

# TEACHER NOTES

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# About Dairy World

**DAIRY WORLD** is a CD-ROM for schools, designed to support the Northern Ireland Key Stage 2 Curriculum. Compatible with Windows and Macintosh computers, it provides children with a media-rich educational tool, to make learning about the Dairy Industry and health-related matters both fun and challenging.

The program contains more than one hour of sound, video and animation and over 200 photographs, interactive objects and panoramas. Screen text has been colour coded to make it easy to assimilate. To further motivate visitors to **DAIRY WORLD**, it incorporates a puzzle dimension with over two hours of game play and a facility to save and review work done.

**DAIRY WORLD** is suitable for both Key Stage 2 topic work and as a complementary resource for occasional study. It can be used by a single pupil or small group and requires minimal teacher supervision. It provides opportunities for knowledge, understanding and skills development in the Geography, Science and Technology, English and Mathematics programmes of study and in the cross-curricular themes of Information Technology, Health Education and Education for Mutual Understanding (EMU). Progress through the program is logged and a record can be printed of sections completed, those remaining to be done, and total time spent.

**DAIRY WORLD** is a groundbreaking program, filled with innovative learning features. It immerses pupils in the world of the Dairy Industry with unprecedented realism. It takes account of the more sophisticated visual awareness of children today (acquired through contact with television and computer games) and delivers a quality learning experience to excite, challenge and reward.

## Teaching Strategies

**DAIRY WORLD** is suitable for both Key Stage 2 topic work and as a complementary resource for occasional study. Topics within the program can be usefully explored in any order or in isolation. It can be used by a single pupil or small group with minimal teacher supervision. It is particularly effective in shared or paired reading exercises with mixed-ability groups. Because it is designed for use throughout Key Stage 2 in meeting Northern Ireland Curriculum teaching objectives, teachers may wish to be selective in the parts of the program they use with individual pupils.

Progress through the program is logged and a record can be printed of sections completed and time spent. Individual progress files are saved to the computer's harddisk in a folder created the first time **DAIRY WORLD** runs. The folder is called *DairyWld*. Backing-up this folder periodically is recommended to safeguard the records if they are to be used in assessment.

To minimize interruption, printing of images from within the program has been limited to selected ones in the **Scrapbook** section of the program. Teachers may wish to print and photocopy these in advance for class distribution. Teachers are also advised of the practicality of printing the **Teacher Notes**, **Cooking is Fun** recipe book and other texts distributed on the CD-ROM in the folder called *Teacher*. They are described in the **Scrapbook** section of the **Dairy World** program.

# Curriculum Fit

Use the following table to identify where topics in **Dairy World** fit most strongly within the Northern Ireland Programmes of Study at Key Stage 2.

PROGRAMMES OF STUDY \ TOPICS IN DAIRY WORLD	GEOGRAPHY		SCIENCE & TECHNOLOGY			INFORMATION TECHNOLOGY			ENGLISH		MATHEMATICS			
	Where People Live and What People Do	Geographical Skills	Health Education	Living Things	Materials	Information Handling	Controlling	Modelling	Talking and Listening	Reading	Processes	Measures	Shape and Space	Handling Data
The Dairy Cow	▲			▲		▲			▲	▲	▲			▲
Milking Time	▲		▲	▲				▲	▲	▲				
Collecting the Milk	▲							▲	▲	▲				
The Milk Factory	▲		▲		▲			▲	▲	▲				
Shopping	▲		▲					▲	▲	▲	▲	▲		
The Milkround	▲						▲	▲	▲	▲	▲		▲	
The TV			▲	▲				▲	▲	▲				
Cooking is Fun			▲			▲		▲	▲	▲				
Fridge Facts			▲							▲	▲			
Bone Builder			▲	▲						▲				
Saving Smiley			▲	▲						▲				
Food of Fortune			▲	▲						▲				
Overseas	▲	▲					▲	▲	▲	▲	▲		▲	

## Education for Mutual Understanding

The **Dairy World** program provides useful background for joint school visits to the dairy farm or dairy factory.

- For information on arranging and organising visits, contact your local dairy or open farm.

## History

Two puzzles in **Dairy World** have an historical dimension.

- **The Dairy Cow** puzzle is a crossword whose visual clues relate to the history of dairying.
- **The Milk Factory** puzzle relates to the increase in milk production and decline of the number of dairy herds in Northern Ireland in the last 50 years.

## Art and Design

Many of the extension activities suggested later in these *Teacher Notes* draw attention to possibilities for Art and Design within **Dairy World**.

# Copyright

Files in the *Images* & *Teacher* folders may be used in-house by teachers and pupils to prepare & illustrate work relating to **DAIRY WORLD**. The copyright on this and other material on this CD (except where otherwise stated) is as follows:

**Information content** © Dairy Council for Northern Ireland, 1999, 2001

**Software, graphics & design** © Adrian Mallon Multimedia, 1999, 2001

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## Computer System Requirements

To run **Dairy World**, you will need either a Macintosh or a PC computer with the following minimum requirements:

### Macintosh

Operating system 7.5 or later; 32MB RAM (64MB recommended)

4 speed CD-ROM drive (12 x speed or more recommended)

640x480 monitor display set to thousands of colours

External amplified speakers (or headphones) are essential for listening to the many video soundtracks in the program

*QuickTime 3 or later* installed (installer supplied on this CD-ROM)

### PC

Operating system Windows 95 or later, or Windows NT or later

32MB RAM (64MB recommended)

4 x speed CD-ROM drive (12 x speed or more recommended)

640x480 monitor display set to thousands of colours

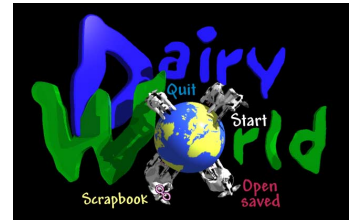
Sound card and external amplified speakers (or headphones) which are essential for listening to the many video soundtracks in the program

*QuickTime 3 or later* installed (installer supplied on this CD-ROM)

### To install QuickTime

- If *QuickTime 3 or later* is not already installed on your computer, locate the *QuickTime* folder on the CD-ROM (PC\_QuickTime for PC, Mac\_QuickTime for Mac) and follow the instructions in the *ReadMe* file in that folder.

# Starting Dairy World



1. Disable screensavers and quit all other programs to allow **DAIRY WORLD** to run at its best.
2. Insert the **DAIRY WORLD** CD-ROM into the CD-ROM drive.
3. On a PC, doubleclick the file entitled *PC\_START* on the CD-ROM. On a Mac, doubleclick the file entitled *Mac\_START* on the CD-ROM.

This **CONTENTS SCREEN** shown at top right will appear.



**START** Starts the **DAIRY WORLD** program. You must first choose an identity by clicking on a selection of characters and then type in a name for your character. If you have already saved a file, you should choose **OPEN SAVED** and not **START** to begin **DAIRY WORLD**.



**OPEN SAVED** Lets you open and print a previously saved record of the puzzles you have solved and starts the **DAIRY WORLD** program. (Saving your work is important because, when all the puzzles are solved, the **DAIRY WORLD** screen animates.)



**SCRAPBOOK** Contains brief descriptions of the files contained in the *Teacher* and *Images* folders on the CD-ROM. The **Scrapbook** also has a facility to let you directly print the pictures contained in the *Images* folder. Use them to produce in-house, classroom materials (see **Copyright**, p.4). **Adobe Acrobat Reader** (required for some files) is on the CD-ROM (*PC\_Acrobat* folder for PC, *Mac\_Acrobat* folder for Mac).



**QUIT** Press **QUIT** to leave the program. Before you leave, the production credits play. Click again anywhere on the screen to quit the program or return to the **CONTENTS** screen by clicking on the picture of the world.

## Icons

**TAGS** open sub-sections    **HELP** buttons provide guidance

Click the **EYE** to **LOOK** at pictures

Click the **HEAD** to **STUDY** videos and text

Click the **HAND** to **SOLVE** puzzles



Use the **WORLD** to go back



# The Dairy World Landscape

When you find yourself in the **Dairy World** landscape, click on the topic headings to go to that section. The topic headings appear when you move the pointer over the appropriate part of the landscape. Other features of the **Dairy World** landscape are the **CONTENTS**, **HELP**, **SAVE** and **QUIT** options.



**CONTENTS** Returns you to the **CONTENTS** screen.

**HELP** Clicking **HELP** repeats your **Dairy World** mission: “*HELP. The dairy products have disappeared. Solve all the puzzles you find in Dairy World to bring them back again.*”. The reward for doing so is stated: “*Dairy World will come to life*”—a final animated sequence.

The program’s navigational icons are explained and the importance of saving your work is emphasized.

**SAVE** Use **SAVE** to stop and restart the program where you left off. Pupils should be encouraged to save their work frequently because, when all the puzzles have been completed, the **Dairy World** landscape animates to illustrate how the various stages relate to each other.

**QUIT** Click to run the production credits. Click again to quit the program or click on the world to return to the **CONTENTS** screen. (Always **SAVE** before quitting.)

## Program Structure



# The Dairy Cow



## Outline



### Look

Observe visual images of the three types of popular dairy cow in Northern Ireland.



### Study

Follow video-footage of the life of the dairy cow throughout the farming year.



### Solve

Plot a line-graph of milk production over the last 50 years.

## Learning outcomes

Pupils will be able to:

- Understand how seasonal changes affect the life of a dairy cow.
- Identify the three most popular breeds of dairy cow in Northern Ireland.
- Interpret information presented in a table and plot the corresponding line graph.
- Read and interpret instructions and information presented in a variety of media texts.

## Suggested extension activities

- Make a wall chart of a year in the life of a dairy cow.
- Write encyclopaedia descriptions of Ayrshire, Jersey and Friesian cows and illustrate using a computer image of cows printed from the [Dairy World Scrapbook](#).

# Milking Time



## Outline



### Look

Explore interactive photographs of rotary and herringbone milking parlours.



### Study

Play video descriptions of rotary and herringbone milking parlours.



### Solve

Sequence the main stages of milking in a simulated herringbone parlour.

## Learning outcomes

Pupils will be able to:

- Use a range of controls to navigate within a series of interactive photographs.
- Understand similarities and differences between rotary and herringbone milking parlours.
- Solve a problem by the purposeful exploration of a variety of media texts.

## Suggested extension activities

- Arrange a class visit (possibly on a cross-community basis) to a dairy farm. (For information on arranging and organising visits, contact your local dairy or open farm.)



# Collecting the Milk



## Outline



### Look

Follow a photo sequence of a milk tanker's journey from farm to factory.



### Study

Play a video description of the tanker's journey.



### Solve

Sequence the stages in filling the milk tanker using a photo simulation.

## Learning outcomes

Pupils will be able to:

- Read and understand a photo-story and video of the milk-collection process.
- Solve a problem by the purposeful exploration of a variety of media texts.

## Suggested extension activities

- Design a comic strip to illustrate the journey of the milk from farm to factory.

# The Milk Factory



## Outline



### Look

Interact with a series of photo-stories describing the manufacture of dairy products (bottled and cartoned milk, cheese, butter, cream, yogurt and powdered milk).



### Study

Play video descriptions of the production processes.



### Solve

Solve an historical crossword puzzle based on a series of picture clues.

## Learning outcomes

Pupils will be able to:

- Read and understand photo-stories and videos of dairy-factory production processes (production of bottled and cartoned milk, cheese, butter, cream, yogurt and powdered milk).
- Use a range of controls to navigate within a series of interactive photographs.
- Search for and find information required to solve a crossword puzzle.
- Read and interpret a series of instructions to solve a problem.

## Suggested extension activities

- Make a word-search based on the crossword puzzle answers.
- Arrange a class visit (possibly on a cross-community basis) to a dairy factory. (For information on arranging and organising visits, contact your local dairy or open farm..)
- Research information (in the library or on the Internet) about Louis Pasteur and write a short fact file of his life and work.

# Shopping



## Outline



### Look

Explore the food labels on a variety of dairy products by interacting with a series of virtual objects.



### Study

Access information on labelling from a food fact-file.



### Solve

Follow instructions to create a barcode based on a randomised calendar date.

## Learning outcomes

Pupils will be able to:

- Use a range of controls to purposefully explore 3D models of dairy products.
- Read and understand written information about food labelling.
- Read and interpret a series of instructions to solve a problem.

## Suggested extension activities

- Make a collection of packaging from a variety of dairy products. Sort and classify them according to various criteria, for example, recyclability.
- Develop a milk drink for children. Research the most popular flavours of milk drinks. Create a new healthy milk drink aimed at your target group and taste-test it. Design and make packaging for your product. Plan an advertising campaign to promote your new product.
- Create a word-search based on key-words found on food labels.

# The Milkround



## Outline



### Look

Follow a photo sequence of a milkround.



### Study

Play a video description of the milkround.



### Solve

Write a computer program using LOGO to control a milkfloat on its round.

## Learning outcomes

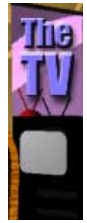
Pupils will be able to:

- Read and understand a photo-story and video of a milkround.
- Create, edit and use a sequence of instructions using LOGO to control a milkfloat on its round and extend understanding of movement and turning.
- Read and interpret instructions to solve a problem.

## Suggested extension activities

- Arrange a class visit by your school's milkman.  
Devise a series of questions to discuss aspects of his work.
- Conduct a class survey to investigate the doorstep delivery service.
- Create an advertisement to encourage home delivery.
- Investigate the quantity of milk delivered to your school and calculate the annual cost.
- Program a Roamer device to deliver milk around a model estate in the classroom.

# The TV



## Outline



### Look

Read brief descriptions of 6 television ads relating to milk in a TV Guide.



### Study

Select and view each of the TV ads.



### Solve

Sequence a range of video clips to match a soundtrack and create a television ad.

## Learning outcomes

Pupils will be able to:

- Listen to and understand a variety of audio-visual texts.
- Engage with, and respond to, a series of media presentations.
- Read and interpret a series of instructions to solve a problem.
- Interpret and successfully sequence a television ad.

## Suggested extension activities

- Gather examples of existing milk advertising from magazines and newspapers and discuss their effectiveness.
- Rank the **Dairy World TV** ads in order of preference and justify your selection.  
Identify target audiences for each ad.
- Through role-play, music and drama, create, enact and, if possible, record a new television or radio commercial advertising milk.

# Cooking is Fun



## Outline



### Look

Use the interactive contents page of a recipe book to access a range of recipes and to explore a glossary of food words.



### Study

Learn how to prepare each recipe through the stages of “Ingredients”, “Equipment” and “What to Do”.



### Solve

Prepare a pizza in a simulated kitchen environment.

## Learning outcomes

Pupils will be able to:

- Retrieve information from food word and recipe databases.
- Read and interpret instructions and information presented in a variety of media texts.
- Appreciate a number of factors that contribute to good diet.
- Develop an understanding of the safe handling of food.
- Make decisions and respond to consequences in a simulated kitchen environment.
- Read and interpret a series of instructions to solve a problem.

## Suggested extension activities

- Prepare **Cooking is Fun** recipes in the classroom.
- Debate the issue “Cooking is Fun”.
- Survey what people in your class ate for breakfast. Then write an article to appear in a children’s magazine emphasizing the importance of a healthy breakfast.
- Design a new recipe based on one from **Cooking is Fun** and try it out at home.



# Fridge Facts



## Outline



### Look

Explore the contents of a household fridge.



### Study

Find out about what foods belong where in the fridge.



### Solve

Set the temperatures in parts of a fridge within the correct range.

## Learning outcomes

Pupils will be able to:

- Identify household food that requires refrigeration.
- Develop an understanding of the safe handling of food by means of temperature control.
- Search and retrieve information required to solve a problem.
- Read and interpret a series of instructions to solve a problem.

## Suggested extension activities

- Survey the contents of your fridge and produce a report.

# Bone Builder



## Outline



### Look

Explore pictures of the stages of bone growth from baby to adult.



### Study

Access information on the importance of calcium for bone growth from a fact-file.



### Solve

Interactively build and label a model of a skeleton.

## Learning outcomes

Pupils will be able to:

- Understand the importance of milk as a source of calcium for healthy bone growth
- Read and understand written information about calcium and bones.
- Appreciate that drinking milk (as a source of calcium) and exercise are factors that contribute to good health.
- Read and interpret a series of instructions to solve a problem.

## Suggested extension activities

- Measure and compare heights within your class.  
Calculate the average class height.  
If possible, carry out a survey of heights within your school and compare averages.
- Devise a team quiz based on the information contained in the **Bone Builder** fact-file (and/or other sections in the **Magnet Muddles** part of [Dairy World](#)).

# Saving Smiley



## Outline



### Look

Explore a picture of the mouth to learn about the different types of teeth.



### Study

Access information on dental hygiene from a fact-file.



### Solve

Choose between two eating patterns to solve an animated cartoon puzzle.

## Learning outcomes

Pupils will be able to:

- Learn about the importance of teeth for a healthy body.
- Understand the negative effects of sugar on teeth.
- Understand the positive effects of brushing and tooth-friendly foods, such as milk, cheese, vegetables and fruit.
- Read and understand written information concerning dental health.
- Read and interpret instructions to solve a problem.

## Suggested extension activities

- Devise a word-search based on key factors relating to diet and dental health.
- Write a comic strip starring Smiley as a super-hero in the fight against tooth decay.

# Food of Fortune



## Outline



### Look

Explore a picture to learn about types of food in each food group.



### Study

Explore the food wheel to read further information on each food group.



### Solve

Reconstruct a food-wheel diagram based on the information contained in the previous sections.

## Learning outcomes

Pupils will be able to:

- Learn about what constitutes a healthy diet.
- Categorize food according to its food group to solve a problem.
- Read and interpret instructions to solve a problem.

## Suggested extension activities

- Create a collage of a food wheel using pictures from magazines and food wrappings.
- Survey what you and your classmates take for lunch.  
Score each lunch according to the number of food groups represented.
- Design ideal balanced lunches for children during one school week (a different lunch every day).

# Overseas



## Outline



### Look

Follow a photo sequence of a milkpowder shipment from factory to docks.



### Study

Run a video description of the milkpowder shipment.



### Solve

Use an atlas to label a map and write a program to control a shipment of milkpowder on its journey to the Middle East.

## Learning outcomes

Pupils will be able to:

- Read and understand a photo-story and video of a shipment of milkpowder on its journey overseas.
- Use the contents and index of an atlas to locate seas and oceans.
- Create, edit and use a computer program using the eight points of the compass to control a ship's route on a map and extend understanding of movement and turning.

## Suggested extension activities

- Use the **Scrapbook** facility in [Dairy World](#) to print the **Overseas** map. Then, using an atlas, label the map with the names of countries mentioned during the milkpowder journey from Belfast to Dubai.
- Find out where your nearest milk factory is located and plot the route from the factory to Belfast docks on a map.
- Print the **Overseas** series of photographs from the **Scrapbook** to create a sequencing task for pupils.