S1 Biology Learning Intentions: Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class \_\_\_\_\_\_\_\_\_\_

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| **Learning Intentions - Cells** | Red | Amber | Green |
| Describe the purpose of a cell. |  |  |  |
| Label and remember the parts of a microscope. |  |  |  |
| Set up a microscope and view objects. |  |  |  |
| Work out the magnification of the objects viewed in the microscope. |  |  |  |
| Following instructions make slides of plant and cheek cells. |  |  |  |
| Draw a diagram and state the magnification of what you see. |  |  |  |
| Label a diagram of plant and animal cell structures |  |  |  |
| List the parts of a cell. |  |  |  |
| List the cell parts that are different between plant and animal cells. |  |  |  |
| Create a table to show the cell structures and their functions.  |  |  |  |
| State that organisms can be single celled or multicellular. |  |  |  |
| Give examples of single celled and multicellular organisms. |  |  |  |
| State that multicellular organisms have different types of cell. |  |  |  |
| Recall some differentiated cell types in plants and animals. |  |  |  |
| **Learning Intentions – Reproduction in plants** | Red | Amber | Green |
| Remember that sexual reproduction in flowering plants involves two parents. |  |  |  |
| Produce a correctly labelled diagram of the structures a flower involved in reproduction |  |  |  |
| Take apart a flower and use a diagram to identify reproductive structures of a flowering plant. |  |  |  |
| Remember how to set up a microscope and use it to identify pollen.  |  |  |  |
| Describe the process of fertilisation in flowering plants. |  |  |  |
| State that sexual reproduction produces seeds.  |  |  |  |
| Complete a table that recognises different seed structures and how they relate to method of dispersal. |  |  |  |
| **Learning Intentions – Reproduction in plants** | Red | Amber | Green |
| State that asexual reproduction involves only one parent and is a faster way of plants to reproduce.  |  |  |  |
| Write notes on four methods of asexual reproduction. |  |  |  |
| Explain how gardeners use this ability of plants to artificially propagate plants. |  |  |  |
| Follow instructions to make a new plant by taking a stem cutting. |  |  |  |
| Draw a summary table which compares types of reproduction.  |  |  |  |
| **Learning Intentions – Why plants are vital** | Red | Amber | Green |
| Select the information from a text and video to show that plants gain mass over time. |  |  |  |
| Construct a table to show where plants get their mass from over time. |  |  |  |
| Explore and discuss in groups ideas on how a plant gains mass.  |  |  |  |
| Relate information and write a note that explains how a plant gains mass over time. |  |  |  |
| State the main food made by photosynthesis in plants. |  |  |  |
| Following instructions, investigate the types of carbohydrate found in plant parts. |  |  |  |
| Construct a scientific report of the investigation following the correct layout. |  |  |  |
| Analyse investigation results to identify the carbohydrates found in a range of plant parts. |  |  |  |
| Using resources, put into your own words how we make use of some carbohydrate plant products. |  |  |  |
| Following instructions, investigate if plants use up CO2 |  |  |  |
| Using knowledge on photosynthesis predict the results of this investigation. |  |  |  |
| Complete a table to record results. |  |  |  |
| Analyse results and explain the colour changes in each jar. |  |  |  |
| State that CO2 is one of the raw materials needed for photosynthesis. |  |  |  |
| **Learning Intentions – Why plants are vital** | Red | Amber | Green |
| State that plants produce oxygen and release it. |  |  |  |
| Following instructions, investigate effect of light intensity on rate that plants give out O2. |  |  |  |
| Describe how to measure the rate of photosynthesis by using the speed of O2 release from a plant. |  |  |  |
| Construct a table with correct headings to record results. |  |  |  |
| Draw a graph of the results to show the effect of light intensity on rate of oxygen release. |  |  |  |
| Relate graph and write a note that explains the effect of light on plants. |  |  |  |
| To collate information from the completed topic work including practical's and written notes. |  |  |  |
| Group discussion of questions and create four success criteria for the presentation.  |  |  |  |
| Create a presentation of collated information to explain why plants are therefore vital for life on Earth |  |  |  |
| **Learning Intentions:- Heart, Lungs and Circulation** | Red | Amber | Green |
| State the connection between organs in the body. |  |  |  |
| Label the names of the four chambers in the heart. |  |  |  |
| Label the position of the heart valves and state what they do. |  |  |  |
| Draw arrows to show the direction of blood flow through the heart. |  |  |  |
| State that the wall of the heart is made of (Cardiac) muscle and that the left ventricle has a thicker wall. |  |  |  |
| State that the function of the heart is to pump blood around the body.  |  |  |  |
| Describe how heart contractions circulate the blood. |  |  |  |
| Following instructions, measure your heart rate, record results and calculate class average. |  |  |  |
| **Learning Intentions:- Heart, Lungs and Circulation** | Red | Amber | Green |
| Draw a graph of the results. |  |  |  |
| Explain why your pulse rate increases after exercise. |  |  |  |
| Label a diagram with structures of the lungs involved in gas exchange. |  |  |  |
| Relate lung diagram to a model  |  |  |  |
| Describe how the rib cage, muscles and diaphragm work together to show the mechanism of breathing. |  |  |  |
| Relate how the model shows the mechanism of breathing. |  |  |  |
| After watching the video, in your own words write down what lung volume and peak flow is measuring. |  |  |  |
| Recall what gas passes from blood into lungs. |  |  |  |
| Investigate what happens when you breathe into lime water and explain the colour change that occurs. |  |  |  |
| Investigate what happens when you breathe onto cold glass and explain what happens. |  |  |  |
| Review gas exchange diagram and discuss in a group what information it needs.  |  |  |  |
| Draw and label a diagram that explains gas exchange in the lungs.  |  |  |  |
| List the features that make the lungs good at gas exchange. |  |  |  |
| Describe what makes blood important. |  |  |  |