GROWING FOOD

LESSON PLAN:

- Age: from age 10
- Learning area: math, science
- Preparation time: 10 minutes
- Duration: 60 minutes

GROWING FOOD

WHAT DO YOU NEED?

- Poster paint such as Creall Dacta color
- Clay such as Creall Therm soft
- Attachment: "Growing Food - Needed for Food Production“ (printed or slide 8)
- Pencil
- Paper
- Cardboard
- Brushes

WHAT WILL YOU BE DOING?

Together with your classmates, you will produce enough food for a small village.

GROWING FOOD

STEP 1

What do you already know about healthy and sustainable eating?

The village for which you are producing food has 700 inhabitants: 400 adults and 300 children live there. Calculate how many kilos of food you need for everyone in the village for the month of August.

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STEP 2

Choose 5 or more types of food from the table. Write down how many kilos of each type you want to produce. (For example: potatoes – 5000 kilos and strawberries – 4000 kilos).

Make sure you have enough in total to feed the village in August.

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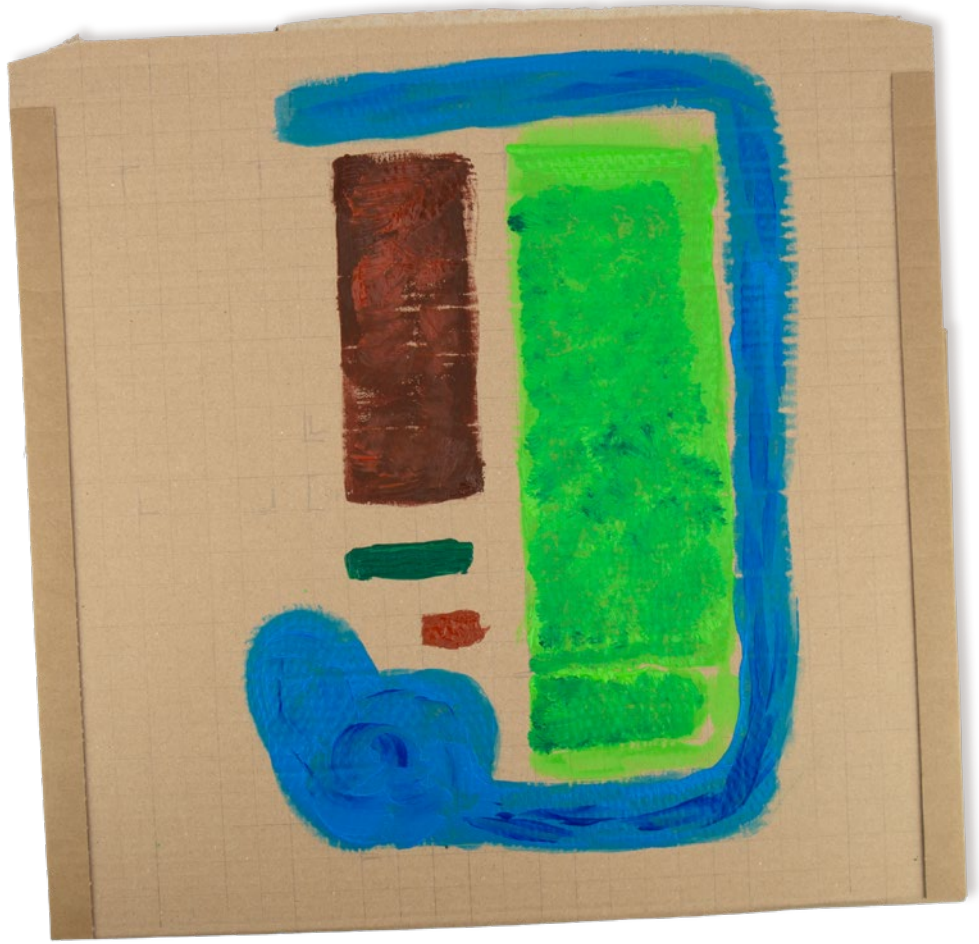
STEP 3

Calculate and write down per type of product and in total how much land area you need.

Create a model of your field on cardboard. Think about how the land should look. Make sure the distribution per area is approximately correct. Sculpt one or more products or animals to indicate what will be on the field or in the pasture.



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STEP 4

Return to the table and calculate how much water and energy is needed for your farm. Also calculate the total CO_2 emissions of your farm.

Compare the farms (as a class). Which group has the smallest farm? And which group has come up with the most sustainable farm?

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Step-by-step instructions

1

2

3

4

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FOOD NEEDED

Per person per day*

- Adults: 2 kilos
- Children: 1.5 kilos

** Loosely based on reality.*

NEEDED FOR FOOD PRODUCTION*

Per kilo of product:	Area	Water	Energy	CO_2 Emissions
Pork	8 m²	4,800 litres	7 kWh	8 kilos
Beef	18 m²	15,000 litres	16 kWh	28 kilos
Chicken	5 m²	4,300 litres	4 kWh	4 kilos
Milk	2 m²	1,500 litres	0.3 kWh	1.3 kilos
Eggs	0.5 m²	250 litres	0.6 kWh	3 kilos
Cheese	15 m²	5,500 litres	8 kWh	9 kilos
Wheat	1.5 m²	1,300 litres	1.5 kWh	0.7 kilos
Potatoes	0.2 m²	250 litres	0.7 kWh	0.3 kilos
Tomatoes	0.4 m²	180 litres	0.6 kWh	2.5 kilos
Lettuce	0.3 m²	130 litres	0.4 kWh	0.7 kilos
Kale	0.6 m²	240 litres	0.7 kWh	0.3 kilos
Broccoli	0.3 m²	285 litres	0.6 kWh	0.6 kilos
Carrots	0.2 m²	130 litres	0.3 kWh	0.1 kilos
Cauliflower	0.5 m²	250 litres	0.7 kWh	0.3 kilos
Leeks	0.6 m²	250 litres	0.6 kWh	0.3 kilos
Strawberries	0.8 m²	500 litres	1.3 kWh	3 kilos
Apples	0.7 m²	700 litres	0.6 kWh	0.4 kilos
Bananas	0.6 m²	790 litres	2 kWh	0.8 kilos
Pears	0.7 m²	750 litres	0.7 kWh	0.3 kilos

IT'S MORE FUN WITH YOU!