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5th Class

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**How plants
support the soil?**



March, 2008

How plants support the soil?



Do you observe something strange to the flowers of this photo? Is something missing? Could the situation be better for them?

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Activity

Materials

- ✓ 2 plastic cups
- ✓ 1 A4 page
- ✓ 3-4 paper clips
- ✓ scotch tape
- ✓ pencil with a rubber on it
- ✓ soil from our garden or our schools playing ground



Pour some soil into the plastic cup until it's half full. Put the pencil into the soil and try to stabilize it. Try to push it slightly. What do you observe?



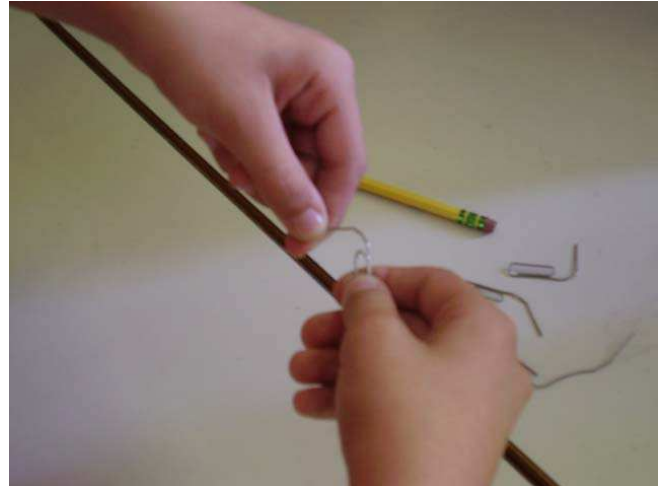
Observation

We observe that it is difficult to stand, since it takes only a little push to fall out of balance .It also stirs the soil.

Stretch some paper clips, but not completely, to make little footholds.

Stick the paper clips in the rubber of the pencil. If the pencil doesn't have a rubber, use some scotch-tape.

Try now to stabilize it. What do you observe?



Observation

We observe that the pencil is steadier but it can still fall with a strong push.

Place the pencil in the cup and cover with the rest of the soil.

Try moving the pencil with more force and in all directions.

What do you observe?





Observation

We observe that it is very steady. The soil seems to move but it doesn't give way.

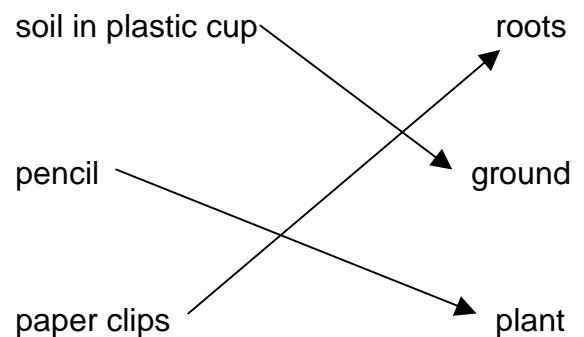


In what phase of your activity did you achieve the best outcome?
Which material or materials were the most helpful and effective?

When we stuck the paper clips on the pencil rubber and when we used the rest of the soil. So paper clips helped the pencil to be steadier.



Make pairs



In our country many fires break out particularly during the summer months. **During August 2007 our prefecture, Iliá, faced the most horrific fire in our history.**

The main causes are carelessness and arson. There is also excessive and illegal logging. Unfortunately, this leads to the destruction of several important sources of oxygen. Trees and forests are diminishing rapidly.

The negative consequences are evident throughout the year but mostly during the winter months. Why then? What else is damaged besides trees? If you bring to mind images from news reports on TV you will be able to answer. The picture on the right will also help you. Take a careful look.



Because during wintertime there are intensive rain falls. Soil in this picture seems to be dispersed as if it was dug. On TV reports we see mud and water flood peoples' houses. Basements and cellars are totally overflowed.

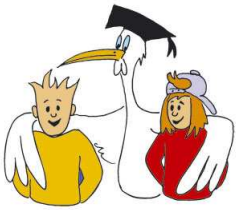


Conclusion

Plant's support is accomplished by roots' and soil's interaction. Furthermore, trees support soil and protect it from erosion and flood.

Complete the conclusion using the words below.

- support ▪ plants ▪ roots ▪ soil / ▪ trees ▪ hold-support ▪ soil ▪ protection ▪ erosion
- flood



We have to realize that it is everybody's duty to protect the forest. It provides us with **oxygen**, which is essential for the lives of all living things on the planet. It also provides valuable resources and they are the natural habitat of many animals.

Furthermore forests help protect the soil preventing **erosion**. If there were no trees with their roots nothing would be able to support the soil which would erode and be washed away in the first rainfall. Without trees the soil is left unprotected from **flooding**. Since there are no roots to absorb water and support the soil water ends up in our towns and cities.

Prevention and care for trees as well as **reforestation** should be our primary concern and become our way of life. Destroying trees means destroying our own lives.



HOMEWORK

1) Crossword

Find the vertical word

1. When we plant new trees in the woods...(noun)
2. It is the person who sets fire in the forest
3. When the soil is drawn away...(noun)
4. They are on the tree's branch.
5. Roots and soil.....the plant (verb)
6. Water and nutritive elements are transferred through this tube

		1	R	E	F	O	R	E	S	T	A	T	I	O	N
	2	A	R	S	O	N	I	S	T						
			3	E	R	O	S	I	O	N					
			4	L	E	A	F	E	S						
				5	S	U	P	P	O	R	T				
6	G	R	A	F	T										

2) True or False?

Write **T** for true statements and **F** for the false.

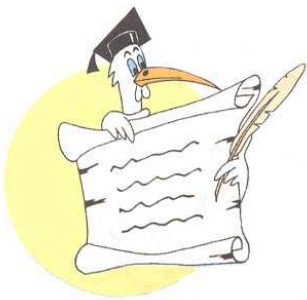
T Roots support the plant with the soil's help.

F Soil draws the trees away.

F Erosion happens when the trees are drawn away by the water.

T Reforestation restores the damaged forests.

T Logging means cutting down the trees for trade reasons.



And something more....

Where are the roots? A nature's miracle!!!

Saint Theodora's monastery in Vasta.(Megalopolis, Arcadia, Peloponnesus).

Nature has worked a miracle in this little church. Seventeen enormous trees emerge on its roof. While water from a stream flows at its foundation. This phenomenon must be due to the fact that the church is made of stone with a high content of mud which was used instead of cement. This mud helped the first tree to grow and then this tree shed its own seeds... so the roof of the church was filled with trees **although there are no visible roots in the interior of the church.** Tradition has attributed this to a miracle.

