Science Programme of Study
Animals, including humans

This unit has been designed for children in Year 2 and meets the requirements of the 2014 Curriculum.

Introduction to the programme

Animals, including humans feature in the Year 2 Programme of Study for Science. Through this unit, children will consider the basic needs of animals for survival. They will consider the importance of exercise and nutrition in more depth, including doing surveys of both the food they eat, and the favourite foods of their classmates. They will move on to think about how animals grow up from babies into adults and consider how their needs change.

It is also suggested that teachers organise a visit to somewhere in the local area where animals can be seen.

Recommended websites

Websites are referred to in the planning.

Lesson Variations

The session plans for this unit are detailed.

Suggestions have been made about how to differentiate activities for children with Special Educational Needs, children with English as an additional language, and children who are gifted and talented.

Each session also has a resource list which makes it clear which resources have been included in this pack, and which need to be sourced at school.

Year 2 Unit – Animals, including humans Session 1

Duration 1 hour.   Date:

Main teaching

LO: To know why we need food, and that food can be put into different groups.
CHILDREN'S LO: To know that food can be put into groups.
CCL – Music in plenary
Q: What do animals, including humans, need to survive?
(water, food, air)
Q: Why do we need food?
Q: What else do we need apart from food to be healthy?
(Ensure children understand they must drink too) **Q: Are all foods good? Why/why not? Can you give me some examples?**
Children carry out **Activity 1** on the carpet:
Free sort food into groups and discuss
Q: Why did you put __ in the same group as ___?
CT to model using Speaking Frame with TA.
Children to use Speaking Frame for support on IWB.
CT to introduce the 5 food groups. Tell the children that scientists sort food into different groups because they give your body different things that it needs. Tell them the names of the groups.
- **Dairy**
- **Carbohydrates** (Bread, cereals, potatoes, pasta, rice - ensure children understand cereals here doesn't just mean coco pops)
- **Meat & Fish**
- **Sweets & oils**
- **Fruits and vegetables**
Ask children to go back to their sorted food from Activity 1, and now to try to sort it into those 5 groups.
Q: Can we eat food from only one food group?
Why or why not?
CT to explain that eating healthily means eating the right amount from each group. That's what the Food Pyramid shows us – how much from each food group we should eat. At the bottom of the pyramid we can eat lots of food from that group and as you go up the pyramid we should eat less food from those groups.
Ethnic Minority Achievement: visual scaffolding, modelling, speaking frames, mixed ability grouping.
ICT – Whiteboard, Sing up song
http://www.singup.org/songbank/song-bank/whiteboard/song/290/
Every Child Matters: Keeping Healthy

Activities - Differentiation

Activity 1: Free sort food into groups and discuss on the carpet. In Mixed Ability groups children to free sort a selection of food packaging into groups. Children to explain how/why they sorted the foods.

Activity 2: Children to sort food pictures into Food Pyramid in their Science books.
CT to give labelled pictures of foods.
Children to choose a food for each food group and draw it into the pyramid. The majority also to label their drawings.

G&T – pyramid does not have labels for food groups so children need to write these in too. Could also suggest their own foods rather than use images.

EAL/SEN:
Speaking Frame for Activity 1:
I put _____ with _____ because _____

Vocab:
Food group (and their names – see left), food pyramid, healthy.

Success Criteria:
I know there are 5 food groups.
I know I need different amounts of each food group.
I can identify which food group something belongs in.

Plenary

Q: What food group does pizza go into?

Explain that lots of things that we eat like pizza, pasta, curry, etc... is made up of foods from different groups.

End by singing Vegetable and Fruit song from Sing Up website. This might require a subscription but many schools are subscribed. If not, there are many free fruit and veg songs on youtube.

Tell children to remember what they eat for supper and breakfast because they'll need to know for the next session.

Resources

(bold = in pack)
Worksheet (regular)
Worksheet (G&T)
Food packaging from a selection of food groups.
Photographs of food would work too.
Labelled foods to sort

Year 2 Unit – Animals, including humans Session 2

Duration 1 hour   Date:

Planned by Matilda Munro for Two Temple Place, 2013

Main teaching	Activities - Differentiation	Plenary
LO: To understand what eating healthily means. **CCL** – Maths (data handling) Go over the food groups from Session 1. On IWB CT to show foods and children to vote which food group it belongs to. Use this to assess children's grasp of food groups from previous lesson. CT to model making a food diary on IWB. Breakfast: Lunch: Supper: Snacks: When you have completed your food diary, discuss with the children what food groups different items fall into. E.g a cheese sandwich would be both dairy and carbohydrate. **Activity 1: Make a food diary in Science books.** Back to the carpet. Ask children to help you put your food diary into a food pyramid. For each portion, put a tick or tally in the correct part of a blank food pyramid. **Q: Did I have a healthy diet yesterday? Were my meals balanced? What should I have eaten more of? What should I have eaten less of?** **Activity 2: Record Food Diary into Food Pyramid.** CT to interpret and discuss children's diets. **Q: Did you eat a balanced diet? Do you have the right amount from each group? What group did you have too much of? What group did you have too little of?** **Ethnic Minority Achievement:** visual scaffolding, modelling, speaking frames, mixed ability grouping. **ICT** – Whiteboard, Sing up song http://www.singup.org/songbank/song-bank/whiteboard/song/290/ Every Child Matters: Keeping Healthy	**Activity 1: Make a food diary in Science books.** Children to record in the Science books what they ate the previous day. If children can't remember yesterday they can use today's meals. **Activity 2: Record Food Diary into Food Pyramid.** Children to have a blank Food Pyramid and to convert their food diary into ticks (or tallies) on the food pyramid. Eg, carrots for lunch would be 1 tick in the Vegetables box. If time, they can then use the writing frames (below) to write a sentence evaluating their diet. **SEN/EAL:** Writing frames, additional support. **G&T:** Write sentences independently in books to describe their diets. **Speaking/writing frames:** Yesterday I did eat healthily because _____ Yesterday I did not eat healthily because _____ I need to eat more/less _____ to be healthier. **Success Criteria:** I know that food can be sorted into different groups. I can decide if I have eaten healthily.	Children to discuss their diets and whether or not they have a healthy diet. **How can we eat more healthily?** **What do you need to eat more of?** **What do you need to eat less of?** Can sing Vegetables and fruit song if time. ### Resources **(bold = in pack)** **Food diary worksheet** **Blank food pyramids for tally chart of food diaries.** **Speaking/writing frames**

Year 2 Unit – Animals, including humans Session 3

Duration 1 hour.   Date:

Main teaching

LO: To collect data about our favourite food.

CCL – Maths

VOCABULARY: food groups, food pyramid, sort, data, collect, display, least, most

What is data? Explain that data is information, any kind of information can be called data. Today we are going to find out data about our class's favourite foods.

AFL: How can we find out about our favourite foods?

(CT to assess children's previous knowledge on data handling) Tell children that we are going to find out about our class's favourite foods. The first thing that we need to do is to come up with options for favourite foods. Ask children to come up with 7 options for favourite food and scribe on IWB.

Now how can we collect data, collect information, about who likes what?

CT to show blank tally chart and model filling it in on IWB. Explain that 4 ticks then cross means 5 and we organise our data into groups of 5.

CT to model recording favourite foods into tally charts.

Activity 1: Collect data in tally charts

Now that we have this data, how can we make it easy for people to see the information?

CT to explain that we use block graphs to display data so that it is easy to see.

AFL: How do we make a block graph?

CT to model steps to making a block graph.

1. Draw vertical and horizontal lines.
2. Label the vertical line numbers 1-20.
3. Label the horizontal line with the food options. Each column of blocks is for one option, so children need to write labels sideways and appropriate size.
4. Use data from tally chart to fill in # of blocks. Use different colours so easy to see.

Activity 2: Make a block graph of favourite food.

Ethnic Minority Achievement: visual scaffolding, modelling, speaking frames.

ICT – Whiteboard

Every Child Matters: Keeping Healthy

Activities - Differentiation

Activity 1: Collect data in tally charts.

Children to have blank tally charts and to fill in favourite food options listed on IWB. CT to give children time to collect data from classmates and record in tally chart.

Activity 2: Make a block graph of favourite food.

Children to make block graphs using data from tally charts. Ensure children follow steps to making a block graph.

HA: Make own block graphs.

SEN/EAL: Adult support + Block graph templates. Could use plastic blocks on axes to make a 3D graph.

G&T: Interpret results of their block graphs using questions for plenary.

Success Criteria:

I can collect data.

I can display data in a graph.

Plenary

Interpret results of their block graphs.

Which is the class's favourite food?

Which is the least popular?

What is the 2nd most popular?

G&T: How many more people like ___ than ___?

Resources

(bold = in pack)
Tally chart for recording data
Block graph template

Year 2 Unit – Animals, including humans Session 4

Duration 1 hour.   Date:

Main teaching	Activities - Differentiation	Plenary
LO: To know we need to exercise to be healthy **CCL** – PE This lesson could be integrated into an existing PE lesson, or taught as a separate cross-curricular science lesson. Class teacher to set up a range of activities inside or outside. Examples: - skipping (outside) - star jumps (in or out) - running on the spot (in or out) - hopping on the spot (in or out) - bouncing a basketball (outside) - stretching (in or out) Begin by warming up with the children, stretching slowly and carefully. Ensure children have adequate space. Ask them how they feel after warming up. **Q: What feels different to before?** (warmer, heart beating more quickly) **Q: Why is warming up important?** (so we are ready to exercise and we do not injure ourselves) After they have done each activity, children to answer questions orally in MA pairs: 1. **What activity did you do?** 2. **What parts of your body was it exercising?** 3. **How did you feel afterwards?** **Ethnic Minority Achievement:** role play, modelling, speaking frames **ICT –** Whiteboard **Every Child Matters:** Keeping Healthy	**Activity 1:** Children to carousel around physical activities and to ask and answer the three questions in MA pairs. Teacher and TA to listen to responses and record those of focus groups on stickers to put in books. Teacher also to take photos to be stuck in books as evidence. **G&T:** Children to think about why exercise is important to keep healthy. **Q: If you were an Olympic athlete and exercised a lot every day, how would that affect what you need to eat to be healthy?** **SEN/EAL:** **Speaking frames:** I just did _____ I was exercising my _____ Afterwards I felt _____ **Success Criteria:** I know that exercise has an effect on my body. I understand that exercise is important to keep healthy.	Why is exercise important for keeping healthy? What kinds of exercise do you enjoy doing? What exercise can you do outside school? Discuss G&T question. If you do a lot of exercise, your body needs a lot of energy, so you need to eat more to be healthy. Analogy: if you want a car to drive a long way, it needs more petrol than if you are just going a short way. ## Resources **(bold = in pack)** Possible PE equipment Camera Sticky labels **Questions and speaking frames**

Year 2 Unit – Animals, including humans Session 5

Duration 1 hour.   Date:

Main teaching

LO: To know that animals (including humans) produce young which grow into adults.

Tell children that all animals, including humans, produce young which then grow into adults.
Q: What are the different stages in a human life called? Show pictures on the whiteboard and ask them to put them in order, and then label.
baby > toddler > child > teenager > adult
Explain that just like humans, other animals also produce offspring (babies) and they also change as they grow up.
Q: Do you know the names of any baby animals? What do they grow into?
Very cute baby animals video:
http://www.bbc.co.uk/nature/collections/p00fxfvq

Go over some familiar ones and ensure children know the names of some animals' babies:
Kitten > cat
Puppy > dog
Duckling > duck
Chick > hen/chicken (egg > chick > chicken)
Calf > cow
Piglet > pig
Lamb > sheep
Tadpole > frog (could teach frogspawn > tadpole > frog)
Egg > caterpillar > pupa > butterfly

Children to complete **Activity 1**.

Ethnic Minority Achievement: modelling, MA pairs, visual scaffolding, writing frames
ICT – Whiteboard
Every Child Matters: Keeping Healthy

Activities - Differentiation

Main activity:
Activity 1 in MA pairs or threes:
Each pair or three to have a set of animal cards and they must match the parent and the baby.
When they have matched all of the cards, children must choose 3 and record them in their books.

SEN/EAL: MA pairs, visual scaffolding

G&T: To think about how the needs of different baby animals vary. e.g. a lamb can walk within moments of being born – how is this different from a human?

Success Criteria:
I know that all animals have babies.
I know these babies grow up into adults.
I understand that sometimes the baby looks very different from the adult.

Plenary

Talk to the children about their experiences of babies and toddlers within their homes.

Q: How is a toddler different from a baby?
CLUE: Think about how they communicate, how they move and how they eat…

Q: How are you different from a toddler?

Resources

(bold = in pack)
Animal pictures of parents and babies.
One extra set could be printed per class for display or laminated for use as a memory game in wet play box. – you can make your own, or download from www.twinkl.co.uk

Adults & Young worksheet

Food Pyramid

L.O.: To know that food can be put into different groups

Look at the pictures on your table:

You need to find at least 1 food to put in each section of the pyramid.

When you have chosen one, draw it in the correct part of the pyramid,

and then label it – copy the name from the picture carefully.

FOOD
PYRAMID

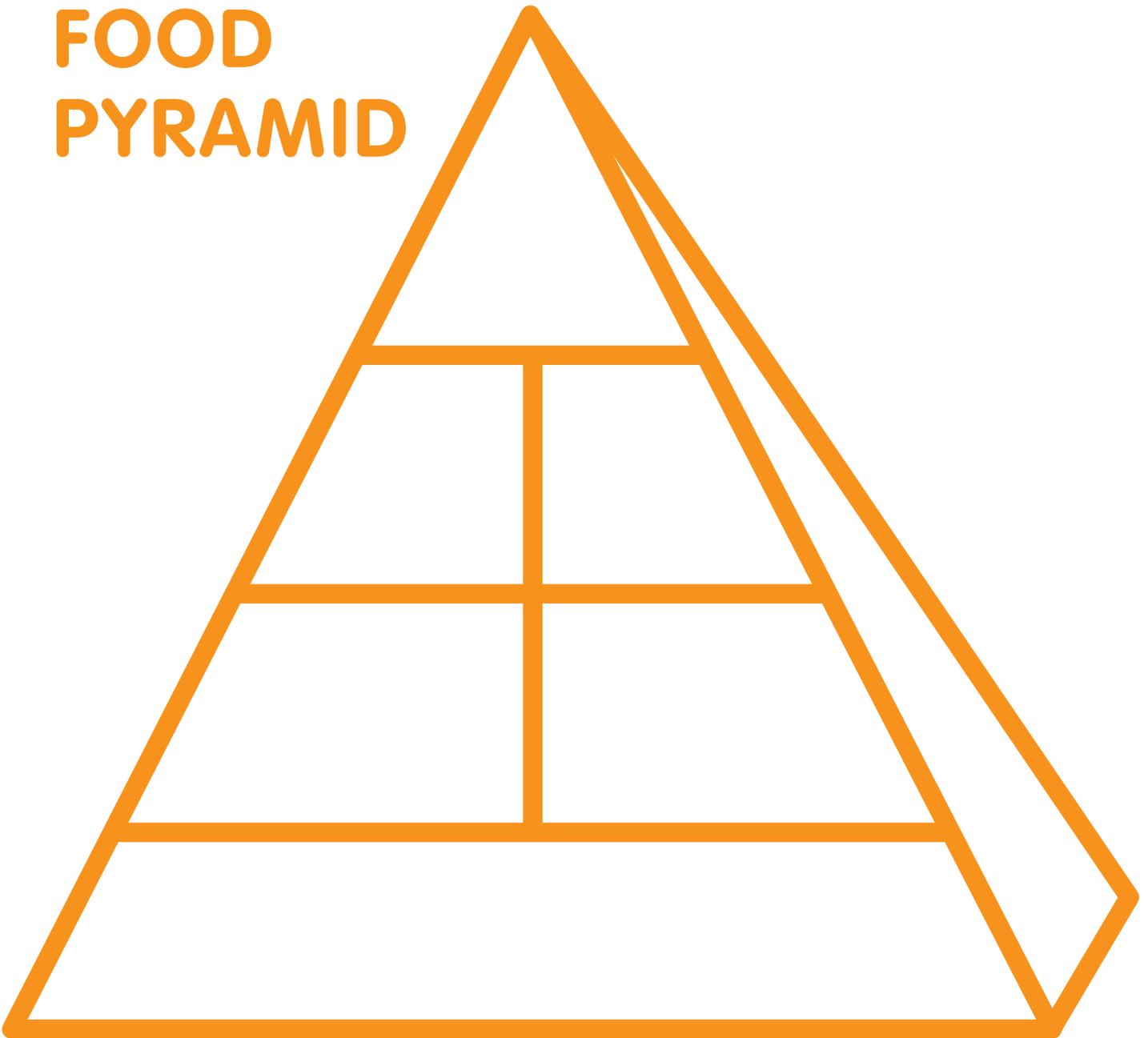|		
Bread	Pasta	Cheddar cheese
Milk	Yoghurt	Grilled steak
Carrots	Chicken curry	Okra
Apple	Oranges	Sweets
Fish	Sweetcorn	Mango

Food Pyramid

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When you have chosen one, draw it in the correct part of the pyramid,

and then label it – copy the name from the picture carefully.

FOOD PYRAMID

SWEETS & OILS

DAIRY   MEAT & FISH

FRUITS   VEGETABLES

CARBOHYDRATES
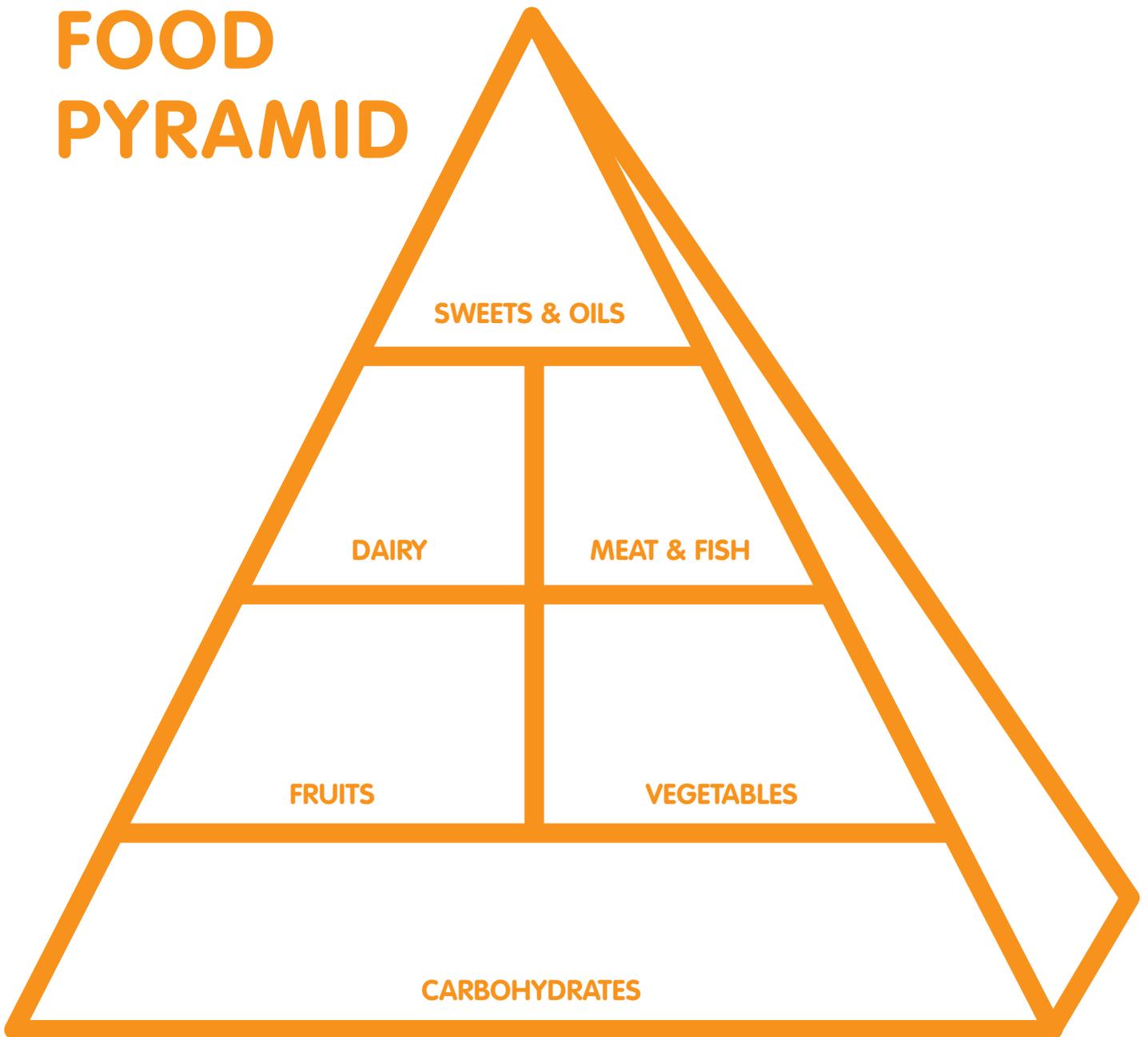
Food diary Worksheet
L.O.: To understand what eating healthily means

What did you eat for breakfast, lunch and supper and snacks yesterday?

Don't forget to include what you drank too!

BREAKFAST	
LUNCH	
SUPPER	
SNACKS	

Food Pyramid

L.O.: To understand what eating healthily means

You need to look at your food diary. Then put a tick in the right part of the pyramid. For example, if you had cereal with milk for breakfast you could put one tick at the bottom of your pyramid (cereals), and one for dairy (milk). Then you need to decide if you ate healthily yesterday or not...did you have a balanced diet?

FOOD PYRAMID

SWEETS & OILS

DAIRY

MEAT & FISH

FRUITS

VEGETABLES

CARBOHYDRATES
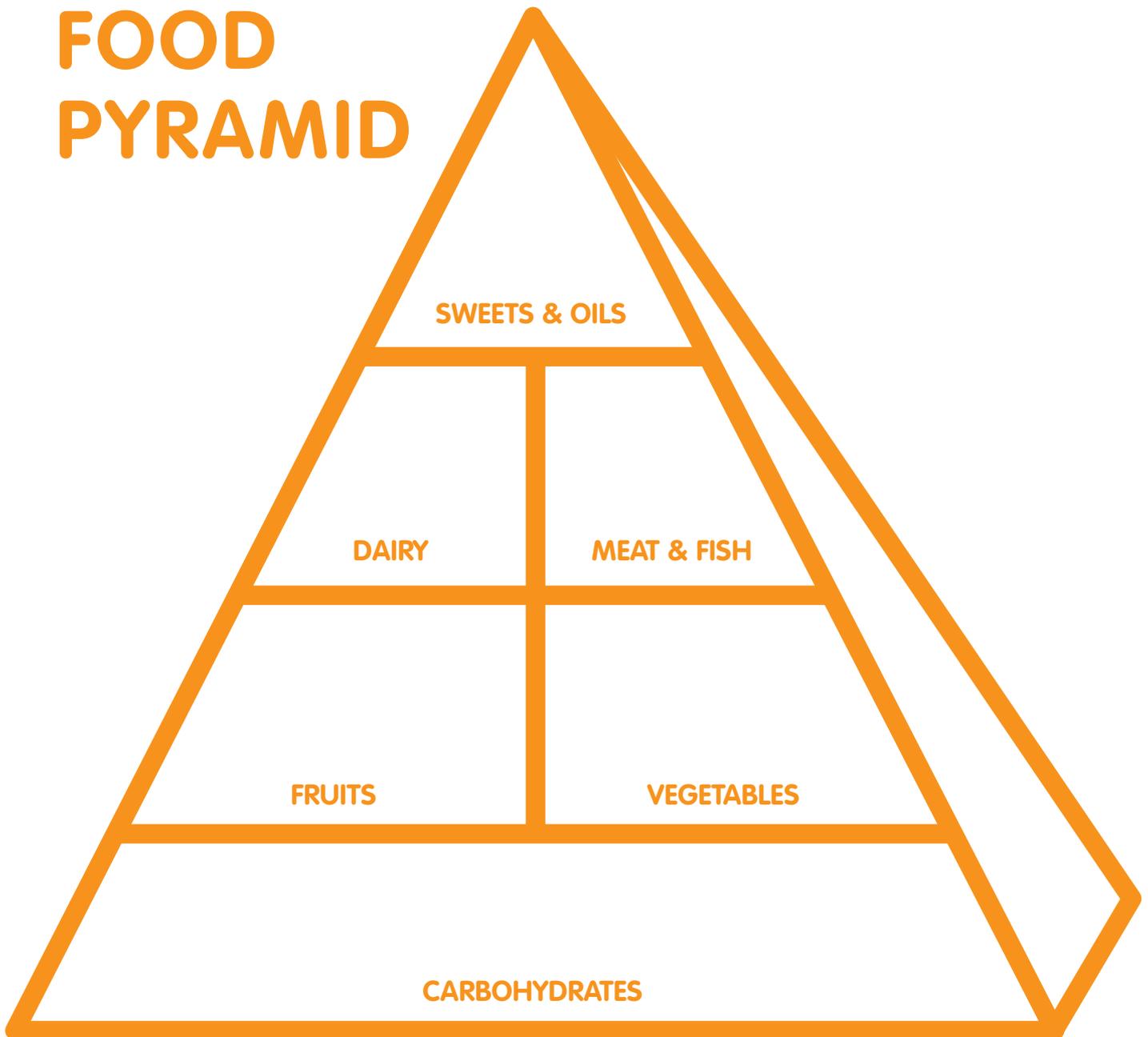
Speaking/writing frames:
L.O.: To understand what eating healthily means

Yesterday I did eat healthily because

....

....

Yesterday I did not eat healthily because

....

....

I need to eat more/less...

to be healthier.

Tally Chart for Recording Data

Favourite Food Options	No. 1-5	No. 6-10	No. 11-15	No. 16-20

Block Graph Template

20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
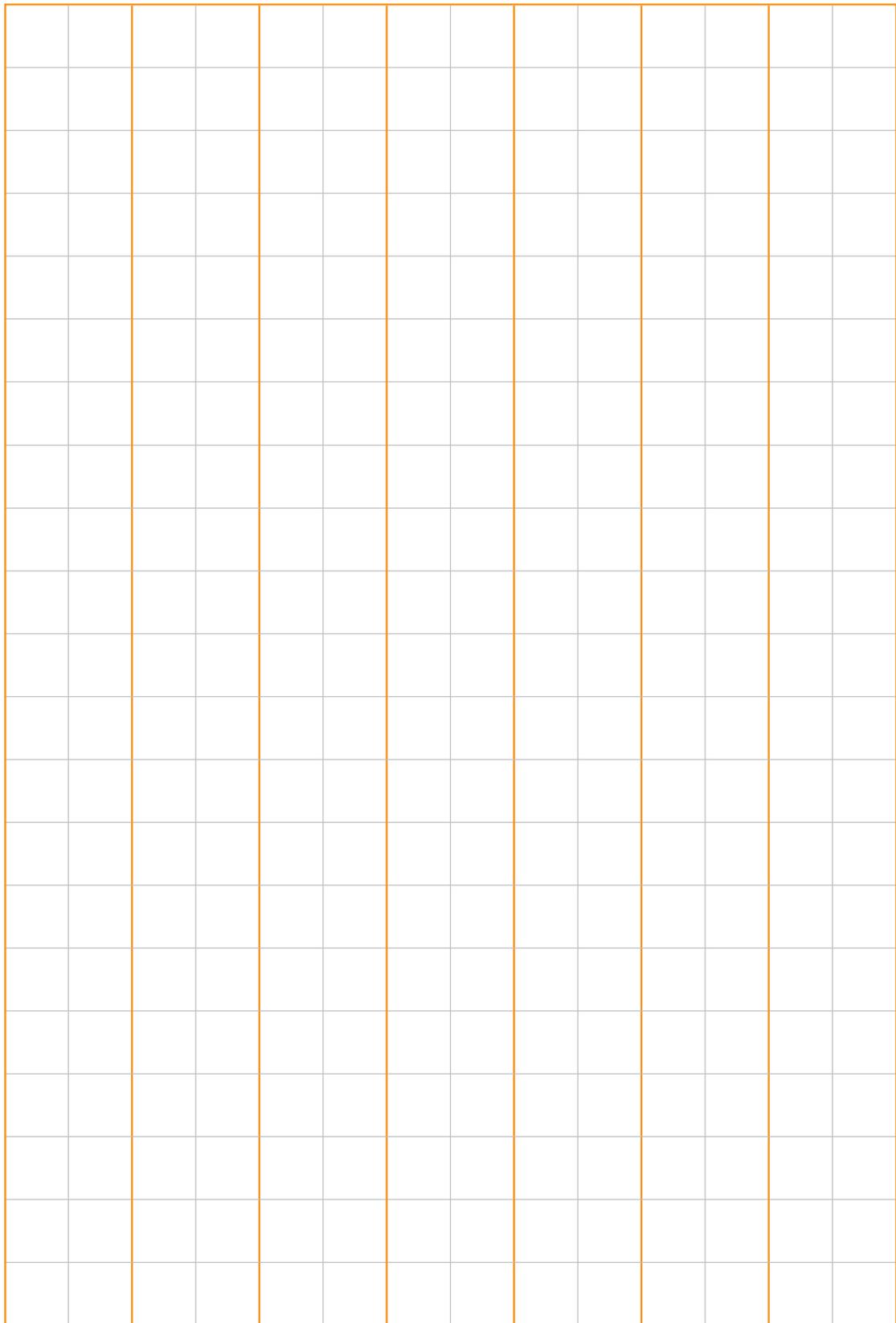
FOODS

Questions and speaking frames:

L.O.: To know we need to exercise to be healthy

Questions:

1. What activity did you do?

2. What parts of your body was it exercising?

3. How did you feel afterwards?

Speaking frame:

I just did ....

....

I was exercising my

....

....

Afterwards I felt

....

....

Worksheet

L.O.: To know that animals (including humans) produce young which grow into adults

First you need to work in your group to sort out your animal cards.

Can you match the adult to the baby?

Then choose 3 of your pairs and draw them and write their names in this table.

Adult	Baby