

## Paper: Key Stage 3

# Ideas for teachers

including teachers' notes for  
pupils' activity pages

Hyperlinks within the text are **underlined bold copy**.

Click on the link to find out more about the subject.

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# Ideas for teachers

## Background

Most of the world's paper supply still comes from forests rather than plantations and to create one tonne of paper, it takes somewhere in the region of 4 tonnes of trees. The pulp and paper industry consumes the most water of all industries and is one of the biggest industrial greenhouse gas emitters. Aside from the wood, water and energy consumed; chemical processes involved with the creation of many types of paper products generate toxic by-products that wreak tremendous damage on the environment - the land, water and air.

While an increasing amount of paper is recycled these days which is wonderful, we need to bear in mind that recycling consumes energy and other resources also and often the products we buy containing recycled paper only have certain percentage of recycled content.

If we use less paper, fewer trees and other resources will be used to make paper which is better for the environment. Recycling paper is a good way to reduce the number of trees cut down for making paper but reducing the amount of paper we use is an even better solution.

## Rethink

- Watch this video looking at the paper industry and the arguments to **reduce paper waste**. Discuss the issues raised in the video with your students.
- Think about when you use paper in your classroom. Do you always need to use paper? Think of other ways to record learning such as by using ICT, taking digital photographs, video or audio recording.

**10 litres of water is needed to create one A4 sheet of paper**

[Go to link](#)

**The UK is the world's 5th largest consumer of paper products. In 2005 it consumed 12.5 million tonnes**

**The global consumption of paper has tripled in the last 30 years**

- Think about how you teach. Think about all the methods you use that don't use paper; oral lessons, discussions, debates, drama, ICT and practical activities can all be carried out paper free. Consider using more paper free teaching methods.
- Why not have a Paper Free Day at school. You could measure how much paper you save in one day. Paper Free Days could take place regularly. **Look here for ideas for paper free days**
- Painting display boards annually can cut down on the amount of backing paper and trims needed.
- Consider more paper free homework, limit the use of photocopied worksheets. Use on-line homework.
- Buy recycled paper products for your class when doing your requisition. Consider having a policy for using recycled paper products when possible.
- Don't forget other paper products like cardboard, card, envelopes, junk mail, magazines, tissue, kitchen rolls, toilet paper, wrapping paper, newspapers, magazines, paper plates and cups etc. Set the students a task to list all the paper products they use in school or at home in a day or a week, then think of ways to reduce their need for these. Task them to carry out internet searches to see which of these materials can currently be commercially **recycled in Northern Ireland**.
- Think of different ways to send messages home such as by email or handwritten notes in homework books.
- Ask parents about signing up to an e-newsletter rather than sending out a paper copy.
- Class or school councils could lobby the school to use paper wisely and commit to reducing the amount of paper wasted. This could include a Paper Usage Reduction Policy with **paper saving tips** for staff and students.

**On average one tree can be used to create 80,500 sheets of A4 paper...**

**That's 786 million trees just to keep the world in paper for one year.**



**The paper industry is the third greatest industrial greenhouse gas emitter**

- Invite local businesses, **politicians** or councillors in to your school so children can question them about what they are doing to reduce paper wastage in your area.
- Invite **Bryson House Education Unit** in to your school to do an **assembly on Waste**.

## Reduce

- Encourage students to use the smallest size paper needed for a particular task.
- When using exercise books; use the pages more efficiently. Do students always need to take a new page? Use narrower margins or use the blank spaces for working out.
- Create electronic based worksheets and materials rather than paper copies that students can complete on the computer rather than printed versions.
- If you really have to photocopy, consider reducing margins and white space and print on both sides. Providing one copy between two, halves your paper usage. Printing in booklet mode reduces your paper usage by a quarter.
- Laminate a piece of card for each child to write on using water based markers. These can be used for practicing handwriting, working out or drawing and then simply wiped clean to be used again.

## Reuse

- Create paper savers for your classroom, so students can store unused or used on one side paper and paper off-cuts. Encourage students to keep clean scrap paper for notes, working out and art and craft activities. They could design their own paper savers for the class so that they can sort into different sizes and textures.

**The pulp and paper industry is the single largest industrial consumer of water...**

**...and uses more water to produce a tonne of product than any other industry on the planet**



**Producing recycled paper involves between 28-70% less energy use than virgin paper and uses less water**

- Use both sides of paper when you can.
- Use scrap paper and card for art and craft activities.
- Visit the **Play Resource Warehouse** in Belfast which provides a huge range of waste materials collected from industry which can be used in schools.

## Recycle

- Once paper is no longer usable in class send it for **recycling**.
- Have recycle bins available in class and make sure students know when and how to use them.
- Visit your **local recycling centre** or a paper or cardboard factory to learn more about the process involved and the energy used.
- Find out more about **recycling** and the facilities in your area.
- Learn about the different **recycling symbols**

**Over 5 million tonnes of paper ends up in landfill every year**

**Paper emits methane whilst decomposing – a potent greenhouse gas**

# Teachers' notes for pupils' activity pages

## Key Stage 3

### Key message

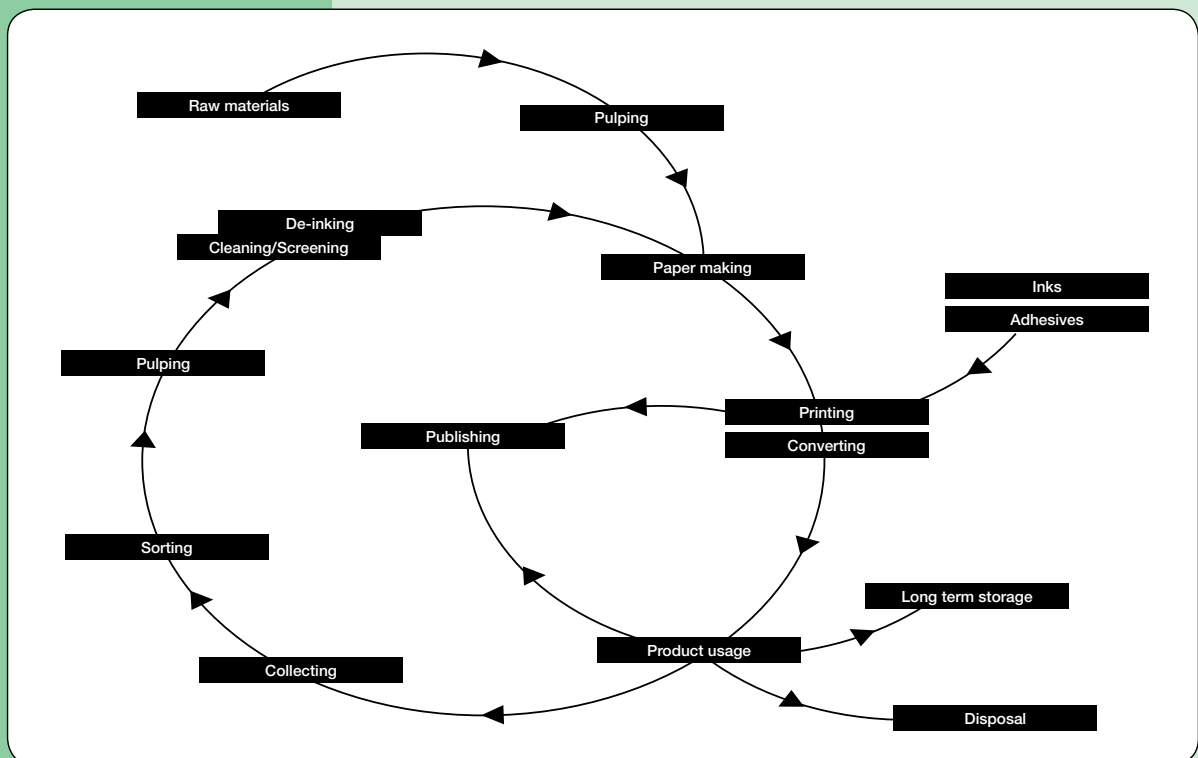
Paper production requires lots of raw materials and energy, so we should use it wisely

### Curriculum links

Cross-Curricular Skills  
 Thinking Skills and Personal Capabilities  
 English  
 Mathematics  
 Environment and Society  
 Science and Technology  
 Learning for Life and Work

### Background Knowledge

Paper is made from wood pulp which comes from cutting down trees. Old paper can be used again to make new paper – this is called recycled paper.



<b>Aim</b>	Students will learn about the environmental impact of paper production and consumption and want to reduce their paper usage and encourage others to do the same.
<b>Objectives</b>	<p>Students will learn more about the paper production, consumption and waste.</p> <p>Students will think creatively about ways to reduce paper consumption.</p> <p>Students will have opportunities to share what they have learnt with others.</p> <p>Students will consider the impact of over consumption of paper on the environment.</p>
<b>Childrens' activities</b>	
<b>Paper order</b>	Discuss the teacher's paper order and consider the different ways the paper is used in school. Think about how the amount of paper could be reduced or the sorts of paper used could be changed to reduce the impact on the environment. An Excel table has been prepared to assist the students in their calculations.
<b>Paper audit</b>	<p>Task the students to make a list of all the paper and paper products used in class in a day</p> <p>Help them prepare a paper audit table/chart to measure and record their paper usage.</p> <p>Discuss ideas on how to reduce consumption of paper. The class could try out some of the ideas and measure again to see the difference.</p>
<b>Search the internet</b>	Allow students to choose one of the topics listed and use the internet to prepare a 1 minute talk for the others in the class.
<b>Case study: Rags and Riches in India</b>	Read the case study 'Rags and Riches' about the handmade paper industry in India and follow the web-link 'Conditions for Rag Pickers' to find out more. Discuss the case study from different perspectives trying to identify both positive and negative impacts on the people involved.

## Paper pictures



Divide students into groups to look at each of the images and discuss what they think the image is about, how it makes them feel. Do they feel the image is positive or negative? What message do they think the photographer was trying to get across through the picture? Do all the people in the group think the same things about the images? Why is this?

## Persuade your peers

Give students the opportunity to share what they have learnt with others and try and encourage others to also use less paper. Students could choose different media to try and persuade others of their age group to use less paper such as ICT, presentation, video, song, drama, blog etc. Students could work in small groups to plan and prepare their campaign. Allow the students to showcase their work in front of others for example at assembly.