

Hubble Space Telescope - Activities (Ages 12-15)



Today we are going to investigate:

- Where the Hubble Space Telescope (HST) is in the sky
- If it is visible from your location
- Who built it and why
- The technology used on the HST

Activities

- 1 Today we are going to investigate one of the greatest scientific instruments ever built, the Hubble Space Telescope (HST). The HST was placed in orbit in 1990. Turn on Night Sky and see if you can find the HST. Use Search to help you find it.

Question: Why put a telescope in space?

- a) Because its closer to the stars
- b) Because the view is clearer above the atmosphere
- c) Because it is always dark in space

- 2 Tap on the Hubble Space Telescope to show its orbital path (pink dotted line). It must rise over the horizon for it to be visible to you. If you do not live far enough south you may not be able to see the HST.

Question: Is the HST is ever visible from your location?

- 3 Double tap on the HST to bring up the 3D model and move it around with your finger to find the logos of two space agencies that collaborate on the HST.

Question: Which two agencies are these?



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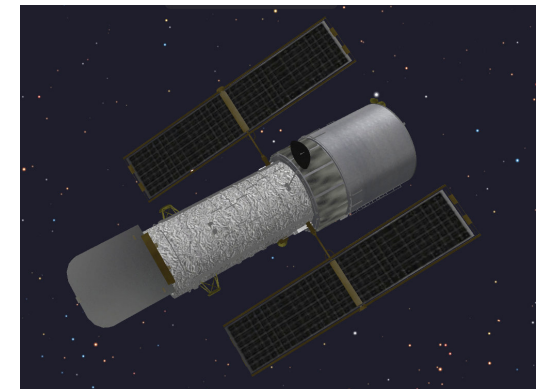
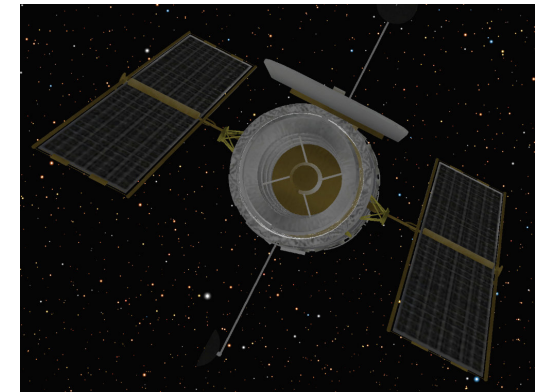


- 4 Hubble collects light from distant objects using its 2.4m (7ft 10in) wide mirror which you can see down its tube. Instruments on the HST turn its observations into digital data. On Earth this data is processed to convert it into spectacular images.

Question: Looking at the model can you see how this information is returned to Earth?

- 5 The HST uses six batteries to power its systems while it is passing through the Earth's shadow.

Question: From looking at the model how do you think are these batteries recharged?



What we have discovered:

- The HST is not visible from everywhere on Earth
- An international collaboration built the HST
- The HST collects astronomical data and returns it to Earth
- The HST is powered by solar energy