A Winter’s Tale – Science Curriculum Objectives

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| **Year/Topic** | **Curriculum Objectives** | **Link to Winter’s Tale** | **Learning Journey** |
| Year 3  Plants | * -identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers * -explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant * -investigate the way in which water is transported within plants * -explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal | * Perdita is passionate about horticulture. * and loves flowers. * Perdita and Polixenes debate about cross-breeding flowers. * Perdita needs help learning all of the different parts of a flower and wants to understand what each part does so that she can be even better in the garden. | Step 1 – plant parts & what they do (resource 1)  Step 2 – what plants need to live & grow  Step 3 – how is water transported/ investigate factor affecting growth  Step 4 - life cycle of a flowering plant  Homework: Create a research project on a chosen flower. |
| Year 4  States of Matter | * observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C) * identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature | * There are many journeys taken by water in the play. * The Oracle of Delphi has predicted an extremely hot summer. Leontes is worried that the Simeto river will lose a lot of its water, which will affect his boats being able to carry produce to other parts of the country. * Geography link - learn about some physical features of Siciliy. | Step 1 – Sequence the stages of the water cycle (resource 2).  Step 2- Create a 3D model (or drawing) of the water cycle.  Step 3 – Plan an experiment to investigate how temperature affects the rate of evaporation.  Homework: Create a research project on the temperatures found at the top of Mount Etna. |
| Year 5/6  Living Things & Their Habitats  Evolution & Inheritance | * describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird * describe the life process of reproduction in some plants and animals * recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents | * Hermione is pregnant with Perdita in the play. * Mamillius is very confused about his mother’s pregnancy and is asking for help to understand some of the technicalities | Year 5  Step 1 - Research a mammal, amphibian and reptile and create a life cycle for each.  Step 2 –  Write a letter to Mamillius explaining that you think he is right or wrong and why.  Step 3 – Draw a diagram from Mamillius of the human reproductive process.  Homework: Create a research project on the life cycle of a chosen animal, which hasn’t been studied in class.  Year 6 (may be helpful for children to recap using slides for Y5)  Step 1 - Write a letter with diagrams to Mamillius explaining whether he is likely or unlikely to look exactly like his new sibling and WHY.  Step 2 – Research selective breeding and write an argument for or against.  Homework: Create a research project on own family’s DNA. Who looks like who? Explain why this is. |