

Making fire (option 1)

YOU'VE JUST WASHED UP ON AN ISLAND. YOU ARE SOAKED AND COLD. YOU ARE TRYING TO MAKE A FIRE TO WARM UP WITH ALL KINDS OF MATERIALS YOU CAN FIND ON THE ISLAND.

Materials:

- Magnifying glass
- Lamp
- Dry grass
- Fire wood
- Ducktape
- Metal wire

Roadmap

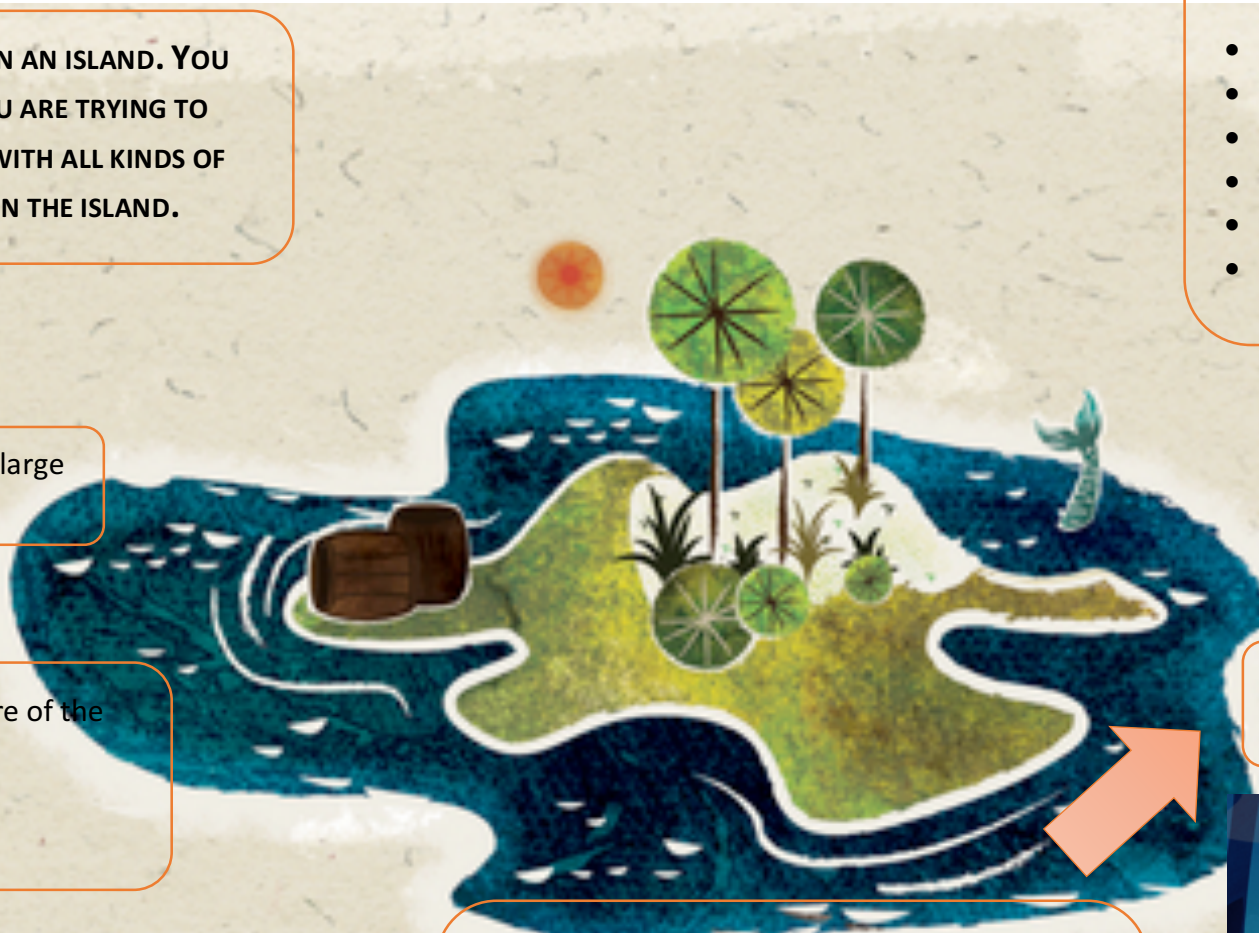
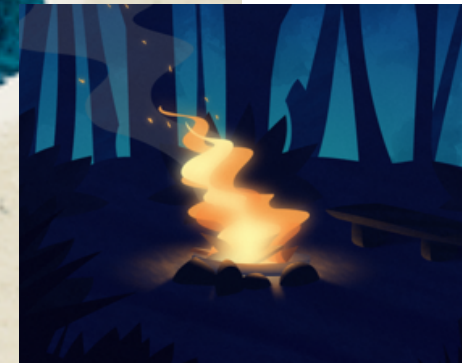
1. Put dry grass under the large lamp.

2. Measure the temperature of the dry grass.
3. Fill this out on the chart

4. Create a construction with duct tape and metal wire so the magnifying glass hangs stable under the lamp.
5. Turn on the lamp.

6. Measure the temperature of the dry grass after 30 seconds.
7. Fill this out on the chart.
8. Repeat this every 30 seconds.
9. If the dry grass is warm enough, place the firewood on it.

What has happened to the dry grass?



Making fire (option 2)

YOU'VE JUST WASHED UP ON AN ISLAND. YOU ARE SOAKED AND COLD. YOU ARE TRYING TO MAKE A FIRE TO WARM UP WITH ALL KINDS OF MATERIAL THAT YOU CAN FIND ON THE ISLAND.

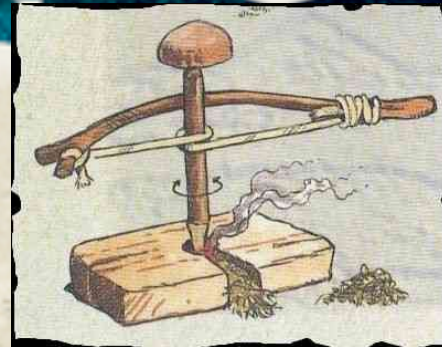
MATERIALS:

- 4 kinds of branches
- Rope
- A piece of wood
- Dry grass
- Fire wood

Roadmap

1. Divide into 2 groups.
2. Each group gets a couple of branches.

3. Grab a piece of wood and make a cavity in it.
4. Place the dry grass.
5. Make a fire bow of the branches and rope.
6. Take the last brache.
7. Put it all together like in the picture.



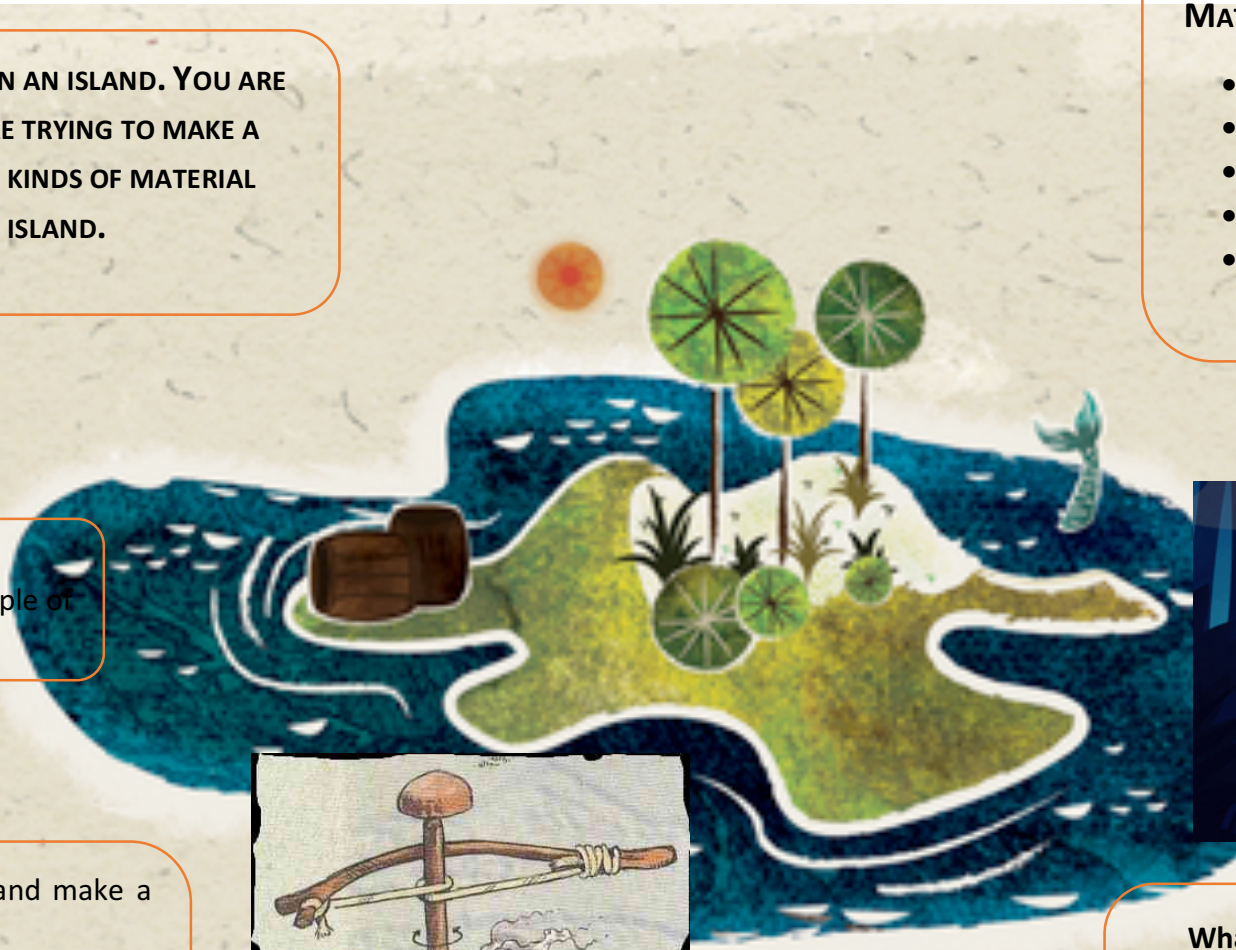
4. Go back and forth with the fire bow.



What has happened to the dry grass?

Which one of the fire bows worked the best?

The small one or the big one?



Purifying water.

IF YOU WANT TO SURVIVE ON AN ISLAND, YOU NEED A COUPLE OF THINGS. ONE OF THE MOST IMPORTANT THINGS IS WATER. HOWEVER ON AN ISLAND YOU CAN ONLY FIND SALT WATER. HOW CAN YOU TURN THE SALT WATER INTO DRINKABLE WATER?

BENODIGDHEDEN:

- Salt water
- Strainer
- A couple of filters with different kind of permeability
- Bunsen burner
- Beaker

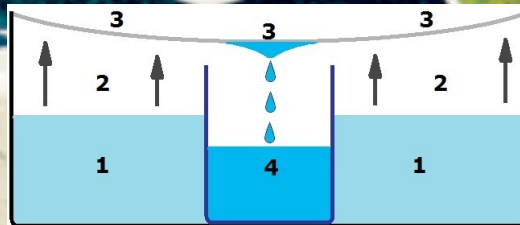
Roadmap

1. Take a filter so that we can take the large chunks out of the water.

2. Take a small filter to take out the impurities from the water.

3. Turn on the Bunsen burner.
4. Let the water boil.

5. catch the vapor of the boiling water.



What has happened to the water?
How does it taste? Is it still salty or not?



Seeking shelter.

THERE IS A LOT OF SUN ON THE SCIENCE ISLAND.
BUT HOW DO YOU PROTECT YOURSELF FROM IT?
WHICH MATERIAL IS THE BEST TO MAKE YOUR
SHELTER?

Benodigdheden:

- Big plastic butter tub
- Moss
- Silver foil
- Sand
- leaves
- glue

Roadmap

1. Take a butter tub.

2. Cover each shanty with one of the following materials: moss, sand, leaves.

4. measure the temperature in each shelter.
5. Now put the lamp above the shelters.
6. Turn on the lamp.
7. Measure the temperature every 30 seconds.
8. Put this on the chart.

Which shelter is the warmest?



Seeking shelter

YOU HAVE FIRE AND SHELTER, BUT WHERE DO YOU PUT YOUR FIRE BY YOUR SHELTER? THAT SMOKE DOESN'T LOOK SO HEALTHY TO INHALE, BUT IS THAT TRUE?

Benodigdheden:

- The shelter that you chose in the previous assignment
- Oxygen - meter
- CO₂-meter
- Candle
- Lighter

Roadmap

1. Light up a candle.



2. place the fire:

- In front of the shelter
- Next to shelter
- In the shelter
- Behind the shelter
- In the doorway of the shelter



3. Measure at each placement the oxygen value and CO₂waarden.

4. Write the values in the table.

5. Compare the results

Where are you going to place your fire?



Creating energy

If you want to notify someone about washing up at an island but the battery of your mobile phone is dead, then what do you do? After each assignment the professor gave you some materials. He says you can charge your mobile phone with it, but how do we do that?

Roadmap

1. Take the lemons, electricity wires and alligator clips.
2. Insert the copper part of each electricity wire through the hole of the alligator clip.
3. Do this 8 times.
4. Wrap the copper part around it.



5. There is a cut in every lemon.
6. Insert one coin in the cut.
7. Do this with every lemon.
8. Put a nail in every lemon.
=> the nails and coins should not touch each other!!!



9. Put the lemons next to each other.
10. Put the alligator clup on the nail of the first lemon and clamp the other one on the coin of the second lemon.
10. Connect the other lemons the same way.



Materials:

- Coper elektricity wires
- lemon
- alligator clips (8x)
- 8x nails

Does the little patch work?

11. Connect the nail of the last lemon to the light on the side where the light is flat.
12. Connect the coin of the lemon to the light.