

### Year 3 Spring 2 Topic Tasks



#### Science

# To discuss the concept of friction To investigate how fast a car will travel when changing the surface that it travels on

Watch the video and answer the two questions at https://www.bbc.co.uk/bit esize/topics/zsxxsbk/article s/zxqrdxs

. What if we didn't have friction? When is it useful to reduce friction? Ensure the children understand that 'the rougher the surface, the greater the friction'.

Use objects around the house that would be good to roll (ball, car etc) and investigate which surfaces have greater friction by rolling them along each one and seeing how long it takes to stop.

Slide the sleigh on the surface http://www.sciencekids.co.nz/gamesactivities/friction.html

### To understand what force means To understand how forces are pushes and pulls

Pose the question: What are forces? What do the children know about forces so far? Go through the PowerPoint to the hockey player and watch the clip.

Continue though the PowerPoint discussing pushes and pulls. In addition, link to any forces discussed so far such as gravity or friction.

Stop on slide 7. Set the task of creating freeze frames of a force, perhaps something from the film clip. Class to guess what action it is and whether it is a push or a pull motion and maybe what actual forces are being used.

Complete the pushing and pulling forces worksheet.

Children to create a story board of a trip to the park, explaining any of the forces acting on the objects. There are 3 differentiated storyboard templates available.

## Know that air resistance slows an object moving through air. Know that the surface area of a parachute can increase Air resistance

Take two sheets of paper. Ask the child which one would hit the ground first if we dropped them? Then screw one into a ball and ask the same question. Why does the ball hit the ground first? What do they currently understand by the term 'Air Resistance'? Extend discussion by using everyday examples of walking with an umbrella or cycling in the wind. Ask the children how they think a parachute works. Talk through the PowerPoint to slide 6. Then refer to the IWB The children have been asked to come up with the best design for landing a space capsule safely. Explain that to land a capsule safely the landing must be as slow as possible.

Children should use any materials you have available to design a parachute. They need to consider, material, size, shape etc.

Try attaching an object to it (not too heavy) and test the parachute. Do they need to make any amendments? Were they happy with their parachute? Why/why not?

To compare and group materials according to whether they are magnetic by sorting materials. To notice that magnetic forces can act at a distance and attract some materials and not others by sorting materials.

Go through the PowerPoint and discuss who is right about magnets. What do the children already know? Have they used magnets before? Where might you find a magnet? A compass. A scrap metal yard, a fridge door, a cupboard door etc. Go through the rest of the PowerPoint. Watch the video on slide 7 looking at what is magnetic or not. If poss use the iron filings to show how the iron is attracted to the magnet.

https://www.bbc.co.uk/bitesize/topic s/zyttyrd Watch these two videos to give pupils information about magnets and magnetic materials.

https://www.bbc.co.uk/bitesize/topic s/zyttyrd/articles/zw889qt Play this game to sort magnetic and non-magnetic items.

### **Humanities**

## To know that a coast is where the land meets the sea.

## To consider the ways in which coasts look different.

Put the questions on the board 'What is a coast?' 'What is another word for coast?' 'What is a coastline? Look at the pictures of coasts. Read through a couple of examples together and let the children ask any questions and share any information that pops into their heads about the subject. What differences do you see between these places? Compare Brighton Pier and Beachy Head (both on first page).

Flick through the PowerPoint in the folder, this consists of more coastlines in Britain. Discuss the ways in which the coasts in the book and PPT were different – make a list of the features e.g. cliffs, sandy, rocky, industrial, harbour, touristy. What coasts have they visited? What did they look like? What did they go there for? What did they do? What facilities were there?

To understand how erosion can affect coasts in different ways and identify some key terms. Introduce the idea that waves can erode rocks and cliffs and take them through the power-point. Give them 1 minute to think and discuss what has happened to each of the coastlines. KQ: How have these coasts changed? What do you think has happened to them? Why have some parts eroded and not others?

Watch videos in folder.

Chn to write an explanation of erosion in their books with pictures to support. Why is erosion dangerous to coastal towns? See Mrs Stirling's example to set high expectations.

https://www.bbc.co.uk/bitesize/guides/z3ndmp3/revision/3 features of coastal erosion.

To understand why sea defences are necessary and the advantages and disadvantages to three.

Look at the pictures of the three beaches. Ask them to discuss what they can see (the features of the coast)-think back to lesson 1. Encourage them to use the correct vocabulary – sand, shingle, groynes, sea wall etc. Ask the children to explain why those features are there. Explain that they are called **sea defences** and this is what we are going to be learning about today. Watch the clips

https://www.bbc.co.uk/bitesize/clips/zs 9q6sg

https://www.bbc.co.uk/bitesize/clips/z8tyr82

In the second clip children will see effects of erosion learnt in last week's lesson. What type of sea defences would be used to prevent/stop this from happening?

Cliff formations caused by erosion Watch the clip at

https://www.bbc.co.uk/bitesize/clips /zc2pvcw and discuss how beaches are formed. Then watch https://timeforgeography.co.uk/vide os list/coasts/formation-of-a-seastack/ Can children explain how each of these is formed. Watch

http://www.bennett.karoo.net/topic

s/waves.html#cliff to see how different formations occur. Children to draw a picture of each cliff formation (can order the pictures if needed) and attempt to describe how it is formed, through either and

it is formed, through either and explanation or series of pictures. See example.

|          | The children's task is to produce a mind map of what coasts look like and what you might see there. See example.  |   |  |   |
|----------|---|---|--|---|
| Art & DT | To investigate a variety of familiar objects that use air to make them work.  How many objects can children think of that use air to make them work?  Discuss pictures on slides and how air is used to make them work.  Complete the worksheet in the folder.  It may be a good idea to start collecting recycling for your child to use when making their monster at the end of this half term. | To investigate techniques for making simple pneumatic systems.  Work through the PowerPoint discussing each of the different pneumatic systems.  Can children create their own pneumatic system using a washing up liquid bottle and a balloon?  Use the worksheet available to design before making and taking pictures. | To be able to design a monster including a moving pneumatic system.  Discuss the pneumatic systems you have looked at in previous lessons. Children will be designing their own system over the next few lessons.  The PowerPoint in the folder will give them a few ideas and has some good prompting questions.  Look at the design ideas sheet and ask your child to think of which body parts they would like to move on their monster.  Complete the design sheet available, design four different monsters before deciding on a final. | To be able to make a monster with a moving pneumatic part. Go through the slides available. Discuss each part with your child. Are they entirely happy with their design? Now is the time to make any adjustments they need. The children will now be creating their monster using any equipment they have (recycling will be a great place to look for resources). Take a picture and send it to your teacher. What did the children enjoy? What do they like about their monster? What would they change if they made it again? |
| Spanish  | To locate and colour<br>Spain on a map. To know<br>that Spanish is a foreign<br>language and to listen to   | To participate in a conversation involving greetings, and saying goodbye.  Appropriate videos.  | To participate in a conversation involving a discussion about how you feel.  Como Estas PowerPoint.  | What difficulties did they face?  |

| exar      | nples of spoken     | Flashcards showing emotions. |  |
|-----------|---------------------|------------------------------|--|
| CAG       | Spanish.            |                              |  |
|           |                     |                              |  |
| Go to     |                     |                              |  |
| http://v  | ww.bbc.co.uk/sch    |                              |  |
| ools/pri  | marylanguages/sp    |                              |  |
| anish/cu  | ulture and places/  |                              |  |
| Run thre  | ough some of the    |                              |  |
| key fact  | s and listen to the |                              |  |
| facts in  | Spanish.            |                              |  |
| Display   | the map of          |                              |  |
| Europe.   | Ask pupils to       |                              |  |
| pinpoin   | the UK. See what    |                              |  |
| other co  | untries they can    |                              |  |
| name fr   | om the map.         |                              |  |
| Hand th   | e child a blank     |                              |  |
| map she   | et. They should     |                              |  |
| colour t  | ne map of Spain,    |                              |  |
| labelling | major cities and    |                              |  |
| the neig  | hbouring            |                              |  |
| countrie  | s where             |                              |  |
| appropr   | iate to their       |                              |  |
| ability.  |                     |                              |  |
|           |                     |                              |  |
| Addition  | nal: pupils can     |                              |  |
| colour a  | Spanish flag.       |                              |  |
|           |                     |                              |  |