Carnivore Digestion

The following activities are intended to be used as a follow-up to the virtual tour of the Toronto Zoo's Amur tiger habitat, with a focus on hunting styles and digestive systems in carnivores.

ACTIVITY ONE - Make a Scent Trail

Amur tigers use the sense of smell to communicate with other tigers about their territory and interest in mating. Both males and females spray a scent marker (fluid mixed with urine) on upright objects found on their travels. They may also mark objects by rubbing oils from their glands over the surface. Passing tigers then pick up and translate these messages (scents) so they can gather information about the sender, such as gender, availability for mating, and when they were last in the area.

Let's make our own tiger scent trail!

Materials:

- 1 cup water
- 10 drops of lemon juice OR vanilla extract
- 10 cotton balls
- 5 sandwich bags

Directions:

1. Prepare the scent solution by mixing the water with the lemon juice or vanilla extract.
2. Soak the cotton balls with your water mixture.
3. Place 2 soaked cotton balls in each sandwich bag. These bags are your scent markers!
4. Travel through your home territory and leave a scent marker (make sure the bag is open!) in an accessible space.
5. Travel through your territory several times each day and journal whether you can still smell your scent markers.
6. Repeat for the week and see how long you can smell the markers for!

Modifications:

- Try this with a family member as a "hide-and-seek" scent game. One person uses lemon juice and water, while the other uses vanilla extract and water. See if you can find the other person's markers by sniffing them out!
- You can try this outdoors by putting the scent mixture into a spray bottle. Mark several items in your backyard and journal the location and strength.

ACTIVITY TWO - Leap Like a Tiger

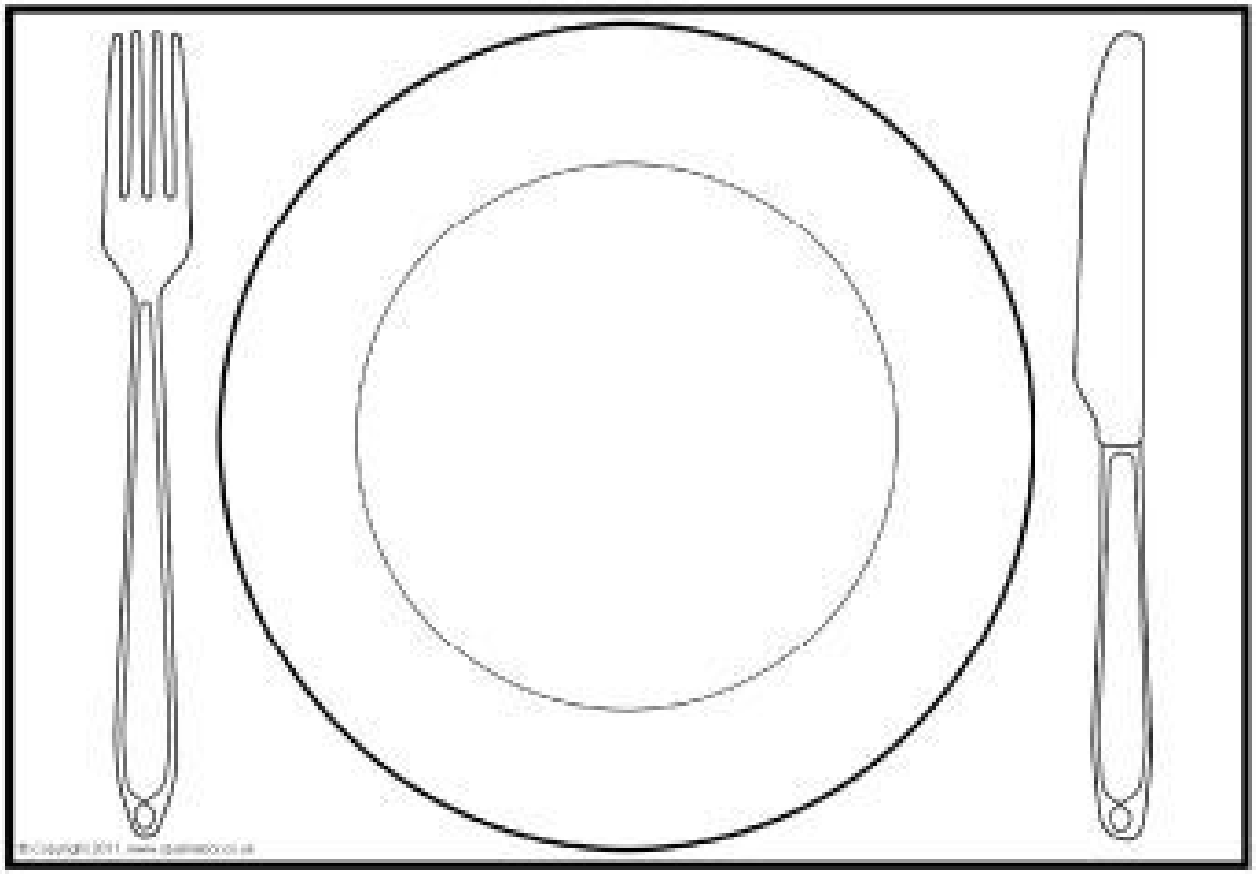
Amur tigers are not great runners, and they rarely chase their prey very far. Instead, they approach their prey stealthily, hiding behind rocks, trees, and bushes as they try to get closer. As demonstrated during the live presentation, tigers crouch low to the ground and slowly sneak as close as possible before pouncing on the unsuspecting prey. Using the power of their hind legs, Amur tigers can leap from a crouching position between 9-10 metres to take down their prey!

Let's practice being an Amur tiger! On a blank sheet of paper, trace and cut out an outline of your own hand. Cut out the tiger print found on the next page of this resource. Which "paw" is bigger?

Place the tiger pawprint on the floor as your starting point. Get into your Amur tiger crouching position and leap forward as far as you can! Mark your landing spot on the floor with the cutout of your hand. Did you leap as far as an Amur tiger? To compare, measure 9 metres from your tiger pawprint.

ACTIVITY THREE - What's for Dinner?

Amur tigers are strictly carnivores, meaning that they only eat meat. In the wild, Amur tigers eat wild boar, deer, antelope, buffalo, or guar. Did you know that an Amur tiger can eat up to 27 kg of meat in one sitting? If you were an Amur tiger, what would your dinner plate look like? Use the handout provided on the next page to cut out meat items, and paste them to the blank plate below until you get a meal that equals 27 kg.



Summary of Food:

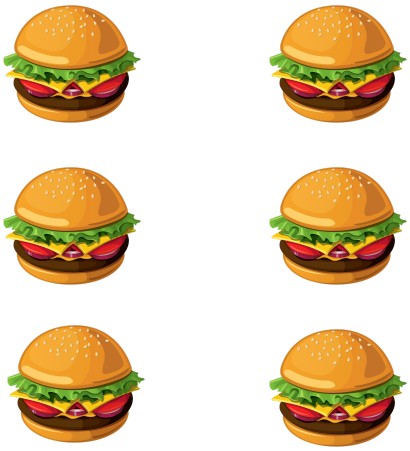
_____ x Hamburger = _____kg

_____ x Bacon = _____kg

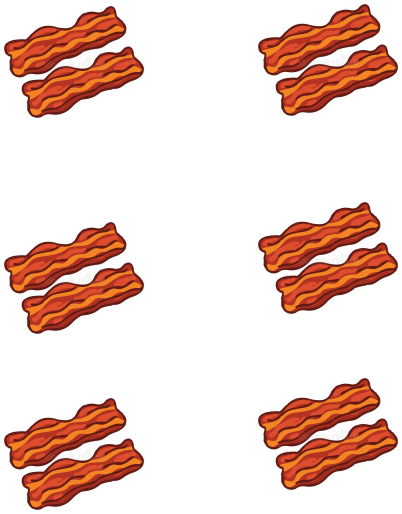
_____ x Roast Beef = _____kg

_____ x Steak = _____kg

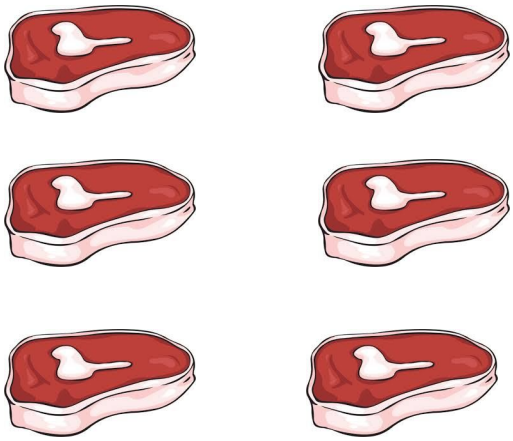
_____ x Ham = _____kg



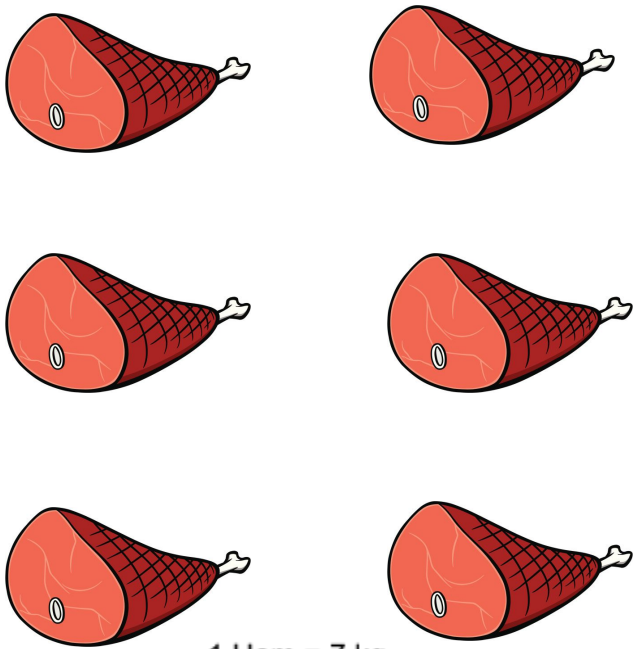
1 Hamburger = 0.35 kg



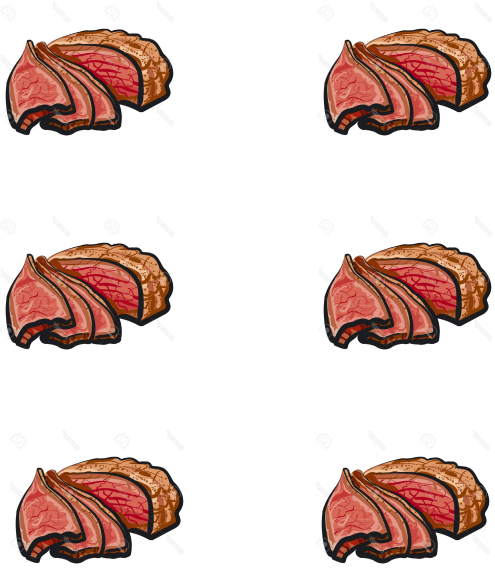
Bacon Package =0.5 kg



1 Steak = 0.5 kg



1 Ham = 7 kg



1 Roast Beef = 2.5 kg

ACTIVITY FOUR - Adaptation Matching

Amur tigers live in a harsh climate that can have both extremely cold temperatures and lots of snow in the winter season. The tigers have several interesting adaptations to help them hunt and survive in this climate. What might those adaptations be? Use the images below to match the feature to the image that corresponds best to the body part/behaviour.

1. Duvet

2. Lard

3. Boots

4. Scarf

5. Brush

6. Fitness Tracker

7. Sandpaper

8. Knife Set

A. Fur on neck

B. Large territory

C. Whiskers

D. Rough tongue

E. Thick fur

F. Sharp teeth

G. Fur on paws

H. Layer of fat

Answers:
1:E
2:H
3:G
4:A
5:C
6:B
7:D
8:F