



Class Tamar

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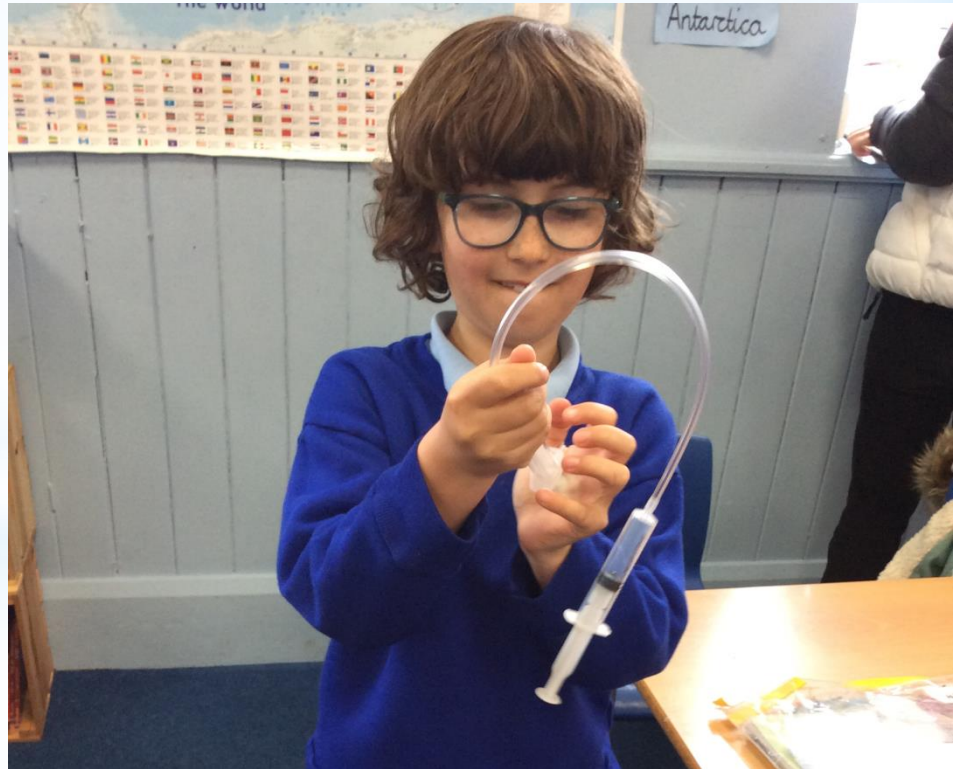
Making volcanoes

Pneumatic systems

We were introduced to 'pneumatic systems' and explored different ways it is used.

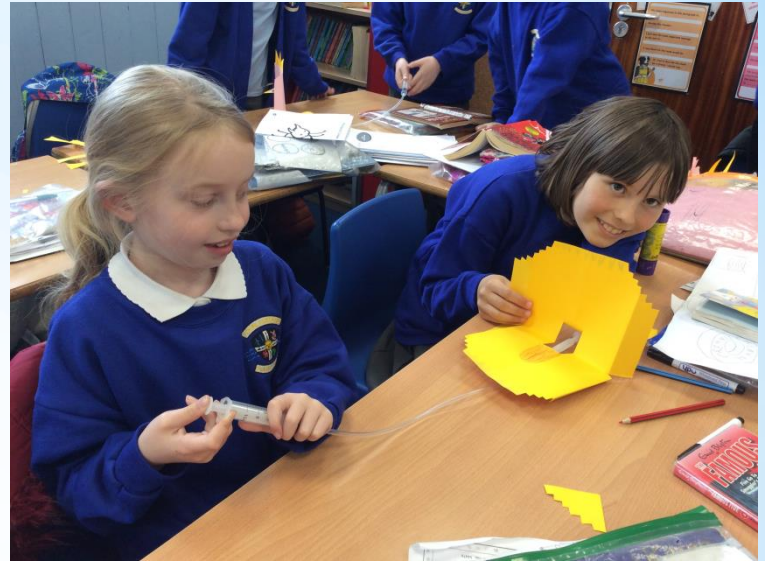
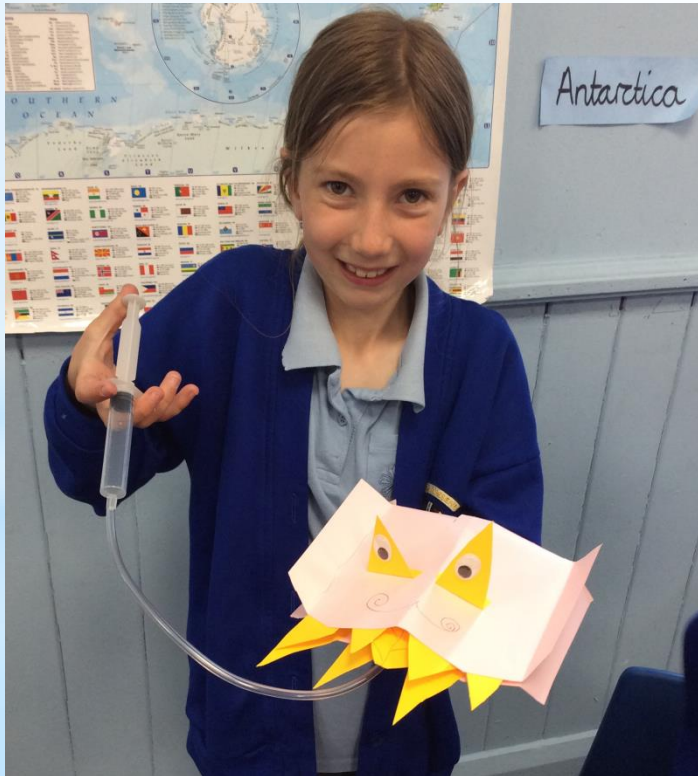
Pneumatic systems use compressed air to do its job.

Mrs Green uses a whistle in PE which is a pneumatic system!



Making monsters

We made a moving monster head using a pneumatic system. This was made with two syringes and a tube.



It will only work if there is air in one syringe so that the air can push to the other side and open its mouth!

Planning our volcanoes

We thought carefully about how we could use the syringes for our monster heads and apply the same pneumatic system to make an erupting volcano.

One of the syringes will have to be inside the volcano to push out the lava.

I can plan my erupting Volcano using a pneumatic system.

What you will need:

- Strips of paper to represent lava
- A bottle
- 2 syringes attached to a tube
- Glue
- Newspaper
- Paint

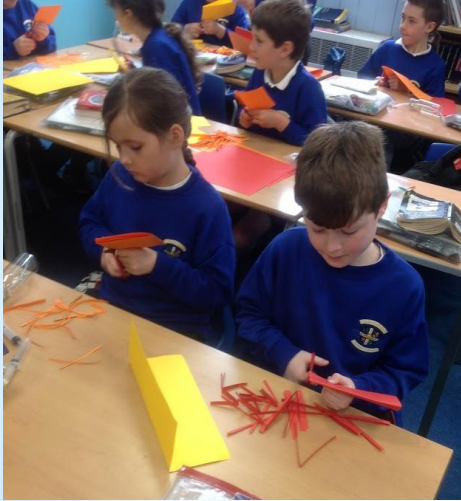
Explain how your volcano will work:

There will be strips of paper inside a curled up newspaper inside a bottle with a hole in the bottom. The 2 syringes will be pushed causing the strips of paper to fall out.

Draw a labelled diagram of your volcano: (use the inside space for the picture and the outside space for labels)

Labels in diagram: bottle with hole in bottom, fake lava, Volcano Structure, Syringe, tube, curled up newspaper, Syringe 1.

Making our volcanoes



Evaluating our volcanoes

First we looked at each others volcanoes and gave two stars and a wish. Then we evaluated our own volcanoes.

We needed perseverance to make sure we finished our volcanoes!

Design Technology Project Evaluation Sheet

Aim of the Project: To create an erupting volcano using a pneumatic system.



What Worked Well? I think that all the glue we put on made an object in a good way. We used the string and stuck all the glass down. I think the pneumatic system worked well and did its job.

Challenges I Faced I couldn't keep my hand clean. The main challenges I faced were keeping the paper in small squares, getting the top of the syringe from getting stuck and getting the volcano in good shape.

How I Dealt with Any Challenges I dealt with the thin paper by putting smaller parts on the bigger parts. I dealt with the syringe by pushing it to the other side so it wouldn't stick to my hands.

What I Would Change Next Time Next time I would change the shape of the volcano (it's a bit flat), I would change the side of the thin paper. I would try to make a bigger variety of colours.

I would ~~change~~ make sure that no newspaper has showing.





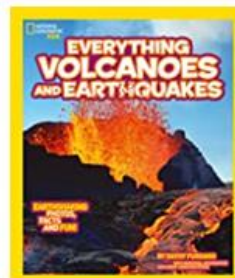
Forever Facts

- To understand how pneumatic systems work.
- Develop and use knowledge of how to construct strong, stiff shell structures.
- Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes.
- Know and use technical vocabulary relevant to the project.

Skills

- I can investigate how pneumatic systems work and incorporate this in my design.
- Use annotated sketches, prototypes, final product sketches and pattern pieces; communication technology, to develop and communicate ideas.
- Plan the main stages of making
- Select from and use a range of appropriate utensils, tools and equipment with some accuracy related to their product.
- Select from and use finishing techniques suitable for the product they are creating.
- Test their product against the original design criteria and with the intended user.
- Evaluate the ongoing work and the final product with reference to the design criteria and the views of others.

Exciting Books



Subject Specific Vocabulary

pneumatics	Pneumatics is the use of compressed air for mechanical motion
volcano	A volcano is an opening in the Earth's crust that allows magma, hot ash and gases to escape.
mechanism	A mechanism modifies input forces and movement into a set of output forces and movement that the user desires.
design	A plan or drawing produced to show the look and function of something before it's made.
evaluate	Evaluating is the process of deciding if you've done something the best way, and looking at what could be improved.

Our Endpoint

To make and evaluate a model of an erupting volcano in small groups.

SMSC: Spiritual – reflect on self-awareness. Moral - learning about our responsibilities within a group. Social – many opportunities to work collaboratively to share and reflect on their own values and opinions. Cultural - value diversity when working in groups.