

MEDIUM TERM PLAN

TERM: Autumn 1		YEAR GROUP: Year 4		SUBJECT: Science – Movement and Nutrition	
WEEK 1 DATE: 02.09.24	WEEK 2 DATE: 09.09.24	WEEK 3 DATE: 16.09.24	WEEK 4 DATE: 23.09.24	WEEK 5 DATE: 30.09.24	WEEK 6 DATE: 7.10.24
LO: To explain the role of a skeleton. Working scientifically: To group animals based on their physical properties. Success Criteria: I can name the three key functions of the skeleton. I can recall key features of a vertebrate, invertebrate, endoskeleton and exoskeleton. I can group animals based on their skeletons. I can describe the role of joints in the skeleton. Main Event: In children complete the activity: Sorting animal skeletons. Children complete the activity: Split pin skeleton (one each). Children to label the joints. Support: Could be provided with a pre-cut version of the Activity: Split pin skeleton; could be offered a list of the joints (neck, shoulder, elbow, wrist, hip, knee, ankle) when labelling their skeleton. Challenge: Could label their skeleton with organs and a broader range of joints, for example, finger and toe joints, back and jaw; could predict the outcome of certain bones being broken and explain how the function may be affected, for example, if the ribs were broken the heart or lungs may not be protected, or an arm bone that is broken may stop the elbow joint from moving.	LO: To recognise the main bones in the body. Working scientifically: To measure and sort data. Success Criteria: I can name key bones in the human skeleton. I can identify the location of key bones in the human skeleton. I can measure the length of different bones. I can sort the data into size order. Main Event: Children to roll the die to collect bones, which they then circle and label. First child to collect all the bones wins. Children to complete the Activity: Recording bone lengths. Children to complete the results table. Once the children have gathered their data, ask them to complete the conclusion and evaluation. Support: Could use the Activity: Build a skeleton: support version that could be pre-cut to allow pupils to glue the correct bone when they roll the corresponding number. Challenge: Could be given maths challenges when rolling the die for the Activity: Build a skeleton, for example, $6 \div 3$ instead of 'roll a 2'.	LO: To explain how muscles are used for movement. Science in action: To explore scientific advances. Success Criteria: I can recall that there are different muscles in the body. I can describe how a muscle causes movement. I can explain how scientific research has helped with prosthetics. Main Event: Children to make their own hand model with working muscles. Support: Could work in small groups to produce one hand; should watch the Pupil video: Making a model hand on loop when creating their hand; could have the resources pre-cut. Challenge: Should make comparisons between their model hands, bionics/prosthetics and real arm and hand movement.	LO: To explain how food is an essential energy source for animals. Working scientifically: To gather and compare data to answer questions. Success Criteria: I can recall that animals, including humans, need to eat food to survive. I can describe ways the body uses energy. I can identify how energy needs are different between people. I can compare the nutritional information on food packaging. Main Event: Children into groups of three and hand out the Activity: Matching energy needs (one per group, pre-cut and shuffled). Ask the children to match each activity to the energy used. Children to make numerical comparisons with the energy in the food packaging and the energy used in different activities (see the Activity: Matching energy needs). Support: Could use the Activity: Energy in the park (support) as a writing frame for pupils to complete the Wrapping up activity. Challenge: Could use a calculator to find the total energy supplied by the food packaging on their table to compare this to recommended daily values; could conclude whether the total energy from the food packaging is more or less than the recommended daily value for a child their age and make a judgement whether it is suitable; should consider what factors may affect the energy usage of living things in the scene shown in the Presentation: Energy in the park.	LO: To identify the main nutrient groups and their simple functions. Working scientifically: To record information using secondary sources. Success Criteria: I can recall some of the seven nutrient groups. I can give examples of food that contain a particular nutrient group. I can explain why a particular nutrient group is essential for the body. Main Event: Children to complete Activity: Nutrient group notes. In pairs, children to move around the classroom collecting information from the Resource: Nutrient group information. Children should add the name of the nutrient group to the back of each flap. On the inside of the flaps, they should write (and/or draw) foods which are a good source of that nutrient and outline their role in the body. Support: Should use the Activity: Nutrient group notes: support version. Challenge: Should look at the scenarios in the Resource: Nutrient group extended thinking and draw comparisons between the individuals.	LO: To explain what makes a balanced diet. Science in action: To explore how knowledge has progressed over time and different jobs use this information. Success Criteria: I can give examples of foods that make up a balanced diet. I can compare different meals, explaining which is more balanced. I can describe some changes to scientific knowledge about nutrition. I can identify some jobs that require knowledge of nutrition. Main Event: Children will pretend to be a nutritionist and plan two meals, one on each half of a paper plate. One side balanced and one side unbalanced. Children to label individual foods. Children to review each others plates and make a decision about which side is balanced/unbalanced. Support: Could work in pairs to share the workload of designing a balanced and unbalanced meal; should use the Knowledge organiser (see link: Movement and nutrition) to support the Main event activity. Challenge: Should consider the proportions of the nutrient groups on each side of the plate when evaluating which is the most balanced meal; could apply their knowledge of fractions to help explain the proportions of different nutrient groups within a meal; could consider if one side of the plate is more suited to a particular group of people than others or how the choices would compare for different people (for example, vegetarians or religious dietary requirements).