Name: _____ Date: _____

How the Dutch Turned Sea Floor Into Farmland

Circle group

Much of the Netherlands lies lower than the sea. Without help, water from the North Sea and rivers would flood the land. Over many years, the Dutch learned to hold the water back. They even made new land.

First, people build a dike. A dike is a strong wall of earth that keeps the water out. Next, they dig canals and pump the water out of the walled area. For hundreds of years, windmills powered the pumps. Later, engines and electric pumps did the job. When the land is dry, the old sea floor has rich soil that is good for farming. This new land is called a polder.

Polders still need care. Rain keeps falling, and rivers keep flowing. Pumps and canals carry the extra water away. Water boards check that the dikes are strong.

Engineers from many lands visit the Netherlands. They study how its dikes, gates, and pumps keep people safe.

Questions

1. What is a dike?

_____

_____

2. What is a polder?

_____

_____

3. What powered the pumps for hundreds of years?

_____

_____

4. Why is the soil of a new polder good for farming?

_____

_____

5. Why do polders still need pumps?

_____

_____

6. Why do engineers visit the Netherlands?

_____

_____

Words to know

dike: a wall built to hold back water

canal: a long channel dug for water to flow through

engineer: a person who plans and builds things like machines and bridges

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

How the Dutch Turned Sea Floor Into Farmland

Triangle group

A large part of the Netherlands lies lower than the level of the sea. Without protection, water from the North Sea and from rivers would flood these places again and again. Over many centuries, the Dutch learned to hold the water back and even to make new land.

The first step is to build a dike, a long, strong wall of earth that keeps the water out. Next, people dig canals and pump the water out of the enclosed area. For hundreds of years, windmills turned to power the pumps. Later, engines and electric pumps took over the job. When the area is dry, the old sea floor is rich soil that is good for farming. A piece of land made this way is called a polder.

Polders still need care. Rain keeps falling, and rivers keep flowing, so pumps and canals must carry the extra water away. Special local groups called water boards check that the dikes are sturdy and the canals are working.

Because water shaped their country, the Dutch became famous for their skill in managing it. Engineers from many lands travel to the Netherlands to study how its dikes, gates, and pumps keep so many people safe and dry.

Questions

1. What is a dike?

_____

_____

2. What is a polder?

_____

_____

3. What powered the pumps for hundreds of years?

_____

_____

4. Why is the soil of a new polder good for farming?

_____

_____

5. Why do polders still need pumps after they are dry?

_____

_____

6. Why do engineers from other lands visit the Netherlands?

_____

_____

Words to know

dike: a wall built to hold back water
canal: a long channel dug for water to flow through
enclosed: shut in on all sides
engineer: a person who plans and builds things like machines and bridges
sturdy: strong and solid

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

How the Dutch Turned Sea Floor Into Farmland

Square group

A large portion of the Netherlands lies lower than the level of the sea. Without protection, water from the North Sea and from the country's rivers would flood these regions again and again. Over many centuries, the Dutch learned not only to hold the water back but also to create entirely new land.

The first step is to construct a dike, a long and powerful wall of earth that keeps the water out. Next, people dig canals and pump the water out of the enclosed area. For hundreds of years, windmills turned to drive the pumps, until engines and electric pumps eventually took over the work. Once the area is dry, the former sea floor becomes rich soil that is excellent for farming. A piece of land made in this way is known as a polder.

Polders still require constant care. Rain continues to fall and rivers continue to flow, so pumps and canals must carry the surplus water away. Special local groups called water boards make sure that the dikes are sturdy and the canals are working properly.

Because water shaped their country, the Dutch became famous for their skill in managing it. Engineers from many nations travel to the Netherlands to study how its dikes, gates, and pumps keep so many people safe and dry.

Questions

1. What is a dike?

_____

_____

2. What is a polder?

_____

_____

3. What drove the pumps for hundreds of years?

_____

_____

4. Why is the soil of a new polder excellent for farming?

_____

_____

5. Why do polders still require pumps after they are dry?

_____

_____

6. Why do engineers from other nations visit the Netherlands?

_____

_____

Words to know

dike: a wall built to hold back water
canal: a long channel dug for water to flow through
enclosed: shut in on all sides
engineer: a person who plans and builds things like machines and bridges
sturdy: strong and solid

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

For the teacher: How the Dutch Turned Sea Floor Into Farmland

Each student sheet carries a shape, not a level. The same topic and facts, written three ways.

Circle: How the Dutch Turned Sea Floor Into Farmland

Easier · 154 words · Flesch-Kincaid grade 3.1

1. A strong wall of earth that keeps water out.
2. Land made by pumping water out of a walled area.
3. Windmills.
4. The old sea floor leaves rich soil.
5. Rain and rivers keep adding water that must be carried away.
6. To study its dikes, gates, and pumps.

Triangle: How the Dutch Turned Sea Floor Into Farmland

This passage · 203 words · Flesch-Kincaid grade 5.9

1. A long, strong wall of earth that keeps water out.
2. A piece of land made by pumping water out of an enclosed area.
3. Windmills.
4. The old sea floor leaves behind rich soil.
5. Rain and rivers keep adding water that must be carried away.
6. To study how its dikes, gates, and pumps manage water.

Square: How the Dutch Turned Sea Floor Into Farmland

Harder · 217 words · Flesch-Kincaid grade 7.8

1. A long, powerful wall of earth that keeps water out.
2. A piece of land created by pumping water out of an enclosed area.
3. Windmills.
4. The former sea floor becomes rich soil.
5. Rain and rivers keep adding water that must be carried away.
6. To study how its dikes, gates, and pumps manage water.