

TEACHERS GUIDE

Lesson Plan

Subject: Science Unit - Movement - Lesson 1

Class/ year group: 4 (age 8-9)

Context: Introduction to unit on movement and the human skeleton

Objectives:

- To know the functions of the skeleton
- To know some of the names of the bones of the skeleton

Resources:

Blank outline of human body (Appendix 1), IWB – Bones presentation. Skeleton model (if available)

Vocabulary: skeleton, bones, move(men)t, support, protect, skull, ribs, pelvis, spine

Key Questions What do you think your skeleton looks like?

What jobs (functions) does your skeleton do?

If you didn't have a skeleton, what would it stop you doing?

Activity:

- **Input** – Give children a blank outline of a human body. (Appendix 1)
- Ask children to visualise what their skeletons look like.
- Ask children to draw inside the outline and discuss with a partner what they know about the skeleton.
- Show children 'Bones Presentation' (attached) and discuss the different bones.
- Ask children to feel the bones through their skin – can they feel their ribs, skull, pelvis, spine?
- What function/job does the skeleton do?
 - * Movement
 - * Protection
 - * Support

Plenary:

Discuss what children have learned – can they point to skull, ribs, spine and pelvis on their own body?

Success criteria

Children can name some bones in their body.

Children can say the functions of the skeleton

Assessment.

Lesson Plan

Subject: Science Unit - Movement - Lesson 2

Class/ year group: 4 (age 8-9)

Context: Follow on from lesson 1 and learning about the human skeleton.

Objectives:

- To know some more names of the bones of the skeleton
- To know how the bones join together to form the skeleton

Resources:

Powerpoint 'The Human Body Lesson 2', Skeleton model (if available) Appendix 2, 3 and 4

Vocabulary: skeleton, bones, skull, ribs, pelvis, spine, humerus, radius, ulna, femur, fibula, tibia, patella, scapula

Key Questions How do your bones join together ?

Activity:

Input Lesson 2

- Remind children of the different bones in their body. Recap the 4 names learned last lesson – skull, spine, ribs and pelvis.
- Show children the Powerpoint – The Human Body lesson 2
- Using a full size skeleton model (if possible) , use the label cards (Appendix 2) to attach to model. Learn the names of the bones humerus, radius, ulna, femur, fibula, tibia, patella, scapula.
- Play a game 'Simon Says' where children only do what Simon says Eg Simon says point to your skull (children do it), Point to your ribs (don't do it) etc.
- Give children the skeleton sheet (Appendix 3) Can children match the names of the bones to the skeleton and answer questions?
- Discuss answers with the class.
- Children make a model skeleton by cutting out bones and fixing together with split pins. (Appendix 4)

Plenary:

Use their model skeletons to point to different bones.

Success criteria

- Children can name some bones in their body.
- Children can join the different bones together correctly.

Assessment.

Lesson Plan

Subject: Science Unit - Movement - Lesson 3

Class/ year group: 4 (age 8-9)

Context: Having learned about the human skeleton, children can relate their knowledge to other animals.

Objectives:

- To recognise the skeletons of different animals.
- To be able to compare different types of skeleton.

Resources:

Powerpoint – Animal skeletons, Appendix 5 and 6

Vocabulary: skeleton, bones, skull, ribs, pelvis, spine, same, different, movement

Key Questions How are the skeletons the same/ different from human skeletons?
Why are they different?

Activity:

- Look at Powerpoint of Animal skeletons.(attached) Can children identify the animal before you show answer on the slideshow?
- How are the skeletons the same as humans?
- How are the skeletons different? Does the different skeleton affect the way the skeleton moves? Eg Snake
- Using photo sheets (Appendix 5) and comparison sheet (Appendix 6) ask children to draw one in detail and write how it is the same and how it is different from a human skeleton.

Plenary:

Ask different children to explain something the same and something different that they have noticed.

Success criteria

Children can name some differences between human and animal skeletons.

Children can name some similarities .

Assessment.

Lesson Plan

Subject: Science Unit - Movement - Lesson 4

Class/ year group: 4 (age 8-9)

Context: Having learned about the human and animal skeletons, children will learn how muscles affect movement.

Objectives:

-To know some of the names of muscles.

Resources:

Vocabulary: muscle, tendons, biceps, triceps, quadriceps, work in pairs, contract, relax

Key Questions

What jobs (functions) do your muscles do?

Activity:

Input –

- Ask children to flex their arms and feel the muscle in their arm working. Do the same with the leg and feel the thigh muscle.
- Watch the cartoon on how muscles work from the website http://kidshealth.org/kid/htbw/htbw_main_page.html
- On the same website, do the online quiz.
- Label a diagram of how a muscle works (Appendix 7 – muscle picture)

Plenary:

Discuss what children have learned – can they point to their biceps, triceps, quadriceps on their own body?

Success criteria

Children can name some muscles in their body.

Assessment.

Lesson Plan

Subject: Science Unit - Movement - Lesson 5

Class/ year group: 4 (age 8-9)

Context: Having learned about skeletons and muscles, the children will carry out an investigation.

Objectives:

- To be able to investigate a question
- To be able to predict and carry out an investigation.
- To record results and draw conclusions.

Resources:

Measuring tape, ruler, Appendix 8

Vocabulary: skeleton, bones, move(ment), support, protect, skull, ribs, pelvis, spine

Key Questions What do you think will be the answer to the question? Why?

How could we make it a fair test?

How could you record your results?

Activity:

- **Input** – Investigation – Can the person with the longest femur, jump the furthest?
- Discuss with the class what their prediction would be? (Appendix 8)
- How can we make it a fair test?
- Work in groups of 6 and plan an investigation. Think about keeping the test fair by keeping everything the same apart from one factor.
- Predict who in the group will jump the furthest. Test the theory by measuring and jumping.
- Record results.
- Draw conclusions.

Plenary

Success criteria

Children can make a prediction.

Children can carry out a fair test and collect results.

Children can draw conclusions.

Assessment.

Lesson Plan

Subject: Science Unit - Movement - Lesson 6

Class/ year group: 4 (age 8-9)

Context: Continue work from last lesson by showing children how to record findings on a line graph. Review learning during this unit

Objectives:

- To be able to draw a line graph of results.
- To be able to answer quiz questions about Movement.

Resources:

Vocabulary: results, line graph, skeleton, muscles, bones

Key Questions How could you show your results as a graph?

Activity:

Input –

- Show children how to draw a line graph of the results – one axis shows length of femur and one axis shows distance jumped. Plot names on the points.

To review their knowledge during the unit on 'Movement', do the online quiz. (PP Moving and Growing WWTBAM attached)

Plenary:

Discuss what children have learned – can they write down 3 facts they have learned.

Success criteria

Children can draw a line graph.

Assessment. See how much has been learned by doing the quiz 'Moving and Growing WWT-BAM'