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**BIOLOGY, CHEMISTRY**

**Task1**

* 1. **Tasks for group: “Soil scientists”.**

Aim: examination of soil on the territory of the area, examination of soil horizons, definition of soil pH.

Integrated subjects: Biology, Chemistry, Geography.

Equipment: Spade, measuring tape, knife, paper A4, glue, ruler, pencil, solution of all-purpose indicator, Phillips beaker, distilled water, paper towels, electronic pH-meter, camera / smartphone.

1. Dig the hole 1 metre depth with size about 40x60cm in order to make all the soil horizons visible.
2. Study the horizons. Measure their thickness with a measuring tape. Compare this thickness, colour, possible inclusions. Take a photo of the profile.
3. Make a soil profile on paper. Keep the proportions and scale. Draw the horizons on the paper, grease it with glue. Spread the samples of the soil onto the sticky surface.
4. Determine the **pH of soil** of every horizon according to the following method. Make a solution (mixture) of water and soil from every horizon and determine the **pH of soil** with the help of all-purpose indicator and pH-meter.

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| **Colour** | **Acidity of soil** |
| Red | High |
| From pink to orange | Medium |
| Yellow | Weak |
| Greenish-blue | Neutral |
| Blue | Neutral, close to alcaline |



1. Fill in the cluster diagram of the decomposition of substances in the soil.

Good luck in work!