

The moon – an educational and a scientific trump card

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Abstract

The moon has always been a mystery. In modern times a lot of those mysteries can be explained. The latest proof of water ice on the moon might even lead humankind to the challenge to build up a moon base. While plenty of answers regarding the earth companion reach the public, there are less people who really understand what these answers are about.

There is a new group of students coming up in the next couple of years. Older people who are working or who have already been retired and young people searching for knowledge next to school (Figure 1). Knowledge taught in a different way than what they are used to.



a)



b)

Figure 1 Students in special scientific afternoon seminars of GEONAT in elementary school a) and in an adult education centre b).

In these times it is important not just to offer information but to go out and work with the people giving them “a hand”.

The moon as a night time companion can be seen easily by everyone everywhere without expensive background material to invite a wide public into research. Watching and describing the dark spots and then learning that they are oceans of lava (Figure 2). Thinking about “Mascons” and what kind of characteristics they possess and why we know about them and how we could get further information is something students should be introduced with. To use “Mascons” as a leading theme to explore the moon in a seminar popularizes a different view on

the moon and as well could be used to explain other scientific backgrounds like gravity anomaly.



Figure 2 Dark spots on the moon (NASA, Earth observatory)

Basalt as a moonlike stone from earth enables a real experience and idea of the material the moon is made of and a slight idea of the power it needs to create regolith.

Talking about the tides and visualise them (Figure 3 a, b) brings up emotions and questions a teacher can start with to introduce a further look on the natural satellite of the earth.



a)



b)

Figure 3 a) Low tide and b) high tide on Trebarwith Strand, Cornwall (England)

With all those different kind of aspects like historical influence on human society, fairytales, scientific as well as artificial pictures and of course already a lot of answers on scientific questions that the moon offers us it is one of the best objects in the sky to invite people into planetary science and create exciting lessons that make fun and have got a real connection to live.

