



Canal & River Maintenance



canalrivertrust.org.uk/stem

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Objectives

- Describe what erosion is.
 - Understand one key feature of erosion.
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- Understand why **water quality** is important.
 - Apply the concept of erosion to the **challenges of designing** canal and river banks.



Protecting canal banks

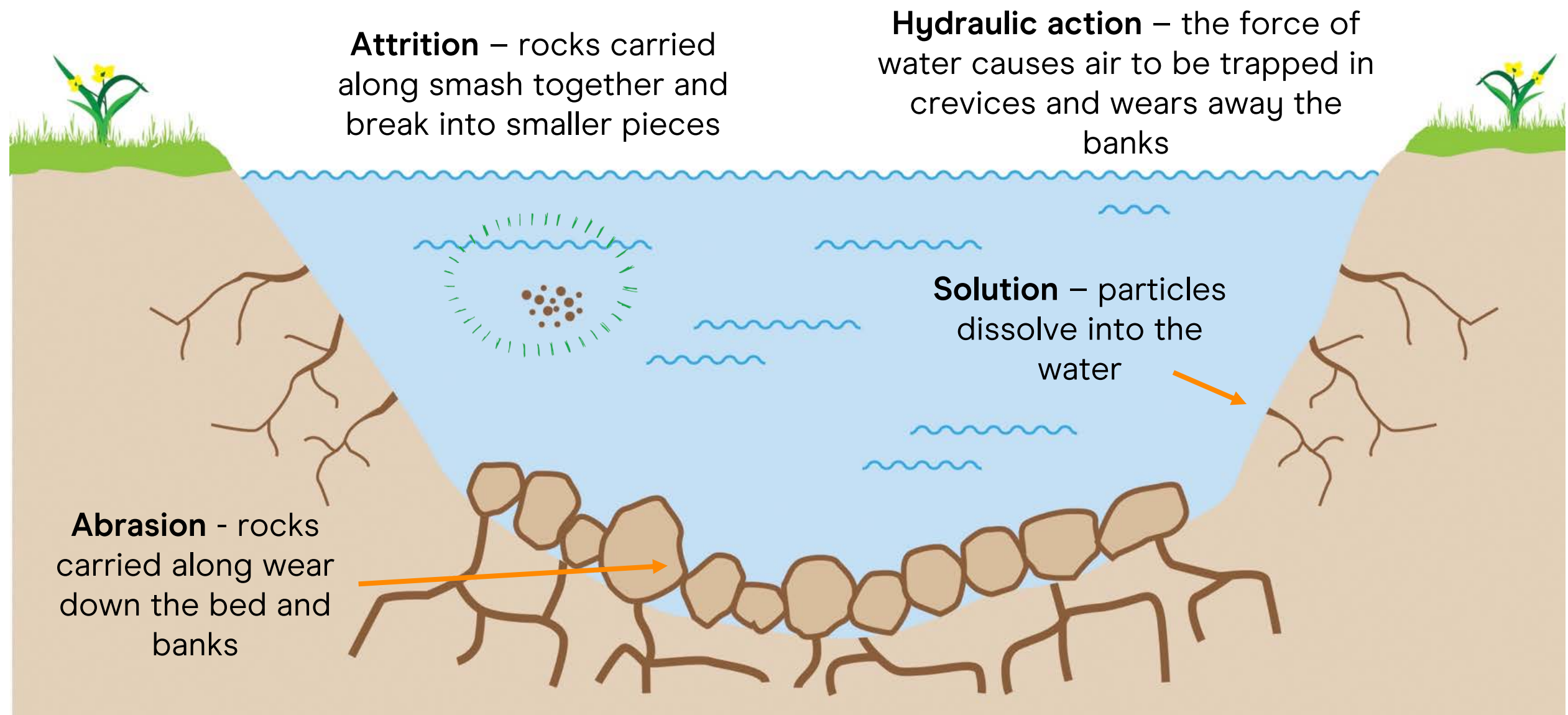
Canals were originally **lined with clay** and their banks frequently **planted with reeds** to provide **stability**.

With heavy use by boats, the banks frequently **eroded** and it was necessary to make stronger bank protection.



How canals and rivers are eroded

(worn away by moving water and boats)





Concrete bank protection



Sheet piling bank protection



Gabions as bank protection
(mesh cages filled with stones)



Coir matting with plants as bank protection

What did
you find
out?

What creates a
force in the
canal or river?

What is a
key feature of
erosion?

How can
different
sorts of **bank
protection**
help?

What happens
when a **force** is
applied to
water?

Experiment 1: Acid /Alkali

1. Put water into a plastic tub to 3cm level and use a pH stick to measure the pH level of the water.
2. Pour a few drops of lemon juice into the water and test the pH level again.
3. Now collect a level teaspoon of bicarbonate of soda, add it to the water and lemon juice and test the pH again.
4. Summarise your findings.



What did you find out?

What effect can **pollution** have on wildlife and the **natural environment**?

- What might **cause** a canal or river to become polluted?
- **How** can pollution be **cleaned up**?
- **Why** does pollution in river or canal water need to be **treated**?