

Parent-Pupil

SCIENCE

Information File

for Key Stage 2

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Introduction





This Information File is a comprehensive revision package in Science covering all aspects of the **Science** attainment target in The Northern Ireland Curriculum for the end of Key Stage 2.

The Information File comprises:

- ✧ A comprehensive reference file detailing information that children should know for the **Science** attainment target at the end of Key Stage 2. The content, which should be learnt, is outlined briefly in a number of **NEED TO KNOW** boxes.
- ✧ A variety of review questions.
- ✧ 10 Oral Checklists to consolidate knowledge of each section of content.



Vertebrate Factfile

	TYPE OF BODY COVERING	WARM OR COLD BLOODED	BABIES BORN LIVE OR AS EGGS
Mammals 	hair / fur	warm	live (care for young - babies drink mother's milk)
Reptiles 	dry scales	cold	eggs (laid on land)
Fish 	dry scales	cold	eggs
Amphibians 	damp skin	cold	eggs (laid in water)
Birds 	feathers	warm	eggs

Animal Defences

Animals defend themselves in a number of ways. Some animals can use a variety of the following methods listed below to help them attack other animals or defend themselves against attack.

NEED TO KNOW

Children should be aware of how some common and familiar animals defend themselves from attack from other animals.

1. speed,
e.g. gazelle



2. horns,
e.g. rhino



3. claws,
e.g. bear



4. beak,
e.g. vulture



5. poison,
e.g. scorpion



6. strength,
e.g. elephant



7. camouflage,
e.g. stick insect



8. teeth,
eg tiger



9. hearing,
e.g. owl



10. sight,
e.g. eagle



11. smell,
e.g. skunk



12. sting,
e.g. bee



13. spikes,
e.g. porcupine



The methods some animals use in attack and defence:

Characteristic \ Animal	Speed	Poison	Claws	Sting	Teeth	Strength	Camouflage
Adder		✓					
Elephant						✓	
Lion			✓		✓	✓	✓
Rabbit	✓						
Scorpion		✓					
Wasp				✓			



Invertebrates – Oral Checklist

- 1 What does the word invertebrate mean?
- 2 How many legs does a spider have?
- 3 How many parts make up an insect's body?
- 4 Name 3 invertebrates which have more than 8 legs.
- 5 Name an animal which is both segmented and has many legs.
- 6 How many legs has an insect?
- 7 Name 3 crustaceans?
- 8 Name the stages of development in the life cycle of a butterfly. Begin with the earliest stage.
- 9 Name two 8-legged invertebrates.
- 10 Is a snail a crustacean or a mollusc?
- 11 Name 3 molluscs.
- 12 Which one of the following invertebrates cannot fly?
(a) ladybird (b) woodlouse (c) wasp (d) fly
- 13 Name 2 invertebrates which camouflage themselves through looking like the shape or the colour of their natural surroundings.
- 14 How does a scorpion kill its prey?
- 15 What does a spider use to catch its prey?
- 16 During what time of the year does a butterfly lay its eggs?
- 17 Approximately how long does an adult butterfly live?

The Human Body

NEED TO KNOW

Children should be aware that the body's skeleton performs 4 basic functions.

Skeleton

Humans have skeletons that:

1. **Support** the body
2. Allow the body to **move**
3. **Protect** the major organs
4. Provide **shape** for the body

Joints in our body help us **BEND**, **TURN** and **TWIST**.



shoulder joint

elbow joint

wrist joint

hip joint

knee joint

ankle joint



Muscles hold bones together and allow the bones to move.



Non-living Force Makers

(i) **Natural**
Wind, tide (water), sun (solar)

(ii) **Man-made**
Energy can be stored in a number of ways which allow models and machines to work.

- (a) springs
- (b) batteries
- (c) balloons (air inside)
- (d) elastic bands
- (e) machines: some use petrol, electricity or batteries as a source of energy.

NEED TO KNOW

Children may be expected to identify the energy sources in certain objects as illustrated below.



Car (petrol)



Car (electricity)



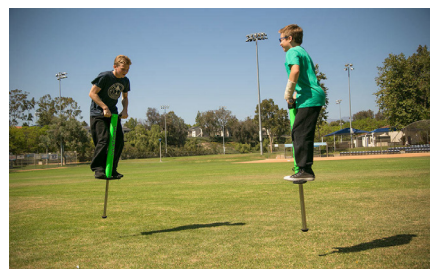
plane
(elastic band)



Fire
(wood)



Torch
(battery)



Pogo Stick
(spring)

How sound is produced:

- * A **vibrating** object can produce sound, e.g. a harp string vibrates when it is plucked.
- * Other sounds are produced which cannot actually be seen, e.g. a flute being blown makes air vibrate inside the instrument, producing sound.
- * When we speak, our **vocal cords** vibrate.

Examples

Air vibrates to make a sound in a flute.



The metal vibrates when the cymbals clashed.



The skin of a drum vibrates when struck.

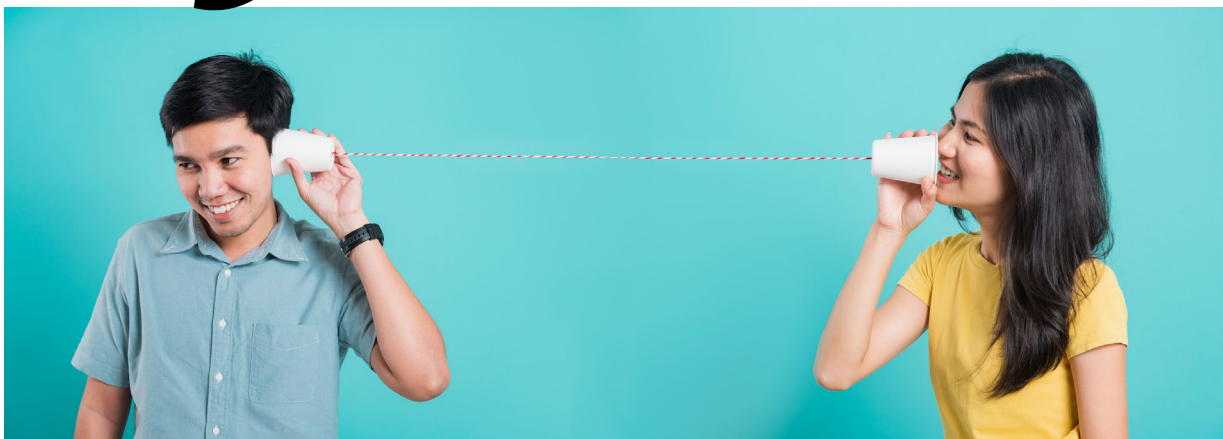


The strings of a harp vibrate when they are plucked.



A listening device

Sound travels through a vibrating string as shown on the diagram so that someone speaking into a cup can be heard by another person with their ear against a cup at the other end of the string.



Answer Key

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The Body and Healthy Living page 56

1. touch, sight, hearing, smell, taste
2. support
allows movement
protects major organs
provides shape
3. brain
4. respiratory
digestive
circulatory
5. allows turning, twisting and bending
6. sweet
sour
bitter
salty
7. any 6 of: brain, lungs, heart, stomach, kidneys, liver, bladder
8. stomach
9. bones
10. pumps blood around the body
11. stores the body's waste fluid
12. respiratory
13. sends messages around the body
14. any 3 of: eyes, ears, finger tips, lips, palms, soles of feet (or suitable alternatives)
15. heart
16. bladder
17. nerves
18. arteries
19. liver
20. exercise, eat balanced diet, rest, wash regularly (or suitable alternative)
21. heart, lungs
22. fats
vitamins
carbohydrates
23. protein
24. minerals
25. prescribed drugs
26. ecstasy, cocaine, glue, non-prescribed drugs (or suitable alternatives)
27. helps the body grow and repair itself
28. fish
egg
lean meat
cheese (or suitable alternatives)
29. carbohydrates, vitamins
30. keep the body healthy
31. fruit, vegetables
32. increases it
33. sleep
34. gives the body energy
35. potatoes
pasta
rice
bread (or suitable alternatives)
36. veins
37. eating
38. gives the body warmth and energy
39. fatty meat
milk
cheese
cooking oils (or suitable alternative)
40. fats/sugar
41. digestive
42. kidney

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