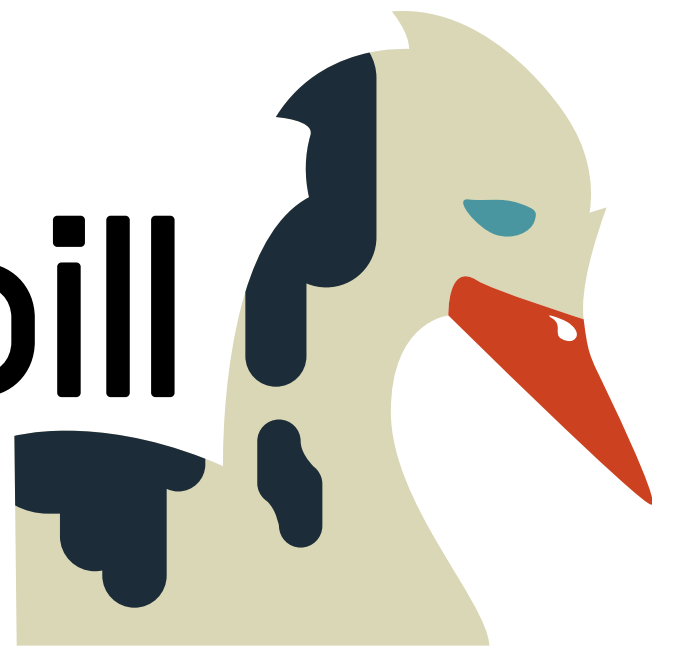




Oil spill challenge



Investigators, I need your help!

I live in Columbia, next to the Sogomoso River. It is a beautiful place but, it is being spoilt by oil spills that start in the ocean and spread to my hometown.

Every day I see sick birds that are covered in oil which makes it very difficult for them to fly and search for food. I try to help the birds by cleaning their feathers with water but, this doesn't work very well. What else could I use that won't harm the birds?

Mrs Beak

..... Your challenge
To find the best way to remove oil from feathers.

Things to think about

- How will you make sure your investigation is fair?
- How long will you take to clean each feather?
- Do you think it will be difficult to clean the feathers?
- How will you measure the success of each cleaning method?

What do you think will clean feathers the best?

..... Investigate!

To begin your investigation you will need to first add water to the large bowl.

Then add some vegetable oil to the water.

Select at least three cleaning methods from the options available.

Your feathers will need to be added to the oil water mixture and then taken out and cleaned.



Oil spill challenge



Your results

What worked best?
You could record your results in a chart like the one below. You could also take photos or draw pictures to record your results.

Method of cleaning	Appearance of feather without oil	Appearance of feather with oil	Appearance of feather after cleaning
Sponge and water	soft and fluffy	Sticky	dull

..... Share your ideas

Present your results to the group. Tell them what you found the best cleaning method to be and why. Explain how you made sure your investigation was fair, was this easy to do?
Did other investigators get the same results as you?

Discuss

If you were to do this activity again what would you do differently?
How could you make your investigation better?

Take it further

Try and remove the oil from the water. You might like to use a spoon, a tissue or some soap. What else could you use?
What do you think will work best?





Oil spill

Facilitators notes



About the activity

This activity will enable children to learn about oil pollution and the effect of oil spills on birds and the environment in general.

Children will need to make predictions, record their observations and test their theories before presenting their results to the rest of the group. Throughout the activity children will need to problem solve, consider measurements, think about separating substances and the pros and cons of different materials.

Materials and equipment

Cleaning products- a variety of products which could include shampoo, washing up liquid, fabric conditioner, toothpaste and salt.

Cleaning materials- a selection of items that could be used for cleaning these could include sponges, clothes, scourers, cotton wool, tissue, toothbrushes and spray bottles.

Large bowl or waterproof container

Water

Vegetable oil

Spoons- if doing the follow on activity.

Pencils

Camera- this is optional but taking pictures may be a good way of recording results.

Advance preparations

Ensure you have a suitable device to show the supporting images or print them out before starting the activity if you plan to use them.

Gather all of the materials together so that they can be easily given out when needed.

Instructions

Introduce the topic by asking the children what they know about oil spills, have they seen or heard anything about them before, if so what? show them the images of oil spills.

Ask the children how they think oil spills could affect nature in general and then specifically birds.

Read out the short note from Mrs Beak.

Show the children images of birds that have been affected by oil spills.

Read out the challenge.

Give out the worksheets and materials to the children.

Encourage the children to think about how they are going to do their experiment. How will they ensure that their investigations are fair? How will they record their results?

Support the children to do their experiments allowing them to learn from their mistakes. An important part of this activity is for children to appreciate the difficulty in getting oil off of feathers and the almost impossibility of getting feathers to look the same after they have been coated in oil.

Encourage the children to record their results, they might want to do this in the form of a chart or may prefer a more visual way, perhaps through drawings or photos.

Enable the children to share their results and compare their findings with the rest of the group. Prompt them to discuss what went well and what didn't and whether their predictions were right. Get the children to consider what they would do differently if they were to repeat the activity.

This activity can be extended by asking the group to try and remove the oil from the bowl of water. In doing so they will discover how difficult it is to separate oil and water.



Oil spill Resources



Oil spills in Columbia.

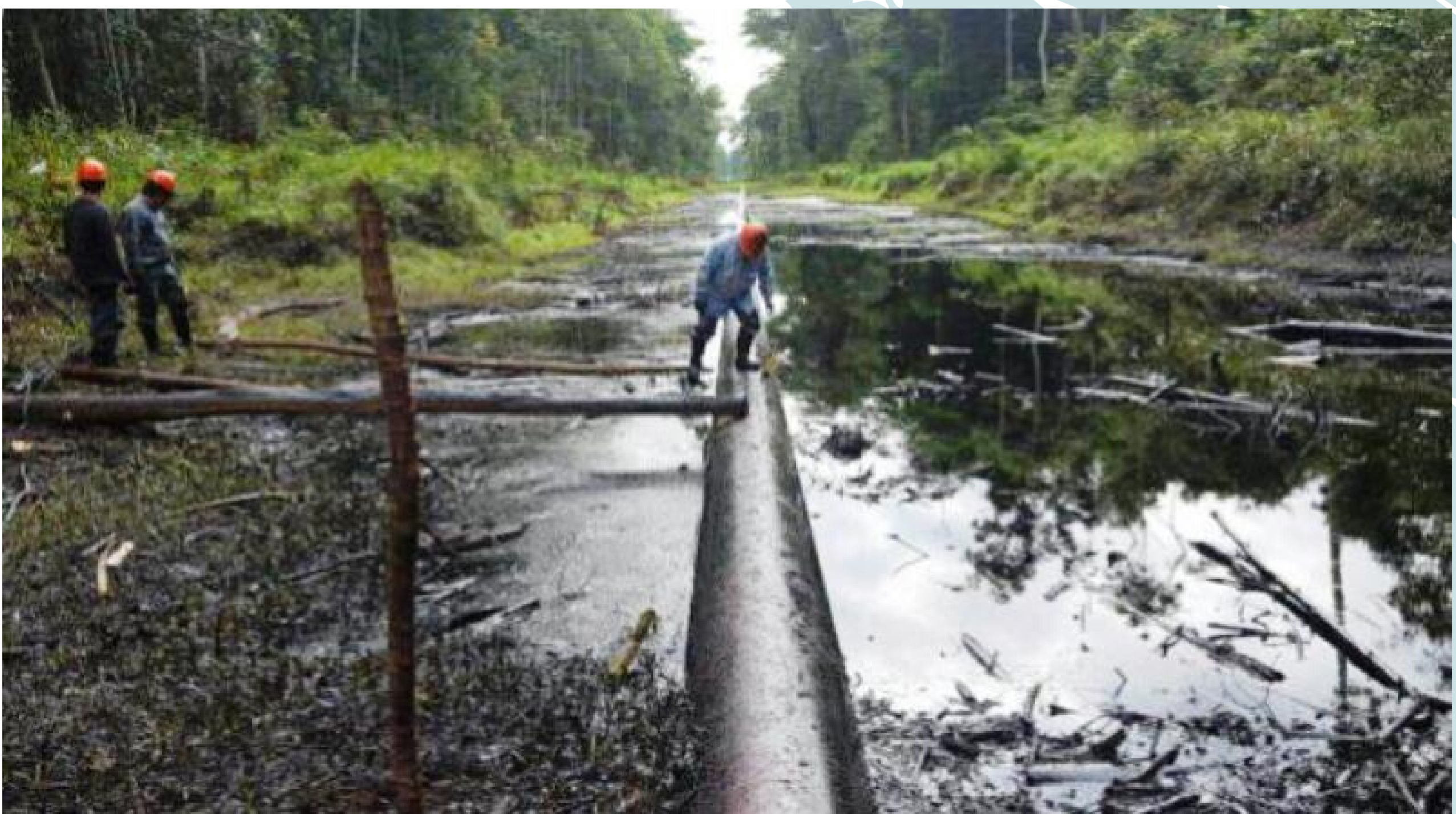




Oil spill Resources



Oil spill in Peru.





Oil spill Resources



Birds covered in oil from spills in the USA

