Year 5 & 6 Science: Home Learning Week 12

Hello Year 5 & 6, this week our focus is on evolution. You should try to complete tasks 1 & 2 if you can, the rest, including the practical activity, are optional. I've included instructions to make a straw rocket.

As always, remember to get permission from an adult before doing any practical activities and clean up after yourself when you're finished!

Take care & 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
2	Visit BBC Bitesize, read the information and complete the activities on the theory of evolution: https://www.bbc.co.uk/bitesize/topics/zvhhvcw/articles/z9qs4qt
3	Answer the following questions: a) What does the word variation mean? Use a dictionary to find out. b) What is a habitat? List three examples. c) Why do animals and plants need to suit their habitat? d) Can you think of any examples of adaptions in animals or plants for the habitats you listed in your answer to question b?
4	Research information about an animal and create fact file using the following headings. You can choose any animal that you like but it must be a real animal and not a domesticated one, so no pets or farm animals: • Name of animal • Where it lives (it's habitat) • What it looks like – describe it and draw a picture • How it is adapted to it's habitat • What it feeds on • Other information – life span, size, how it moves etc.
5	**OPTIONAL PRACTICAL ACTIVITY: Make a straw rocket.**

Practical details:

Straw Rockets

Why do this?
Do you want to launch a rocket and investigate flight?

Safety

- Ensure the bottle and rocket are pointed away from your face and other people when shooting.

Equipment & materials

- 1 clean, dry, empty 2L fizzy drink bottle
- 1 narrow straw
- 1 wider straw (e.g. milkshake straw)
- 1 pencil
- 1 ball of blu-tack, plasticine or play dough
- Sticky tape
- Scissors
- Paper to make wings / fins

Method

1. Put some plasticine into the opening of the bottle and mould it around the edges to make a good seal.
2. Using a sharp pencil, push it through the plasticine and remove it to leave a hole through the plasticine into the bottle.
3. Carefully push the narrow straw into the hole and mould the plasticine around the straw to ensure a good air tight seal. Be careful not to block the end of the straw with plasticine.
4. Take the wider straw and pinch one end together. Stick a small amount of tape over the pinched end to make it airtight.
5. Check for leaks by blowing into the wider straw. Re-tape the end if there is a leak.
6. Slide the wider straw over the narrow straw sticking out of the bottle.
7. Point the bottle / rocket away from people and give the bottle a hard squeeze.

Expected observations and results
Pressure from the bottle as the air inside is compressed causes the rocket to fly through the air.

Background notes

- 2L lemonade bottles work well. Lids are not required.
- If air is escaping from the top of the bottle, an extra piece of tape wrapped around the neck could help improve the seal.
- Use the least amount of tape possible to seal the wider straw, otherwise it may nose dive.
- Use enough play dough to totally cover the opening of the bottle and the edges.
- An alternative to a wider straw is to make a tube out of a piece of paper. Wrap the paper around a pencil (bigger than the narrow straw) and tape along the seam.

Questions and possible further investigations

- Does changing the launch angle affect the distance travelled?
- Does changing the amount of force applied to the bottle affect the distance travelled?
- Does the length of the wider straw affect how far it will fly?
- Does adding fins or wings to the wider straw make it fly further?