Activity - Before visiting the Observatory

**Material List:**
- 12 picture-cards and 12 word-cards handed out by the teacher

**Outline**
In this activity you will be tested in your knowledge of how to classify different objects that can be observed in the universe, so that you are well-equipped for observing these structures on your own.

You should beforehand have been presented by the teacher with different ways of identifying each kind of structure. A reminder of these can be seen at the end of this hand-out under Further Resources.

**Procedure:**
- Divide into groups of two.
- **Lay all 12 picture-cards on a table,** such that the word-side is facing the table and the picture-side is facing upwards for you to see. They don’t need to be arranged by structure. The more randomly they are distributed, the better.
- Put the remaining 12 word-cards in a pile and **take turns drawing one word-card from this pile.**
- When a card has been drawn from the pile, the student who has drawn it must then **find a picture-card with an object that corresponds to the word-card.**
- Once a picture-card has been chosen, it can be flipped to see on the back, whether the word corresponds to the word-card.
- **If the match is correct,** the picture-card is removed and this now belongs to the student along with the word-card and counts as one point.
- **If the match is incorrect,** the picture-card is flipped back, so that the picture faces upwards again and the word-card is put at the bottom of the word-card pile.

The online observatory collaboration consists of the following partners:
- Baldone Observatory, Brorfelde Observatory, Cardiff University, Harestua Solar Observatory, Helsinki Observatory
• The game continues until all of the picture-cards have been matched up with a word-card and the student with the most points win.

Assessment:

• Which structures were hard to identify and why?
• Were there any structures that you repeatedly misidentified?
• Can you come up with other ways of separating and identifying the types of objects?

Further Resources:

<table>
<thead>
<tr>
<th>Spiral Galaxies</th>
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<tr>
<td>Typically flat, round objects with noticeable spiral-texture. Very bright center.</td>
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<tr>
<th>Elliptical Galaxies</th>
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<tr>
<td>Lit, spherically looking objects with bright centers. Typically hard to discern individual stars.</td>
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</table>
| **Open Star Clusters**  
| Area with abundance of stars, that can easily be discerned, but without a particular shape. |
| **Globular Star Clusters**  
| Spherical area with abundance of stars, that can easily be discerned from each other. |
| **Nebulae**  
| Colourful areas of the sky, mostly without noticeable stars. |