo



Adult: £15

Child: £10

Student: £12.50

OAP: £12.50

### Special Offers!

Family ticket (2 adults 2 children): £45

Family ticket (1 adult 3 children): £40

If there are 2 adults and 2 children in a family, how much would they save by buying the Family ticket?

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**Challenge:** What percentage are they saving?

.....%

What is the cheapest price for a family of 2 adults and 3 children?

.....

What fraction is the price of a child's ticket of an adult's ticket?

.....

**Challenge:** Can you put this in it's simplest form?

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Work out how much it would be for your family or friends to go to the zoo (you can invite anyone you want to!) Don't forget to write down who is joining you!

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## **Design a Zoo Creative Extension Options**

Choose 1 (or more) creative bonus project(s) to complete that will incorporate technology, language arts, or creative arts to your project.

 Design an advertisement for your zoo that persuades people to come and visit.

 Design an interactive animal presentation for infant pupils. Write out the script of the presentation.

 Design an advert for your zoo using technology of your choice.

 Design a zoo billboard that will be visible from the motorway.

 Design a T-shirt that people can buy at your zoo.

 Design a full colour visitor's map of your zoo.

 Compose a jingle that could play on the radio to advertise your zoo.

 Create a 3-D scale model of your zoo.

