

Year 5 & 6 Science: Home Learning Week 8

Hello Year 5 & 6, this week our focus is on lifecycles in animals and humans. You should try to complete tasks 1, 2 & 3 if you can, task 4 is an optional challenge.

The rest, including the practical activity, are optional. Remember to get permission from an adult before doing any practical activities and clean up after yourself when you're finished!

Stay at home & stay safe

Miss Johnston ☺

Task	Description																																						
1	Watch the BBC Bitesize lesson on Wednesday. Here's a link to the daily lessons page: https://www.bbc.co.uk/bitesize/tags/zncsscw/year-6-lessons/1 If you have trouble watching online, you can access the Bitesize lessons via the red button on your TV remote. Just switch the TV to BBC1, press the red button and the Bitesize options should come up... It can take a minute or two to load so be patient!																																						
2	Visit BBC Bitesize, read the information and complete the activities on lifecycles in animals and humans: https://www.bbc.co.uk/bitesize/topics/zgssgk7/articles/zwn6mnb And https://www.bbc.co.uk/bitesize/topics/zgssgk7/articles/z2msv4j																																						
3	Some animals go through metamorphosis as part of their life cycle. a) What does metamorphosis mean? Use a dictionary to find out if you're not sure b) Can you think of some examples of animals that go through metamorphosis?																																						
4	<table border="1"><thead><tr><th>Age (years)</th><th>Height (cm)</th></tr></thead><tbody><tr><td>0</td><td>50</td></tr><tr><td>1</td><td>75</td></tr><tr><td>2</td><td>87</td></tr><tr><td>3</td><td>100</td></tr><tr><td>4</td><td>108</td></tr><tr><td>5</td><td>114</td></tr><tr><td>6</td><td>121</td></tr><tr><td>7</td><td>129</td></tr><tr><td>8</td><td>133</td></tr><tr><td>9</td><td>Not measured</td></tr><tr><td>10</td><td>145</td></tr><tr><td>11</td><td>152</td></tr><tr><td>12</td><td>156</td></tr><tr><td>13</td><td>161</td></tr><tr><td>14</td><td>Not measured</td></tr><tr><td>15</td><td>182</td></tr><tr><td>16</td><td>Not measured</td></tr><tr><td>17</td><td>187</td></tr></tbody></table> <p>Mark's mum measured him regularly as he grew up. The table shows her measurements.</p> <p>a) In which year did Mark grow the most quickly?</p> <p>b) Between which ages was Mark:</p> <p>i. a baby</p> <p>ii. a child</p> <p>iii. a teenager</p> <p>c) Can you use the information from the table to draw a line graph?</p> <p>d) Use your graph to predict how tall Mark was aged:</p> <p>i. 9</p> <p>ii. 14</p> <p>iii. 16</p> <p>e) Mark stopped growing when he was 19. Estimate how tall he might be aged 19. How did you decide?</p>	Age (years)	Height (cm)	0	50	1	75	2	87	3	100	4	108	5	114	6	121	7	129	8	133	9	Not measured	10	145	11	152	12	156	13	161	14	Not measured	15	182	16	Not measured	17	187
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5	OPTIONAL PRACTICAL ACTIVITY: Double Bubble! Can you blow a bubble inside another bubble? Take the double bubble challenge to find out!																																						

Practical details

Double Bubble!

About this activity

Soap bubbles are a thin layer of water particles mixed with washing-up liquid. Mixing washing up liquid with water forms a stretchy and sticky solution. When you blow on this, the chemical bonds in the bubble solution are sticky enough to hold together but will also stretch, which is how a bubble is formed. Adding sugar to the solution gives the bubble wall even more strength, flexibility and stability. It also slows down the evaporation of water so that the bubbles last longer.

Blowing a bubble inside a bubble causes the outer bubble to expand. As the inner bubble grows, the fixed volume of air in the outer bubble becomes compressed; it pushes against the outer bubble wall, making the bubble bigger.

As time passes the water in the bubble solution evaporates making the bubble wall thinner. Because the walls of bigger bubbles are thinner to start off they should pop faster than smaller bubbles.

Parents & carers – why do this?

Children love bubbles and these stay in one place, although I'd recommend this activity for a sunny day outdoors, just in case! This activity links to the Key stage 2 topic Properties of Materials and allows children to make their own bubble solution by following a simple scientific procedure, as well as supporting the development of hand-eye co-ordination and scientific observation skills.

Safety

- This activity is not suitable for children who are seriously allergic or sensitive to soap or detergent products.
- Do not taste or drink the bubble mixture.
- Should any washing-up liquid get in someone's eye, rinse with water by getting them to lie on their back on a table or near a sink and gently pouring cool water from a jug, or similar, over the open eye continuously for 10 minutes.
- Wash your hands thoroughly after practical work.

Equipment & materials

- 1 cup
- 1 straw
- ½ teaspoon of sugar
- 1 teaspoon of washing-up liquid
- 3 or 4 jugs containing warm water
- 1 tablespoon and 1 teaspoon

Method

1. Place 2 tablespoons and 2 teaspoons of warm water into a cup.
2. Add ½ teaspoon of sugar and stir it until dissolved.
3. Add 1 teaspoon of washing-up liquid and stir well.
4. Wet a small section of desk by dipping your fingers into the bubble mixture and spreading it over approximately 10cm².
5. Submerge one end of the straw in the bubble solution so that it's completely coated.
6. Place the coated end of the straw vertically onto the wet section of your desk, then, through the other end of the straw blow a fairly large bubble.
7. Dip the straw back into the bubble solution, then, aiming for the centre of the first bubble, gently push it inside.
8. Gently blow a second bubble on the surface of the desk inside the first bubble.

9. Try blowing a third bubble inside the inner bubble and possibly even a fourth inside the third bubble.

Expected observations and results

When you blow into the straw a bubble will be produced on the desk. Inserting the coated straw into this bubble does not burst it. When you blow again, a second bubble will form inside the first bubble. As the second bubble is blown the first bubble will expand slightly in size.

Notes

- If you live in a hard water area you may need to use distilled water or collected rainwater.
- You must use a smooth surface such as a table or tray. Alternatively, use laminated card or a plastic tablecloth.
- If, when you attempt to blow the inner bubble, you do not aim for the centre of the outer bubble, the new bubble is likely to touch and merge with the original bubble.

Possible further activities

- Who can blow the biggest bubble? Coat a small plastic ruler with bubble solution and slide it vertically into the middle of your bubble to measure its height.
- Do larger bubbles take longer to pop?
- Investigate which, if any, of the ingredients makes the bubbles last longer.