Unit 11
Measure

Year 1
Spring term

Five daily lessons

Merseyside Consultants' Cluster Group

This Unit Plan is designed to guide your teaching.

You will need to adapt it to meet the needs of your class.

Unit Objectives

Year 1

- **Suggest suitable (non) standard units and measuring equipment to estimate, then measure mass** recording estimates and measurements 'about as heavy as 20 cubes'
- Know seasons of the year
- **Use mental strategies to solve simple problems** set in 'real life', measurement contexts, **using counting and addition, explaining methods and reasoning orally.**

Pages 70 -79

Reception

- **Use language such as more or less, longer or shorter, heavier or lighter…. To compare two quantities**, then more than two, by making direct comparisons of masses…
- Begin to understand and use the vocabulary related to time.
  Sequence familiar events.

Link Objectives

Year 2

- **Estimate, measure and compare masses using standard units; suggest suitable units and equipment for such measurements.**
- **Read a simple scale to the nearest labelled division,** recording estimates and measurements as 'nearly 3 kilograms heavy'
- Solve problems involving length or time.
- Order months of the year.

(Key objectives in bold)

Resources needed to teach this unit:

- Activity Sheet 11.1
- Activity Sheet 11.2
- Activity Sheet 11.3
- Activity Sheet 11.4
- Resource Sheet 11.1
- Resource Sheet 11.2
- Variety of everyday materials for weighing
- Flipchart or large sheets of paper
- Variety of fruit
- Uniform non-standard objects for measuring mass, e.g. Multilink cubes
- Selection of parcels for weighing
- Washing line and pegs
- Counting hoop (12 divisions)

Planning sheet	Day One	Unit 11 *Measure*	Term: *Spring*	Year Group: *1*

Oral and Mental		Main Teaching		Plenary
Objectives and Vocabulary	**Teaching Activities**	**Objectives and Vocabulary**	**Teaching Activities**	**Teaching Activities/ Focus Questions**
VOCABULARY		Suggest suitable (non) standard units and measuring equipment to estimate, then measure mass, recording estimates and measurements 'about as heavy as' VOCABULARY Measure, compare, weigh, weighs, balances heavy light heavier, lighter, heaviest, lightest, weight, balance, scales RESOURCES Variety of everyday materials for weighing, Multilink cubes or other objects to use as repeated units for measuring mass. Activity sheet 11.1	• Hold up pairs of objects in the room that can be compared by handling them. Ask: **Q** Which is heaviest? How do you know? • Invite a child to compare them by holding one in each hand, e.g. heaviest item in left hand Ask: **Q** How do you know which object is heaviest? Emphasise the fact that the left hand will drop lower than the right if the heaviest item is held in the left hand. Introduce the children to the balance scales and demonstrate comparing the weight of two objects using the balance. Bring out the idea of using a repeated small unit to measure each mass, such as multilink cubes Ask: **Q** How could we use the cubes and balance scales to find the weight of the objects? Ask the children to estimate how many multilink cubes would be required to balance the object and the demonstrate how to balance the object with the cubes, counting how many cubes are required to make the scales balance. Record this on the board with the pupils. Repeat with other items, firstly asking children to estimate. Record findings on the board. Ask the children to estimate first then measure the items. Repeat the questioning. • In pairs the children balance selected objects with cubes, recording their findings on activity sheet 11.1	Review the measuring activity and ask the children for their responses. Discuss their estimates. Ask: **Q how many cubes did you need to balance a toy car, a parcel, etc.** **Q** Were the estimates that you made close to the actual number of cubes? **Q If you had to weigh an elephant would it be sensible to use multilink cubes?** Establish the need to select appropriate units. Remind the children when weighing: • Importance of the scales balancing • Importance of sensible estimation • Use of appropriate units for measuring **By the end of the lesson, children should be able to:** • **Suggest suitable units to estimate and measure mass.** • **Compare two masses by direct comparison** (Refer to supplement of examples, section 5, page 74.)

Planning sheet	Day Two	Unit 11 *Measure*	Term: *Spring*	Year Group: *1*

Oral and Mental		Main Teaching		Plenary
Objectives and Vocabulary	**Teaching Activities**	**Objectives and Vocabulary**	**Teaching Activities**	**Teaching Activities/ Focus Questions**
VOCABULARY		Suggest suitable (non-standard) units and measuring equipment to estimate, then measure mass, recording estimates and measurements 'about as heavy as' Solve simple problems involving mass VOCABULARY Measure, compare, weigh, weighs, balances heavy light heavier, lighter, heaviest, lightest, weight, balance, scales What could we try next? How did you work it out? RESOURCES Suitable non- standard objects for measuring mass. Selection of parcels for weighing Flipchart or large sheets of paper	Display a selection of everyday non - standard units for measuring mass, units eg. Cubes, beads, counters, coins, etc. **Q Which objects could you weigh with beads? Why would that be a suitable unit of measure?** Encourage children to discuss together in pairs first. Repeat questioning for cubes, counters, coins, etc. Ensure responses focus on appropriate size of unit to object. **Q** What would be a suitable unit to measure the weight of a shoe? Why? Repeat paired discussion and responses as above. Repeat questioning for other everyday items in the classroom. Show children two parcels from a selection and ask **Q** How could you tell if the red parcel is heavier than the blue one? Collect responses from the children, encouraging them to think about their hands and balance scales. Ask **Q** What could we use to measure the weight of the parcel? Choose a suitable unit with the pupils, use the balance and non-standard units to weigh the parcels and record the measurement with the children. Children, in groups, choose parcels from a selection and predict which parcel they feel is heavier. Children should then directly compare the two objects using balance scales, then use non-standard uniform units to measure the mass of each object. Children should use large sheets of paper to record their finding as a group.	• Discuss estimates and measurements from activity. Using the children's results ask questions such as: **Q Which was heavier the blue or the red parcel?** Repeat questions relating to their results. Select three parcels and discuss how the pupils could find which of the three parcels is the heaviest. Carry out measuring activity with the pupils and place parcels in order from heaviest to lightest. **By the end of the lesson, children should be able to:** • **Understand and use the vocabulary related to mass** • **Suggest uniform units to measure or estimate mass** (Refer to supplement of examples, section 5, pages 72 - 76. & also problems involving measures page 70)

Planning sheet	**Day Three**	**Unit 11 *Measure***	**Term: *Spring***	**Year Group: *1***

Oral and Mental		**Main Teaching**		**Plenary**
Objectives and Vocabulary	**Teaching Activities**	**Objectives and Vocabulary**	**Teaching Activities**	**Teaching Activities/ Focus Questions**
	.	**Use mental strategies to solve simple problems** set in 'real life' measurement contexts, **using counting and addition, explaining methods and reasoning orally.** VOCABULARY Measure, compare, weigh, weighs, balances heavy light heavier, lighter, heaviest, lightest, weight, balance, scales What could we try next? How did you work it out? RESOURCES Variety of fruit Uniform non-standard units for measuring, e.g. Wooden blocks, beads, etc. Activity Sheet 11.2	• Remind pupils of the previous two days activities and the importance of using uniform units when estimating and measuring mass. • Recap use of balance scales by using two pieces of fruit to ensure that pupils understand how to determine which item is heavier. • Ask: **Q** How do you know which fruit is heavier? Place an apple on one side of the balance and ask **Q** How many blocks do you think will balance the apple? Complete the activity with the pupils counting out the required number of blocks to make the scales balance. Repeat the activity using a pear. Next, place the apple and the pear on one side of the balance and ask **Q** How many blocks will balance the apple and the pear? How do you know? Encourage the children to determine the answer by counting and then addition. If appropriate, record the addition calculation for the pupils and ask the pupils to explain their reasoning orally. Repeat the activity using different items of fruit. Children work in pairs using picture cards on AS 11.2. Children select two cards and then deduce how many blocks they would needs to balance the two items of fruit. Children can record their calculations appropriately using number sentences or number lines.	Bring the class back together and select two cards from the paired activity. Ask **Q** How many blocks will we need to balance the two pieces of fruit? Take responses from the pupils asking them to explain their reasoning. Record calculations for the pupils, if necessary. Repeat the activity with other cards asking the following questions: **Q** How did you work it out? How could we show this? Encourage children to give responses that include an explanation of how they worked it out. **By the end of the lesson, children should be able to:** • **Understand and use the vocabulary related to mass** • **Suggest uniform units to measure or estimate mass** • **Use mental strategies to solve simple problems** set in 'real life' measurement contexts, **using counting and addition, explaining methods and reasoning orally.** (Refer to supplement of examples, section 5, pages 72 - 76. & also problems involving measures page 70)

Planning Sheet	Day Four	Unit 11 *Measure*	Term: *Spring*	Year Group: *1*

Oral and Mental		Main Teaching		Plenary
Objectives and Vocabulary	**Teaching Activities**	**Objectives and Vocabulary**	**Teaching Activities**	**Teaching Activities/ Focus Questions**
VOCABULARY RESOURCES		Know seasons of the year VOCABULARY Seasons: spring, summer autumn, winter Before, after RESOURCES Resource sheets 11.1 and 11.2 (enlarged) with cards cut out Washing line Counting hoop (with 12 divisions)	• Recite the days of the week together. Repeat several times. Next move on to reciting the months of the year and discuss which month it is at the moment. • Place the washing line up in the classroom. Ask pupils to estimate where along the line, the randomly picked months of the year would be placed. Place along the line, paying particular attention to the months that come before and after each month. When all of the cards have been placed on the line, recite the months of the year with the pupils. • Using a counting hoop, with twelve divisions, ask pupils to recite the names of the months of the year. At various intervals stop and ask **Q** Which month would come after January? Before September? etc. Next, introduce the seasons of the year cards and introduce the seasons to the children. Explain that there are four seasons in the year and that each season is made up of four months. One by one replace the months of the year cards with the season cards so that the hoop is split into the four seasons. Ask the pupils **Q** What type of weather would you see in Winter? Encourage the children to give responses that include snow, ice, cold weather, etc. Repeat questioning for the other seasons of the year. Ask **Q** What would a tree look like in Winter, Spring, Summer and Autumn? Give pupils Activity sheet 11.3 and ask pupils to fill in each section on the activity sheet, considering the type of weather and what the tree would look like for each season.	Recite the months of the year and the seasons again. **Q** What is the first month of the year? What season is this in? **Q** What would a tree look like in Winter Repeat for other months and seasons. **Q** Name a month that is in summer **Q** What would the weather be like in summer? Make sure the children know the difference between the months of the year and the seasons and that there are 12 months in a year and 4 seasons. **By the end of the lesson, children should be able to:** • Know seasons of the year (Refer to supplement of examples, section 5, page 78.)

Planning sheet	Day Five	Unit 11 *Measure*	Term: *Spring*	Year Group: *1*

Oral and Mental		Main Teaching		Plenary
Objectives and Vocabulary	**Teaching Activities**	**Objectives and Vocabulary**	**Teaching Activities**	**Teaching Activities/ Focus Questions**
VOCABULARY RESOURCES		Solve simple problems involving time. VOCABULARY Seasons: spring, summer autumn, winter Before, after What could we try next? How did you work it out? RESOURCES Activity Sheet 11.4 (for each pair of children) cut into cards	• Reinforce the previous day's lesson by reciting the seasons of the year. • Remind the children that there are 4 seasons in the year, winter, spring, summer and autumn. Remind pupils of the previous day's activity, where they were asked to think about the weather and what a tree would look like for each season in the year. Ask: **Q** What might the weather be like in Spring? **Q** Would a tree have many leaves in Winter? **Q** Would you wear a big coat in Summer? Establish that at would be appropriate to wear different types of clothes at different times of the year, because of the weather. Introduce pupils to the cards from Activity Sheet 11.4 and pick two cards one showing a season and the other an item of clothing. Ask the children if the two cards match, e.g. **Q** Would I wear sunglasses in Winter? Encourage the pupils to give an answer, with an explanation to support this. **Q** Which season would you wear sunglasses in? Is this before or after Winter? In pairs, children should take it in turns to select a season card and an item of clothing or object from the cards from Activity Sheet 11.4. Children should support all answers given with explanations and particularly focus on the seasons that fall before and after others.	Repeat the activity from the main activity with the class. **Q** What season does the card show? What type of clothes might you wear in this season? Why? Ask Does Spring come before or after summer? Repeat with other seasons of the year, emphasing the order of the seasons. Each time, encourage the pupils to give verbal explanations for their responses. **By the end of the lesson, children should be able to:** • Know the seasons of the year • Solve simple problems involving time. (Refer to supplement of examples, section 5, page 70, 78)

Months of the year cards

January	February	March	April
May	June	July	August
September	October	November	December

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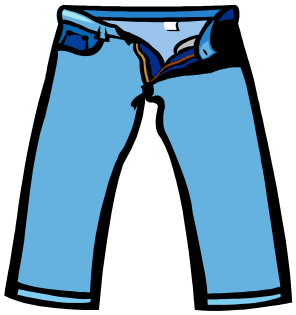
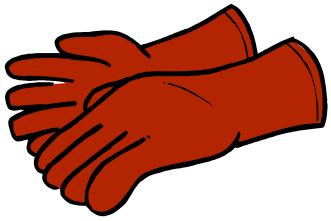
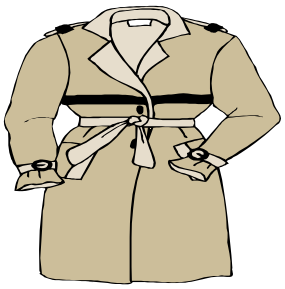
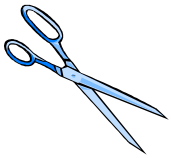
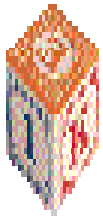
Winter	Spring
Summer	Autumn

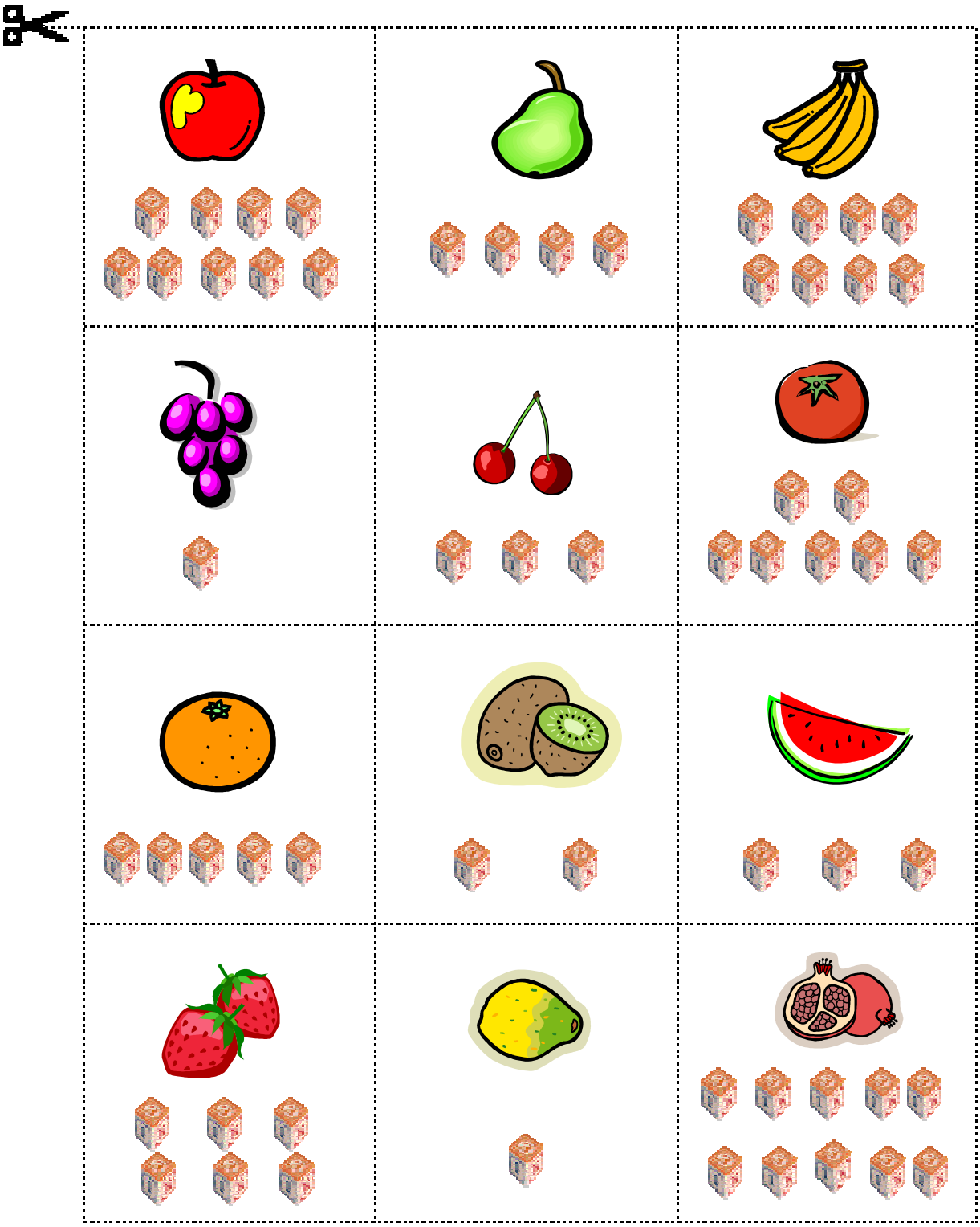
Autumn	Winter
Spring	Summer

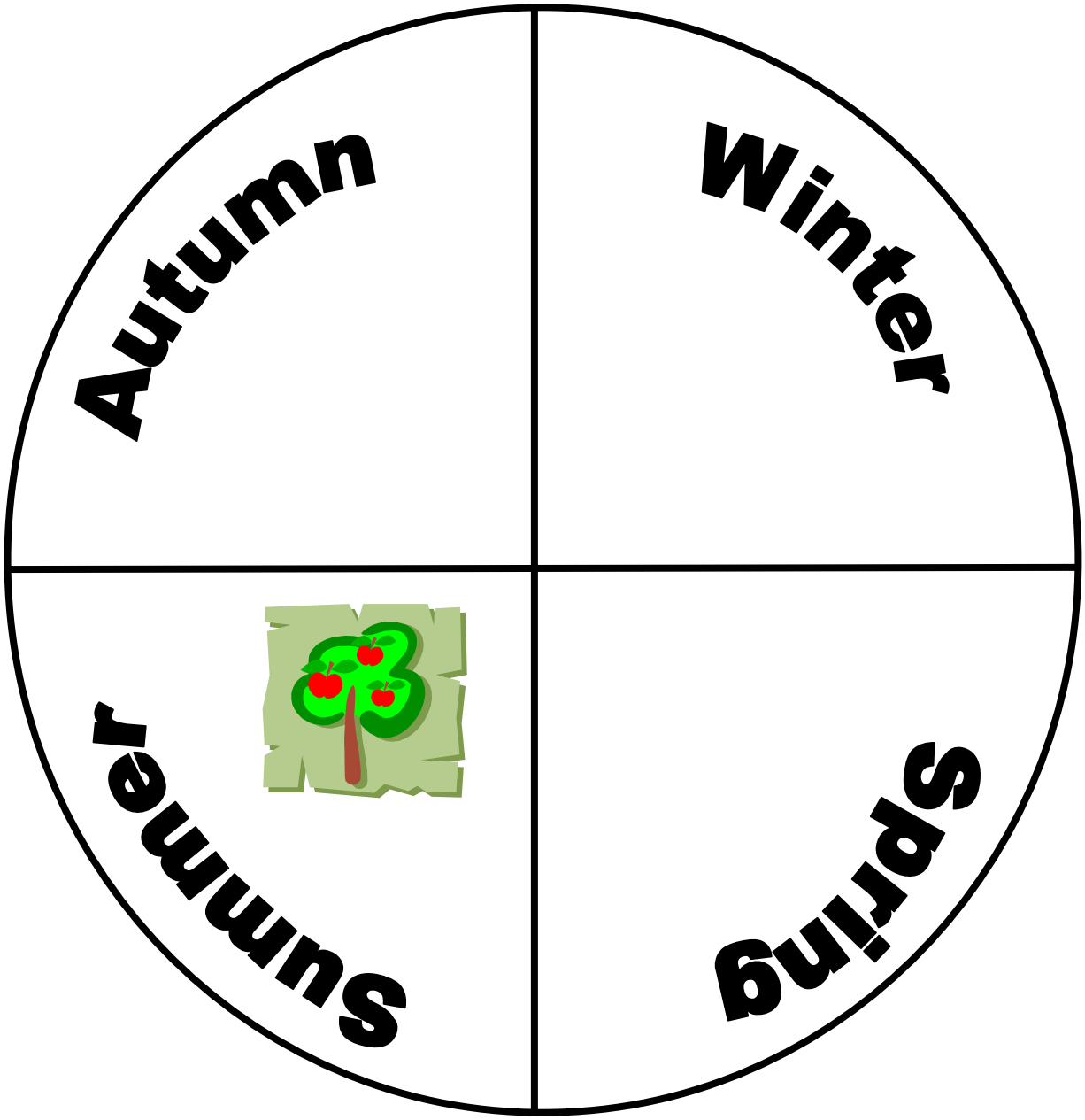
Cards with clothes Items relating to Seasons

How many cubes to balance……

Object	Estimate	Actual number
Car 		
Scissors 		
Book 		
Wood Block 		




Autumn
Winter
Summer
Spring

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