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Planets of the Solar System with INDI robot

Year	Field of study, subject	Subject connections
5.	Natural Science and Geography Natural Science	Physics, digital culture

The purpose and didactic tasks of the lesson

Teaching the Solar System with the INDI robot: students can learn about the planets of the Solar System interactively, while developing their algorithmic thinking.
Students playfully learn about the structure of the Solar System, the order of the planets, and their orbits.

The effect of the clock

Developed competencies: collaboration, spatial orientation, systematization, logical thinking, digital and scientific competence
Differentiation options: advanced groups can plan a longer route; slower workers can be supported with guiding questions

Tools and resources used

	*State curriculum, local curriculum, textbooks*
	*INDI robot and color code cards*
	*INDI robot orbit, with circles representing planetary orbits drawn*

robocomp
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Occupation plan

5 minutes	**Tune in: "Up for space travel!"**	• Motivation, discussion group, frontal discussion, frontal work form. • Student tools: - • Imaginary space travel to the solar system.
10 minutes	**New knowledge: introduction to planets**	• Knowledge transfer, demonstration, question and answer, frontal and individual work form. • Student tools: Digital board (pictures), planet cards. • New knowledge: planetary order.
20 minutes	**INDI orbit: route planning and space travel between planets**	• Discovery learning, action-based method, problem solving, pair/group work. • Student tools: INDI car, colored tiles, planet cards. • Students plan the route and test it.
8 minutes	**Complete the worksheet**	• Knowledge application, systematization, independent task solving, individual/pair work. • Student materials: Worksheet, pencil. • Paper-based recording of what you have learned.
2 minutes	**Summary, evaluation**	Reflection, feedback, frontal working method. Student tools: - What did you like the most? What did you learn?

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Worksheet

INDI WORKSHEET – Exploring the Solar System

Name: _____ ___ Date: _____

Station 1: Which planet is it?

On the ground, colored tiles lead to different planets.
Guide INDI off the Earth and to the Sun.

Task: Which planet did INDI pass through on his journey?
Write the names of the planets in order!

1. _____ _____
2. _____ _____
3. _____ _____

2nd Station: Planetary Order – INDI

Your INDI car travels between planets with different color codes.
You will find numbers on the stations (from 1 to 8) that indicate the order of distance from the Sun.

Task: Write the correct number next to the planets!

- Mercury _____
- Venus _____
- Earth _____
- Mars _____
- Jupiter _____
- Saturn _____
- Uranus _____
- Neptune _____

3. Station: INDI asks

Task: Go through the correct answers!
Question Answer Which planet do we live on?
Which is the largest planet?
Which planet has the most moons?
Which planet is called the "red planet"?
Which planet has spectacular rings?

Station 4: Draw your path!

Draw the INDI car's journey between the planets!
Mark the starting point (Earth), the arrival point (e.g. Jupiter), and the intermediate planets!

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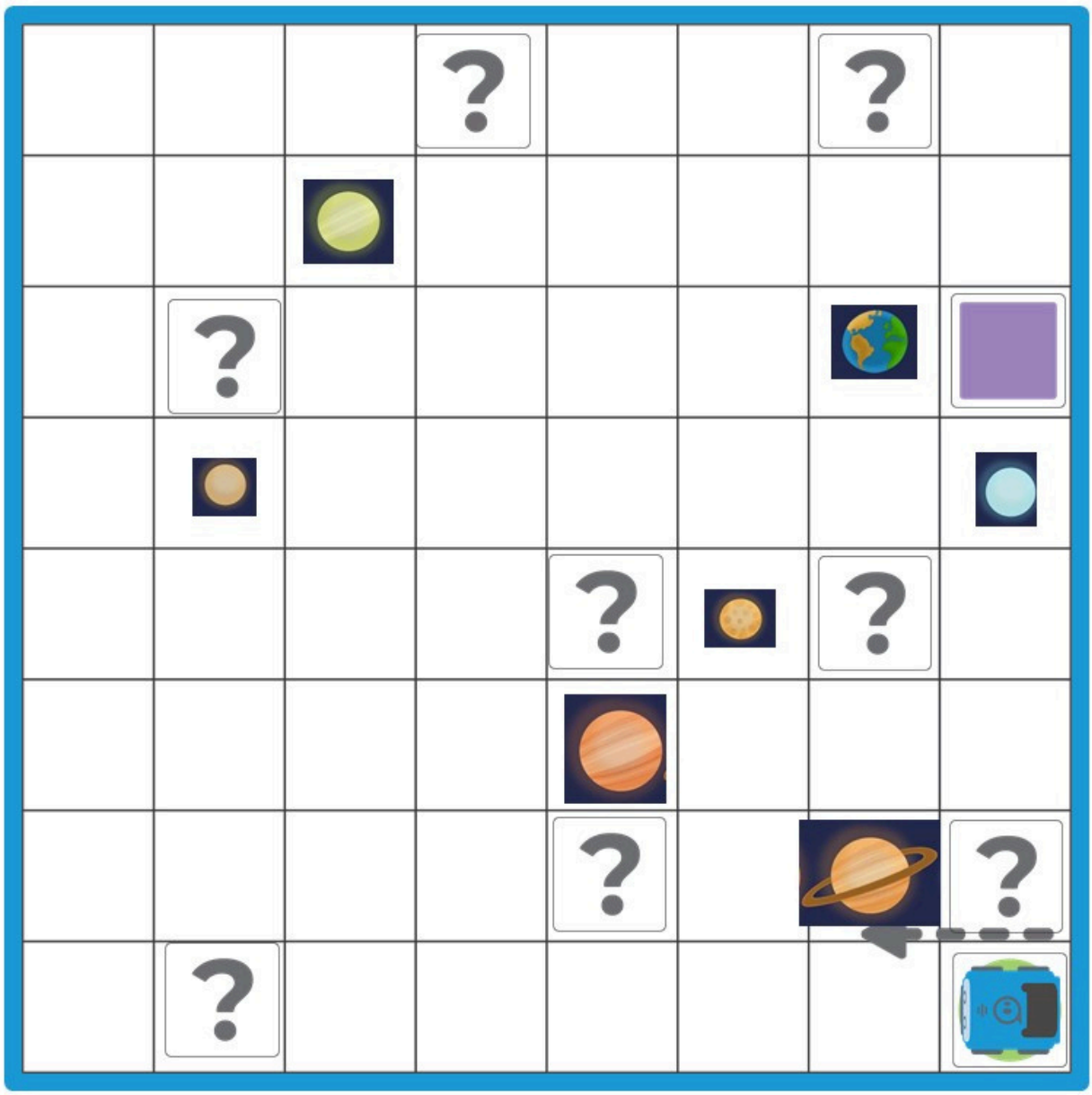
The track



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