**Curriculum Summary for September – October 2017**

SUBJECT: Science: Earth & Space YEAR GROUP: 5 TEACHER: Adam Miller and Beata Kruk-Zabawa

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| Week | Learning objectives | Activities (in brief) |
| **1**  Sep 4th – 8th | To show what I already know about the Earth and Space. | Complete mind map answering the following questions:  **- What do I know about the Earth?**  **- What do I know about the Sun?**  **- What do I know about the Moon?**  **- What else do I know about Space?**  **- What would I like to learn about during this topic?**  Quiz to show what they already know. Multiple choice. |
| **2**  Sep 11th – 15th | To learn about the shape and relative sizes of the Earth, Sun and Moon | One transparent cup on each table half-filled with water. Each child to have a go at putting a pencil in the water, and complete the questions on the sheet:  **1. What do you observe? How does the pencil look?** (bent where it enters the water)  **2. Does this mean the pencil really is bent?** (no)  **3. How do you know? What evidence can you give?** (take it out of the water, feel it)  Fill in missing words on worksheet about direct and indirect evidence, and the relative sizes of the Earth, Sun and Moon.  Demonstrate relative distances between planets |
| **3**  Sep 18th – 22nd | To understand why our shadows change, and why we have day and night. | Discuss why we have shadows.  Go outside at different intervals – draw and measure shadows at different times. Discuss change of length and position of shadows.  Record size of shadows in graph.  Show the children a globe and identify the North and South pole, and where its axis would be. Locate various continents on the globe.  Get a child to stand up to represent the sun.  Ask other children to identify where in the world it is day and night as you rotate the Earth on its axis – NB should rotate anticlockwise. Children should see that it is day in China before it is day in UK – this explains time difference between countries. |
| **4**  Sep 25th – 29th | To learn about the Earth’s orbit around the Sun | **Q: What is a year? What do we mean by a year? Q: Why are years important in our lives?**  **Q: Why do we measure time in years? Q: How long is a year?**  [Discuss birthdays, anniversaries, festivals that come around once  **Q: How do we divide up our year?** (months, weeks, days…)  **Q: What is a year?**  **Q: How do we know what a year is and when a year has passed?**  **Q: How did the people from ancient cultures who made the first calendars know what a year was?**  **What did a year mean to them?**  **Q: What are the 4 seasons? What do we associate with each season?** E.g. cold in winter, snow, no leaves on trees etc.  **Q: Why would the seasons have been important to ancient civilisations?**  In MA pairs, to write/perform script for the video explaining that the seasons are caused by the tilt of the earth. Work to be done in Science books. |
| **5**  Oct 2nd – 6th | To investigate the Moon’s phases and orbit of the Earth | **Q: What is the moon?**  **Q: What is a month?**  **Q: What do we see when we look at the Moon each night for a month?**  Explore different websites to explain the movement and phases of the moon.  (In pairs) Children write questions to quiz other pairs about the moon |
| **6**  Oct 9th – 13th | To learn about our Solar System and man’s journeys into space. | **Q: Do you think sending humans into space is a good idea? Why or why not?**  **Q: Do you think everyone agrees with you?**  **Q: What are the pros and cons for spending money on space exploration?**  In pairs, imagine that one of you is an astronaut who’s just got back from a journey through our solar system.  First as a pair brainstorm questions you might like to ask.  Then use the websites to find what the answers might be. Try to be as realistic as you can – and include as much scientific information as you can.  Finally, put your questions and answers into a script for a radio show designed for kids about space.  View videos of Tim Peake doing Science in Space |
| **7**  Oct 16th – 20th | To show what I have learned about the Earth, Sun and Moon. | **Activity 1:**  Repeat mindmap from Session 1.  **Activity 2:**  Earth, Sun and Moon Quiz.  **Activity 3:**  Finishing off interviews.  **Activity 4:**  Further investigation to do with the usefulness of space exploration using website. |
| **8**  Oct 22nd – 27th | Assessment | Complete Assessment of Earth and Space |
| **Mini-Project**  **(Homework)** | Produce 1 of:   1. Presentation on the Solar System/ Earth Sun and Moon 2. Presentation on a famous astronomer or space explorer 3. 3D Model of the Solar System – including labels and size/distance of planets. | |