Activities for Monday 1st February

The Government guidelines state that children in Year 4 should spend 4 hours each day on their learning from home. To make things clearer, we have made a list of how long we would spend on each of today's activities, if we were in school. These are an approximate guide. Please remember to email us some photos of your work at the end of the day. We look forward to seeing how you get on.

Thinking Skills – 30 minutes
P.E – 30 minutes
Maths – 1 hour
Science – 1 hour
SPAG – 30 minutes
Spelling – 30 minutes

Thinking Skills

Think of 5 possibilities for each number sentence.

? + ? = 100

? − ? = 100

P.E

- We are going to be working out with Joe Wicks today.
- Use the link below to access today's workout. It will be live at 9am or you can follow it later.
- https://www.youtube.com/user/thebodycoach1

White Rose Maths

L.I – To make shapes.

Please access this website – https://whiterosemaths.com/homelearning/year-4/spring-week-4-measurement-area/

If you are struggling to open the link, please try copying it and pasting it into your internet search engine.

There is a video labelled ‘Making Shapes’ and it will tell you all the information you need to be able to meet the learning intention today.

Remember, you don’t need the worksheets as all of the questions are on the next slide.

Activity 1

Ron has 4 squares.
He systematically makes rectilinear shapes.

Use 5 squares to make rectilinear shapes.
Can you work systematically?

Activity 2

- Use squared paper to draw 4 different rectilinear shapes with an area of 12 squares.
  Compare your shapes to a partner.
  Are they the same?
  Are they different?

Activity 3

Mo is building a patio made of 20 square slabs.
What could the patio look like?
Mo is using 6 black square slabs in his design.
None of them are touching each other.
Where could they be in the designs you have made?

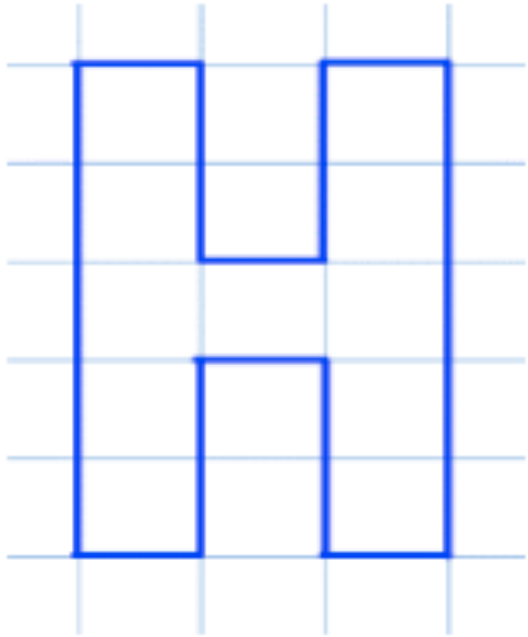
Problem Solving 1

Here is a rectilinear shape.

Using 7 more squares, can you make a rectangle?
Can you find more than one way?

Problem Solving 2

Can you make some capital letters on squared paper using less than 20 squares?



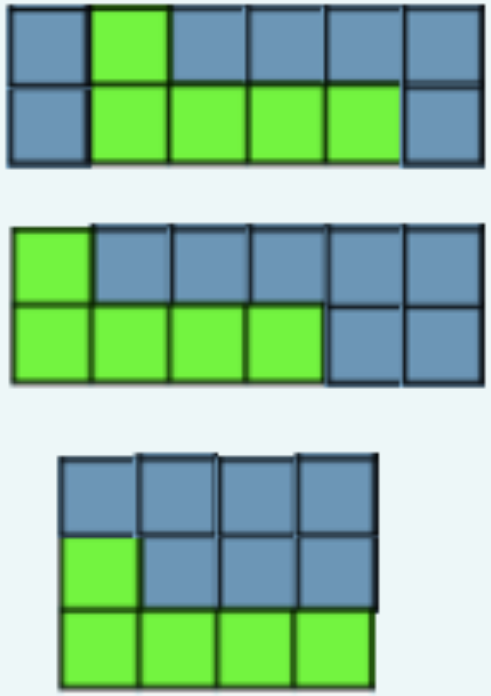
Make a word from some and count the total area of the letters.
Which letters have a line of symmetry?
What is the area of half of each letter?

Problem Solving Answers

Here is a rectilinear shape.

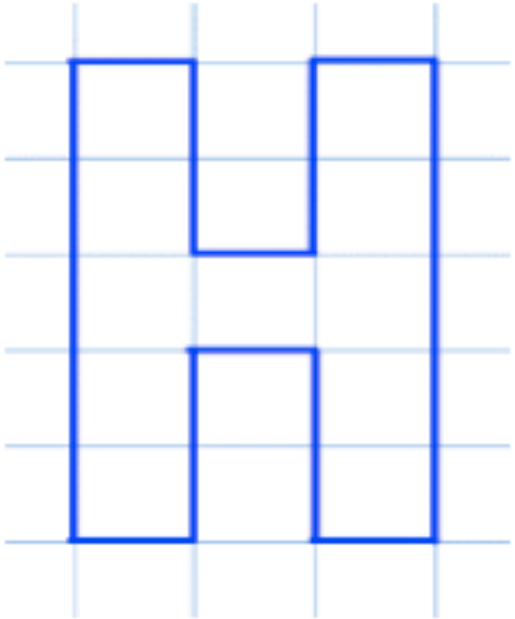
Using 7 more squares, can you make a rectangle?
Can you find more than one way?

Possible answers include:



Problem Solving Answers

Can you make some capital letters on squared paper using less than 20 squares?



Make a word from some and count the total area of the letters.
Which letters have a line of symmetry?
What is the area of half of each letter?

Most letters can be made. They could be drawn on large squared paper or made with square tiles.

Science

L.I - I can explore how sounds change over distance.

For today's lesson you will need:

2 paper cups

A sewing needle/scissors to make holes in the cup

Approximately 20m length of string

How sounds travel

- The pictures below represent how sounds travel. Using your understanding from previous lessons, can you draw the pictures underneath in the correct order. Then, add a caption underneath each picture to explain what is happening.

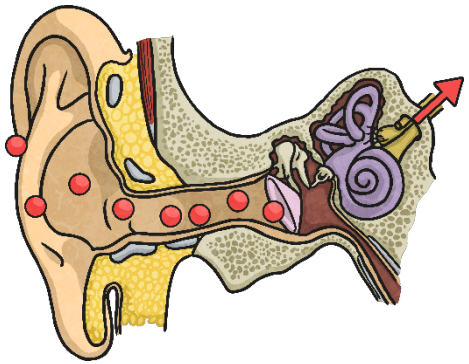
Travelling Sounds

Sounds get quieter as the distance between the sound source and your ear increases.

Sounds travel as vibrations. As the sound waves travel, the particles of whatever they are travelling through vibrate, or move quickly on the spot. The further the vibrations travel, the more they spread out. As they spread out through more and more particles, the vibrations become smaller and smaller. This causes the sound to get quieter and quieter.

Think of dropping a leaf into a pond. The very first ripples directly around the leaf will be very large, but as the ripples spread out across the pond, they will get smaller and smaller until eventually they disappear.

This is why sounds get quieter and quieter as you move further away from the source, until you eventually can't hear the sound at all.



Travelling Sounds

You can see the ripples getting smaller as they spread out across the pond, until they eventually disappear. This is like the way the vibrations of sound get smaller as they spread out over distance, getting quieter and quieter.

Travelling Sounds

Sounds also get quieter over distance because some of the vibrations are absorbed by obstacles they meet.

If the ripples in the pond below hit an obstacle such as a stick or rock, they would not travel as far. This can help you understand why sounds get quieter as you move further away.

Sound over Distance

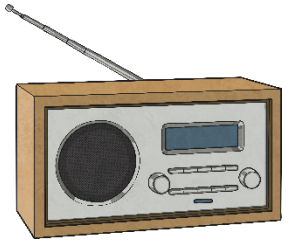
We know that vibrations spread out and get smaller as they travel, making sounds quieter as we move further away from the source of the sound. But often people need to be able to hear sounds from far away.

Can you think of any devices that transmit sound over a distance, or ways of making sounds louder so that they travel further?

Make a mind map of your ideas.

Phone

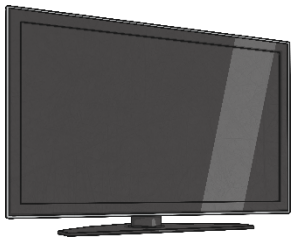
Microphone



Radio

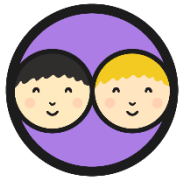
Walkie Talkie

Putting hands around



Television

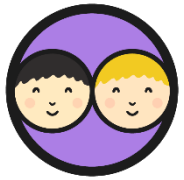
Telephone Transmission



Telephones are used to transmit the sound of people's voices over long distances.

When you speak into a telephone, the sound energy in your voice is turned into electrical energy, which is transported down a wire to the other person's telephone. The electrical energy is converted back into sound energy, and they can hear what you are saying!

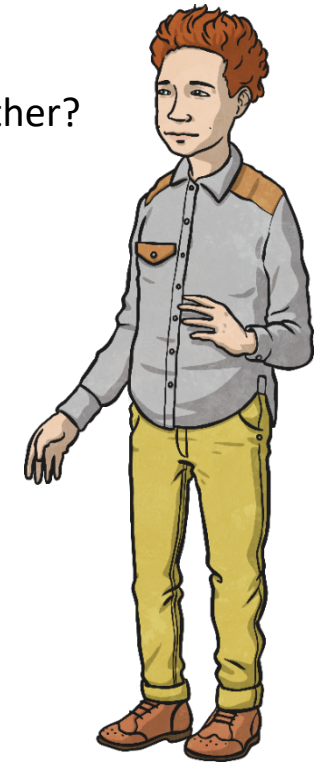
Telephone Transmission



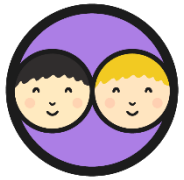
You need to ask someone in your family to help you.
You should stand far apart from each other.

Use your normal speaking voice to try to talk to each other. Make sure that you can't hear each other!

Can you explain why you can't hear each other?

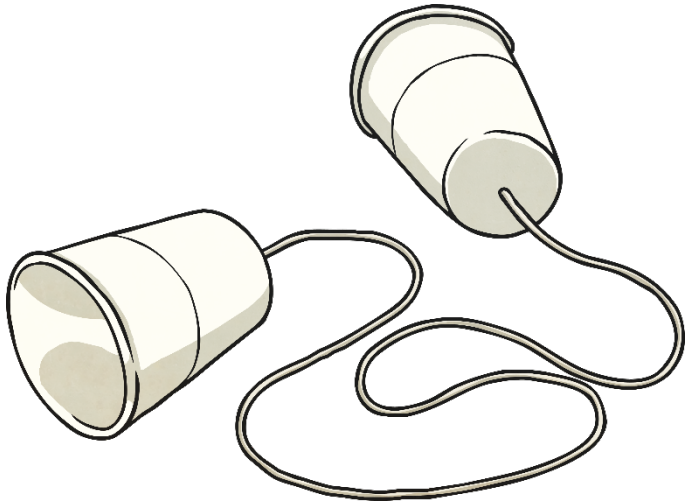


Telephone Transmission



The vibrations from the sound of your voice cannot continue moving as far as your partner's ear. The vibrations get smaller and stop before they reach your partner.

Your challenge today is to create a string telephone that will transmit the sound of your voice over a distance. The instructions for making your telephone are on the next slide.



Stand the same distance apart as you did earlier. Use your telephone to speak to each other. Remember to use your normal speaking voice. You should be able to hear each other now!

Instructions for making your string telephone

What to do:

1. Use the compass or sewing needle to carefully poke a hole in the bottom of each cup. You may need to ask an adult to help you.

2. Thread the string through the holes and tie a knot at each end to stop it pulling through the cups.

3. You and your partner should each hold a cup and move apart so that the string is tight.

4. Take turns talking into your cup while your partner listens in their cup.

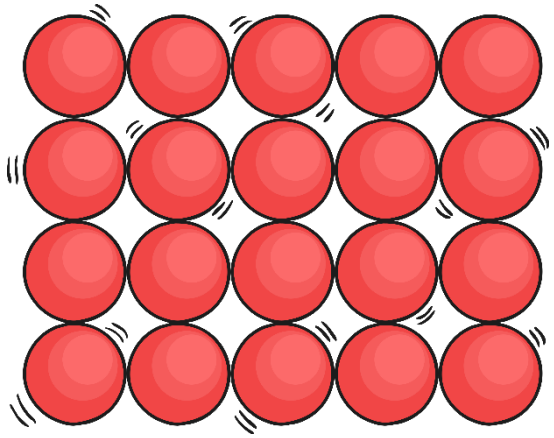
Telephone Transmission

How does your telephone work?

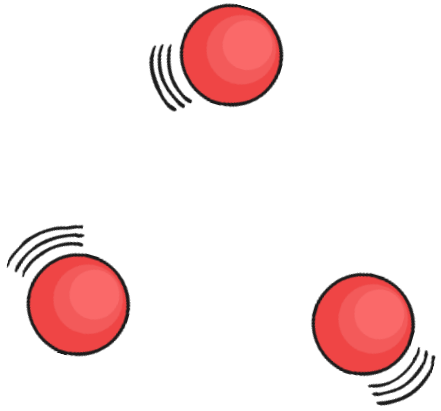
The string and the cups are solid, so the particles are much closer together than the particles in the air, which is a gas.

The sound energy can travel from particle to particle far easier in the solid string telephone, so the sound of your voice is louder over the same distance than it was in the air.

Solid Particles



Gas Particles



Now you have carried out your experiment, write an explanation explaining how it works.

How does it work?

Use the key words below to help you explain how your string telephone works.

sound	voice	cup	vibrates	energy	string	solid	
particles	close	quickly	distance	ear	louder	air	

SPAG
L.I – To explore simple sentences.

- For this lesson, you will need some paper and a pencil. When you have your resources, click the link below. ☺

- https://classroom.thenational.academy/lessons/to-explore-simple-sentences-cmwp8r

Spellings
L.I – To investigate the suffixes –ful and –less.

- For this lesson, you will need some paper and a pencil. When you have your resources, click the link below. ☺

- https://classroom.thenational.academy/lessons/to-investigate-suffixes-ful-and-less-suffixes-6gwp8d?activity=video&step=1