

Earthlearningidea bauble quiz Fun for all the family – and your class



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Q. If you had to choose a bauble that was most like the Earth in colour – what colour would that be?

A. *Blue – the Earth when seen from space is sometimes called ‘The blue marble’*

Q. If you wanted to spin your bauble at the same speed as the Earth, how fast should you spin it?

A. *At a speed of rotation of once a day*

Q. If you wanted to tilt your bauble so that it had the same tilt to its plane of rotation as the Earth, by how much should you tilt it?

A. *23½ °*

Q. Which line of latitude or longitude on the Earth is the longest?

A. *The Equator, because the Earth is an oblate spheroid (a slightly ‘squashed sphere’) with its equatorial circumference longer than its polar circumference*

Q. How is the shape of a bauble different from the shape of the Earth?

A. *Baubles are spheres; the Earth is an oblate spheroid (a slightly ‘squashed sphere’)*

Q. If you vibrated the bauble and the Earth, which would have the lower note?

A. *The Earth, one of its vibration modes is E flat, 20 octaves below middle C (the vibration of the Earth would be from a large earthquake; you could vibrate a bauble by flicking it with your finger – and testing its frequency against a piano)*

Q. Which has the greater topography (relief), a bauble or the Earth?

A. *They are about the same – in relative terms, the Earth is as smooth as a pool or snooker ball*

Q. Which has the thicker outer layer, the Earth or the bauble?

A. *The bauble – if the outer layer of the Earth is considered to be the chemical outer layer (the crust – mean thickness 15 km) it is relatively as thin as a postage stamp on a football; if it is the mechanical outer layer (the lithosphere – mean thickness 100 km), the ‘shell’ of the bauble is still thicker*

Q. Are both outer part of the Earth and the bauble brittle?

A. *Yes – both are solids that can break; the bauble is easier to break because it has air inside; breaks in the solid Earth cause earthquakes*

Q. Where do the materials used to make the bauble come from?

A. *The Earth – if the bauble is made of glass then it is made mainly of silica sand from the Earth that was melted and quickly cooled; if it is made of plastic, plastic is made from oil from the Earth.*

The back up

Title: Earthlearningidea bauble quiz.

Subtitle: Fun for all the family – and your class.

Topic: A festive Earth quiz for everyone.

Age range of pupils: 10 years upwards

Time needed to complete activity: 15 minutes

Pupil learning outcomes: Pupils can:

- relate the properties of a bauble to the properties of the Earth;

Context:

An exercise to consolidate learning about the Earth through comparisons with a festive bauble.

Note that experiment has shown that the vibration note of a glass bauble was C, three octaves above middle C, whilst that of a plastic one was G below middle C.

Following up the activity:

Ask the pupils if they can think of other Earth/bauble-related questions – and their answers.

Underlying principles:

- Several Earth properties can be contrasted with those of a bauble.

Thinking skill development:

Comparing the Earth and a bauble can cause cognitive conflict.

Resource list:

Optional

- a festive bauble
- a small model of the Earth

Source: Chris King of the Earthlearningidea Team.

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