**ARTFICIAL SATELLITE RESEARCH PROJECT (20 MARKS)**

Your mission is to research an artificial satellite. Create a poster to demonstrate that you have learned about the satellite, and to share the information with your class.

**Evaluation**: Research worksheet (5 marks for quality information.)

Poster (15 marks): Posters must use simple language to indicate an understanding of the content (not cut-and-pasted information.)

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| CATEGORY  | **All will be able to** | **Some will be able to** | **A few will be able to** |
| **Research****( / 5 )** | Use the research template to find out basic information about their satellite. | Use the research template to find out many pieces of information relevant to their satellite. This may require use of several different references. | Seek out information beyond the framework of the research template and add additional information relevant to their satellite. |
| **Presentation of information****( / 15 )** | Include fundamental information about the satellite they select. This would include things like the name, the role of the satellite, and its lifespan/origin. | Include a visual of the satellites’s design or pictures the satellite has taken. | Include additional images related to the satellite or other relevant visuals related to the satellites’s function. |
| **Citation of Sources** **(included in presentation)** | Reference at least one source of information. | Include two or more references. | Use references from multiple different types of sources. |

WEATHER OR CLIMATE SATELLITES - help to make better weather predictions and to observe the impact of climate change on earth

* Geostationary Operational Environmental Satellites (GOES 13)
* Polar Operational Environmental Satellites (POES)
* Defense Meterorological Satellite Program (DMSP)
* Ocean Surface Topography Mission (OSTM)/ JASON-2
* Joint Polar Satellite System (JPSS)
* Advanced Composition Explorer (ACE)
* Weather geostationary satellites are operated by the USA ([GOES](http://en.allmetsat.com/satellite-goes.php)), Japan ([MTSAT](http://en.allmetsat.com/satellite-mtsat.php)), China ([Fengyun-2](http://en.allmetsat.com/satellite-fy2.php)), Russia ([GOMS](http://en.allmetsat.com/satellite-goms.php)) and India ([KALPANA](http://en.allmetsat.com/satellite-kalpana.php)).
* Polar orbiting weather satellites are operated by the US ([NOAA](http://en.allmetsat.com/satellite-noaa.php), [QuikSCAT](http://en.allmetsat.com/satellite-quikscat.php)), Russia ([Meteor](http://en.allmetsat.com/satellite-meteor.php)) and China ([Fengyun-1](http://en.allmetsat.com/satellite-fy1.php)).

COMMUNICATION SATELLITES allow us to relay telephone and data conversations. If you use a cell phone or SkyTV, you can thank a satellite!

* SES
* Iridium Next

NAVIGATION OR GPS SATELLITES

* Navstar GPS
* GLONASS

MILITARY SATELLITES

* ????

INTERNATIONAL SATELLITE SYSTEMS :

* International Space Station (ISS)
* COSPAS- SARSAT System (for rescue missions)

ASTRONOMICAL SATELLITES study the universe:

* Hubble Space Telescope
* Chandra

**POSSIBLE SOURCES**:

BBC Solar System: <http://www.bbc.co.uk/science/space/solarsystem/all>

NASA ALL Topics A-Z : <https://www.nasa.gov/tags/>

 NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**SATELLITE RESEARCH NOTES (10 marks)**

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| --- | --- |
| What is the name of your satellite? |  |
| Citation of website used for your information | **Loff, S. (2015, February 19). Apollo. Retrieved from https://www.nasa.gov/mission\_pages/apollo/index.html** |
| Is this a credible site? Why or why not. Explain with two reasons  |  |
| What is the purpose of this satellite? |  |
| What does it do? |  |
| How high is its orbit? |  |
| How fast is it traveling? |  |
| When was it launched? |  |
| How long is it supposed to last? |  |
| What kinds of scientists and engineers created this satellite? |  |
| Who is using the data from the satellite now? |  |
| How does this satellite help the human race? |  |
| Provide some of the data and/or images that this satellite acquires.What does the data tell us? |  |
| Citation of an article about your satellite from an online database  |  |
| Two interesting facts about your satellite not mentioned in any of your earlier research eg. who made it?  |  |
| Think of at least two questions requiring paragraph answers or two thoughtful comments to show that you have thought about what you have read.  |  |