



SPACE

awareness

JOURNEY OF IDEAS:
GENERAL INTRODUCTION

There is a chronic underrepresentation in Europe of children from migrant communities that choose to pursue careers in science, technology and engineering. Consequently an enormous reservoir of untapped talent exists that could be potentially mobilised for the benefit of society. The Space Awareness Program is therefore devoting special attention to reaching out to schoolchildren in migrant communities from Turkey, the Middle East and North Africa and their teachers. We regard it as important to show children in these communities that they belong to a rich heritage of distinguished scientists who helped shape the global history of astronomy and space sciences during the Islamic Golden Ages and beyond. We hope that showcasing aspects of the rich history of Islamic science will help to motivate children from migrant communities to consider pursuing a career in science or engineering.

The recent influx of refugees to Europe from the Middle East and Africa, the majority of which are Moslem, makes the need for such an approach more acute. Thus, more than ever it is necessary to build a bridge between the Islamic culture and Latin Europe. One way of doing this is to identify common roots between these apparently two different worlds, by focusing for example on how scholars in the Islamic world in the past gathered knowledge from different cultures, made invaluable translations into Arabic, and introduced new developments that triggered the renaissance in Europe and laid to the foundation of modern science.

Astronomy as a field of knowledge common to humankind seems to be ideal to build this bridge. In this sense, the present astronomical heritage kit “The journey of the ideas” and its corresponding handbook will contribute to fill the 1000 years gap in the history of science by showing concrete examples of the influence of Islamic science on the development of modern astronomy, optics and space sciences.

It must be pointed out that we refer here to “Islamic science” or “Islamic astronomy” not in the religious sense but in the rational sense brought to the Islamic civilisation from the Greek tradition. The word “astronomy” in Arabic (ʿilm al-hayʿa) means “science of the configuration of the world” and has no equivalent in Greek. Furthermore, the Arabic language during the Golden Ages played a similar role to what English plays today in science: It was the language in which Persian, Syriac, Turkish, North African and other scientists of the Middle East communicated their knowledge at that time.

In our teacher’s handbook we start with the description of special ancient cities and places, Babylon, Egypt, Millet, Athens, Alexandria and Baghdad, as places where knowledge and lots of astronomical new ideas gathered and further developed. The activities of the box will familiarise children with the geography and important places of those times. Four historical Islamic figures of the 8th and 9th century (two women and two men) provide examples of the incredible open attitude and inquisitive spirit of Islamic scientists during the Golden ages of the Islam. By using the personal stories of their lives, this toolkit will build bridges to their legacy by showcasing the impact of their achievements on European scientists.

The didactical approach of this kit relies on the following key ideas:

- We share a history, with epochs of collaboration, coexistence and tolerance.
- We share the night sky, and still use the Arabic names of the brightest stars.
- We all need and use calendars to measure time.
- We are all Earth citizens and should work together for the benefit of humankind and for the preservation of our planet.

**Ignorance leads to fear,
fear leads to hate,
and hate leads to violence**



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