

# Firstly, answer this set of questions about **Sound**.

1. When there is thunder and lightning which one reaches your brain first? \_\_\_\_\_

This is because:

- a. sound travels faster than light
- b. your eyes work more quickly than your ears
- c. light travels faster than sound
- d. your ears work more quickly than your eyes

CHOOSE ONE ANSWER

2. A long tuning fork makes a different note than a short tuning fork.

Which one makes the lower note? \_\_\_\_\_

3. All sounds are made by \_\_\_\_\_. When vibrations are very fast we say they have a high \_\_\_\_\_ and a musical note would have a high \_\_\_\_\_. When we hit or shake an object

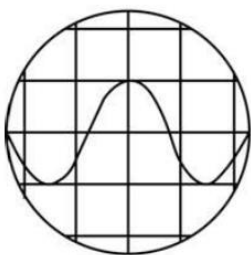
we are giving it \_\_\_\_\_.

**Energy   vibrations   pitch   frequency**  
WHICH WORD GOES IN WHICH SPACE?

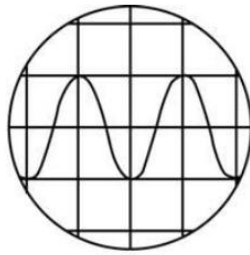
4. Younger people can hear sounds that older people cannot hear. These will be **high / low** notes.

CHOOSE ONE

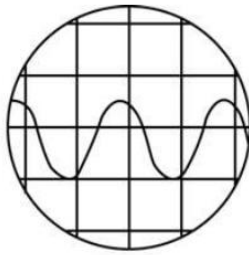
5. Circle the one of these soundwave patterns which shows the loudest sound?



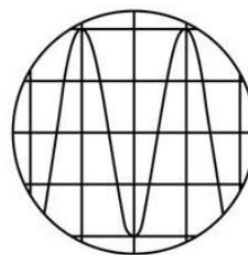
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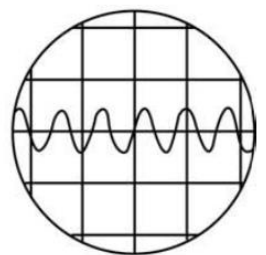
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3



4



5

6. Sound travels across a room when molecules of \_\_\_\_\_ hit each other, one after another.

7. Sound can travel through water. **True** or **False**? Name four things that sound can travel through.

8. Describe how we hear sound?

9. Robert rings a bell. Describe how the bell makes a sound.

10. What does the sound travel through to reach Robert's ears?

11. Robert rings the bell and then touches it with his hand. Why does the bell stop making a sound?

12. Robert now makes sounds by twanging a ruler on the edge of the table. The ruler makes a sound. How can Robert make the sound softer?



# Next, have a go at these **watery Science** activities...

**Report on paper on what happens in three or four of them.**

**[If some of them *don't* work for you, please only report on the ones that do work!]**

## **1. Needle on water**

Find a needle. Try to float it on water. It probably won't. So instead fold a piece of tissue into a raft. Lie the needle on the raft. Float it on water. Watch what happens to the paper and watch what happens to the needle.

## **2. A glass filled to above the brim**

Fill a glass to the very, very top so that even a drop more should overflow it. Find some coins. Add them into the water. How many coins can you add before the glass of water overflows?

## **3. A string for watering plants**

Find some cotton-y string (string that soaks up water and goes properly soggy when it's been left in water). Place a glass of water right next to a pot plant (possibly sitting on a small box) so that it is just above the level of the soil in the pot. Now drape a piece of string so it is in the water at one end and lying on the soil at the other (Don't let it sag lower in between the glass and the plant). This will take quite a long time but it should now be able to keep watering your plant slowly for several days.

## **4. Basic chromatography**

Put about a 2cm depth of water in a tall glass. Find a strip of newspaper or filter paper or any other slightly-rough paper about 15 cm long. Draw three or four heavily-coloured dots of different colours using felt tip pens about 2cm away from one end of the strip. Hang the strip on a pencil or two across the top of the glass so that the end of the paper strip with the dots only **just dips into the water – but don't let the inky dots go into the water**. Watch what happens – it might take quite a while so perhaps do one or two of the other tasks and come back to look afterwards.

## **5. Paper napkin rope – a clever way to snap it**

Roll a paper napkin (or two) into something like a tight thin rope. It should be impossible to snap just by pulling the ends. (If it snaps make another and use two napkins, rolled together, so that it is too strong to snap). Get anyone nearby to pull on it to prove that it is impossible. Then add a couple of drops of water (just from slightly wet fingers will usually be enough) at the middle of the rope.

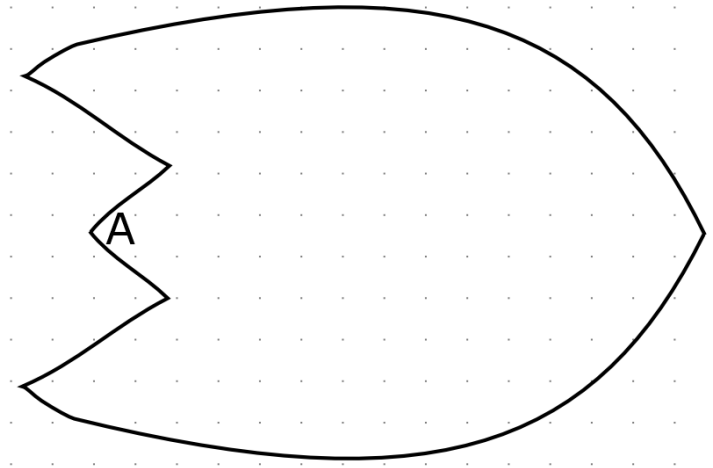
## **6. Pepper on water – soapy finger**

Mostly fill a bowl with water. Sprinkle pepper on the surface. Then touch the water surface. Very little will happen. But now rub your fingertip on some wet soap and touch the surface of the water again. What happens this time?

## **7. Circle of thread on water's surface**

[Similar to the last one, but nice to look at when it works!] gently drape a piece of cotton round in a rough loop on the surface of a bowl of water. Touch a very soapy fingertip to the surface of the water in the middle of the loop. What happens?

## 8. Cardboard boat – with a soap motor



Cut out a card shape a bit like this one, probably about 10 or 12cm long. Place it on the surface of a bowl or bath of water. It should float and stay still on the water.

Take it out of the water. Rub a fingerful of soap onto your boat at the point marked with an 'A' in the diagram. Put it back on the water. What happens this time?

## Friday afternoon: French

### Describing Clothes with Colours

Going back online to the second of the French lessons, following on from last week's one about names of clothes.

The link is <https://teachers.thenational.academy/lessons/describing-clothes-with-colours-c9h6at>

This is mostly simple, **but...** the lesson also tackles the way the colours are **spelt differently** depending on what type of noun-word they are describing, so follow that bit really carefully.

## P.E.

### Part 1: Miss Price's Circuit Challenge

These are on the next page.

As usual, try to do the full set of exercises twice.

# Miss Price's Circuit Training Challenge: Week Four

12 Shuttle runs



25 Star jumps



30 Sit ups



10 Burpees



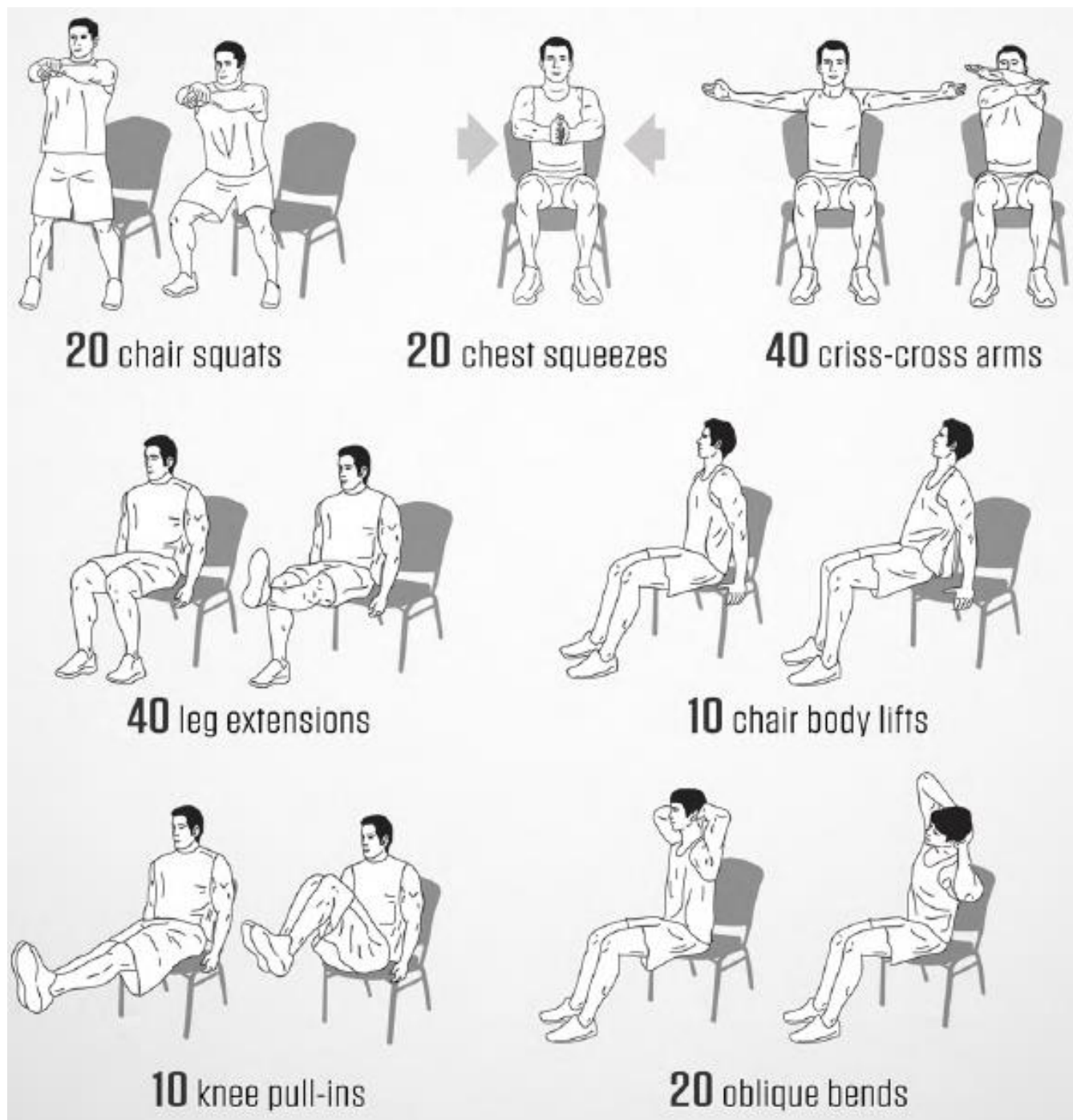
Tricep dips



Have a 1 minute rest between each exercise.  
Try to do the circuit twice.

## Part 2: Office exercises

There was an old joke that, in the Olympic Games, Team GB always seemed to win medals in sports that allowed you to sit down while doing them (cycling, horse riding, sailing). Great Britain does win medals in other sports these days, but **we do spend an awful lot of time sitting down**. **Sitting at a desk or looking at a computer can make you very stiff and 'slouchy'**. For this reason, this week's second set of exercises are **sitting down exercises**. Make sure you aren't sitting in a soft comfy chair though as that will actually make them much more difficult. **Try to complete the full set of exercises twice.**



And then have a lovely weekend!