



CUDHAM
CE Primary School

Together, we Aim, Believe and Achieve.

Home Learning Project - Week 6 - Science

Years 5 and 6

Monday 6th July

Reading: Watch this video on collisions. <https://astroacademy.org.uk/resources/collisions/>
Conduct some further research into the science behind the collisions and create an information page from the knowledge you have found.

Writing: <https://www.sciencefun.org/kidszone/experiments/lava-lamp/>

Read the instructions and have a go at this experiment.

Task: Write a diary of your experience - what happened? Can you explain WHY is happened?

Maths: Spend some time on Times Table Rockstars - how many coins can you win today? Can you beat your records?

Visit [WHITE ROSE MATHS](#) and complete the learning video for today. Get some extra practice on [BBC bitesize](#) to become an expert!

About this activity

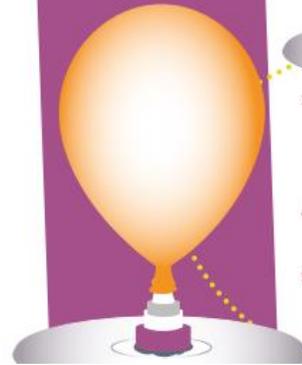
In March 2020 there is a cargo resupply mission to the International Space Station (ISS). The ISS was built by space agencies from countries around the world.

In this activity you'll look at some of the experiments that UK European Space Agency (ESA) astronaut Tim Peake completed onboard the ISS, before you have a go yourself!

Kit list

- 1 x CD
- 1 x pull-up bottle lid (such as on a sports drink)
- 1 x balloon
- 1 x blob of Blu Tack
- Stopwatch or camera (optional)
- 2 x one metre rulers (optional)

Time: 1 hour



Instructions

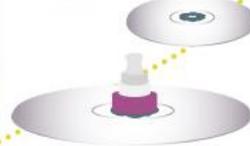
First, head to astroacademy.org.uk/resources/collisions to watch Tim Peake's demonstrations of elastic and inelastic collisions between objects of different masses.

Now it's your turn

1 Roll the Blu Tack into a sausage shape and press it around the edge of the bottom of the bottle lid.



2 Push the bottle top down onto the middle of the CD so that it sticks to the CD with no gaps for the air to escape, except through the hole in the CD.



3 Blow up the balloon reasonably full, but not completely, and then twist the bottom round several times (so the air doesn't come out while you're attaching it to your hovercraft base!)

4 Stretch the balloon over the top of the bottle top with the bottle top closed. Untwist the balloon.

5 When you want your hovercraft to go, pull the bottle lid into the open position. Push your hovercraft gently and watch how far it glides!

6 Just like Tim did in the video, try (gently!) colliding two hovercrafts. What happens and why?

Next steps

✔ What happens if you increase the mass or velocity of your hovercraft? Can you think of a way to record data from your experiment to show what is happening?

✔ Download the CAPCOM GO! app by NSC Creative in the app store to see an augmented reality rocket launch.

At home

Visit spotthestation.nasa.gov to see when the ISS will be visible in your area.

We would love to see your hovercraft experiments. Ask your teacher to share them with us.

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Topic: Enlarge the experiment based on collisions.

CHALLENGE: Attempt the 'Next Steps' questions.

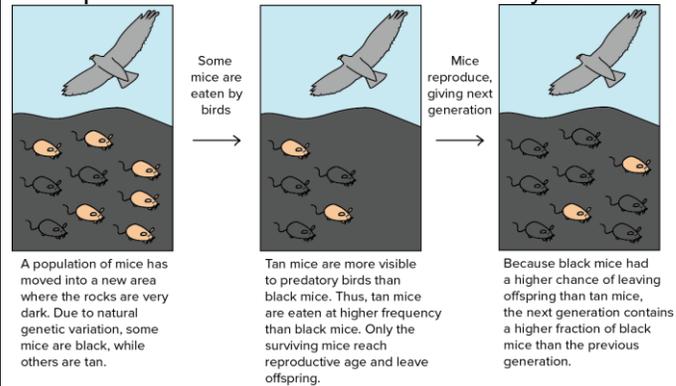
Tuesday 7th July

Reading: Research who Charles Darwin was and his theories on Evolution and Natural Selection. Use this website as a starting point but use others to find out more:
<https://www.natgeokids.com/uk/discover/science/general-science/charles-darwin-and-the-mystery-of-life/>
https://www.stem.org.uk/system/files/elibrary-resources/legacy_files_migrated/33287-Charles%20Darwin.pdf

Writing: <https://www.bbc.co.uk/bitesize/topics/zvhhvcw/articles/z9qs4qt>

<https://www.bbc.co.uk/teach/class-clips-video/science-ks2-the-work-of-charles-darwin-and-alfred-wallace/zrbxgwx>

Use these videos and the picture to learn more about Evolution and Natural Selection. Find another example of natural selection and create your own comic strip to show how they evolved over time.



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Topic: Have a go at this experiment!

<https://www.sciencefun.org/kidszone/experiments/milk-art/>

Wednesday 8th July

Antarctica

Reading: <https://www.dkfindout.com/uk/earth/continents/antarctica/>

Read the following link and make a note of information that interests you.

CHALLENGE: Research any buildings that exist in Antarctica - why are they there? Who built them? How do they work in these conditions? These Websites may help you:

<https://www.ukaht.org/discover/port-lockroy/>

<https://www.ukaht.org/discover/other-historic-sites/>

<https://www.bas.ac.uk/polar-operations/sites-and-facilities/station/>

<https://discoveringantarctica.org.uk/how-is-antarctica-governed/geopolitics/geopolitics-of-antarctica/>

Writing: Create your own Building for the Antarctic: Consider the following questions: What is the terrain like? Where would you locate it? How cold can it get in Antarctica? What temperature will it need to be inside the station? How will you heat the station? How will you maintain the temperature? Think about thermal energy and insulation. What will the inhabitants be doing there? What equipment and rooms will the station need to accommodate them? How and where will they eat, sleep, exercise etc? How will people travel around?

Put your design, ideas and answers together into a presentation: this could be a PowerPoint, on paper or any other creative ways you can think of!

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Topic: Have a go at this experiment!

<https://www.sciencefun.org/kidszone/experiments/sizzlin-snowballs/>

Thursday 9th July

Reading: https://www.nasa.gov/audience/foreducators/stem-on-station/dayinthelife#.VD_TifldU1

Use this website to find out more about what life is like as an astronaut in space.

Writing: <https://www.youtube.com/watch?v=UyFYqeE32f0>

Using your research from this morning and YouTube videos like the link above, write a diary entry as an astronaut in space. Tell me what it feels like, what your emotions are, what you miss on earth and what are the most amazing things about being in space.

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	<p>Topic: Try this experiment - have a go at the extra experiments too! https://www.sciencefun.org/kidszone/experiments/balloon-pop-not/</p>
<p>Friday 10th July</p>	<p>Reading:Friday Treat - enjoy reading a favourite book!</p> <p>Writing: Who is the greatest Scientist of all time? https://www.dkfindout.com/uk/science/famous-scientists/ Use the link above to research some famous scientists. Create a piece of writing claiming who you think is the greatest scientist of all time. Explain why you think they are the greatest - what did they achieve? How did they change the world? Are we still benefiting from them today? Why is another scientist not as great? Give reasons why and use evidence to support your arguments. Convince me that you are correct!</p> <p>Maths:Spend some time on Times Table Rockstars - how many coins can you win today? Can you beat your records? Visit <u>WHITE ROSE MATHS</u> and complete the learning video for today. Get some extra practice on <u>BBC bitesize</u> to become an expert!</p> <p>Topic: Have a go at this experiment and enjoy a slushy soda in the sunshine! https://www.sciencefun.org/kidszone/experiments/super-cool-soda/</p>
<p>Other helpful websites:</p> <p>https://www.sciencefun.org/kidszone/experiments/ https://www.britishscienceweek.org/app/uploads/2020/01/BSA_BSW_secondary_1119v13.pdf</p>	