**Questions to accompany The Science Channel’s “Faces of Earth”**

**Episode One “Building the Planet” (version 2)**

1.

\_\_\_\_\_\_\_\_\_\_

True or False:

Planes flying a “mass-spec” (infrared imaging mass spectrometer) can

detect the molecular composition of the Earth’s surface.

2.

\_\_\_\_\_\_\_\_\_\_ The imaging equipment is chilled to 77 degrees Kelvin with the use of liquid

nitrogen... this is equal to \_\_\_ degrees below zero Fahrenheit.

3.

\_\_\_\_\_\_\_\_\_\_ When the first data set is generated, desert vegetation shows up as green and red...

surface mineral compositions are revealed in the color \_\_\_.

4.

\_\_\_\_\_\_\_\_\_\_ As the process of accretion began (with the collisions of dust grains and rocks to

form the early planet Earth), the (lighter / heavier ) elements sank to the interior of the molten orb.

5.

\_\_\_\_\_\_\_\_\_\_

True or False:

The Earth’s magnetic field protects the Earth by deflecting charged particles from the sun... most of these particles pass around the Earth while others are channeled along the magnetic field lines to the poles generating the Northern and Southern Lights.

6.

\_\_\_\_\_\_\_\_\_\_ It is thought that the Earth’s magnetic field is generated from the molten fluids

moving within the Earth’s (a) Solid Iron Inner-core or (b) Fluid Outer Core

7.

\_\_\_\_\_\_\_\_\_\_ True or False: Water has been present since the start of the Earth some was locked

up within the rocky pieces that coalesced to form the proto-planet and other amounts came from

comets that struck the Earth.

8.

\_\_\_\_\_\_\_\_\_\_ True or False: Cyanobacteria are multiple-celled organisms that absorbed CO2

and released O2 as a waste product.

9.

\_\_\_\_\_\_\_\_\_\_ Undersea volcanoes called “black smokers” expelled ferrous iron into the water

which combined with the oxygen- rich water and generated world-wide iron deposits called \_\_ iron

formations.

10.

\_\_\_\_\_\_\_\_\_\_ Extinction events come in different sizes and have different causes... 250 million

years ago the greatest extinction of Earthly life occurred... this is called the P-T or \_\_\_ extinction

or “ the great death”. During this event more than 95% of life forms ceased to exist.

11.

\_\_\_\_\_\_\_\_\_\_ The K-T (Cretaceous-Tertiary) extinction ended the dominance of the \_\_ over the

planet Earth.

12. \_\_\_\_\_\_\_\_\_\_ 310 million years ago the Appalachian regions of the United States were broad,

flatland tropical swamps which led to the formation of what important economic resource?

13.

\_\_\_\_\_\_\_\_\_\_ The Permian Reef complexes of the Guadalupe Mountains are studied because they

are exposed sections of reservoir rock similar to those exploited today for oil and natural gas.

(a) Carboniferous

(b) Triassic

(c) Permian

(d) Jurassic

14.

\_\_\_\_\_\_\_\_\_\_ No matter if the seismic profile is two dimensional or three dimensional, a good

indicator of the possibility of trapped oil and natural gas is a \_\_ dome.

15.

\_\_\_\_\_\_\_\_\_\_ True or False: Salt deposits often behave more like solids than fluids over geologic time.