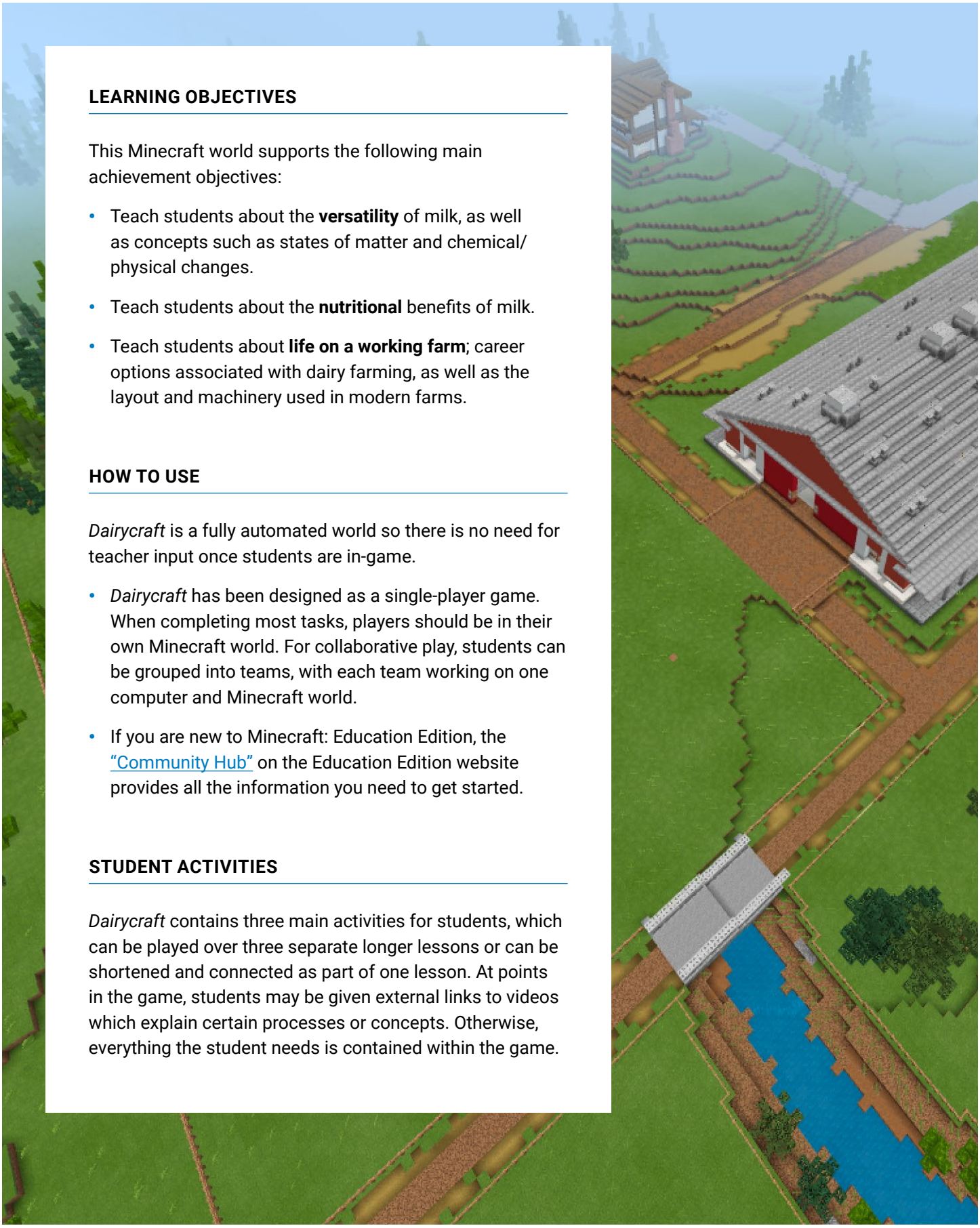
DAIRYCRAFT

LESSON PLAN

A Day on the Farm

Grade: 1 | **Subject:** Science and Technology | **Total time:** 30 min





LEARNING OBJECTIVES

This Minecraft world supports the following main achievement objectives:

- Teach students about the **versatility** of milk, as well as concepts such as states of matter and chemical/ physical changes.
- Teach students about the **nutritional** benefits of milk.
- Teach students about **life on a working farm**; career options associated with dairy farming, as well as the layout and machinery used in modern farms.

HOW TO USE

Dairycraft is a fully automated world so there is no need for teacher input once students are in-game.

- *Dairycraft* has been designed as a single-player game. When completing most tasks, players should be in their own Minecraft world. For collaborative play, students can be grouped into teams, with each team working on one computer and Minecraft world.
- If you are new to Minecraft: Education Edition, the "Community Hub" on the Education Edition website provides all the information you need to get started.

STUDENT ACTIVITIES

Dairycraft contains three main activities for students, which can be played over three separate longer lessons or can be shortened and connected as part of one lesson. At points in the game, students may be given external links to videos which explain certain processes or concepts. Otherwise, everything the student needs is contained within the game.

OVERVIEW

Students will investigate the different structures on a dairy farm, how they're designed/built, and how the farmer uses them to produce dairy.

CURRICULUM ALIGNMENT

Designed for grade 1 science and technology curriculum, understanding structures and mechanisms strand.

OVERALL EXPECTATIONS

By the end of the lesson, students will:

2) Investigate structures that are built for a specific purpose to see how their design and materials suit the purpose.
3) Demonstrate an understanding that objects and structures have observable characteristics and are made from materials with specific properties that determine how they are used.

SPECIFIC EXPECTATIONS

3) Understanding Basic Concepts

By the end of the lesson, students will:

3.2) Describe structures as supporting frameworks.
3.4) Describe the function/purpose of the observable characteristics (e.g., texture, height, shape, colour) of various objects and structures, using information gathered through their senses.
3.5) Identify the materials that make up objects and structures.
3.6) Distinguish between objects (including structures) and materials found in nature (e.g., tree: sap) and those made by humans.

STUDENT EXPECTATIONS

Demonstrate an understanding of the purpose of different design structures, and the materials used.

ACTIVITY: THE FARMHOUSE

Player starts in the barn. They speak to the Farmer.

STEP 1 The Farmer explains that there are many different types of jobs on the farm. He prompts players to visit all 9 of the remaining workers and gives players a compass. This compass will always point to the next worker that the player has not spoken to.

1. 2 Farmers in the Barn
2. Veterinarian in the Barn
3. Dairy Nutritionist in the Milk House
4. Farmer child (with milk boost) in the playground behind the Farmhouse
5. Farmer in the Crops Field
6. Farmer child beside the Silo
7. Field Service Person in the Calf Barn
8. Salesperson in the Shed

STEP 2 Players can use a camera to take photos of the different farm workers for reference.

STEP 3 Once the player has spoken to all 9 workers, the Salesperson will give the player a key. This can be used to drive the tractor (by right-clicking).

STEP 4 The player is then directed to drive the tractor to the pasture field outside the barn (again, the compass will point in the right direction).

Video links provided by the farm workers:

- Farmer within the barn: "Dairy Farming"
- Veterinarian within the barn: "Careers in the Dairy Industry"
- Salesperson by the Driving Shed: "Modern Technology"
- Farmer by the milking machines: "Robotic Milking"

BONUS TASK: COLLECT THE COWS!

STEP 1 Farmer at the pasture field explains that he needs help getting 7 of his cows back into the barn. He needs one of each of the farm's breeds, which are described in the 'Cow Guide' handbook.

STEP 2 Players are also given leads. Players can right-click on a cow whilst holding a lead, and then the cow will follow the player's movements.

STEP 3 Once all 7 cow varieties are back in the barn, the player is congratulated. They have now finished the lesson.

BONUS TASK: BUILD A FARM!

Optional: This 4th and final task is an optional task for players once they have finished all the other lessons. The task is open-ended and would be suitable as a homework task.

Players must design and build their own farm on the spare plot indicated by the Farmer (who provides a link to "Dairy Farming" video). Materials can be given to students to help them plan and organize their farm, such as a checklist of key buildings and locations.

You could also ask students to prepare a presentation of their farm, by taking photos of their farm (using the camera item), and exporting as a PDF.

See here for information on how to use the camera and portfolio in Minecraft: Education Edition.