

WORKSHEETS FOR PUPILS

Name of activity	Estimated duration	Difficulty of activity	Age of children for which activity is suitable	Aids and material	Objective of activity
1. Making models of the objects of the Solar System	3 lessons	time difficulty is high, manual skills and mental difficulty are medium	middle school	see aids and instructions	preparation of models of important objects in the Solar System for next exercises; understanding the meaning of basic characteristics of the planets of the Solar System; development of manual skills
2. Model the motion of Earth around the Sun	20 minutes (if models have been made within activity a)	low to medium (low in the first exercises, medium in the final exercises)	elementary and middle school	models of Sun and Earth, also model of Moon	understanding the nature of seasons' change; understanding the nature of motion of the Solar System's objects; understanding day and night alternation
3. What are the distances of planets from the Sun?	40 minutes	medium	middle school	models of Sun and planets	understanding the composition of the Solar System and the system of distribution of planets in the Solar System; acquiring competencies in perceiving distance ratios in the Solar System
4. What are the planets' sizes?	30 minutes	medium	middle school	models of Sun and planets	understanding size variety of

					planets in the Solar System; acquiring competencies in perceiving size and distance ratios in the Solar System
5. When observing from Earth, why can we see the tilting of Saturn's rings?	15 – 25 minutes	medium	middle school	models of Sun and Saturn	understanding the phenomenon of tilting of Saturn's rings during Saturn's orbiting the Sun; consolidation of knowledge about maintaining the direction of planets' axes in the Solar System; consolidation of knowledge about causes and manifestations of seasons' change
6. Model the motion of Uranus around the Sun and describe how seasons change for various hypothetical positions of an observer on the "surface" of Uranus.	30 – 60 minutes	high	middle school, or secondary school	models of Sun and Uranus	understanding Uranus' orbiting the Sun; consolidation of knowledge about maintaining the direction of planets' axes in the Solar System; consolidation of knowledge about causes and manifestations of seasons' change