Make Your Own Stellar Trading Card!

Annie Jump Cannon’s classification system for stars is still used by astronomers today!

Choose your favorite Annie Jump Cannon quote!

Using the trading card template and materials provided, make your own trading card for your favorite star type!

Materials:
- Star photo (cut out)
- Stellar spectrum (cut out)
- Annie Jump Cannon quotes
- Fact sheet:

<table>
<thead>
<tr>
<th>Type</th>
<th>Temperature (K)</th>
<th>Color</th>
<th>Mass (M_{Sun})</th>
<th>Radius (R_{Sun})</th>
<th>Abundance</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>≥ 30,000</td>
<td>blue</td>
<td>≥ 16</td>
<td>≥ 6.6</td>
<td>extremely rare</td>
</tr>
<tr>
<td>B</td>
<td>10,000 - 30,000</td>
<td>blue-white</td>
<td>2.1 - 16</td>
<td>1.8 - 6.6</td>
<td>very rare</td>
</tr>
<tr>
<td>A</td>
<td>7,500 - 10,000</td>
<td>white</td>
<td>1.4 - 2.1</td>
<td>1.4 - 1.8</td>
<td>rare</td>
</tr>
<tr>
<td>F</td>
<td>6,000 - 7,500</td>
<td>yellow-white</td>
<td>1.04 - 1.4</td>
<td>1.15 - 1.4</td>
<td>uncommon</td>
</tr>
<tr>
<td>G</td>
<td>5,200 - 6,000</td>
<td>yellow</td>
<td>0.8 - 1.04</td>
<td>0.96 - 1.15</td>
<td>occasional</td>
</tr>
<tr>
<td>K</td>
<td>3,700 - 5,200</td>
<td>orange</td>
<td>0.45 - 0.8</td>
<td>0.7 - 0.96</td>
<td>fairly common</td>
</tr>
<tr>
<td>M</td>
<td>2,400 - 3,700</td>
<td>red</td>
<td>0.08 - 0.45</td>
<td>≤ 0.7</td>
<td>very common</td>
</tr>
</tbody>
</table>
“Hardly a more fascinating page in man’s search for knowledge is to be found than this story of the analysis of light.”

“Each substance...sends out its own vibrations of particular wave lengths, which may be likened to singing its own song.”

“Then, with a Spectroscope attached to the telescope, we may behold a radiant and beautiful sight, for the twinkling starlight becomes a band showing all the rainbow colors, also crossed by the telltale dark lines.”

“Thus, peering in to the far-away spaces of the heavens, and looking back, as it were, into by-gone epochs of time, we find stars composed of the same elements necessary to us today, vibrating in the same rhythm, sending out waves of the same lengths.”

“Classifying the stars has helped materially in all studies of the structure of our universe, than which no greater problem is presented to the human mind. While teaching man his relatively small sphere in creation, it also encourages him by its lessons, of the unity of nature, and shows him that his power of comprehension allies him with the great intelligence that encompasses all.”

“Classifying the Stars”
*The Universe of Stars* (1926)

“By placing a prism in front of the object-glass of the telescope, the spectra of all the brighter stars were obtained. Thus an almost untrodden field lay open for the investigator, a field that was destined to produce a vast amount of material for the astronomical discussions of the future.”

“Each photographic plate may be likened to the only existing copy of a valuable book.”

“Williamina Paton Fleming”
*Astrophysical Journal,* vol. 34, 1911

“The prism has revealed to us something of the nature of the heavenly bodies, and the photographic plate has made a permanent record of the condition of the sky.”

“Williamina Paton Fleming”
*Science,* vol. 33, No. 861, 1911

“Has it not been something of an adventure to take any part, however small, in the remarkable development of astronomy during the present century?”

“There is romance in science! What more appealing to the imagination than the fact that these dark lines in star light bring us messages as to what the stars are, how they are traveling, and how far away they are.”

“Astronomical Adventures”
*Radcliffe Quarterly,* 1931