**Hands on suggestions for term 4**

* [Kassie Sydow](https://www.facebook.com/groups/346737702172016/user/100002148139672/?__cft__%5b0%5d=AZW0E0b81nv4Llbi27L_PsHKpBoeDz2scysBNep8tXINqkt1ukmb0_vJtSheS5bYz8PZXTuStihWaze-ZQkaISo6upn_w4NTg3tTuSUudYahhBBgrtKGejs_ATaFt5Sbq4S-9IcAdlhEJdof1ezFHXYYyKenHYUm77ooLsk6IA87UR4RojL7jrgsKwCR5WczBbA&__tn__=R%5d-R)
* Build a bee/insect hotel..

 [Jo Standley](https://www.facebook.com/groups/346737702172016/user/659639096/?__cft__%5b0%5d=AZW0E0b81nv4Llbi27L_PsHKpBoeDz2scysBNep8tXINqkt1ukmb0_vJtSheS5bYz8PZXTuStihWaze-ZQkaISo6upn_w4NTg3tTuSUudYahhBBgrtKGejs_ATaFt5Sbq4S-9IcAdlhEJdof1ezFHXYYyKenHYUm77ooLsk6IA87UR4RojL7jrgsKwCR5WczBbA&__tn__=R%5d-R)

I used to love making cells models from polystyrene and other found objects...... but the cleaners hated me! Whatever you did there were fragments of polystyrene and tiny beads - and the static made them impossible to vacuum!

[Jo Standley](https://www.facebook.com/groups/346737702172016/user/659639096/?__cft__%5b0%5d=AZW0E0b81nv4Llbi27L_PsHKpBoeDz2scysBNep8tXINqkt1ukmb0_vJtSheS5bYz8PZXTuStihWaze-ZQkaISo6upn_w4NTg3tTuSUudYahhBBgrtKGejs_ATaFt5Sbq4S-9IcAdlhEJdof1ezFHXYYyKenHYUm77ooLsk6IA87UR4RojL7jrgsKwCR5WczBbA&__tn__=R%5d-R)

And there always was 'that kid' who just blew up the biggest balloon (invariably pink) and added a toilet roll inner and a tail and said 'sperm'.....

 [Madeleine Jane](https://www.facebook.com/groups/346737702172016/user/100000590308973/?__cft__%5b0%5d=AZW0E0b81nv4Llbi27L_PsHKpBoeDz2scysBNep8tXINqkt1ukmb0_vJtSheS5bYz8PZXTuStihWaze-ZQkaISo6upn_w4NTg3tTuSUudYahhBBgrtKGejs_ATaFt5Sbq4S-9IcAdlhEJdof1ezFHXYYyKenHYUm77ooLsk6IA87UR4RojL7jrgsKwCR5WczBbA&__tn__=R%5d-R)

I’m making papier mache planets with my classes in the next few weeks!

 [Jeffery Chet](https://www.facebook.com/groups/346737702172016/user/710449676/?__cft__%5b0%5d=AZW0E0b81nv4Llbi27L_PsHKpBoeDz2scysBNep8tXINqkt1ukmb0_vJtSheS5bYz8PZXTuStihWaze-ZQkaISo6upn_w4NTg3tTuSUudYahhBBgrtKGejs_ATaFt5Sbq4S-9IcAdlhEJdof1ezFHXYYyKenHYUm77ooLsk6IA87UR4RojL7jrgsKwCR5WczBbA&__tn__=R%5d-R)

I'm getting my students to build a solar cooker. It has to be able to fry an egg.

 [Thalia Rutherfurd](https://www.facebook.com/groups/346737702172016/user/100000515973969/?__cft__%5b0%5d=AZW0E0b81nv4Llbi27L_PsHKpBoeDz2scysBNep8tXINqkt1ukmb0_vJtSheS5bYz8PZXTuStihWaze-ZQkaISo6upn_w4NTg3tTuSUudYahhBBgrtKGejs_ATaFt5Sbq4S-9IcAdlhEJdof1ezFHXYYyKenHYUm77ooLsk6IA87UR4RojL7jrgsKwCR5WczBbA&__tn__=R%5d-R)

Building trebuchets is great for physics (catapults if you are just wanting the basics).

 [Jo Carter](https://www.facebook.com/groups/346737702172016/user/100013170852160/?__cft__%5b0%5d=AZW0E0b81nv4Llbi27L_PsHKpBoeDz2scysBNep8tXINqkt1ukmb0_vJtSheS5bYz8PZXTuStihWaze-ZQkaISo6upn_w4NTg3tTuSUudYahhBBgrtKGejs_ATaFt5Sbq4S-9IcAdlhEJdof1ezFHXYYyKenHYUm77ooLsk6IA87UR4RojL7jrgsKwCR5WczBbA&__tn__=R%5d-R)

Look up BP challenges- lots of great stuff there

 [John Smith](https://www.facebook.com/groups/346737702172016/user/1197501453/?__cft__%5b0%5d=AZW0E0b81nv4Llbi27L_PsHKpBoeDz2scysBNep8tXINqkt1ukmb0_vJtSheS5bYz8PZXTuStihWaze-ZQkaISo6upn_w4NTg3tTuSUudYahhBBgrtKGejs_ATaFt5Sbq4S-9IcAdlhEJdof1ezFHXYYyKenHYUm77ooLsk6IA87UR4RojL7jrgsKwCR5WczBbA&__tn__=R%5d-R)

Build a bridge using 20 skewers and one glue stick to span 40cm. Bridge must support 3kg and not flex more than 1cm to win a chocky frog. Whole pack for max load.

 [Julia Liefting](https://www.facebook.com/groups/346737702172016/user/100000139493938/?__cft__%5b0%5d=AZW0E0b81nv4Llbi27L_PsHKpBoeDz2scysBNep8tXINqkt1ukmb0_vJtSheS5bYz8PZXTuStihWaze-ZQkaISo6upn_w4NTg3tTuSUudYahhBBgrtKGejs_ATaFt5Sbq4S-9IcAdlhEJdof1ezFHXYYyKenHYUm77ooLsk6IA87UR4RojL7jrgsKwCR5WczBbA&__tn__=R%5d-R)

Building classroom furniture out of recycled materials.

We got some amazing stuff ottomans from 2L drink bottles and then they sewed a cover for them, picnic tables from those big wire holders and plenty of pallet furniture.

Ask local businesses to bring over stuff that would be destined for landfill and have at it!

 [Lauren Palmer](https://www.facebook.com/groups/346737702172016/user/597220124/?__cft__%5b0%5d=AZW0E0b81nv4Llbi27L_PsHKpBoeDz2scysBNep8tXINqkt1ukmb0_vJtSheS5bYz8PZXTuStihWaze-ZQkaISo6upn_w4NTg3tTuSUudYahhBBgrtKGejs_ATaFt5Sbq4S-9IcAdlhEJdof1ezFHXYYyKenHYUm77ooLsk6IA87UR4RojL7jrgsKwCR5WczBbA&__tn__=R%5d-R)

Love a great leaf model with anything and everything you can find or an edible cell model or DNA ( edible too is cool)...

 [Lauren Palmer](https://www.facebook.com/groups/346737702172016/user/597220124/?__cft__%5b0%5d=AZW0E0b81nv4Llbi27L_PsHKpBoeDz2scysBNep8tXINqkt1ukmb0_vJtSheS5bYz8PZXTuStihWaze-ZQkaISo6upn_w4NTg3tTuSUudYahhBBgrtKGejs_ATaFt5Sbq4S-9IcAdlhEJdof1ezFHXYYyKenHYUm77ooLsk6IA87UR4RojL7jrgsKwCR5WczBbA&__tn__=R%5d-R)

Simple machines - do a Rube Goldberg

Or a catapult ...

 [Sarah Knight](https://www.facebook.com/groups/346737702172016/user/774323566/?__cft__%5b0%5d=AZW0E0b81nv4Llbi27L_PsHKpBoeDz2scysBNep8tXINqkt1ukmb0_vJtSheS5bYz8PZXTuStihWaze-ZQkaISo6upn_w4NTg3tTuSUudYahhBBgrtKGejs_ATaFt5Sbq4S-9IcAdlhEJdof1ezFHXYYyKenHYUm77ooLsk6IA87UR4RojL7jrgsKwCR5WczBbA&__tn__=R%5d-R)

Seed raising using different mixes and treatment of soilhttps://youtu.be/4x2V6osOGaw?si=FUQzOlO\_mVCjJOwa

Or link builds to eq proofing of marae

[https://www.facebook.com/share/v/8aMpqfzHhbHbyip2/?mibextid=00RHnp&startTimeMs=3106](https://www.facebook.com/earthquakecommission/videos/1892633671131261/?__cft__%5b0%5d=AZW0E0b81nv4Llbi27L_PsHKpBoeDz2scysBNep8tXINqkt1ukmb0_vJtSheS5bYz8PZXTuStihWaze-ZQkaISo6upn_w4NTg3tTuSUudYahhBBgrtKGejs_ATaFt5Sbq4S-9IcAdlhEJdof1ezFHXYYyKenHYUm77ooLsk6IA87UR4RojL7jrgsKwCR5WczBbA&__tn__=R%5d-R)

 [Vicky Lacey](https://www.facebook.com/groups/346737702172016/user/100001159694943/?__cft__%5b0%5d=AZW0E0b81nv4Llbi27L_PsHKpBoeDz2scysBNep8tXINqkt1ukmb0_vJtSheS5bYz8PZXTuStihWaze-ZQkaISo6upn_w4NTg3tTuSUudYahhBBgrtKGejs_ATaFt5Sbq4S-9IcAdlhEJdof1ezFHXYYyKenHYUm77ooLsk6IA87UR4RojL7jrgsKwCR5WczBbA&__tn__=R%5d-R)

Rocket building, bridge building, mini crossbows, matchstick guns

 [Mark J Freeman](https://www.facebook.com/groups/346737702172016/user/506184839/?__cft__%5b0%5d=AZW0E0b81nv4Llbi27L_PsHKpBoeDz2scysBNep8tXINqkt1ukmb0_vJtSheS5bYz8PZXTuStihWaze-ZQkaISo6upn_w4NTg3tTuSUudYahhBBgrtKGejs_ATaFt5Sbq4S-9IcAdlhEJdof1ezFHXYYyKenHYUm77ooLsk6IA87UR4RojL7jrgsKwCR5WczBbA&__tn__=R%5d-R)

Spaghetti bridges! Build them to span 50cm or so and drive a hot wheels across then strat loading them up with 50g masses!

 [Mikhal Stone](https://www.facebook.com/groups/346737702172016/user/100000452833478/?__cft__%5b0%5d=AZW0E0b81nv4Llbi27L_PsHKpBoeDz2scysBNep8tXINqkt1ukmb0_vJtSheS5bYz8PZXTuStihWaze-ZQkaISo6upn_w4NTg3tTuSUudYahhBBgrtKGejs_ATaFt5Sbq4S-9IcAdlhEJdof1ezFHXYYyKenHYUm77ooLsk6IA87UR4RojL7jrgsKwCR5WczBbA&__tn__=R%5d-R)

BP challenges always worked really well. e.g. 🡪 <http://www.starters.co.nz/bpchallenge-index.html>

 [Ben Reay](https://www.facebook.com/groups/346737702172016/user/720217913/?__cft__%5b0%5d=AZW0E0b81nv4Llbi27L_PsHKpBoeDz2scysBNep8tXINqkt1ukmb0_vJtSheS5bYz8PZXTuStihWaze-ZQkaISo6upn_w4NTg3tTuSUudYahhBBgrtKGejs_ATaFt5Sbq4S-9IcAdlhEJdof1ezFHXYYyKenHYUm77ooLsk6IA87UR4RojL7jrgsKwCR5WczBbA&__tn__=R%5d-R)

I do a following instructions challenge making catapults using iceblock sticks and a rubber band, then we have a challenge to see whose catapult shoots the furthest

 [Shelly Robson](https://www.facebook.com/groups/346737702172016/user/538036383/?__cft__%5b0%5d=AZW0E0b81nv4Llbi27L_PsHKpBoeDz2scysBNep8tXINqkt1ukmb0_vJtSheS5bYz8PZXTuStihWaze-ZQkaISo6upn_w4NTg3tTuSUudYahhBBgrtKGejs_ATaFt5Sbq4S-9IcAdlhEJdof1ezFHXYYyKenHYUm77ooLsk6IA87UR4RojL7jrgsKwCR5WczBbA&__tn__=R%5d-R)

Build a miniature biome with people (get students to give their people an identity) link science learning into survival in the biome.

 [Jo Carter](https://www.facebook.com/groups/346737702172016/user/100013170852160/?__cft__%5b0%5d=AZW0E0b81nv4Llbi27L_PsHKpBoeDz2scysBNep8tXINqkt1ukmb0_vJtSheS5bYz8PZXTuStihWaze-ZQkaISo6upn_w4NTg3tTuSUudYahhBBgrtKGejs_ATaFt5Sbq4S-9IcAdlhEJdof1ezFHXYYyKenHYUm77ooLsk6IA87UR4RojL7jrgsKwCR5WczBbA&__tn__=R%5d-R)

Painting with soil is fun....you need a range of different soils for colour, dry them out in the lab oven and powder, then mix pigments with pva.

 [John Smith](https://www.facebook.com/groups/346737702172016/user/1197501453/?__cft__%5b0%5d=AZW0E0b81nv4Llbi27L_PsHKpBoeDz2scysBNep8tXINqkt1ukmb0_vJtSheS5bYz8PZXTuStihWaze-ZQkaISo6upn_w4NTg3tTuSUudYahhBBgrtKGejs_ATaFt5Sbq4S-9IcAdlhEJdof1ezFHXYYyKenHYUm77ooLsk6IA87UR4RojL7jrgsKwCR5WczBbA&__tn__=R%5d-R)

BTW where is your school?

 [Mike Wilson](https://www.facebook.com/groups/346737702172016/user/655411445/?__cft__%5b0%5d=AZW0E0b81nv4Llbi27L_PsHKpBoeDz2scysBNep8tXINqkt1ukmb0_vJtSheS5bYz8PZXTuStihWaze-ZQkaISo6upn_w4NTg3tTuSUudYahhBBgrtKGejs_ATaFt5Sbq4S-9IcAdlhEJdof1ezFHXYYyKenHYUm77ooLsk6IA87UR4RojL7jrgsKwCR5WczBbA&__tn__=R%5d-R)

If you google for the BP technology challenge they are still hosted on a resource site. Some good activities.

 [Dylan van Schooten](https://www.facebook.com/groups/346737702172016/user/100001001328345/?__cft__%5b0%5d=AZW0E0b81nv4Llbi27L_PsHKpBoeDz2scysBNep8tXINqkt1ukmb0_vJtSheS5bYz8PZXTuStihWaze-ZQkaISo6upn_w4NTg3tTuSUudYahhBBgrtKGejs_ATaFt5Sbq4S-9IcAdlhEJdof1ezFHXYYyKenHYUm77ooLsk6IA87UR4RojL7jrgsKwCR5WczBbA&__tn__=R%5d-R)

I do a lot of model building. Build a model of a Mars dome. A model of a carbon neutral village. A balloon powered waka

 [Travis Georgia-Rose](https://www.facebook.com/groups/346737702172016/user/767777794/?__cft__%5b0%5d=AZW0E0b81nv4Llbi27L_PsHKpBoeDz2scysBNep8tXINqkt1ukmb0_vJtSheS5bYz8PZXTuStihWaze-ZQkaISo6upn_w4NTg3tTuSUudYahhBBgrtKGejs_ATaFt5Sbq4S-9IcAdlhEJdof1ezFHXYYyKenHYUm77ooLsk6IA87UR4RojL7jrgsKwCR5WczBbA&__tn__=R%5d-R)

Colour and build virus models.

Decorate bottles as rockets and add fins and a cone.

Build a solar oven from pizza boxes… they work

 [Andrew Welsman](https://www.facebook.com/groups/346737702172016/user/553542386/?__cft__%5b0%5d=AZW0E0b81nv4Llbi27L_PsHKpBoeDz2scysBNep8tXINqkt1ukmb0_vJtSheS5bYz8PZXTuStihWaze-ZQkaISo6upn_w4NTg3tTuSUudYahhBBgrtKGejs_ATaFt5Sbq4S-9IcAdlhEJdof1ezFHXYYyKenHYUm77ooLsk6IA87UR4RojL7jrgsKwCR5WczBbA&__tn__=R%5d-R)

[https://www.jamesdysonfoundation.co.uk/.../challenge...](https://l.facebook.com/l.php?u=https%3A%2F%2Fwww.jamesdysonfoundation.co.uk%2Fresources%2Fother-engineering-resources%2Fchallenge-cards.html%3Ffbclid%3DIwAR0FyLXR7zQ4VsP7Dk2XsBq3eqFfVo4mekZH1x29sOzY4G0XSxQ-JKlCZ-g&h=AT0jUXgnPsy9dfat2UZrkzEdOE3o_4OVZHmGsyXPMBYmis201Qjvfi5Bo-PSfxvL_KqtXO_TjZ64gTOyG1XUKqdEdTbyTl4B0v-4lKb8qksDRLkGymFcG6OkQSXb5UoLlRqKgKUMqQ&__tn__=R%5d-R&c%5b0%5d=AT2w_Brv2lW8tJxjHQIiDFHjFA3-XTGUZBNn2q2wFQRbbQuv9LPxEcwB8qRXj7Iv6capdNBF8vHaxZ_eNL6ib-zbYCbG5ZKMab_TJrr-8fqzZLN8nbRcefJQ2eiCIcq8sU5F5G7_J4t7AAnJNLQqPNXIbl7MVzNeVsCEDDeoUq-4hbllMR4MvfPzx43wm4wL9wCzO9n8tI_o66sc)

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Challenge Cards