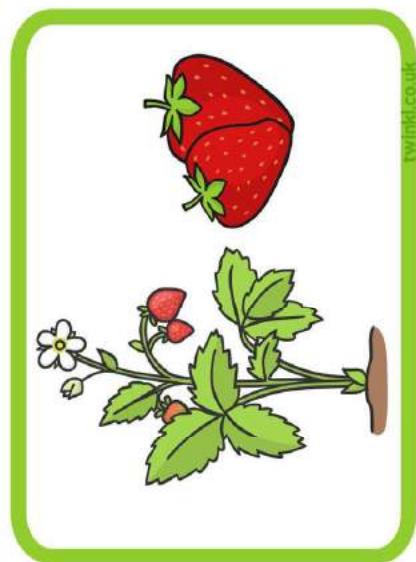


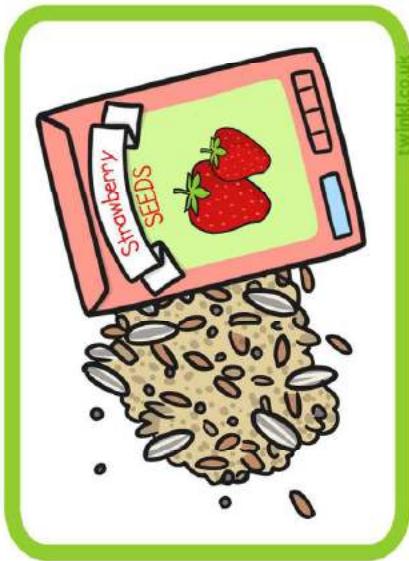
# Primary Science

Resource Pack for Year 5 and Year 6

This Primary Science Resource Pack includes resources on topics from Year 5 and Year 6 Learning Outcomes.



Using a watering can,  
water the seeds.



Plant the seeds into  
the soil.



Fill the plant pot  
with soil.

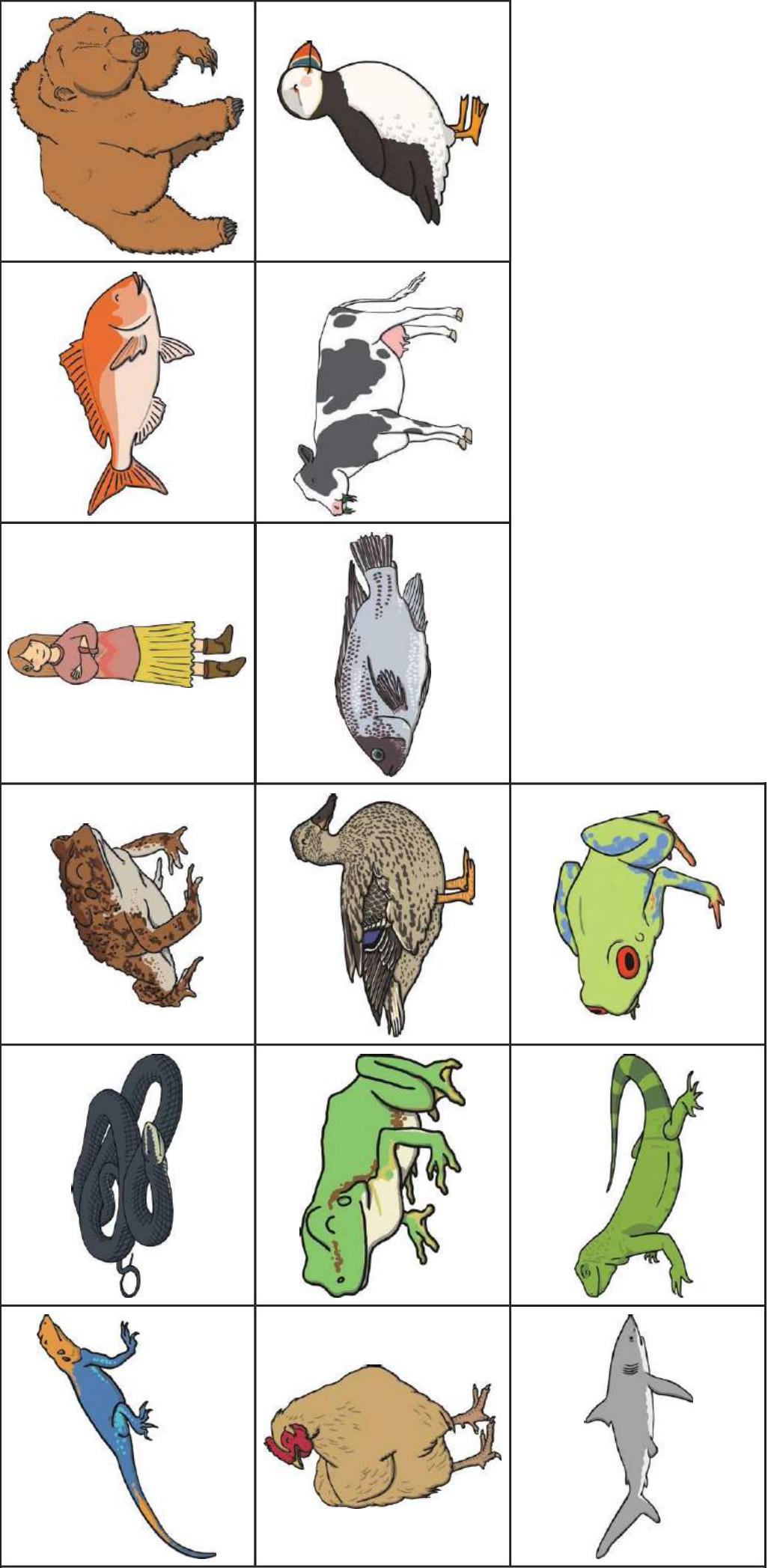
Fruit then grows on  
the plant.

The plant grows and  
begins to flower.

The seeds begin to sprout  
and grow.

# Sorting Animals

Sort these animals into the correct sets. Are they mammals, reptiles, amphibians, fish or birds?



# Caring for the Environment



Write about ways in which you could care for the environment in school and at home,  
e.g switching off lights, recycling etc.

School	Home

# The Science of Sound

## Amazing Fact

The 'anechoic chamber' at Orfield Laboratories in South Minneapolis is officially the quietest room in the world. The walls and structure prevent 99.99% of all sound from penetrating into the room. Once the room is plunged into pitch darkness users have experienced difficulty staying in it for longer than 30 minutes.

Sound is a vibration, which requires a material to travel through. Some materials allow sound to travel through them very easily, especially hard, rigid materials. Softer materials, such as cotton wool, absorb sound, making it difficult for the vibrations to travel.

## Challenge

Think about it:

- In what situations might you want to block out loud noises?
- How do you think you could block out loud sounds?
- What sort of materials do you think would block out sound most effectively?

## Let's investigate!

### Equipment

You will need:

- 2 plastic cups
- a selection of soft materials (cotton wool, paper towel, foil, bubble wrap etc.)
- a sound source (musical instrument, sound recording, music etc.)

### Predictions

Look carefully at the available materials and spend some time exploring them.

Predict which of the materials will absorb sound most effectively and give reasons for your prediction.

Record your predictions in the table on the next page.

### Method

1. Place the materials, one at a time, inside the plastic cups.
2. Place one plastic cup over each ear.
3. Begin to walk away from the sound source until you can no longer hear the sound.



# The Science of Sound

4. The distance can be recorded each time.
5. Ensure the investigation is a fair test by using the same amount of material, same sound source and same person each time.

Material	Prediction	Observation

## Conclusion

Which material blocked out sound most effectively? Why?

How would you describe the most effective material?

Write your conclusion here:

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## Safety points

- Do not place any materials inside your ears.

You could also try to find out:

- how lack of sound or light affects your balance;
- what noises you can hear from your body in the room;
- how the experience affects your thoughts.

# Make your own Volcano!

## Resources required:

A volcano (you can make a volcano out of papier-mâché or LEGO blocks or use a small plastic bottle), vinegar, baking soda, liquid dish washing soap, red and yellow food colouring and glitters (optional).

## Description of investigation:

- 1) Find a space in the house which can be easily cleaned up after the investigation.
- 2) Add two spoonfuls of baking soda.
- 3) Add about a spoonful of dish soap.
- 4) Add about 5 drops each of the red and yellow food colouring and a sprinkle of glitters!
- 5) Now for the eruption! Add about 30ml of vinegar into the container and watch your volcano come alive!



## How does it work?

A chemical reaction creates the appearance of a physical volcano eruption. Research about different types of volcanoes and how they erupt.

**More info:**

<https://www.redtedart.com/how-to-make-a-papier-mache-erupting-volcano-for-the-science-fair/>

## Investigation Questions:

- ✓ Does vinegar temperature affect how fast the volcano erupts?
- ✓ Does the shape of the volcano affect the direction the eruption travels?
- ✓ What can be added to the “lava” to slow it down and make it more like real lava?
- ✓ What combination of vinegar and baking soda creates the biggest eruption?



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# Galaxy Eggs

## Resources required:

Hard boiled eggs; oil (e.g. vegetable oil); food colouring (any colours); vinegar; water; cups; small bowls.

## Description of investigation:

1. Place 1 cup of very hot water in a cup, add 3 to 4 drops of food colouring and 1 teaspoon of vinegar. Mix well. Repeat this step with other colours.
2. Add the eggs in each cup and let sit for about 3 minutes. Remove and set on paper towels.
3. In each bowl, add about 3cm of water until about half of the egg is covered. Next, add 1 tablespoon of oil to each bowl and 6 to 8 drops of food colouring.
4. Place one egg into each bowl. With a spoon, spoon the water/oil mixture over the egg and let sit for about 3 to 4 minutes. Then roll the egg so it turns over and let sit for another 3 to 4 minutes.
5. Take out the egg and lay on paper towels. Let it sit for a few minutes, then wipe off with additional paper towels.

## Investigation Questions:

- ✓ Predict what will happen to the egg when dipped in the vinegar solution.
- ✓ Predict what will happen to the egg when dipped in the water/oil mixture?
- ✓ Why does oil float on water?



## How does it work?

Vinegar is an acidic dye and helps the food colouring to bond to the eggshell. Oil is less dense than water (refer to CEKCIK Lava Lamp activity no. 5) so when the egg is placed in the final coloured water/oil mixture, the oil keeps parts of the egg from bonding with the food colouring giving it a marbled appearance.

## More info:

<https://littlebinsforlittlehands.com/marbled-easter-eggs/>



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