Computer Graphics Project
Course 14012501–3

Title:

The Water Cycle

Done By (Name: ID: Group):
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Groups: 1, 2, 6

Under Supervision:
Dr. Walla Aleidarous

Introduction:

In this project, we will be representing The Water Cycle using 3D drawings., And most importantly, we will be using all of the information we obtained and learned from this course.

Tasks:

1. Draw a 3D scene
2. Add texts to the scene
3. Use the keyboard to run the program
4. Implement different textures
5. Add a light source
6. Change the cameras' position
7. Animation

The purpose of working on this project:

The purpose of working on this project is to improve our working with a team skill. Moreover to increase our knowledge by searching about new codes and techniques. And most importantly to use all of the information that we obtained from this course, and the information that we obtained by searching so that our project is done perfectly and beautifully.

Instructions to run the program:

'X' to decrease cameraPosition[0] value which is the cameras position around x axis
'x' to increase cameraPosition[0] value which is the cameras position around x axis
'Y' to decrease cameraPosition[1] value which is the cameras position around y axis
'y' to increase cameraPosition[1] value which is the cameras position around y axis
'Z' to decrease cameraPosition[2] value which is the cameras position around z axis
'z' to increase cameraPosition[2] value which is the cameras position around z axis

The program starts with this output, representing a ground that has plenty of beautiful nature on it, such as a lake, a waterfall, trees, mountains, and grass. Also, the sun and clouds give it a realistic touch.

The water cycle will start with the *Evaporation*. Where steam comes out of the lake because of the sun's heat. When the steam reaches the sky, there will come the second stage of the water cycle, which is the *Condensation*. Where the steam forms clouds, and the skylight will be darkened. The last stage is the *Precipitation*, and that comes in three different forms: rain, sleet, and snowflakes.

When it rains, raindrops will fall out of the clouds, the same will happen when it sleets, but the skylight will be even darker. When snowflakes fall, the ground will be covered with snow. Same with the trees and mountains. The more time goes by, the more snow covers the area.

Finally, rain and snow then fill the lake, and the process starts all over again.

In the next pages of the report, you will notice a change in the camera's position, it will be (1.1, 1.1, 1.9) to (x, y, z) respectively.
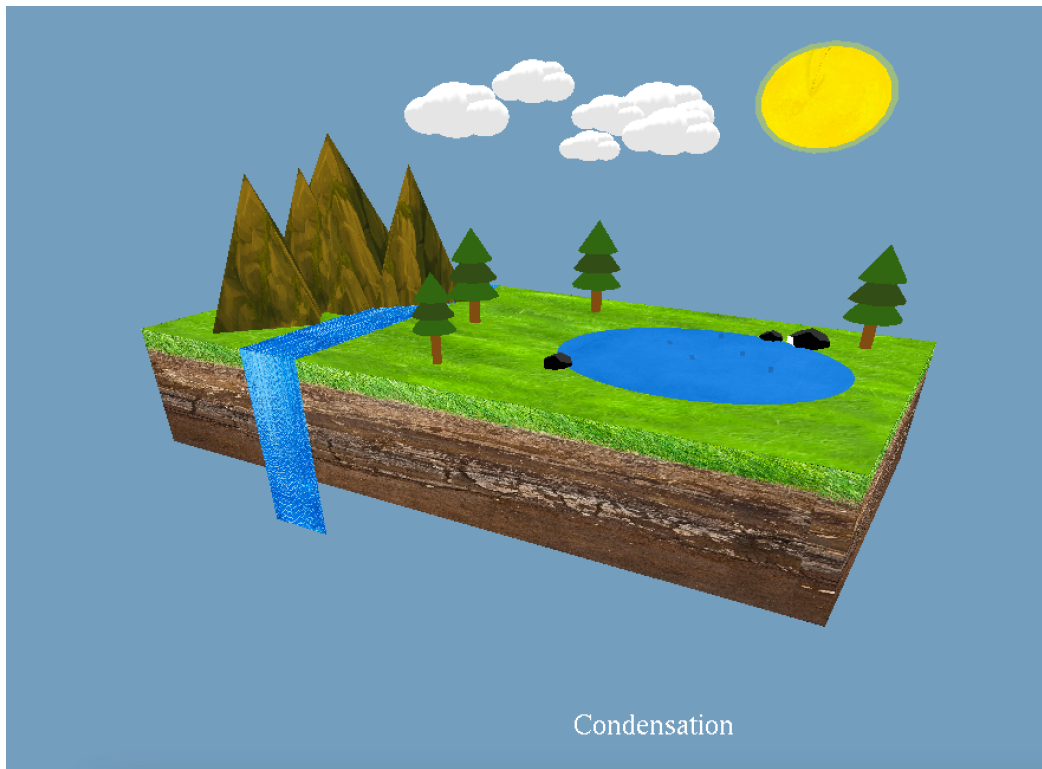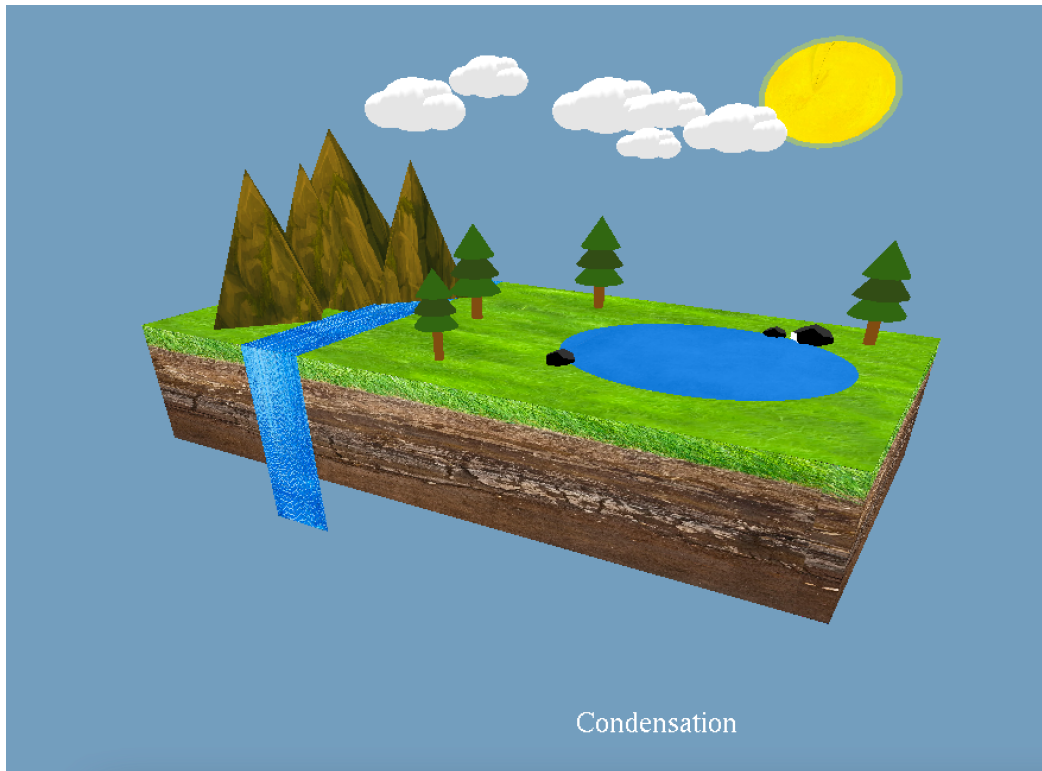
Evaporation:

The heat from the sun causes the water to evaporate from the lake. It starts from the lake going up to the sky.
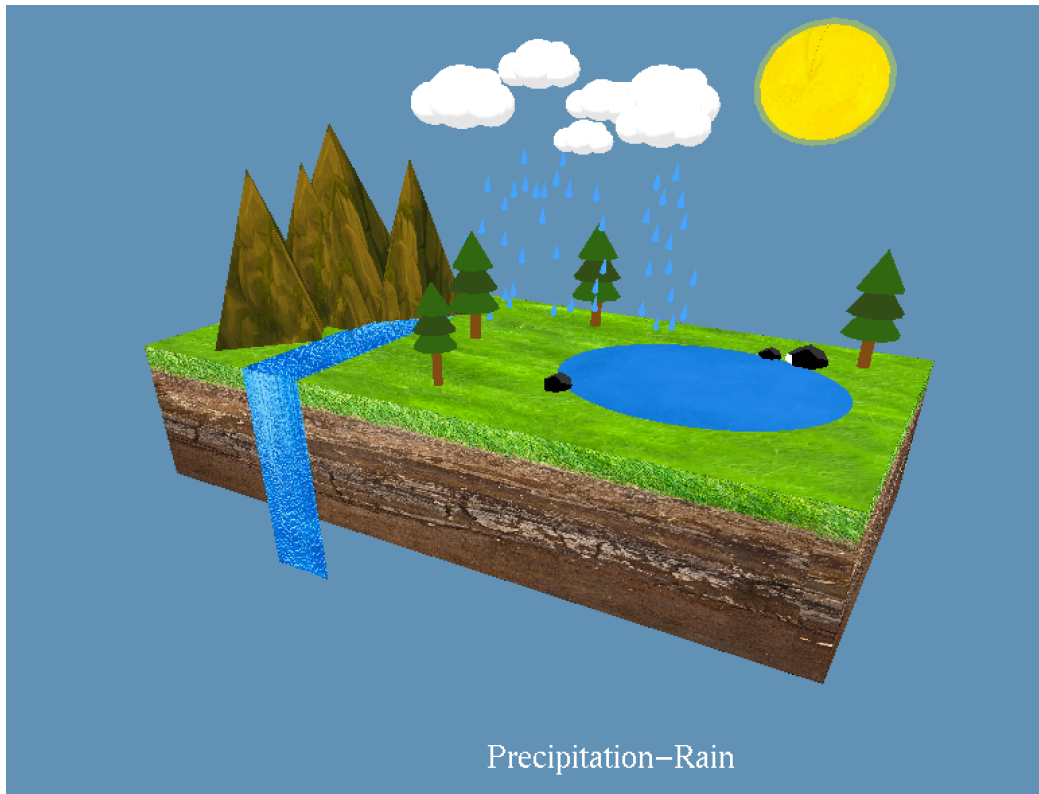

Evaporation

Evaporation
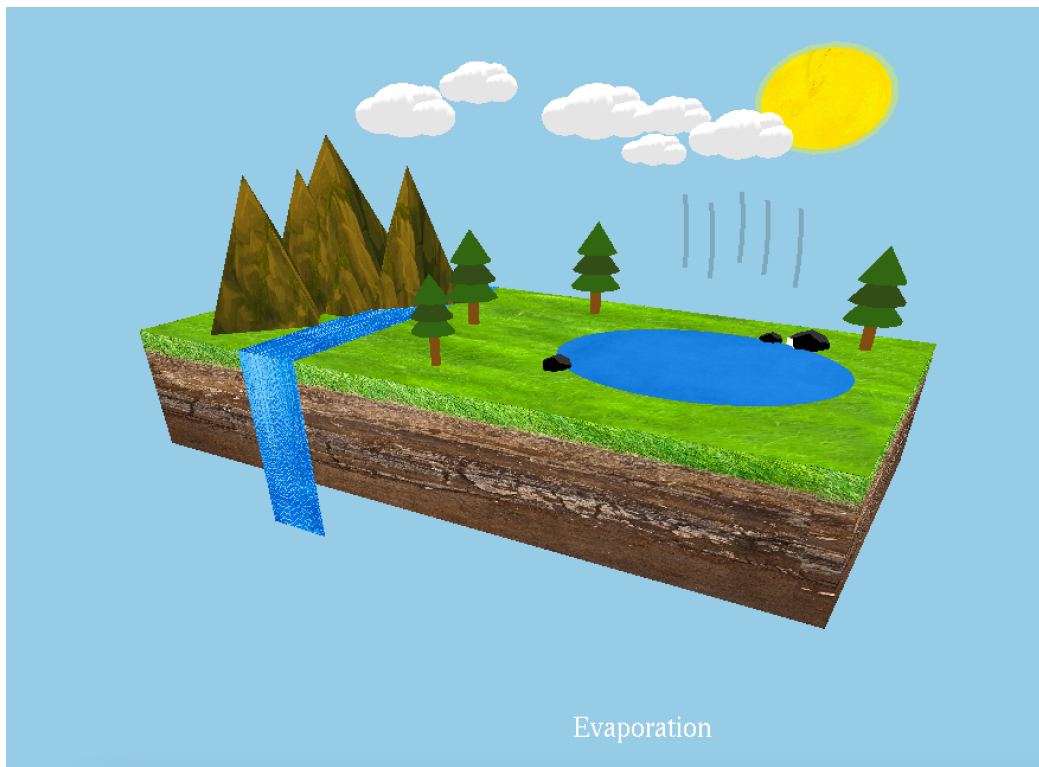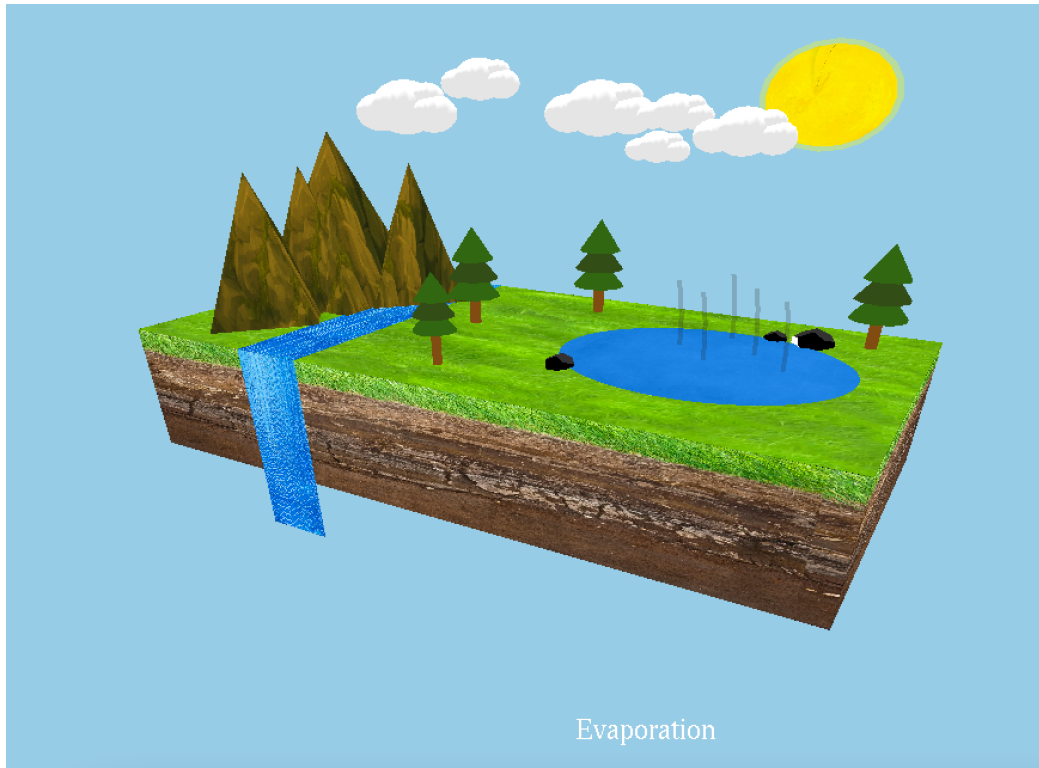
Condensation:

The steam rises up in the air forming clouds, and it will get closer to each other
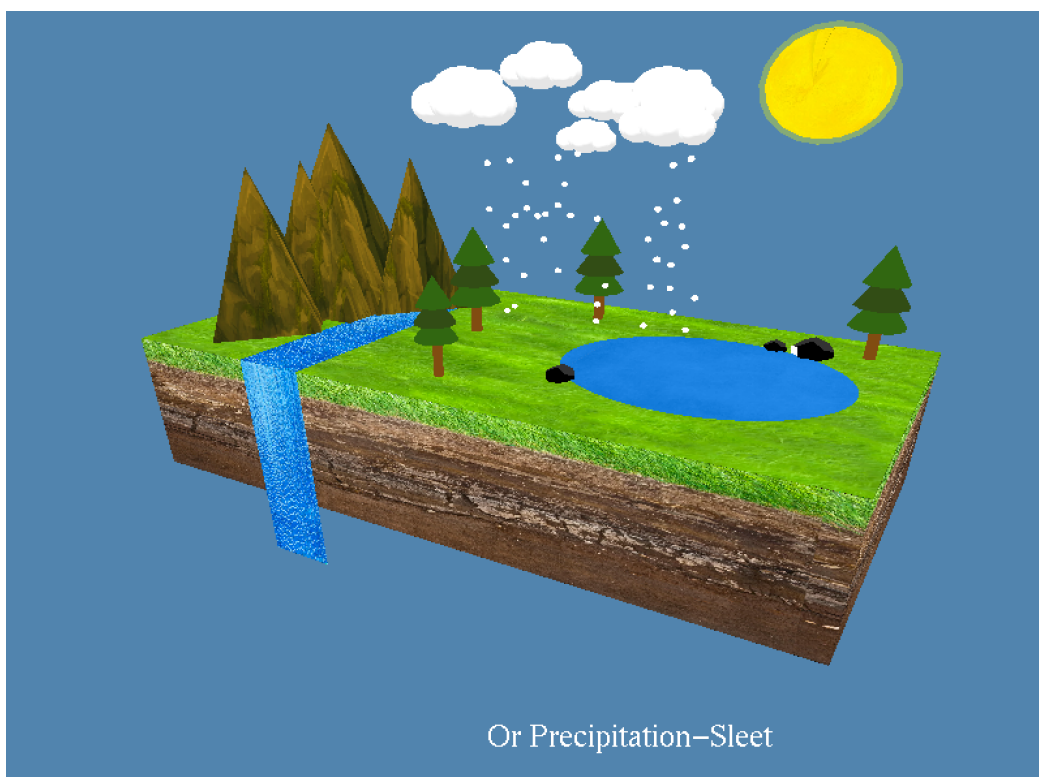

Condensation

Condensation

Precipitation:

The clouds are made of droplets, when these water droplets get too heavy to stay in the cloud, they fall as rain.

Precipitation−Rain

Sometimes they fall as sleet.

Or Precipitation−Sleet

Or they fall as snowflakes.

Or Precipitation—Snowflakes

Or Precipitation—Snowflakes

In conclusion:

Working on this project was fun, and interesting. Every member in our group was very helpful and had their work done at the specified time.

However, at the beginning of working, we were a little concerned about the project idea. We were not so sure about how it is going to be done or how it will look. But of course, we were up for the challenge and we did it.

Working on this project really improved our searching and working with a team skills. We used the information that we obtained from this course plus the information that we got from searching. Our main purpose was to improve our abilities, and we did.

Group work report:

	Amjad Saleh	Ekram Feras	Rehab Alidrisi	Samar Gadi	Shahad Mohammed
Project idea	●	●	●	●	●
Ground, Lake, Waterfall				●	
Trees			●		
Mountains	●				
Clouds		●			
Sun					●
Light source	●				
Camera				●	
Text			●		
Evaporation					●
Condensation			●		
Precipitation		●			
.txt file	●				
Report				●	