

Activity:

Earth Observation

TIME NEEDED **60** minutes



This activity can be used towards requirement 2

Instructions

Earth Observation and inspiration!

Help your young people reflect on Earth and use images of the Earth to really capture their imagination.

1. Get your Scouts started by completing activity sheet 2. Encourage them to think about Earth Observation and how the images taken from space are different to the images taken on Earth.
2. You can look at [Tim Peake's Flickr account](#) to see the photos he took from the International Space Station.
3. From the activity sheet and their own research, encourage your Scouts to produce a piece of art recreating their favourite image and demonstrating the importance of Earth Observation. (Leaders can refer to the answers provided on the next page!)

You will need:

- Poster paper
- Pens/pencils
- Optional: additional craft material to create their images
- Computer (your Scouts will need to do internet research)



Spring time in Europe
CREDIT: ESA



Great Barrier Reef
CREDIT: ESA

Did you know?

Earth Observation (EO) scientists collect information about the Earth – the land, sea and atmosphere – using sensors carried on satellites, aircraft, ships, buoys floating on the ocean, and thousands of weather stations around the world. There is now a great deal of data available and scientists are finding more and more ways to use it to study our planet and make predictions about its future. The International Space Station provides a unique opportunity from where we can monitor environmental processes and change. For example, satellite images can show the damage to an area caused by a forest fire or a tsunami.



Etna Erupts
CREDIT: ESA

Activity sheet 2

From the ground and from the sky

The Earth looks very different from the International Space Station.

Picture 1 and Picture A are both pictures of mountains. Picture 1 was taken by someone standing on a hillside here on Earth. Picture A was taken by an astronaut in a spacecraft called Gemini-5 in 1965.

TASK 1: Things to do

- Which Earth picture (2–6) shows a desert?
- Which astronaut picture (B–F) shows a desert?

Write your answers in the table.

Now do the same for the other places in the table.

TASK 2: Things to talk about

Compare an Earth picture and an astronaut picture of the same place.

- What things can you see in both pictures?
- What things only show in one?
- Which do you think is best? Why?



Place	Earth picture	Astronaut picture
Mountains	1	A
A desert		
An island		
A city		
A lake		
A river		



TASK 3:

Something to think about

Why do you think EO Detectives often use pictures of the Earth taken from space?



Answer sheet

Place	Earth picture	Astronaut picture
Mountains	1	A
A desert	5	C
An island	4	B
A city	2	F
A lake	6	E
A river	3	D

Image information

From the ground and from the sky

Earth pictures

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From the ground and from the sky

- 1 **Himalayas** B Balaji <https://www.flickr.com/photos/bbalaji/4637438533>
- 2 **Downtown Dallas** Susan Adams <https://www.flickr.com/photos/susanad813/1803752788>
- 3 **Confluence of the Nile** joepyrek <https://www.flickr.com/photos/joepyrek/8295695470>
- 4 **Island with clear waters** Chris Isherwood <https://www.flickr.com/photos/isherwoodchris/3382991517>
- 5 **Oman Wahiba Sands** Sylwia Pecio <https://www.flickr.com/photos/59037616@N02/15144630176>
- 6 **Salton Sea pano 1** Akos Kokai https://www.flickr.com/photos/on_earth/1452308744

Astronaut pictures

Courtesy of the Earth Science and Remote Sensing Unit, NASA Johnson Space Center and obtained from <http://spaceflight.nasa.gov/gallery/> [NASA]

- A **Himalayas** Gemini 5 S65-45717 (21–29 Aug 1965) [NASA]
- B **Canary islands** Gemini 6 S65-63150 (16 Dec 1965) [NASA]
- C **Oman** Gemini 4 S65-34661 (3–7 Jun 1965) [NASA]
- D **White and Blue Nile** Apollo 7 AS7-06-1718 (14 Oct 1968) [NASA]*
- E **Salton Sea** Gemini 5 S65-45748 (21–29 Aug 1965) [NASA]*
- F **Huston** Apollo 9 AS09-22-3463 (9 Mar 1969) [NASA]*

